Received by SEC BUR 3/20/26

Post & Schell P.C.
ATTORNEYS AT LAW

17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
717-731-1970 Main
717-731-1985 Main Fax
www.postschell.com

Garrett P. Lent

glent@postschell.com
717-612-6032 Direct
717-731-1985 Direct Fax
File #: 218169

March 20, 2026

VIA ELECTRONIC FILING

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, Second Floor
Harrisburg, PA 17105

A-2026-3061221

Re: Letter of Notification of Mid-Atlantic Interstate Transmission, LLC, for Approval of the Shade Gap-Aspen 115 Kilovolt Transmission Line Rebuild Project in Dublin and Cromwell Townships, Huntingdon County and Fannett Township, Franklin County, Pennsylvania
Docket No._____

Dear Secretary Homsher:

Enclosed for filing on behalf of Mid-Atlantic Interstate Transmission, LLC ("MAIT") is a Letter of Notification ("LON") requesting approval for the Shade Gap-Aspen 115 Kilovolt ("kV") Transmission Line Rebuild Project ("Project"). This LON is filed pursuant to the Pennsylvania Public Utility Commission's ("Commission") regulations at 52 Pa. Code § 57.72(d). Copies of this LON have been served upon the parties as required by 52 Pa. Code § 57.74 and as noted on the attached Certificate of Service.

Subject to the Commission's approval, the Project has a scheduled construction date of June 22, 2026, to meet an in-service date of December 10, 2026. To support this construction timeline, MAIT respectfully requests the Commission's review and approval for the LON on or before the June 18, 2026, Public Meeting to allow construction to commence immediately thereafter.

Due to the size of the filing, only the cover letter and Certificate of Service will be electronically filed through the Commission's e-filing website. The Letter of Notification is being uploaded to the Commission's ShareFile website.

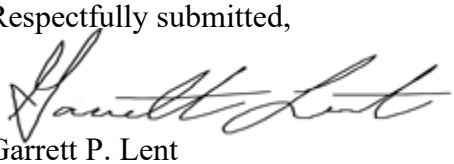
Please enter the appearance of the following attorneys on behalf of MAIT in this proceeding:

Garrett P. Lent (ID #321566)
Megan Rulli (ID #331981)
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
(717) 731-1970
glent@postschell.com
mrulli@postschell.com

Please send copies of all documents and communications in this proceeding to the counsel listed above.

If you have any questions pertaining to this matter, please do not hesitate to contact me.

Respectfully submitted,



Garrett P. Lent

GPL/tjc
Attachments

cc: Deb Backer, Bureau of Technical Utility Services (*via electronic service*)
Jordan Van Order, Bureau of Technical Utility Services (*via electronic service*)
Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Letter of Notification has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 57.72(d)(3).

VIA CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Office of Small Business Advocate
555 Walnut Street
1st Floor Forum Place
Harrisburg, PA 17101

Office of Consumer Advocate
555 Walnut Street
5th Floor Forum Place
Harrisburg, PA 17101-1923

Pennsylvania Public Utility Commission
Bureau of Investigation and
Enforcement
P.O. Box 3265
Harrisburg, PA 17105-3265

Ms. Andrea Lowery, Executive Director
Pennsylvania Historical & Museum
Commission
300 North Street
Harrisburg, PA 17120-0024

Office of Chief Counsel, Real Property
Division
Pennsylvania Department of
Transportation
Commonwealth Keystone Building
400 North Street, 9th Floor
Harrisburg, PA 17120

PA Department of Environmental Protection
ATTN: Bureau of Waterways Engineering
and Wetlands
400 Market Street
Harrisburg, PA 17101

PA Department of Environmental Protection
ATTN: Office of Chief Counsel
400 Market St., 9th Floor
Harrisburg, PA 17105
CC: Secretary to PADEP Chief Counsel

Pennsylvania Department of
Environmental Protection
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110

Pennsylvania Game Commission
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Ave.
Harrisburg, PA 17110-9797

US Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, PA 16801-4850

Pennsylvania Department of
Conservation and Natural Resources
P.O. Box 8552
Harrisburg, PA 17015

Historic Preservation Bureau
400 North St, Ste 2,
Harrisburg, PA 17120

Pennsylvania Fish and Boat
Commission
595 East Rolling Ridge Drive
Bellefonte, PA 16823

Tyne Blazier
District Manager
Huntingdon County
Conservation District
10605 Raystown Road, Suite A
Huntingdon, PA 16652

Dave Stoner
District Manager
Franklin County
Conservation District
185 Franklin Farm Lane
Chambersburg, PA 17202

Commissioner Patrick Reeder
Chair, Huntingdon County
Board of Commissioners
233 Penn Street
Huntingdon, PA 16652

Commissioner Jeffrey Thomas
Member, Huntingdon County
Board of Commissioners
233 Penn Street
Huntingdon, PA 16652

Commissioner Scott Walls
Member, Huntingdon County
Board of Commissioners
233 Penn Street
Huntingdon, PA 16652

Ron Rabena
Chair, Huntingdon County
Planning Commission
205 Penn Street, Suite 3
Huntingdon, PA 16652

Keller Engineers, Inc.
Engineer, Huntingdon County
420 Allegheny Street
Hollidaysburg, PA 16648

Kenneth E. Leidy
Chair, Cromwell Township
Board of Supervisors
10999 Valley Street
Shirleysburg, PA 17260

Jeremy Young
Member, Cromwell Township
Board of Supervisors
10999 Valley Street
Shirleysburg, PA 17260

Richard Gutshall
Member, Cromwell Township
Board of Supervisors
10306 Kresha Lane
Shirleysburg, PA 17260

Todd Banks
Engineer, Cromwell Township
Stiffler & McGraw Assoc.
19 North Juniata Street
Hollidaysburg, PA 16648

William Doyle
Vice-Chair, Dublin Township
Board of Supervisors
23073 Croghan Pike
Shade Gap, PA 17255

Donald Allison
Chair, Dublin Township
Board of Supervisors
13126 Neelyton Road
Shade Gap, PA 17255

Donald Clark
Member, Dublin Township
Board of Supervisors
13126 Neelyton Road
Shade Gap, PA 17255

Keller Engineers, Inc.
Engineer, Dublin Township
420 Allegheny Street
Hollidaysburg, PA 16648

Commissioner Dean Horst
Chair, Franklin County
Board of Commissioners
272 North Second Street
Chambersburg, PA 17201

Commissioner John Flannery
Vice-Chair, Franklin County
Board of Commissioners
272 North Second Street
Chambersburg, PA 17201

Commissioner Robert Ziobrowski
Member, Franklin County
Board of Commissioners
272 North Second Street
Chambersburg, PA 17201

Quentin Clapper
Planning Director
Franklin County Planning Commission
272 North Second Street
Chambersburg, PA 17201

Terry A. Crouse
Chair, Fannett Township
Board of Supervisors
16078 Mountain Green Road
Spring Run, PA 17262

Frank W. O'Donnell
Member, Fannett Township
Board of Supervisors
19940 Mountain Road
Doylesburg, PA 17219

Martin and Martin, Inc.
Engineer, Fannett Township
37 South Main Street
Chambersburg, PA 17201

Barry and Michele Adomnik
11565 Shade Creek Ln
Shade Gap, Pa 17255

Matthew Dennis and Gillian Paige Baer
11617 Auxiliary Dr
Shade Gap, Pa 17255

Marlene and Fred Benson
1007 Mowere Rd
Phoenixville, Pa 19460

Sandra D. Bloom
20422 Spring Run Rd, PO Box 118
Spring Run, Pa 17262

Kevin B. Brothers
21388 Fawn Ln
Shade Gap, Pa 17255

Alfonso V. Ciervo and Dawn Woodward
2148 Chestnut St
Camp Hill, Pa 17011

David W. Cisney
21070 Cisney Ln
Shade Gap, Pa 17255

Arthur C. Clark, Jr. and Patti Ann Clark
12069 Sawmill Rd
Shade Gap, Pa 17255

Paul B. and Stacy S. Coffman
17622 Shatzer Rd
Spring Run, Pa 17262

Edward M. and Connie L. Coons
20112 Spring Run Rd
Spring Run, Pa 17262

Shannon L. Cramer
11843 Taylor Rd
Shade Gap, Pa 17255

Carl E. Devinney and Emily D. Curry
20478 W Spring Run Rd, PO Box 116
Spring Run, Pa 17262

Thomas W. and Sarah Ann Diven
11 Cordell Dr
Stevens, Pa 17578-9497

Do-Right Partners
310 Haller Ln
Lewistown, Pa 17044

Landen William Doyle
20010 Sweet Water Rd
Dry Run, Pa 17220

Mark W. and Shanna A. Fenby
11868 Taylor Rd
Shade Gap, Pa 17255

Kim L. Friese
17659 Shatzer Rd
Spring Run, Pa 17262

G & S Logging
17429 Shade Valley Rd
Blairs Mill, Pa 17213

Guy M. and Sarah M. Gipe
19945 Spring Run Rd
Spring Run, Pa 17262

Jay F. and Cheryl G. Hammond
20575 Hammond Rd
Spring Run, Pa 17262

Mark W. and Brenda L. Hart
20898 Back Rd
Doylesburg, Pa 17219

Matt and Rene Hartman
3581 Aster Ave
Trevose, PA 19053

Dawn H. and Drew W. Johnson
20522 Hammond Rd
Spring Run, Pa 17262

Gary R. Johnson, et al.
21792 Shade Valley Rd
Shade Gap, Pa 17255

Michael J. and Laura A. Keating
22514 Maple Ln
Amberson, Pa 17210

James Knoll
4122 Lauriston St
Philadelphia, Pa 19128

John S. Kreis
20960 Covered Bridge Rd
Shade Gap, Pa 17255

Michael Allen Lake
22640 Tannery Rd
Shade Gap, Pa 17255

Rhonda L. Lake-Scott
21531 Lake Ln
Shade Gap, Pa 17255

Philip R. and Lena M. Lakjer
PO Box 179
Spring Run, Pa 17262

Andrew B. and Valerie J. Lakjer
PO Box 159
Spring Run, Pa 17262

Bradley J. and Magruder Lawrence
17637 Shatzer Rd
Spring Run, Pa 17262

Daniel M. McAllen
9123 Path Valley Rd
Fannettsburg, Pa 17221

Thomas L. and Linda J. McMath
12007 Sawmill Rd
Shade Gap, Pa 17255

Michael J. McMullen, et al.
10153 Blue Jay Cir
Orrstown, Pa 17244

Pamela D. McNew
Po Box 16
Orrstown, Pa 17244

Ronald and Betty Meyer
10696 Jonestown Rd
Annville, Pa 17003

Leirwyn L. Montague, Sr. & Mary F. Montague
13260 Neelyton Rd
Neelyton, Pa 17239

Michael Musser
411 Hensley St
Lititz, Pa 17543

Stuart and Jodie L. Mylin
1052 Deaver Rd
Quarryville, Pa 17566

Christopher A. and Cheryl M. Nagel
12700 Sawmill Rd
Shade Gap, Pa 17255

Dalton Ness, et al.
21337 Main St
Shade Gap, Pa 17255

Sandra Pechart, et al.
16966 Stewart Rd
Spring Run, Pa 17262

Krishna Carlota Pulgar, et al.
565 Hilltop Rd
Hummelstown, Pa 17036

Robert O. Revercomb, III and Maria Revercomb
PO Box 54
Shade Gap, Pa 17255

Carl R. Robinson, et al.
22609 Mountain Foot Rd
Neelyton, Pa 17239

Dotty M. Robinson
PO Box 65
Spring Run, Pa 17262

Jason Lee Robinson
16729 Path Valley Rd
Spring Run, Pa 17262

Randall D. Rorer, et al.
13052 Sawmill Rd
Blairs Mills, Pa 17213

Gregory R. Schoen and Pamela F. Beaston
16223 Amberson Rd
Spring Run, Pa 17262

Larry J. Shatzer, et al.
16804 Path Valley Rd
Spring Run, Pa 17262

Charles H. Shontz, III & Edeltraud Shontz
12209 Sawmill Rd
Shade Gap, Pa 17255

Bill F. Shoop
20215 Spring Run Rd
Spring Run, Pa 17262

James Robert Smith and Katrina Kinzer
18716 Dry Run Rd
Dry Run, Pa 17220

William E. & Nancy E. Snider
201 S Hillcrest Ave
Quarryville, Pa 17566

Don F. and Joyce A. Stuller
PO Box 255
Orbisonia, Pa 17243

Donald L. and Joyce H. Taylor
248 South Angling Pike
Hartford City, In 47348

Tornetta Management LLC
PO Box 6010
Chambersburg, Pa 17202

Howard I. Ulsh, Jr and Stacie M. Ulsh
20685 Covered Bridge Rd
Shade Gap, Pa 17255

John R. Warwood
20708 Covered Bridge Rd
Shade Gap, Pa 17255

Charles and Joyce West
12021 Sawmill Rd
Shade Gap, Pa 17255

Kelly J. Whitsel, et al.
21311 Croghan Pike
Orbisonia, Pa 17243

Dane K. Woodward
20649 Covered Bridge Rd
Shade Gap, Pa 17255

William O'Donnell
Vice-Chair, Fannett Township
Board of Supervisors
20236 Mountain Road
Doylesburg, PA 17219



Date: March 20, 2026

Garrett P. Lent

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

LETTER OF NOTIFICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FOR APPROVAL OF THE SHADE GAP-ASPEN 115 KILOVOLT TRANSMISSION LINE REBUILD PROJECT IN DUBLIN AND CROMWELL TOWNSHIPS, HUNTINGDON COUNTY AND FANNETT TOWNSHIP, FRANKLIN COUNTY, PENNSYLVANIA	:	**Docket No. _____**

LETTER OF NOTIFICATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

Pursuant to the 52 Pa. Code § 57.72 (d)(1)(i) and (v), Mid-Atlantic Interstate Transmission, LLC ("MAIT") hereby files this Letter of Notification requesting approval from the Pennsylvania Public Utility Commission ("Commission") to rebuild approximately 7.2 miles of the existing Shade Gap-Aspen 115 kilovolt ("kV") Transmission Line ("Shade Gap-Aspen Rebuild Project" or "Project") in Dublin and Cromwell Townships, Huntingdon County, and Fannett Township, Franklin County, Pennsylvania.

The proposed Shade Gap-Aspen Rebuild Project was developed to mitigate 40 different thermal loading violations of FirstEnergy and PJM Interconnection, LLC's ("PJM") Planning Criteria on the Shade Gap-Aspen 115 kV Transmission Line, which were identified as a part of a series of PJM's 2022 Regional Transmission Expansion Plan ("RTEP") analyses for model year 2027.

The Shade Gap-Aspen Rebuild Project will be constructed in Dublin and Cromwell Townships, Huntingdon County, and Fannett Township, Franklin County, Pennsylvania. MAIT has provided information regarding this Project to all identified political subdivisions and none of them have objected to the Project. Subject to the Commission's approval, construction on the Shade Gap-Aspen Rebuild Project is scheduled to begin on or about June 22, 2026, to meet an in-service date of December 10, 2026. To support this construction timeline, MAIT respectfully requests that the Commission issue its final ruling by the Public Meeting scheduled for June 18, 2026.

In support thereof MAIT submits as follows:

I. INTRODUCTION

1. MAIT is a public utility subject to the jurisdiction of the Commission over the siting and construction of transmission lines pursuant to Chapter 57, Subchapter G, of the Commission's regulations.

2. The address of MAIT's principal business office is:

Mid-Atlantic Interstate Transmission, LLC
341 White Pond Drive
Akron, OH 44320

3. The attorneys representing MAIT in this matter authorized to receive notices and communications on its behalf are:

Tori Giesler (ID #207742)
FirstEnergy Service Company
341 White Pond Drive
Akron, OH 44320
(717) 490-3292
tgiesler@firstenergycorp.com

David B. MacGregor (ID #28804)
Garrett P. Lent (ID #321566)
Megan Rulli (ID #331981)

Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
(717) 731-1970
dmacgregor@postschell.com
glent@postschell.com
mrulli@postschell.com

MAIT agrees to accept electronic service in this proceeding.

4. MAIT also requests that a copy of all notices and communications regarding this matter be sent to:

Colin P. Nahill
Transmission Siting Specialist
FirstEnergy Service Company
2800 Pottsville Pike
Reading, PA 19612
cnahill@firstenergycorp.com

5. MAIT provides the following attached exhibits in support of this Letter of Notification:

- **Exhibit 1**: A depiction of the general location of the Project on a topographic map;
- **Exhibit 2**: A depiction of the general layout of the Project;
- **Exhibit 3**: A depiction of a 115 kV single circuit steel pole suspension horizontal two pole structure angles 0 to 5 degrees;
- **Exhibit 4**: A depiction of a 115 kV single circuit steel pole deadend vertical single pole structure angles 45 to 60 degrees;
- **Exhibit 5**: A copy of the PJM Subregional RTEP committee meeting slide, dated October 13, 2022;
- **Exhibit 6**: A copy of the PJM Subregional RTEP committee meeting slide, dated November 17, 2022;
- **Exhibit 7**: A copy of the Waters Delineation Report[1] prepared by Civil & Environmental Consultants, Inc. ("CEC") dated May 2025;
- **Exhibit 8**: A copy of the Pennsylvania Natural Diversity Inventory ("PNDI") Receipt dated March 18, 2025;

[1] The Waters Delineation Report evaluates two existing transmission lines: the Shade Gap-Aspen 115 kV Transmission Line and the Aspen-Roxbury 115 kV Transmission Line. The Shade Gap-Aspen 115 kV Transmission Line is the subject of the instant Letter of Notification. A rebuild is also planned for the Aspen-Roxbury 115 kV Transmission Line, which has been assigned the baseline upgrade identification number b3751. MAIT intends to submit a separate Letter of Notification for the Aspen-Roxbury 115 kV Transmission Line Rebuild Project at a future date.

- **Exhibit 9**: A copy of the concurrence letter from the Pennsylvania Department of Conservation and Natural Resources ("DCNR") dated March 18, 2025;
- **Exhibit 10**: A copy of the concurrence letter from the U.S. Fish and Wildlife Service ("USFWS") dated November 20, 2024;
- **Exhibit 11**: A copy of the concurrence letter from the Pennsylvania Fish and Boat Commission ("PFBC") dated August 13, 2025;
- **Exhibit 12**: A copy of the concurrence letter from the Pennsylvania Game Commission ("PGC") dated September 29, 2025;
- **Exhibit 13**: A copy of the concurrence letter from the Pennsylvania State Historic Preservation Office ("SHPO") dated April 30, 2025; and
- **Exhibit 14**: A list of landowners crossed by the Project & entities the Project is seeking approval from.

6. This Letter of Notification and accompanying Exhibits, which are incorporated herein by reference, contain all the information required by 52 Pa. Code § 57.72(d)(4).

II. THE PROJECT

A. NEED FOR THE PROJECT

7. As explained in more detail below, the proposed Project was developed to mitigate 40 different thermal loading violations of FirstEnergy and PJM Planning Criteria on the Shade Gap-Aspen 115 kV Transmission Line, which were identified as a part of a series of PJM's 2022 RTEP analyses for model year 2027. The Project is needed to increase the current-carrying capacity of the existing Shade Gap-Aspen corridor that connects the Shade Gap Substation in Huntingdon County to the Aspen Substation in Franklin County, to meet current and expected transmission system needs in Huntingdon and Franklin counties and the surrounding areas.

1. Existing System

8. The existing 7.2-mile Shade Gap-Aspen 115 kV Transmission Line utilizes 336 kcmil[2] 26/7 aluminum conductor steel reinforced ("ACSR") conductor and #6 Copperweld shield wire.

9. The existing 7.2-mile Shade Gap-Aspen 115 kV Transmission Line is supported by

[2] 1000 Circular Mils.

59 wood structures that range from approximately 50 to 70 feet in height above ground, with an average height of approximately 60 feet. The majority of the existing structures are wooden H-frames. The existing transmission line is in a horizontal configuration, with span lengths that are approximately 700 feet.

10. A map of the existing system configuration is provided as part of **Exhibit 2**.

2. Identification of Need

11. The Project is needed to upgrade the existing conductor throughout the 7.2 miles of the existing Shade Gap-Aspen 115 kV Transmission Line pursuant to PJM's annual RTEP, which aims to identify grid inefficiencies and improve overall reliability.

12. PJM, in its capacity as the regional Transmission Planner, Planning Authority, Transmission Operator, Balancing Authority and Reliability Coordinator, identifies the need and timing for mandatory transmission system upgrades as part of the reliability planning, economic planning, and interconnection planning process to preserve the reliability of the electric grid under its operational control as the Regional Transmission Organization. The PJM planning process is an 18-month cycle starting in September of every calendar year. The process ultimately produces a PJM Board-approved RTEP 18 months later (February). The RTEP consists of transmission system upgrades produced from one, or more, of four processes: reliability planning, economic planning, interconnection planning, and local planning.

13. Baseline upgrades are identified as part of the reliability planning and economic planning analysis. The analysis consists of a comprehensive series of detailed studies that are designed to satisfy not only PJM's reliability planning criteria, but also those of the applicable transmission owners, including FirstEnergy's Transmission Planning Criteria, as well as the North American Electric Reliability Corporation ("NERC") and ReliabilityFirst Corporation reliability

standards. The transmission planning process and the baseline RTEP projects selected for construction under that process are required by the applicable reliability and planning criteria and once approved by PJM, become mandatory. Specifically, transmission owners are obligated to build these projects under Section 1.7 of Schedule 6 of the PJM Operating Agreement.[3] These projects are identified with an upgrade identification number starting with the letter "b" followed by a four-digit number.

14. The proposed Project was developed to mitigate 40 different thermal loading violations of FirstEnergy and PJM Planning Criteria on the Aspen-Shade Gap 115 kV Transmission Line, which were identified as a part of a series of PJM's 2022 RTEP analyses. Specifically, the proposed Project addresses thermal violations identified under NERC standard TPL-001-5[4] for P0, P1, P2, P4, P5, and P7 Planning Events. Planning Event definitions are detailed in the NERC TPL-001-5 standard.

15. The proposed Project will address the thermal overload violations identified in the 2022 RTEP model for the year 2027 under the PJM Generator Deliverability analysis. Identified therein were multiple planning criteria violations, *i.e.*, thermal overload violations, on the Aspen-Shade Gap 115 kV Transmission Line. The worst violation on the Shade Gap-Aspen 115 kV Transmission Line occurs from the loss of the Juniata No. 4 230-69 kV Transformer, resulting in the Shade Gap-Aspen 115 kV Transmission Line loading to 139.0% of the existing summer emergency rating of 160 megavolt-amperes ("MVA"). Upon completion of this Project, the anticipated rating of the Shade Gap-Aspen 115 kV Transmission Line will increase from a 133/160 MVA (Summer Normal/Summer Emergency) rating to a 273/333 MVA (Summer Normal/Summer Emergency) rating.

[3] Available at: https://www.pjm.com/directory/merged-tariffs/oa.pdf.
[4] Available at: https://www.nerc.com/pa/Stand/Reliability%20Standards/TPL-001-5.pdf.

16. The proposed Project was presented at the October 13, 2022, PJM Mid-Atlantic Subregional RTEP Committee ("SRRTEP") meeting, and then again at the November 17, 2022, PJM Mid-Atlantic SRRTEP meeting, at which time a new baseline upgrade identification number, b3752, was assigned to the Project. Copies of the PJM Mid-Atlantic SRRTEP October 13, 2022 and November 17, 2022 meeting slides are included as **Exhibit 5** and **Exhibit 6**.

17. Due to the nature of the Project, MAIT did not consider any alternatives to address the thermal loading violations.

B. THE PROPOSED PROJECT

18. For this Project, MAIT proposes to rebuild approximately 7.2 miles of the existing Shade Gap-Aspen 115 kV Transmission Line. The Project is needed to resolve baseline PJM criteria violations. The Project is located in Dublin and Cromwell Townships, Huntingdon County, and Fannett Township, Franklin County, Pennsylvania. A depiction of the general location of the Project on a topographic overlay is available in **Exhibit 1**. A depiction of the general layout for the Project on an aerial overlay is available in **Exhibit 2**.

19. The Shade Gap-Aspen 115 kV Transmission Line is approximately 7.2 miles in length and is located within an existing approximately 100-foot-wide right-of-way ("ROW"). MAIT proposes installing 1033 kcmil 54/7 ACSR conductor and optical ground wires ("OPGW") in the static wire position.

20. The Project includes the installation of 58 new structures. Structure replacements will primarily be like-for-like, with some structures being adjusted along centerline to optimize span lengths as part of the design and optimize structure locations to meet all clearances and strength usages. One additional structure was determined necessary to avoid clearance concerns, proposed structure #1, which is located on private property between the Shade Gap Substation and

the first structure of the line outside of the Shade Gap Substation. The proposed average structure height will be approximately 65 feet, and the proposed span length will be approximately 700 feet.

21. The proposed structure types are: (1) steel suspension horizontal two pole structures, angles 0 to 5 degrees and approximately 50 to 77 feet in height, as depicted in **Exhibit 3**; and (2) steel deadend vertical single pole structures, angles 45 to 60 degrees and approximately 72 feet in height, as depicted in **Exhibit 4**.

22. If approved, pre-outage construction of the Shade Gap-Aspen Rebuild Project is anticipated to begin on or about June 22, 2026 and planned to be placed in service by December 10, 2026.

23. The estimated total cost of the proposed Project is approximately $19,258,000.[5] A breakdown of Project costs is as follows:

Estimated Total Costs:

Transmission Line Engineering	$1,290,000
Transmission Line Materials	$2,646,000
Transmission Line Construction	$14,012,000
Substation	$1,310,000[6]
Total	$19,258,000

The cost of the Project will be paid for by MAIT. All transmission lines will be owned, operated, and maintained by MAIT.

III. HEALTH AND SAFETY

24. The proposed lines will not create any unreasonable risk of danger to public health or safety. The electrical design for the proposed Project is based upon a nominal phase-to-phase operating voltage of 115,000 volts (or 115 kV). The Project will be designed to meet or exceed

[5] All costs are network costs.
[6] The substation costs consist of approximately $251,000 for engineering, $242,000 for materials, and $817,000 for construction.

all requirements of the latest revision of the National Electrical Electric Code ("NESC") under all operating conditions as well as current MAIT design criteria.

25. MAIT's design criteria states that 115 kV transmission lines shall have a designed vertical conductor-to-ground clearance of 26 feet. This design value exceeds the NESC minimum of 20.1 feet by a margin of 5.9 feet. In general, MAIT design clearance criteria exceed NESC minimums by various margins, ranging from 2 to 7 feet or more, depending on the voltage and specific objects. The proposed 115 kV transmission line maximum operating temperature will be 392 degrees Fahrenheit.

26. When evaluating transmission design criteria and the location of structures with respect to the edge of the ROW, an array of parameters must be considered. These include structure type, conductor size, stringing tension, conductor motion, line voltage, and NESC-defined weather conditions. The proposed transmission line will be designed to ensure all applicable NESC conductor clearances to the edge of the ROW will be met, as well as MAIT design criteria.

27. The design, construction, and operation of the Project will meet or exceed all applicable safety standards established by the Occupational Safety and Health Administration. Moreover, the Project will be constructed following MAIT's standard construction practices to perform all work safely. All work will also be performed in accordance with the NESC and all other applicable state and federal requirements.

IV. DESCRIPTION OF THE RIGHT-OF-WAY

28. The existing ROW width is 100 feet, and the Project utilizes existing ROW without expansion or substantial alteration of the same. While the majority of the existing easements support the Project as proposed regarding MAIT's right to replace existing structures, most of the

existing easements were limited to wood poles only. MAIT has successfully obtained all necessary supplemental easements to allow for the use of steel poles. No ROW expansion is planned, and no new easements for new ROW are needed to support the Project. Structures will be installed in generally the same location along centerline. Where structures are proposed to shift based on design requirements, landowners have been notified. One structure, proposed structure #1, will be installed on a property that does not currently have a structure. MAIT will not be increasing the number of structures on any property that currently has MAIT-owned structures on them. MAIT will coordinate with all affected landowners for temporary access to support construction as needed.

29. Upon completion of this Project, the anticipated ratings of the Shade Gap-Aspen 115 kV Transmission Line will increase from a 133/160 MVA (Summer Normal/Summer Emergency) rating to a 273/333 MVA (Summer Normal/Summer Emergency) rating.

30. Implementation of advanced technologies was considered as part of this Project. OPGW will be installed as part of this Project to create a new fiber pathway from the Shade Gap Substation to the Aspen Substation. The use of OPGW will allow for telecommunication and lightning protection. OPGW enhances power system monitoring, protection, and control through high-speed data transmission. It provides real-time data exchange for system protection schemes and supervisory control and data acquisition, improving system reliability and operational flexibility. OPGW offers a reliable communication path with minimal maintenance and enables critical power functions like remote monitoring, fault detection, and real-time data communication.

V. LAND USE AND ENVIRONMENTAL EVALUATION

31. As explained above, construction of the proposed Project will take place entirely within the existing ROW. Therefore, it is anticipated that the proposed Shade Gap-Aspen Rebuild

Project will have minimal incremental impacts on land use in the area.

32. A field review for wetlands and streams in the Project Area was conducted by CEC and a copy of the Waters Delineation Report is included as **Exhibit 7**. The field investigation identified 34 wetlands and 23 streams within the Project Area. Temporary stream, floodway, and wetland impacts associated with construction and access were minimized to the greatest extent practical through engineering design and construction and access planning. Timber matting will be utilized to minimize potential impacts to wetlands and streams. Existing access roads will be used to the maximum extent practicable and non-existing roads and work areas are expected to be temporary and will be restored to original vegetative cover upon completion of the Project. No tree clearing is anticipated in the ROW. Off ROW road access will require pruning brush and overhanging tree canopies.

33. An Individual National Pollutant Discharge Elimination System Permit and a Pennsylvania Wetland and Waterbody Obstruction and Encroachment General Permit will be prepared and submitted for approval. Stream and wetland crossings will be covered under the PA Chapter 105 Waiver 3 for Utility Crossings and General Permit 8 for Temporary Access Roads. The pole construction, workspaces, laydown yard, and access roads are included in these permits.

34. MAIT will implement appropriate measures during construction, and through the subsequent operation of the Project, to avoid or minimize potential impacts to environmental resources. MAIT will obtain the relevant state and federal permits needed to construct the Project. An erosion and sedimentation control plan will be submitted for approval to the Pennsylvania Department of Environmental Protection and, as necessary, the Huntington and Frankly County Conservation Districts. Best management practices for soil erosion measures and sedimentation

control will be put in place prior to any earth disturbance. Construction access routes will be installed in accordance with the approved soil erosion and sedimentation control plan.

35. A PNDI review was conducted for the proposed Project, and a copy of the PNDI Report Receipt is included as **Exhibit 8**. The review noted further consultation was required with the DCNR, USFWS, PGC and PFBC.

36. Additional information was provided to the DCNR, and in a response dated March 18, 2025, the DCNR provided Project concurrence with a finding of "No Impact Anticipated." A copy of the DCNR concurrence letter is included as **Exhibit 9**.

37. Similarly, the USFWS responded with a concurrence letter dated November 20, 2024, stating that the Project was not likely to adversely affect federally listed species in the Project area. A copy of the USFWS concurrence letter is included as **Exhibit 10**.

38. The PFBC responded to the PNDI with potential impacts to Timber Rattlesnake (*Crotalus horridus*), Spotted Turtle (*Clemmys guttata*), and Woodland Box Turtle (*Terrapene carolina*). Riveredge Environmental Inc. performed presence/absence surveys for these species and a report was submitted to the PFBC on June 18, 2025. In a response dated August 13, 2025, the PFBC provided mitigation requirements to prevent potential impacts to the Timber Rattlesnake. A copy of the PFBC concurrence letter is included as **Exhibit 11**.

39. The PGC responded to the PNDI with potential impacts to Allegheny Woodrat (*Neotoma magister*). A habitat and presence/absence survey was performed and the results submitted to PGC in March 2025. In a response dated September 29, 2025, the PGC provided mitigation requirements to prevent potential impacts to the Allegheny Woodrat. A copy of the PGC concurrence letter is included as **Exhibit 12.**

40. Consultation with the SHPO was initiated on April 2, 2025. A copy of the SHPO

concurrence letter dated April 30, 2025, is included as **Exhibit 13**.

VI. NOTICE

41. MAIT has provided information regarding the Project to representatives of Dublin and Cromwell Townships, the Huntingdon County Conservation District, the Huntingdon County Planning Commission, Fannett Township, the Franklin County Conservation District, and the Franklin County Planning Commission. These entities have not objected to the proposed Project. Copies of the Letter of Notification will be served upon all state agencies, federal agencies, county agencies, municipalities, and landowners in accordance with 52 Pa. Code § 57.72(d)(3). A list of the same entities or landowners impacted or potentially impacted by this Project is provided in **Exhibit 14**.

VII. LETTER OF NOTIFICATION

42. MAIT is proceeding by means of a Letter of Notification, instead of a full Application, pursuant to the Commission's regulations at 52 Pa. Code § 57.72(d)(1)(i) and (d)(1)(v).

43. The proposed Project involves the removal of 57 structures and wire, the installation of 58 structures, and the construction of approximately 7.2 miles of new conductor within the existing transmission line ROW. As such, the Project meets the parameters of 52 Pa. Code § 57.72(d)(1)(i) for a high voltage line proposed to be located entirely on existing transmission line ROW, as well as the parameters of § 57.72(d)(1)(v) for a high voltage line which is to be reconductored or reconstructed, so long as the size, character, design or configuration of the proposed high-voltage line does not substantially alter the ROW.

44. This Letter of Notification is filed on the date set forth below. As provided in 52 Pa. Code § 57.72(d)(5), the Commission will review and, by order, approve or disapprove this

Letter of Notification. If the Commission approves this Letter of Notification, the proposed Project will be constructed as proposed herein without the formal application process set forth at 52 Pa. Code §§ 57.71, *et seq*.

WHEREFORE, Mid-Atlantic Interstate Transmission, LLC respectfully requests that the Pennsylvania Public Utility Commission review and approve the proposed Shade Gap-Aspen Rebuild Project located in Dublin and Cromwell Townships, Huntingdon County, and Fannett Township, Franklin County, Pennsylvania, which is explained above and in the Exhibits attached hereto, on or before the Public Meeting scheduled for June 18, 2026.



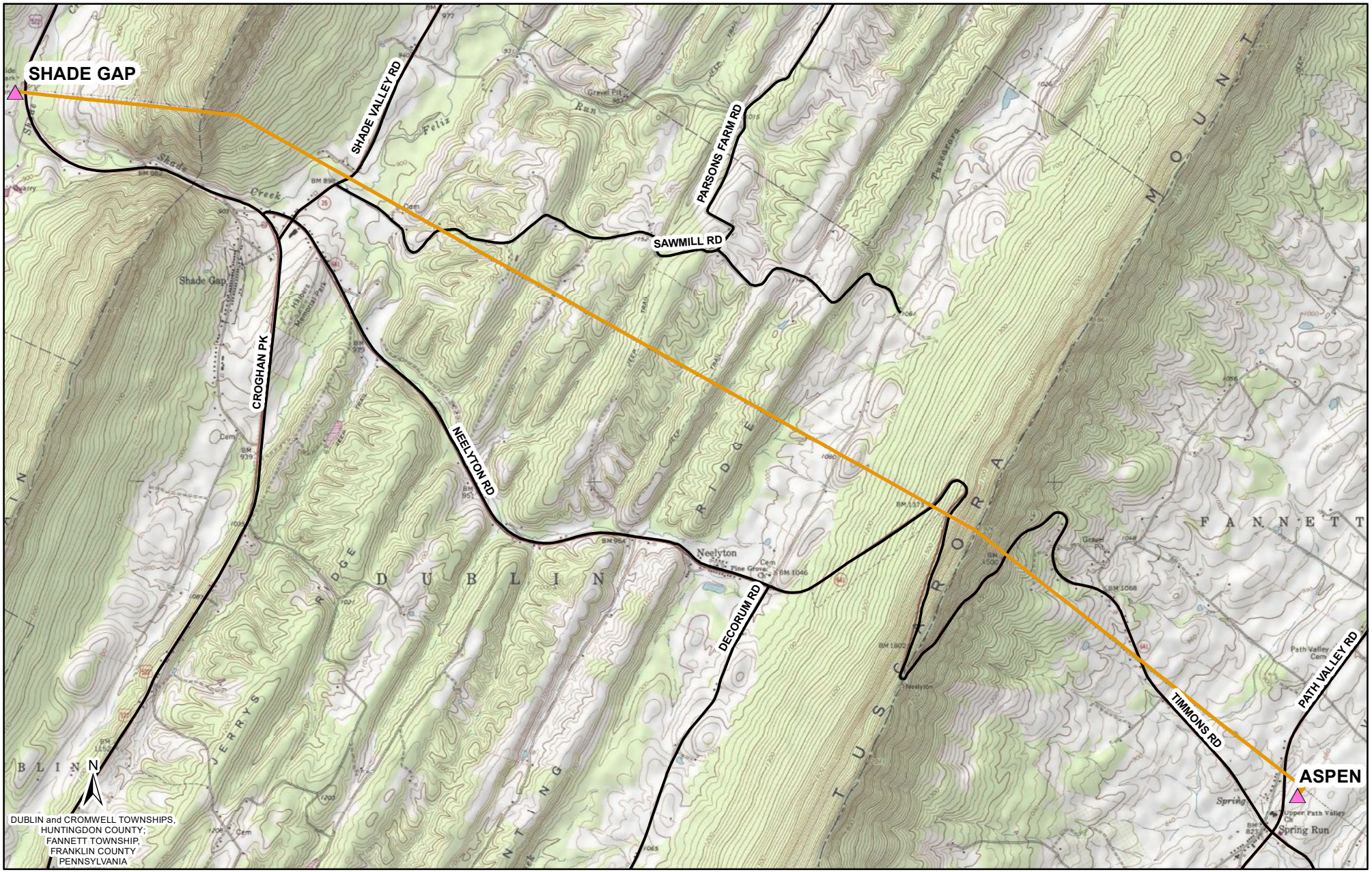
Tori L. Giesler (ID #207742)
FirstEnergy Service Company
341 White Pond Drive
Akron, OH 44320
Phone: (610) 921-6658
Email: tgiesler@firstenergycorp.com

David B. MacGregor (ID #28804)
Garrett P. Lent (ID #321566)
Megan E. Rulli (ID # 331981)
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601)
Phone: (717) 731-1970
Fax: (717) 731-1985
E-mail: dmacgregor@postschell.com
E-mail: glent@postschell.com
Email: mrulli@postschell.com

Attorneys for Mid-Atlantic Interstate Transmission, LLC

Date: March 20, 2026

Exhibit 1



LEGEND:

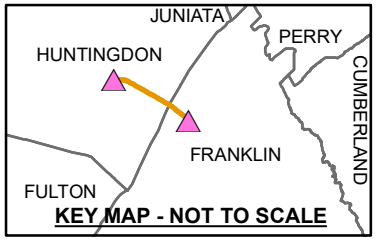
- Substation
- Existing 115 kV Transmission Line
- Roads

0 0.5 1

Miles

Reference:
USGS Topographical Overlay; PennDOT

Coordinate System:
NAD 1983 StatePlane Pennsylvania North FIPS 3702 Feet
Projection: Lambert Conformal Conic; Units: Foot US



KEY MAP - NOT TO SCALE

EXHIBIT 1

MAIT™
Mid-Atlantic Interstate Transmission LLC
A FirstEnergy Company

Shade Gap-Aspen 115 kV Transmission Line Rebuild Project

Exhibit 2

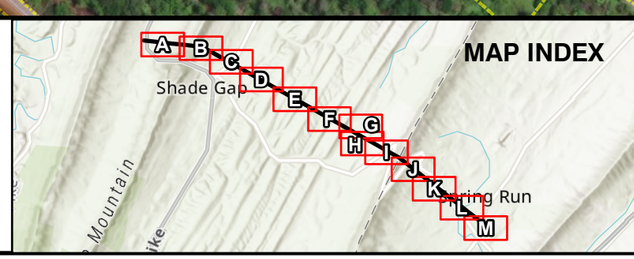


REFERENCES:

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)



CEC
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2A
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

DO-RIGHT PARTNERS
5045.000000000000000

STOLTZFUS JOHN GLEN
5202.000000000000000

CROMWELL TOWNSHIP

DUBLIN TOWNSHIP

G & S LOGGING
5221.000000000000000

MEYER RONALD
5204.000000000000000

HARCLERODE ROGER E & JANE C

5 5 6 6 7 7 8 8 9 9 10 10 11 11 12 12

REFERENCES:

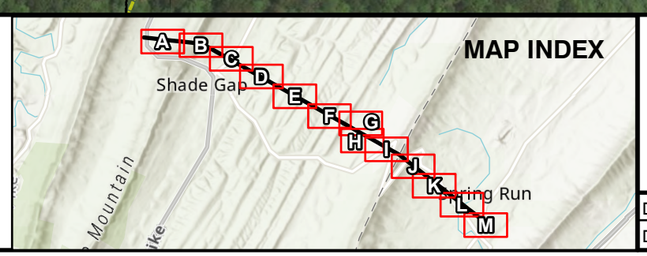
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2B
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

G & S LOGGING
5221.000000000000000

PARSON RICHARD W
5223.000000000000000

FENBY MARK W
5237.000000000000000

FENBY MARK W
5222.000000000000000

PARSON WILLIAM R & MARY C
5386.000000000000000

CRAMER SHANNON L
5508.000000000000000

DERSTINE JUSTIN L
5387.000000000000000

DERSTINE JUSTIN L
5388.000000000000000

JOHNSON GARY R ETAL
5224.000000000000000

PULGAR KRISHNA CARLOTA ETAL
5518.000000000000000

LAKE MICHAEL ALLEN
5389.000000000000000

MCMATH THOMAS L & LINDA J
5394.000000000000000

FISH KENNETH L
5254.000000000000000

HOFFMAN RICHARD E
5519.000000000000000

WALTERS ERIC D
5509.000000000000000

MCMATH THOMAS L & LINDA J
5393.000000000000000

WEST CHARLES
5392.000000000000000

GREENLAND WILLIAM G
5260.000000000000000

GIBBONS SHAWN P
5510.000000000000000

DUBLIN TOWNSHIP

Shade Valley Rd

Taylor Rd

Sawmill Rd

Shade Creek

Felix Run

12 13 14 15 16

REFERENCES:

1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024

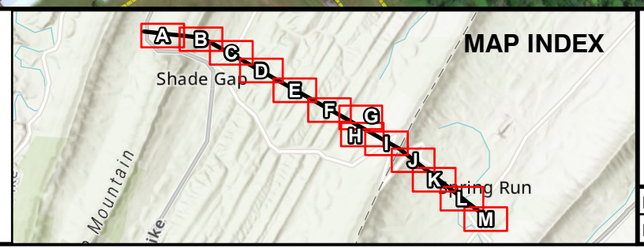
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2C
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

WALTERS JASON A
5391.000000000000000

ICMATH THOMAS L & LINDA J
5393.000000000000000

WEST CHARLES
5392.000000000000000

WALTERS
5395.000000

CLARK ARTHUR C JR & PATTI ANN
5404.000000000000000

VALLEY RURAL ELECTRIC COOP INC
5405.000000000000000

BAER DENNIS F
5406.000000000000000

DUBLIN TOWNSHIP

SHONTZ CHARLES H III & EDELTRAUD
5515.000000000000000

MUSSER MICHAEL
5514.000000000000000

PARK TRAVIS A
5512.000000000000000

GRANT LEE E & DONNA JEAN
5513.000000000000000

CISNEY DAVID W
5421.000000000000000

Sawmill Rd

Cisney Ln

16 17 17A 18 19 20 21

REFERENCES:

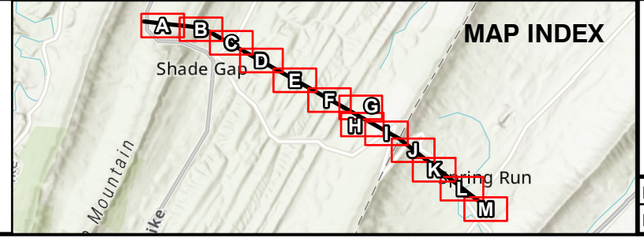
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2D
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

21

MPLE JAMIE L
000000000000000

REVERCOMB ROBERT O III & MARIA
5429.000000000000000

22

22

5427.000000000000000

NAGEL CHRISTOPHER A & CHERYL M
5428.000000000000000

23

23

24

24

DUBLIN TOWNSHIP

25

25

LAKE-SCOTT RHONDA L
5467.000000000000000

26

26

SHOOP CLOYD A & SHIRLEY L
5493.000000000000000

27

27

ZOOK JACOB L
5492.000000000000000

SCALE IN FEET
0 250 500

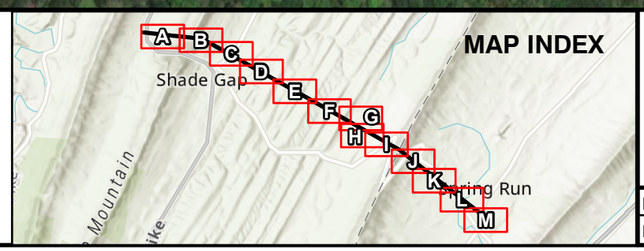
REFERENCES:

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2E
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

BANKS RUTH C
5494.000000000000000

KNOLL JAMES
5495.000000000000000

RORER RANDALL D ETAL
5430.000000000000000

STRAUSNER MARJORIE & CARL F
5432.000000000000000

MURTHA MICHAEL JAMES
5497.000000000000000

PROBST KENNETH H & EVELYN R ET AL
5498.000000000000000

BROTHERS KEVIN B
5496.000000000000000

ROCKWOOD EARL ALBERT II
5507.000000000000000

PROBST KENNETH H & EVELYN R ETA
5506.000000000000000

MONTAGUE LEIRWYN L SR
5471.000000000000000

Fawn Ln

Fawn Ln

Deer Dr

DUBLIN TOWNSHIP

26 27 27 28 28 29 29 30 30 31 31 32 32

REFERENCES:

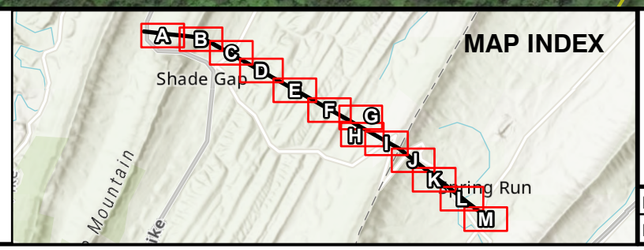
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2F
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

Mt Foot Rd

Mt Foot Rd

Mt Foot Rd

SNIDER TYLER J
5528.000000000000000

DUBLIN TOWNSHIP

ROBINSON CARL R ETAL
5664.000000000000000

31
31
32
32
33
33
34
34
35

REFERENCES:

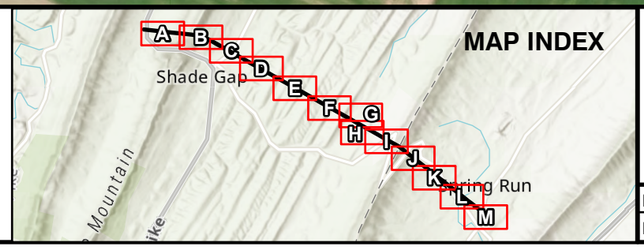
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2G
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

ROBINSON CARL R ETAL
5664.000000000000000

SMITH JAMES ROBERT
5531.000000000000000

Mt Foot Rd

DUBLIN TOWNSHIP

33 34 34 35 35 36 36 37 37 38

REFERENCES:

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2H
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

SMITH JAMES ROBERT
5531.000000000000000

DAY MARSHALL A & DAY TRESSIA S
07-0B22.-002A-000000

DUBLIN TOWNSHIP

FANNETT TOWNSHIP

Spring Run Rd

641

37 37 38 38 39 39 40 40 41 41

REFERENCES:

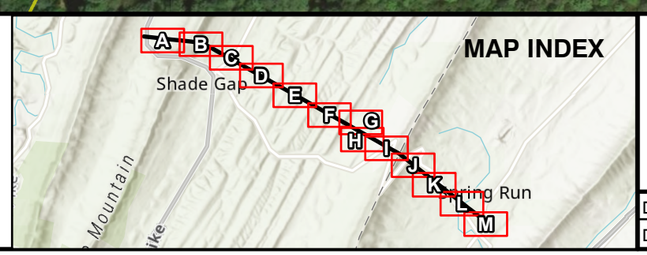
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2I
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

DUBLIN TOWNSHIP

FANNETT TOWNSHIP

41 41 41A 41A 42 42 43 43 44 44 45 45

Spring Run Rd

641

MAXINE F ETAL STEWART
07-0B23.-038.-000000

PETRAZIO BRANDON
07-0B23.-037.-EX0000

PETRAZIO BRANDON
07-0B23.-036A-000000

PETRAZIO BRANDON
07-0B23.-036.-000000

PETRAZIO BRANDON
07-0B23.-054.-000000

COBLE SHIRLEY A
07-0B23.-078.-000000

BOLDING MICHAEL E & BOLDING JULIE K
07-0B23.-080B-000000

BOLDING MICHAEL E & BOLDING JULIE K
07-0B23.-080A-000000

SCOFIELD RACHAEL L
07-0B23.-084.-000000

BOGGS DAVID L
07-0B23.-034B-000000

BOGGS DAVID L
07-0B23.-091.-000000

MORTON BRENT E & MORTON DENISE A
07-0B23.-035.-000000

MICHAEL J ETAL MCMULLEN
07-0B22.-003.-000000

KECKLER STEPHEN
07-0B23.-033B-000000

BAIR GEORGE W & BAIR GERTRUDE B
07-0B23.-056.-000000

SHATZER LARRY J & SHATZER DEBORAH S
07-0B23.-033.-000000

BLOOM SANDRA D
07-0B22.-006.-000000/02

GIPE CHARLES & GIPE VALERIE
07-0B23.-001A-000000

SNYDER CALVIN G & SNYDER ROBYN F
07-0B23.-034.-000000

DEVINNEY CARL E
07-0B23.-032.-LO0000

DEVINNEY CARL E
07-0B23.-032.-000000

BLOOM SANDRA D
07-0B22.-006.-000000

PEPPERNICK SHARON E
07-0B23.-031.-000000

YOHN CHARLES D & YOHN MARTHA L
07-0B23.-058.-000000

SEVILLE GERALD R
07-0B23.-081.-000000

COFFMAN PAUL B & STACY S III COFFMAN
07-0B23.-030B-000000

WBAKER BARRY R & HAWBAKER TERESA D
07-0B22.-005.-000000

Kling Rd

Dry Run Rd W

Spring Run R

SCALE IN FEET
0 250 500

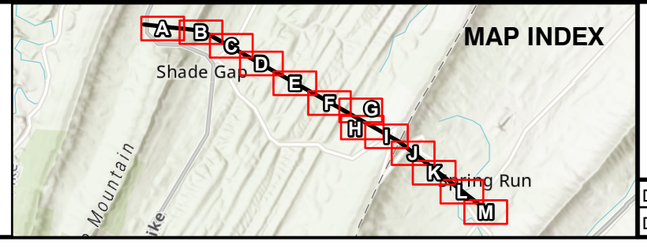
REFERENCES:

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO: E-2J
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310	

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

YOHN CHARLES D & YOHN MARTHA L
07-0B23.-058.-000000

SEVILLE GERALD R
07-0B23.-081.-000000

SHATZER BETTY K
07-0B23.-030A-000000

CIARROCCA JOHN P & CIARROCCA PHYLLIS
07-0B23.-042.-000000

COFFMAN PAUL B & STACY S III COFFMAN
07-0B23.-030B-000000

MCCLURE CARL R & MCCLURE DARLENE A
07-0B23.-025A-000000

SHATZER BETTY K
07-0B22.-008.-000000

JOHNSON LAWRENCE
07-0B23.-063.-LO0000

JOHNSON LAWRENCE E
07-0B23.-063.-000000

GIPE RANDY E & GIPE JANICE
07-0B23.-026A-000000

GIPE RANDY E & GIPE JANICE
07-0B23.-026.-000000

O'DONNELL HAROLD L
07-0B23.-027A-000000

COFFMAN PAUL B & STACY S III COFFMAN
07-0B23.-059.-000000

MCGEE TINA R
07-0B23.-029.-000000

MCCLURE DARLENE A
07-0B23.-025.-000000

SHOOP BILL F
07-0B23.-082.-000000

FRIESE KIM L
07-0B23.-101.-000000

SHOOP BOB E & SHOOP LAURIE A
07-0B23.-094.-000000

SHATZER LARRY J & SHATZER DEBORAH S
07-0B23.-083.-000000

FRIESE KIM L
07-0B23.-030.-000000

FANNETT TOWNSHIP

BENSON MARLENE & BENSON FRED
07-0B23.-028.-000000

JOHNSON DREW W &
07-0B28.-089

PECHART SANDRA ETAL
07-0B23.-027.-000000

COONS EDWARD M & COONS CONNIE L
07-0B28.-001.-000000

Shatzer Rd

Spring Run Rd

641

44 45 46 47 48 49 50

REFERENCES:

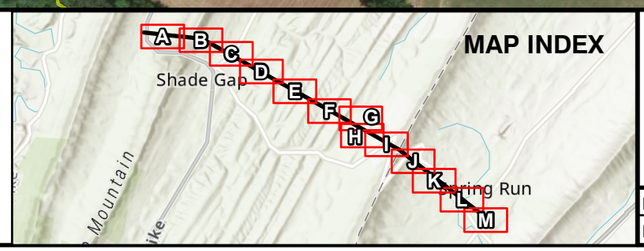
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

SCALE IN FEET
0 250 500

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2K
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

EDWARD M & COONS CONNIE L
07-0B28.-001.-000000

Spring Run Rd

JOHNSON DAWN H & JOHNSON DREW W
07-0B28.-003.-000000

50

50

MURRAY JASON P & MURRAY MELISSA R
07-0B28.-051.-000000

NAUGLE BENJAMIN F & NAUGLE TASHA L
07-0B28.-077.-000000

51

51

RAYMOND R SR RUPERT
07-0B28.-069.-000000

SEIBERT FRED W & SEIBERT PAULINE J
07-0B28.-043.-000000

REEDER TAMMY
07-0B28.-003B-000000

Junkin Rd

JOHNSON DAWN H & JOHNSON DREW W
07-0B28.-004.-000000

GIPE GUY M & GIPE SARAH M
07-0B28.-068.-000000

GIPE GUY M & GIPE SARAH M
07-0B28.-003A-000000

TMIRE BRENDA S
327.-001B-000000

Spring Run Rd

FANNETT TOWNSHIP

GIPE GUY M & GIPE SARAH M
07-0B28.-032.-000000

52

52

Junkin Rd

TA M

TAYLOR DONALD L & TAYLOR JOYCE H
07-0B28.-004A-000000

53

53

CLARK CHARLES S & CLARK LINDA D
07-0B28.-020B-000000

SEIBERT FREDERICK W & SEIBERT PAULINE ETAL
07-0B28.-029.-000000

COUCH JARED C
07-0B28.-057.-0000

NORTH KENNETH E
07-0B28.-028.-000000

54

54

ROBINSON JASON L
07-0B28.-027.-000000

Spring Run Rd

641

LAKJER ANDREW B & LAKJER VALERIE J
07-0B28.-027A-000000

55

55

ROBINSON DOTTY M

SCALE IN FEET
0 250 500

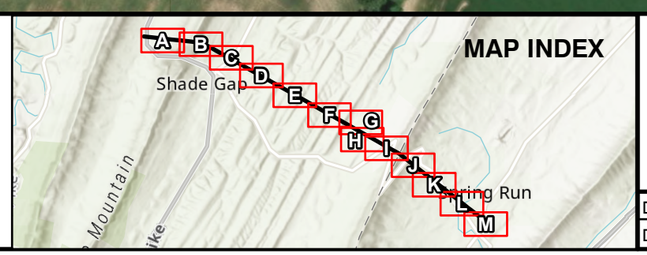
REFERENCES:

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA DOWLOADED: 2024

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2L
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

NORTH

LAKJER ANDREW B & LAKJER VALERIE J
07-0B28.-027A-000000

LAKJER PHILIP R
07-0B28.-080.-000000/02

PRESBYTERIAN CHURCH
07-0B28.-082.-000000

ROBINSON DOTTY M
07-0B28.-027B-000000

Path Valley Rd

Spring Run Rd

55

55

ROBINSON JASON LEE
07-0B28.-064.-000000

56

56

MCCARTNEY MICHAEL F & MCCARTNEY LISA A
07-0B28.-005B-000000

HAMMOND JAY F & HAMMOND CHERYL G
07-0B28F-002.-000000

HAMMOND JAY F & HAMMOND CHERYL G
07-0B28F-003.-000000

75

SCHOEN GREGORY R
07-0B28.-038.-000000

641

JOSEPH J JR TRAXLER
07-0B28F-003A-000000

Main St

LAKJER PHILIP R
07-0B28.-086.-000000

57A

GOSHORN HAROLD T &
GOSHORN LUCY M
07-0B28F-005.-000000

SNYDER RYAN J & SNYDER ELIZABETH
07-0B28.-041.-000000

FREHN CARLA J
07-0B28.-020A-000000

FANNETT TOWNSHIP

SUGAR CAMP HOLLOW INVESTMENTS
07-0B28F-007.-000000/02

ASPEN
SUBSTATION

SNYDER JOHN & SNYDER ELIZABETH A
07-0B28.-026B-000000

75

PRESBYTERIAN UPPER PATH VALLEY
07-0B28.-021.-000000

Spring Run Rd

Main St

FERRY ALAN R & FERRY ELEANOR C
07-0B28.-018.-000000

PRESBYTERIAN CHURCH
07-0B28F-008.-EX0000

LAKJER ANDREW B & LAKJER VALERIE J
07-0B28.-042.-000000

CHILCOTE BRYCE L
07-0B28.-072.-000000

CROUSE RUTH A
07-0B28.-073.-000000

MCGEE GARY J & MCGEE M KATHRYN
07-0B28K-001.-000000

JUNIATA VALLEY BANK
07-0B28.-037A-000000

EDWIN L II ROYER
07-0B28K-003.-000000

YUSSUF A ETAL IBRAHIM
07-0B28K-019.-000000

Main St

LAKJER ANDREW
07-0B28.-037.-000000

LAKJER ANDREW B
07-0B28.-087.-000000

Market

YUSSUF A ETAL IBRAHIM
07-0B28K-018.-000000

West Dry Run

LEAR GARRETT J & LEAR OLIVIA A
07-0B28.-076.-000000

Dry Run Rd S

SCALE IN FEET
0 250 500

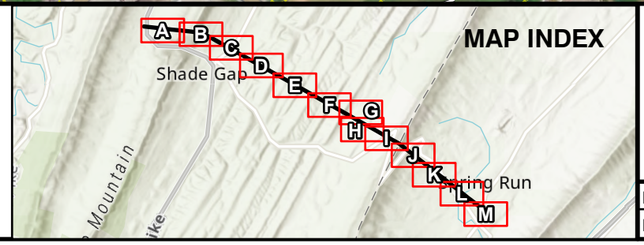
REFERENCES:

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE
   ACCESSED 06/05/2024
2. REAL ESTATE PORTAL USA, LLC PARCEL DATA FOR
   HUNTINGDON & FRANKLIN COUNTIES, PENNSLYVANIA
   DOWLOADED: 2024

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- CENTERLINE
- PROPERTY PARCEL
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- ASPEN SUBSTATION
- EXISTING ROW (100 FT.)

MAP INDEX



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

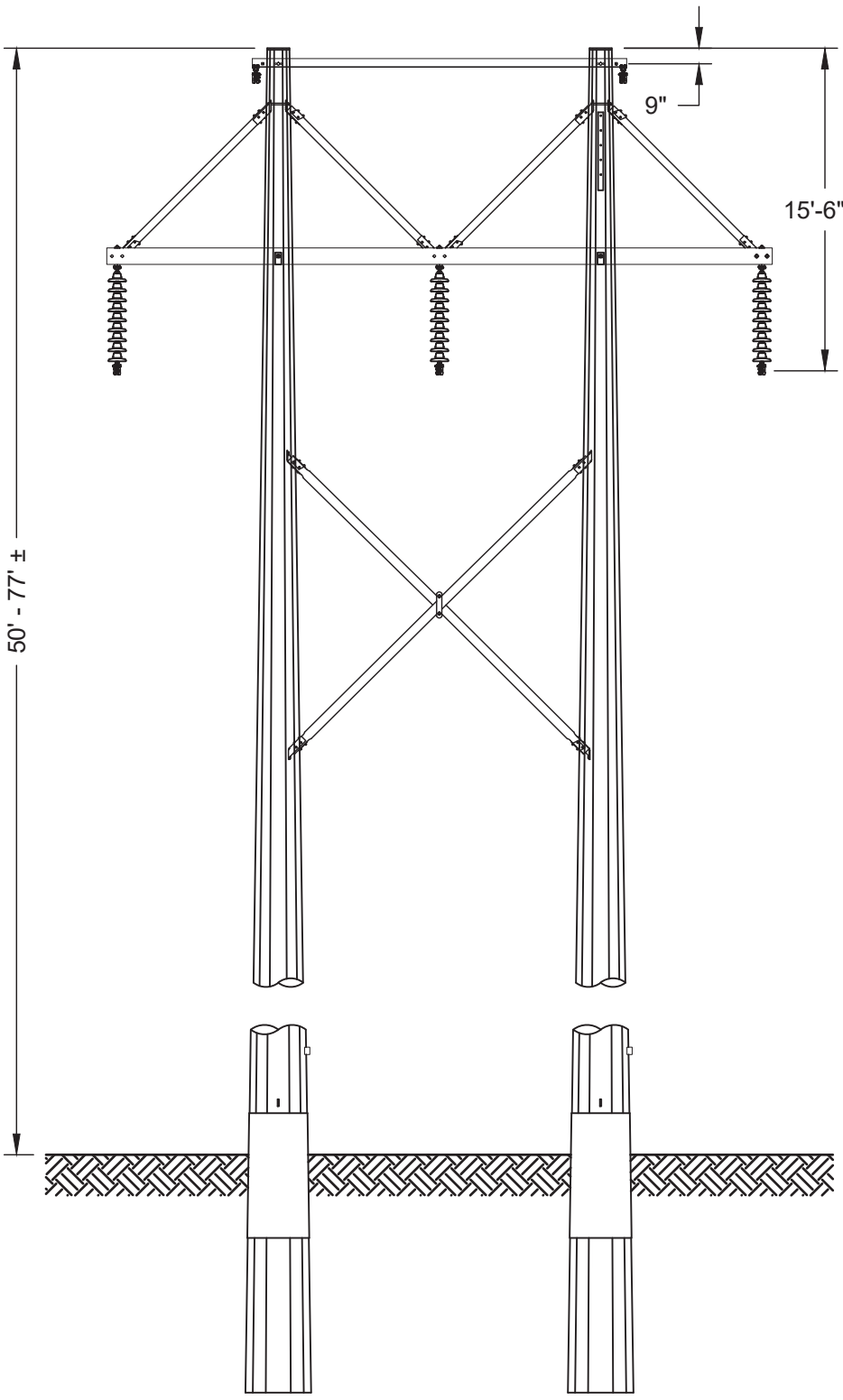
EXHIBIT 2

DRAWN BY:	NTP/SML	CHECKED BY:	MRM	APPROVED BY:	TCC*	FIGURE NO:	E-2M
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC02_Shade_Gap_Roxbury_Ortho_Map\341310_EC02_Shade_Gap_Roxbury_Ortho.aprx 2/27/2026 1:16 PM (ccyprych)

Exhibit 3



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

SHADE GAP–ASPEN 115 kV
TRANSMISSION LINE REBUILD PROJECT

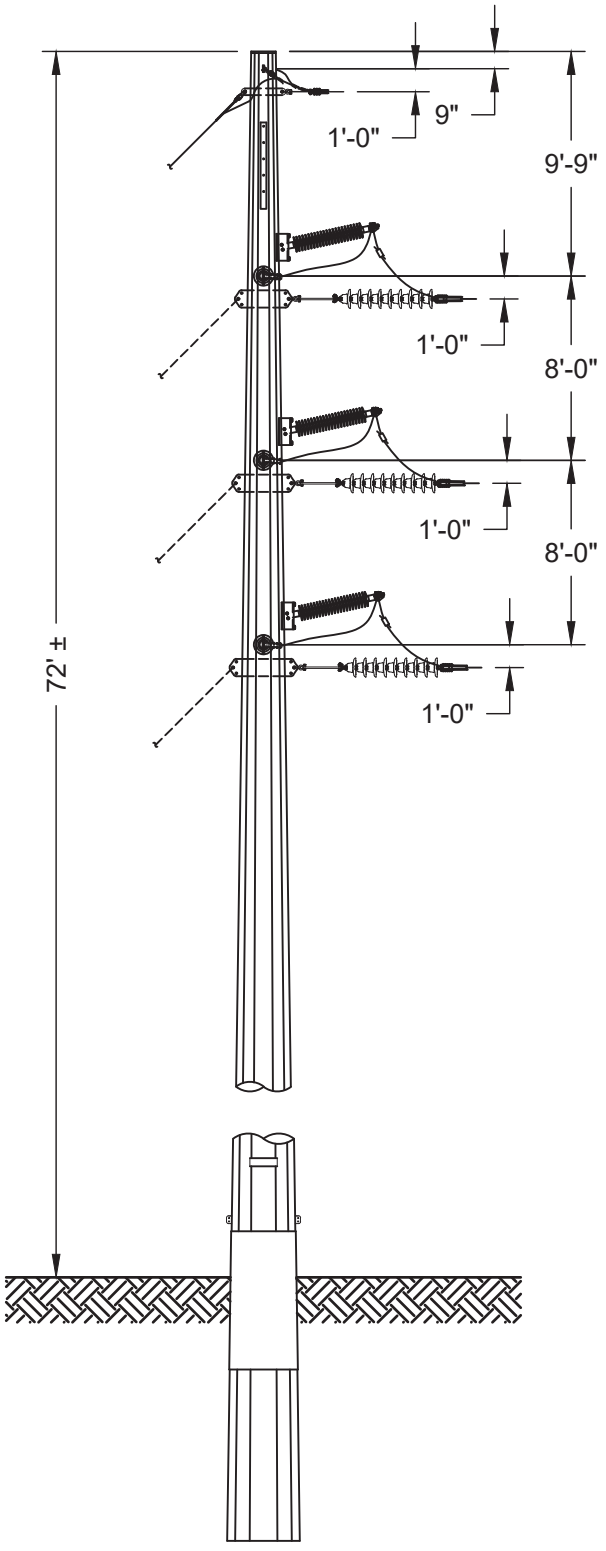
115 kV SUSPENSION HORIZONTAL
TWO POLE STRUCTURE
ANGLES 0° TO 5°

EXHIBIT 3

PAPER SIZE: 8.5X11

SCALE: NTS

Exhibit 4



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

SHADE GAP–ASPEN 115 kV
TRANSMISSION LINE REBUILD PROJECT

115 kV DEADEND VERTICAL
SINGLE POLE STRUCTURE
ANGLES 45° TO 60°

EXHIBIT 4

SCALE: NTS

PAPER SIZE: 8.5X11

Exhibit 5

Penelec Transmission Zone: Baseline

Process Stage: First Review

Criteria: Summer and Winter Generation Deliverability

Assumption Reference: 2027 RTEP assumption

Model Used for Analysis: 2027 RTEP Summer and Winter cases

Proposal Window Exclusion: Below 200 kV Exclusion

Problem Statement: the AE1-071 - Shade Gap 115 kV line is overloaded several contingencies.

Violations were posted as part of the 2022 Window 1:

FG# - 2 Summer flowgates,

FG# - 38 Winter flowgates,

Existing Facility Rating: 133SN/160E, 150WN/190WE MVA

Proposed Facility Rating: 273SN/333SE, 309WN/395WE MVA

Proposed Solution:
Rebuild 7.2 miles of the Shade Gap - AE1-071 115 kV line section of the Roxbury - Shade Gap 115 kV line.

Estimated Cost: $17.43 M

Alternatives
N/A

Required In-Service: 6/1/2027

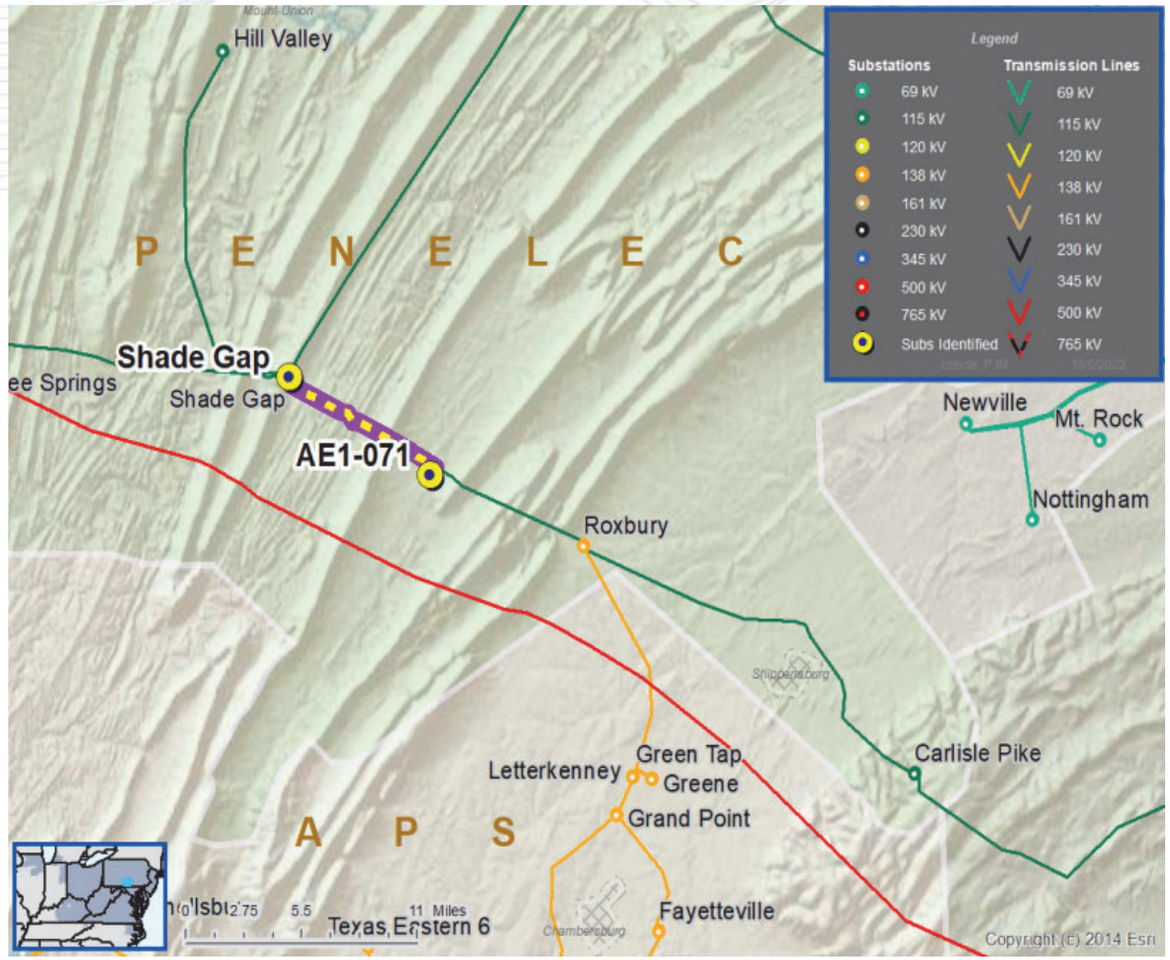


Exhibit 6

Penelec Transmission Zone: Baseline

Process Stage: Second Review
Criteria: Summer and Winter Generation Deliverability
Assumption Reference: 2027 RTEP assumption
Model Used for Analysis: 2027 RTEP Summer and Winter cases
Proposal Window Exclusion: Below 200 kV Exclusion
Problem Statement: the AE1-071 - Shade Gap 115 kV line is overloaded several contingencies.
Violations were posted as part of the 2022 Window 1:
FG# - 2 Summer flowgates,
FG# - 38 Winter flowgates,

Existing Facility Rating: 133SN/160E, 150WN/190WE MVA
Proposed Facility Rating: 273SN/333SE, 309WN/395WE MVA

Recommended Solution:
Rebuild 7.2 miles of the Shade Gap - AE1-071 115 kV line section of the Roxbury - Shade Gap 115 kV line. (B3752)

Estimated Cost: $17.43 M

Alternatives
N/A

Required In-Service: 6/1/2027
Projected In-Service: 6/1/2027

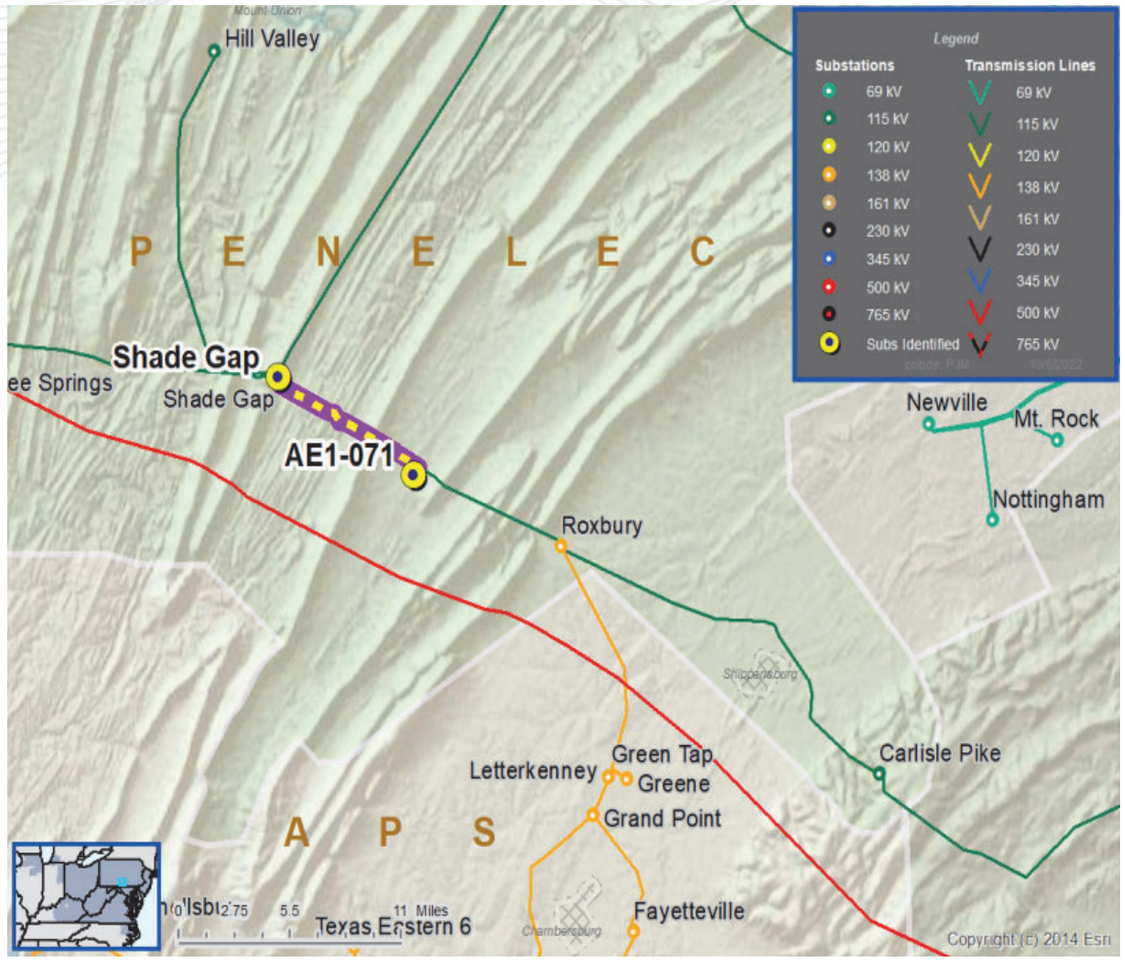


Exhibit 7

WATERS DELINEATION REPORT

SHADE GAP-ROXBURY LINE REBUILD
FANNETT, LETTERKENNY, AND LURGAN TOWNSHIPS, FRANKLIN COUNTY &
CROMWELL AND DUBLIN TOWNSHIPS, HUNTINGDON COUNTY, PENNSYLVANIA

Prepared For:

PENELEC, A FIRSTENERGY COMPANY
800 CABIN HILL DRIVE,
GREENSBURG, PA 15601

Prepared By:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
700 CHERRINGTON PARKWAY,
MOON TOWNSHIP, PA 15108

CEC Project 341-310

MAY 2025

TABLE OF CONTENTS

Page

1.0 Introduction 1

2.0 Methodology 2
- 2.1 Environmental Data Review 2
- 2.2 Field Methods 2
  - 2.2.1 Wetland Delineation 2
  - 2.2.2 Stream and Other Waters Delineation 5

3.0 Results 7
- 3.1 Environmental Data Review 7
- 3.2 Field Results 11
  - 3.2.1 Wetland Delineation 11
  - 3.2.2 Stream and Other Waters Delineation 14

4.0 Conclusions 17

5.0 Regulatory Considerations 19

6.0 Level of Care 21

7.0 References 22

TABLES

Table 1 Soils Information
Table 2 Wetlands Delineated
Table 3 Streams Delineated

FIGURES

Figure 1 Site Location Map
Figure 2 Environmental Data Review Map
Figure 3 Waters Delineation Map

APPENDICES

Appendix A Photographic Summary
Appendix B Wetland Determination Data Sheets
Appendix C Stream Data Forms

1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC) conducted a waters delineation of the Shade Gap to Roxbury Line project located in Fannett, Letterkenny, and Lurgan Townships, Franklin County as well as Cromwell and Dublin Townships, Huntingdon County, Pennsylvania (Figure 1). The proposed project includes the rebuild of an approximately thirteen-mile line from the Shade Gap Substation to the Roxbury Substation. This report includes the findings of a desktop data review and field delineation of current site conditions. The purpose was to identify, characterize, and delineate wetlands, streams, and other waters located within the area of interest (AOI). This report presents the methodology and findings.

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States (WOTUS) under Section 404 of the federal Clean Water Act (CWA), and the placement of structures in or over navigable waters under Sections 9 and 10 of the Rivers and Harbors Act of 1899. Navigable waters are those waters subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used, or have been used in the past, or may be susceptible to use in interstate or foreign commerce, as defined in 33 Code of Federal Regulations (CFR) 329.4. Federally jurisdictional WOTUS are defined in 33 CFR Part 328 as traditional navigable waters, their relatively permanent tributaries, wetlands adjacent with a continuous surface connection to jurisdictional waters, and certain other waterbodies (lakes, ponds, impoundments, and captured streams) if not isolated or otherwise categorically excluded. Wetlands, streams, and other waters that meet the guidelines contained in the Corps Manual, Regional Supplement, and/or exhibit ordinary high water marks (OHWM) might be subject to regulation by USACE as WOTUS as defined by 33 CFR 328.3(a).

2.0 METHODOLOGY

2.1 ENVIRONMENTAL DATA REVIEW

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

- U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps;
- U.S. Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) Soil Survey Geographic (SSURGO) Database;
- Federal Emergency Management Agency (FEMA) flood hazard data;
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI);
- National Hydrography Dataset (NHD);
- Aerial imagery from various sources; and
- Antecedent Precipitation Tool (APT).

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

2.2 FIELD METHODS

CEC performed a waters delineation to identify and delineate wetlands, streams, and other waters within the AOI. The following sections outline the field methods used to delineate these waters.

2.2.1 Wetland Delineation

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 2022); and
- *Field Indicators of Hydric Soils in the United States Version 8.2* (USDA-NRCS 2018).

CEC ecologists walked the AOI and collected data at representative locations within each plant community cover type and areas with potential water feature characteristics (e.g. localized depressions, converging slopes, evident hydrology, etc.). Data collected at each sampling point were recorded on USACE Wetland Determination Data Sheets. The sampling plan was modified as necessary if additional plant community cover types or potential water features characteristics 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 determine if soils met hydric soil indicators. Lastly, wetland hydrology indicators (e.g., surface water, high water table, saturation, etc.) were recorded, if present.

The 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 NWI classification system developed by the Federal Geographic Data Committee (2013) and Cowardin et al. (1979).

- **Palustrine emergent wetland (PEM):** rooted herbaceous and grass like plants which stand erect above the water or ground surface characterize this wetland class (excluding

mosses or lichens). Vegetation is present for most of the growing season in most years. Emergent wetlands include marshes, meadows, and fens.

- **Palustrine scrub-shrub wetland (PSS):** woody vegetation less than 20 feet tall dominate this wetland class. Plant species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. Scrub-shrub wetlands include shrub swamps and bogs.
- **Palustrine forested wetland (PFO):** woody vegetation 20 feet or taller dominate this wetland class. Forested wetlands generally include an overstory of trees, an understory of young trees and shrubs, and an herbaceous layer.
- **Palustrine unconsolidated bottom (PUB):** nontidal wetland lacking vegetation but is less than 8 hectare (20 acres) in size with a water depth in the deepest part of basin less than 2.5 meters (8.2 feet) at low water. Includes all wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6-7 centimeter), and a vegetative cover less than 30 percent.

If more than one Cowardin classification type was identified within a wetland, the boundary between the types was delineated. Wetland boundaries were recorded using a mapping-grade handheld Global Navigational Satellite System (GNSS) receiver capable of sub-meter accuracy.

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

2.2.2 Stream and Other Waters Delineation

Concurrent with the wetland delineation, CEC ecologists walked the AOI to identify streams and other waters. These waters were evaluated for the presence of an ordinary high water mark (OHWM) in accordance with USACE Regulatory Guidance Letter (RGL) No. 05-05: Ordinary High Water Mark Identification (USACE 2005), USACE *Interim National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams* (USACE 2022), and definitions under 33 CFR 328. As described in these OHWM guidance materials and 33 CFR 328.3(c)(4), an OHWM is established by a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Potential jurisdiction limits are delineated using OHWM indicators as weight of evidence including geomorphic (e.g. breaks in slope), transition of vegetation types, changes in sediment type, and other indicators demarcating the regular high flow surface water elevation (e.g. observed flow event, wrack, of leaf litter disturbed or washed away). The uppermost limit of an ephemeral stream was established where the stream loses its defined bed and bank or OHWM.

In addition, all watercourses, which include streams, are defined in Pennsylvania as "a channel or conveyance of surface water having defined bed and banks" (Pennsylvania Code 2022). The federal and state guidance were applied to determine the extents of streams.

For streams, physical and biological data were used to infer the stream's hydrologic flow regime, using a weight-of-evidence approach. CEC used field indicators such as flow, substrate composition, presence of defined bed and bank, origin of hydrologic sources, presence/absence of vegetation within the stream channel, and presence/absence benthic macroinvertebrates, fish, and other aquatic biota to classify onsite stream segments into one of three stream types:

- **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 located using GNSS receivers capable of 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

The USGS 7.5-minute topographic quadrangle and NHD stream layer identified multiple stream features within the AOI including Conodoguinet Creek, Pine Run, Dry Run, and Shade Creek. (Figures 1 and 2). The NWI data also identified several features within the AOI, including R2UBH, R5UBH, and R4SBC riverine features as well as PFOA1, PSS1A, PEM1A, and PUBHh wetland features (Figure 2). Eight floodplains listed as 1% annual chance flood hazard occur within the study area. The SSURGO data identified sixty-four (64) soil layers within the AOI (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
AgB	Allegheny loam, 3 to 8 percent slopes	Well Drained	Not Hydric
AnB	Andover gravelly loam, 3 to 8 percent slopes	Poorly Drained	Predominantly Hydric
As	Atkins silt loam	Poorly Drained	Predominantly Hydric
At	Atkins silt loam	Poorly Drained	Predominantly Hydric
BeB	Bedington channery silt loam, 3 to 8 percent slopes	Well Drained	Predominantly Not Hydric
BhC	Bedington channery silt loam, 8 to 15 percent slopes	Well Drained	Not Hydric
BkB	Berks channery silt loam, 3 to 8 percent slopes	Well Drained	Predominantly Not Hydric
BkC	Berks channery silt loam, 8 to 15 percent slopes	Well Drained	Predominantly Not Hydric
BlB	Blairton channery silt loam, 3 to 8 percent slopes	Well Drained	Predominantly Not Hydric
BlD	Berks-Weikert channery silt loams, 15 to 25 percent slopes	Well Drained	Predominantly Not Hydric
BMF	Berks-Weikert association, steep	Well Drained	Not Hydric

Soil Map Unit Symbol	Soil Map Unit Name	Drainage Class	Hydric Rating
BoB	Blairton silt loam, 2 to 8 percent slopes	Well Drained	Predominantly Not Hydric
BoC	Blairton silt loam, 8 to 15 percent slopes	Moderately Well Drained	Predominantly Not Hydric
BrB	Brinkerton silt loam, 3 to 8 percent slopes	Poorly Drained	Predominantly Hydric
BuB	Buchanan channery loam, 3 to 8 percent slopes	Well Drained	Predominantly Not Hydric
BuC	Buchanan channery loam, 8 to 15 percent slopes	Well Drained	Predominantly Not Hydric
BxD	Buchanan channery loam, 8 to 25 percent slopes, rubbly	Moderately Well Drained	Predominantly Not Hydric
CaB	Calvin shaly silt loam, 3 to 8 percent slopes	Well Drained	Not Hydric
CaC	Calvin shaly silt loam, 8 to 15 percent slopes	Well Drained	Not Hydric
DED	Dekalb and Hazleton soils, 3 to 25 percent slopes, rubbly	Well Drained	Not Hydric
DEF	Dekalb-Hazleton cobbly sandy loams, 25 to 75 percent slopes, rubbly	Well Drained	Not Hydric
EeC	Edom-Carbo silty clay loams, 8 to 15 percent slopes	Well Drained	Not Hydric
ElC	Elliber very cherty loam, 5 to 15 percent slopes	Well Drained	Not Hydric
ElD	Elliber very cherty loam, 15 to 30 percent slopes	Well Drained	Not Hydric
ErB	Ernest silt loam, 3 to 8 percent slopes	Well Drained	Predominantly Not Hydric
Fu	Funkstown silt loam	Well Drained	Not Hydric
HaB	Hagerstown silt loam, 3 to 8 percent slopes	Well Drained	Not Hydric
HaC	Hagerstown silt loam, 8 to 15 percent slopes	Well Drained	Not Hydric
HbB	Hagerstown-Carbo silty clay loams, 3 to 8 percent slopes	Well Drained	Not Hydric
HbC	Hagerstown-Carbo silty clay loams, 8 to 15 percent slopes	Well Drained	Not Hydric

Soil Map Unit Symbol	Soil Map Unit Name	Drainage Class	Hydric Rating
HcC	Hagerstown-Carbo silty clay loams, 8 to 15 percent slopes, very rocky	Well Drained	Not Hydric
HRD	Hazleton-Dekalb complex, 8 to 25 percent slopes, extremely stony	Well Drained	Not Hydric
HRF	Hazleton-Dekalb complex, 25 to 75 percent slopes, extremely stony	Well Drained	Not Hydric
HTD	Hazleton-Dekalb complex, 8 to 25 percent slopes, rubbly	Well Drained	Not Hydric
HTF	Hazleton-Dekalb association, steep	Well Drained	Not Hydric
HxC	Hublersburg cherty silt loam, 8 to 15 percent slopes	Well Drained	Not Hydric
Jg	Jugtown silt loam	Moderately Well Drained	Predominantly Not Hydric
LaC	Laidig gravelly loam, 8 to 15 percent slopes	Well Drained	Not Hydric
LcD	Laidig extremely stony loam, 8 to 30 percent slopes	Well Drained	Predominantly Not Hydric
LCE	Laidig and Hazleton soils, 25 to 60 percent slopes, extremely stony	Well Drained	Not Hydric
LDF	Laidig extremely stony loam, steep	Well Drained	Not Hydric
LhD	Lehew very channery fine sandy loam, 8 to 25 percent slopes, extremely stony	Well Drained	Not Hydric
Mb	Mauretown silt loam	Poorly Drained	Predominantly Hydric
MoB	Monongahela silt loam, 3 to 8 percent slopes	Moderately Well Drained	Predominantly Not Hydric
MrA	Murrill gravelly loam, 0 to 3 percent slopes	Well Drained	Not Hydric
MrB	Murrill gravelly loam, 3 to 8 percent slopes	Well Drained	Predominantly Not Hydric
MuB	Murrill gravelly loam, 3 to 8 percent slopes	Well Drained	Predominantly Not Hydric
MuC	Murrill gravelly loam, 8 to 15 percent slopes	Well Drained	Predominantly Not Hydric
MuD	Murrill gravelly loam, 15 to 25 percent slopes	Well Drained	Not Hydric

Soil Map Unit Symbol	Soil Map Unit Name	Drainage Class	Hydric Rating
Ph	Philo silt loam	Moderately Well Drained	Predominantly Not Hydric
Ph	Philo and Basher silt loams	Moderately Well Drained	Predominantly Not Hydric
Pu	Purdy silt loam	Poorly Drained	Predominantly Hydric
Pu	Purdy silty clay loam	Poorly Drained	Predominantly Hydric
Ru	Rubble land	Well Drained	Not Hydric
SeB	Sideling gravelly loam, 3 to 8 percent slopes	Moderately Well Drained	Not Hydric
SeC	Sideling gravelly loam, 8 to 15 percent slopes	Moderately Well Drained	Not Hydric
SrD	Sideling gravelly loam, 8 to 25 percent slopes, extremely stony	Moderately Well Drained	Not Hydric
SSF	Sideling and Hazleton soils 25 to 60 percent slopes, extremely stony	Moderately Well Drained	Not Hydric
W	Water	Poorly Drained	Not Hydric
WeB	Weikert channery silt loam, 3 to 8 percent slopes	Somewhat excessively Drained	Predominantly Not Hydric
WeC	Weikert channery silt loam, 8 to 15 percent slopes	Somewhat excessively Drained	Predominantly Not Hydric
WeD	Weikert channery silt loam, 15 to 25 percent slopes	Somewhat excessively Drained	Not Hydric
WkD	Weikert very channery silt loam, 15 to 25 percent slopes	Well Drained	Not Hydric
WkF	Weikert very channery silt loam, 15 to 25 percent slopes	Somewhat excessively Drained	Not Hydric

3.2 FIELD RESULTS

CEC staff conducted a field delineation on April 16-19, April 23, October 7-9, 2024, February 10, March 31, and April 18, 2025, to identify, delineate, and classify wetlands, streams, and other waters within the AOI. The AOI consisted of an existing substation and the areas surrounding it. This included powerline rights of way, forested hillslopes, and a roadway. Seventy-eight (78) wetlands and sixty-seven (67) stream features were identified within the AOI (Figure 3). A photographic summary is included in Appendix A. Wetland Determination Data Sheets and stream data forms are provided in Appendices B and C, respectively.

3.2.1 Wetland Delineation

CEC identified seventy-eight (78)wetlands within the project AOI. These wetlands were identified as PEM, PSS, and PUB. Most of the wetlands were found in low-lying areas and stream valleys. Seventy-two (72) sampling points were taken to document upland areas within the AOI. These areas included forests and disturbed open areas on power line rights of way.

Table 2. Wetlands Delineated

Wetland ID	Acreage by Cowardin Classification[1]				Total Acreage[1]	Sampling Point(s)
	PEM	PSS	PFO	PUB		
W001	0.027	-	-	-	0.027	SP-001
W002[2]	0.082	-	-	-	0.082	SP-003
W003[2]	0.004	-	-	-	0.004	SP-005
W004[2]	0.016	-	-	-	0.016	SP-007
W004B[2]	0.098	-	-	-	0.098	
W005[2]	0.071	-	-	-	0.071	SP-009
W006	0.022	-	-	-	0.022	SP-012
W006B	0.017	-	-	-	0.017	
W007[2]	0.478	-	-	-	0.478	SP-014
W008[2]	0.090	-	-	-	0.090	SP-017

Wetland ID	Acreage by Cowardin Classification[1]				Total Acreage[1]	Sampling Point(s)
	PEM	PSS	PFO	PUB		
W009	0.066	-	-	-	0.066	SP-020
W009B	0.011	-	-	-	0.011	
W010	0.019	-	-	-	0.019	SP-022
W010B[2]	0.002	-	-	-	0.002	
W010C[2]	0.010	-	-	-	0.010	
W011[2]	-	-	-	0.378	0.378	SP-024
W012	0.027	-	-	-	0.027	SP-031
W013	0.032	-	-	-	0.032	SP-033
W014[2]	0.041	-	-	-	0.041	SP-035
W015[2]	0.090	-	-	-	0.090	SP-037
W015B[2]	0.081	-	-	-	0.081	SP-037
W016	0.553	-	-	-	0.553	SP-039
W016B	0.215	-	-	-	0.215	
W017	0.023	-	-	-	0.023	SP-041
W018	0.009	-	-	-	0.009	SP-043
W019	0.021	-	-	-	0.021	SP-045
W020	0.051	-	-	-	0.051	SP-047
W021	-	0.040	-	-	0.040	SP-049
W022[2]	0.041	-	-	-	0.041	SP-051
W022B	0.019	-	-	-	0.019	
W023[2]	0.350	-	-	-	0.350	SP-053
W024[2]	0.016	-	-	-	0.016	SP-055
W025[2]	0.017	-	-	-	0.017	SP-059
W026	0.003	-	-	-	0.003	SP-061
W027	0.014	-	-	-	0.014	SP-063
W028A[2]	0.029	-	-	-	0.029	SP-065
W028B[2]	0.084	-	-	-	0.084	
W028C	0.034	-	-	-	0.034	
W029[2]	0.055	-	-	-	0.055	SP-066

Wetland ID	Acreage by Cowardin Classification[1]				Total Acreage[1]	Sampling Point(s)
	PEM	PSS	PFO	PUB		
W030[2]	0.011	-	-	-	0.011	SP-068
W030B[2]	0.019	-	-	-	0.019	
W031	0.020	-	-	-	0.0120	SP-070
W031B[2]	0.020	-	-	-	0.020	
W032[2]	0.101	-	-	-	0.101	SP-072
W033[2]	0.013	-	-	-	0.013	SP-074
W033B[2]	0.001	-	-	-	0.001	
W033C	0.028	-	-	-	0.028	
W033D[2]	0.002	-	-	-	0.002	
W033E	0.043	-	-	-	0.043	
W034[2]	0.008	-	-	-	0.008	SP-076
W035		0.016	-	-	0.016	SP-078
W100	0.091	-	-	-	0.091	SP-101
W101[2]	0.628	-	-	-	0.628	SP-102
W102	0.148	-	-	-	0.148	SP-104
W103[2]	0.063	-	-	-	0.063	SP-106
W104[2]	0.386	-	-	-	0.386	SP-107 & SP-109
W105	0.247	0.034[2]	-	-	0.281	SP-110 & SP-111
W106[2]	0.377	0.042	-	-	0.419	
W107[2]	0.473	-	-	-	0.473	SP-144
W108	0.051	-	-	-	0.051	SP-113
W109	0.043	-	-	-	0.043	SP-117
W110[2]	0.025	-	-	-	0.025	SP-119
W111[2]	0.228	-	-	-	0.228	SP-120
W112	0.009	-	-	-	0.009	SP-123
W113[2]	0.295	-	-	-	0.295	SP-125
W114[2]	0.111	-	-	-	0.111	SP-128
W115[2]	0.146	-	-	-	0.146	SP-132
W116[2]	0.327	-	-	-	0.327	SP-133

Wetland ID	Acreage by Cowardin Classification[1]				Total Acreage[1]	Sampling Point(s)
	PEM	PSS	PFO	PUB		
W117	0.053	-	-	-	0.053	SP-135
W118[2]	0.509	-	-	-	0.509	SP-136
W119[2]	0.067	-	-	-	0.067	SP-138
W120	0.007	-	-	-	0.007	
W121[2]	0.047	-	-	-	0.047	SP-140
W122	0.052	-	-	-	0.052	SP-142
W201A	0.172	-	-	-	0.172	SP-080
W201B	0.013	-	-	-	0.013	SP-080
W201C	0.046	-	-	-	0.046	SP-080
W202	0.048	-	-	-	0.048	SP-081
Total	**7.746**	**0.132**	-	**0.378**	**8.248**	

[1] Acreage includes wetland area within AOI only.
[2] Wetland continues beyond the AOI

3.2.2 Stream and Other Waters Delineation

CEC identified sixty-seven (67) streams during the assessment of the AOI. These streams were classified as Perennial, Intermittent, and Ephemeral. Some of these streams crossed back into the AOI multiple times. Some of the streams also matched up with streams identified on the NHD and NWI layers during the desktop review. CEC did not identify any other open bodies of water during the field visit.

Table 3. Streams Delineated

Stream ID	Length (LF) by Stream Classification[1, 2, 3]			Total Length (LF)[2]
	EPH	INT	PER	
S001	-	-	113	113
S001-2	-	-	110	110
S001-3	-	-	301	301
S002	-	90	-	90

Stream ID	Length (LF) by Stream Classification1, 2, 3			Total Length (LF)2
	EPH	INT	PER	
S003	-	-	358	358
S004	61	-	-	61
S005	-	101	-	101
S006	129	-	-	129
S007	-	187	-	187
S008	79	-	-	79
S009	-	57	-	57
S010	-	129	-	129
S011	-	-	152	152
S012	-	139	-	139
S013	-	-	103	103
S014	-	121	-	121
S015	-	221	-	221
S016	17	-	-	17
S017	-	-	159	159
S018	-	-	120	120
S019	-	81	-	81
S020	-	154	-	154
S021	-	141	-	141
S022	-	203	-	203
S023	-	105	-	105
S024	-	112	-	112
S025	-	68	-	68
S026	-	114	-	114
S027	-	-	102	102
S028	-	56	-	56
S029	-	-	83	83
S030	-	195	-	195
S031	-	268	-	268

Stream ID	Length (LF) by Stream Classification[1, 2, 3]			Total Length (LF)[2]
	EPH	INT	PER	
S032	-	-	71	71
S033	-	62	-	62
S034	-	-	69	69
S035	286	-	-	286
S036	44	-	-	44
S037	49	-	-	49
S038	63	-	-	63
S039	16	-	-	16
S040	-	33	-	33
S041	30	-	-	30
S042	49	-	-	49
S043	-	-	91	91
S100	-	125	-	125
S101	-	74	-	74
S102	-	-	170	170
S103	-	-	239	239
S104	-	198	-	198
S105	-	82	-	82
S106	-	130	-	130
S107	-	-	109	109
S108	-	299	-	299
S109	-	-	110	110
S110	-	347	-	347
S111	398	-	-	398
S112	-	-	108	108
S113	-	71	-	71
S114	-	83	-	83
S115	-	-	125	125
S116	59	-	-	59
S117	51	-	-	51

Stream ID	Length (LF) by Stream Classification[1, 2, 3]			Total Length (LF)[2]
	EPH	INT	PER	
S118	-	51	-	51
S119	-	149	-	149
S120	13	-	-	13
S121	54	-	-	54
S122	-	11	-	11
S201	-	-	272	272
Total	**1398**	**4257**	**2965**	**8620**

[1] Linear feet (LF), ephemeral (EPH), intermittent (INT), and perennial (PER)
[2] Includes the portion of the stream within AOI only.
[3] Stream classification based on channel condition and observations at time of field delineation.

4.0 CONCLUSIONS

CEC conducted a waters delineation within the AOI on April 16-19, April 23, October 7-9, 2024, February 10, March 31, and April 18, 2025. CEC identified the following within the AOI:

- Seventy-eight PEM, PSS, and PUB wetlands, totaling 8.248 acres;
- Sixty-seven perennial, intermittent, and ephemeral streams, totaling 8,620 linear feet; and no ponds or other water bodies.

5.0 REGULATORY CONSIDERATIONS

The USACE has authority to permit the discharge of dredged or fill material into WOTUS 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 WOTUS as defined by 33 CFR 328.3(a), and the currently in effect regulatory definition (SCOTUS 2023).

As a result of ongoing litigation with the January 2023 Revised Definition of 'Waters of the United States' Rule (2023 WOTUS Rule), federal agencies will implement the 2023 WOTUS Rule, as amended by the conforming rule, in 23 states, the District of Columbia, and the U.S. Territories. In the other 27 states and for certain parties, the agencies are interpreting "WOTUS" consistent with the pre-2015 regulatory regime and the Supreme Court's decision in *Sackett v. Environmental Protection Agency* (May 24, 2023) until further notice.

If CWA Section 404 authorization and/or other federal permits are required for the proposed project, consultation with the USFWS will likely be required pursuant to Section 7 of the Endangered Species Act. Furthermore, consultation with the State Historic Preservation Office may also be required relative to potential effects to resources listed on or eligible for listing on the National Register of Historic Places.

The 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 "waters of the Commonwealth" as any watercourse, stream, waterbody, or wetland, including their floodways. 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.

Waters within the AOI 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.

It is the responsibility of any party that intends to discharge dredge or fill material into WOTUS and/or isolated waters to comply with all applicable regulations.

6.0 LEVEL OF CARE

This waters 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 USACE and 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 waters 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.

Report Prepared By:

Fritz Dubbs 5/8/2025

Fritz Dubbs and Sara Keddie — Date
Staff Scientist/Assistant Project Manager
Civil & Environmental Consultants, Inc.

Report Reviewed By:

Gretchen J. Addington 5/8/2025

Gretchen Addington — Date
Project Manager
Civil & Environmental Consultants, Inc.

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.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1, Vicksburg, Mississippi: Department of the Army, U.S. Army Engineer Waterways Experiment Station.

Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

Federal Register / Vol. 88, No. 173. 2023. Rules and Regulations. Department of Defense, Department of the Army, Corps of Engineers. 33 CFR Part 328. Environmental Protection Agency. 40 CFR Part 120. Revised Definition of "Waters of the United States"; Conforming.

U.S. Congress. 1977. *Clean Water Act.* Codified at 33 U.S.C. 1251 (et seq.), Washington, DC: U.S. Government Printing Office.

U.S. Congress. 1986. *Definition of "Waters of the United States".* Codified at 33 CFR 328.3 (et seq.), Washington, DC: U.S. Government Printing Office.

U.S. Congress. 1899. *Rivers and Harbors Appropriation Act of 1899.* Codified at 33 U.S.C. 403 (et seq.), Washington, DC: U.S. Government Printing Office.

USACE. 2022. *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams*, *Interim* V*ersion*. Report #ERDC/CRREL TR-22-16. Available from http://dx.doi.org/10.21079/11681/46102.

—. 2022. National Wetland Plant List, version 3.6. https://wetland-plants.sec.usace.army.mil/

—. 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.

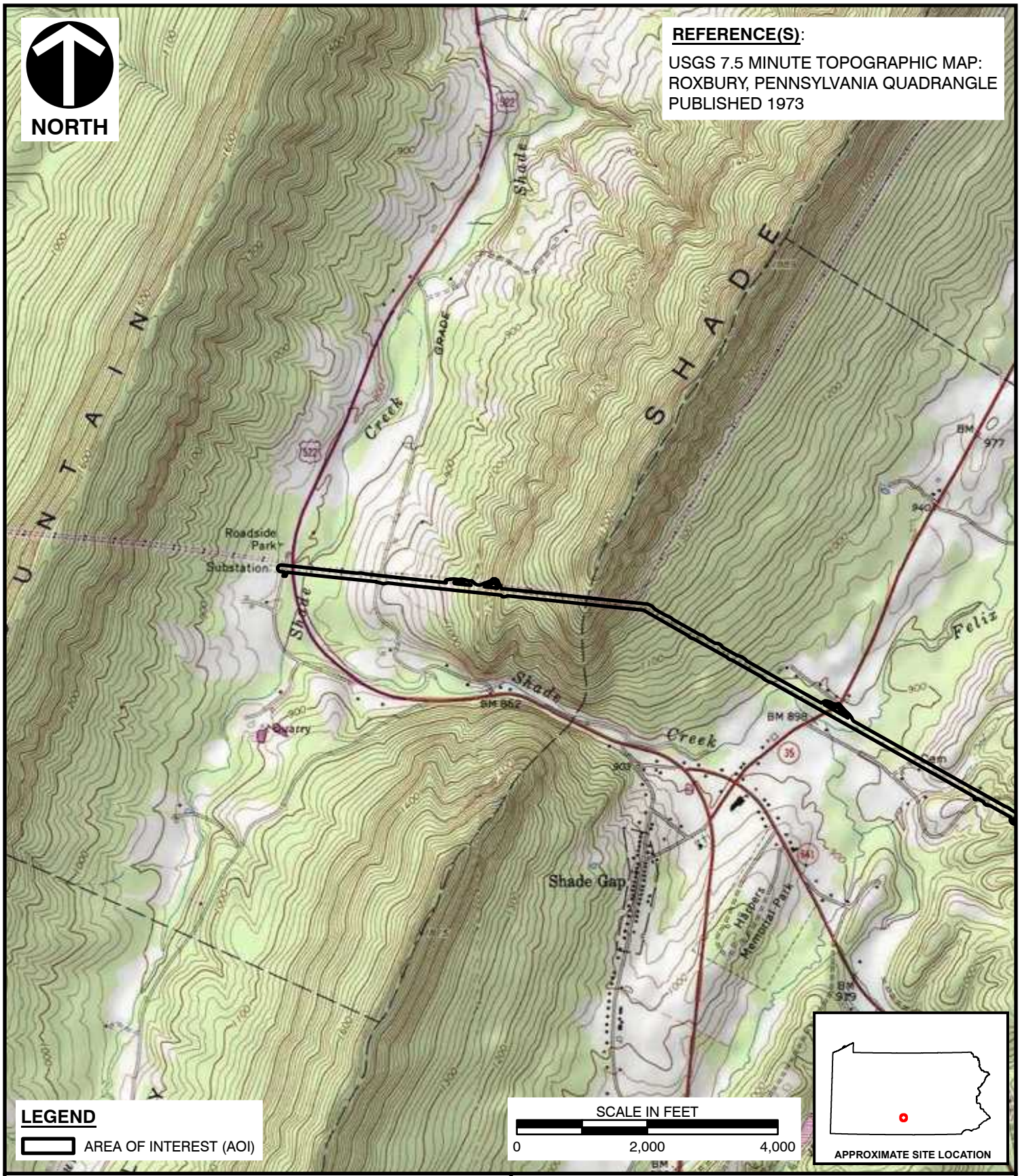
USDA-NRCS. 2024. *Field Indicators of Hydric Soils in the United States, Version 9.0.* Edited by L. M. Vasilas, G. W. Hurt and J. F. Berkowitz. USDA-NRCS, in cooperation with the National Technical Committee for Hydric Soils.

USFWS. National Wetlands Inventory. Available online at: https://www.fws.gov/program/national-wetlands-inventory

USGS. 3D Hydrography Program (3DHP). Available online at: https://hydro.nationalmap.gov/arcgis/rest/services/3DHP_all/MapServer

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at: https://websoilsurvey.nrcs.usda.gov/.

FIGURES



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

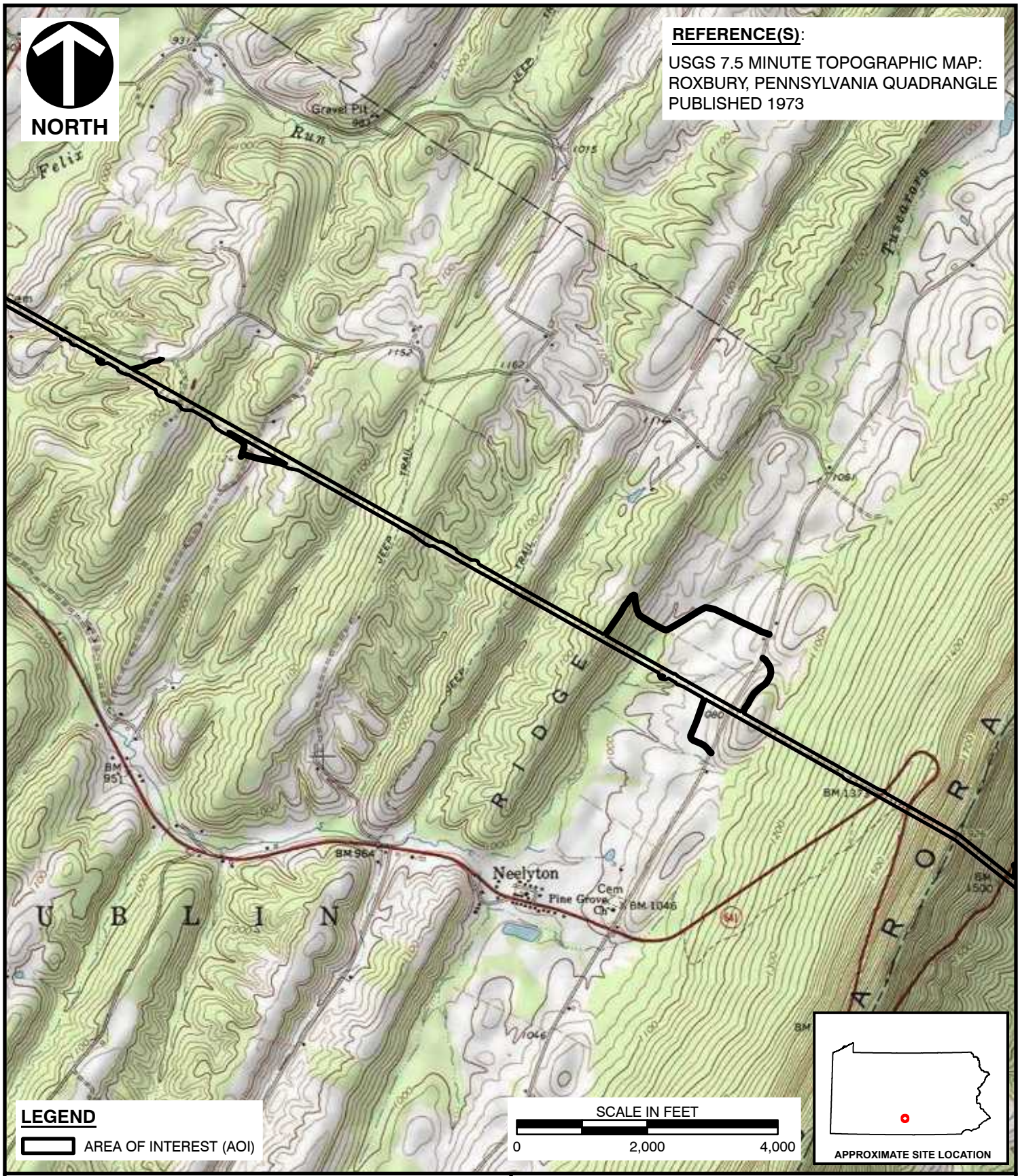
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

SITE LOCATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	1A
DATE:	4/22/2025	SCALE:	1"=2,000'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



CEC
Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

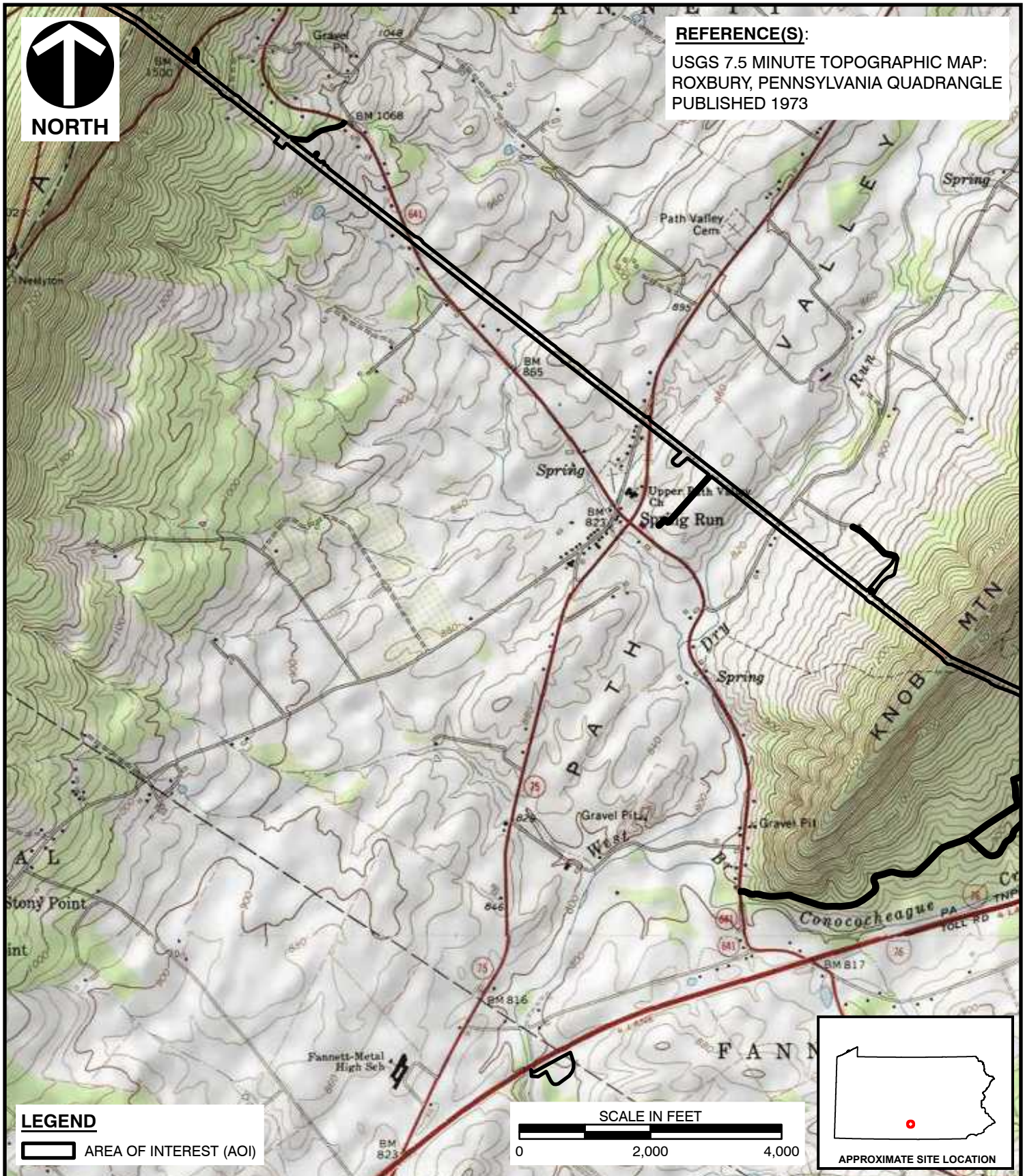
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

SITE LOCATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	1B
DATE:	4/22/2025	SCALE:	1"=2,000'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

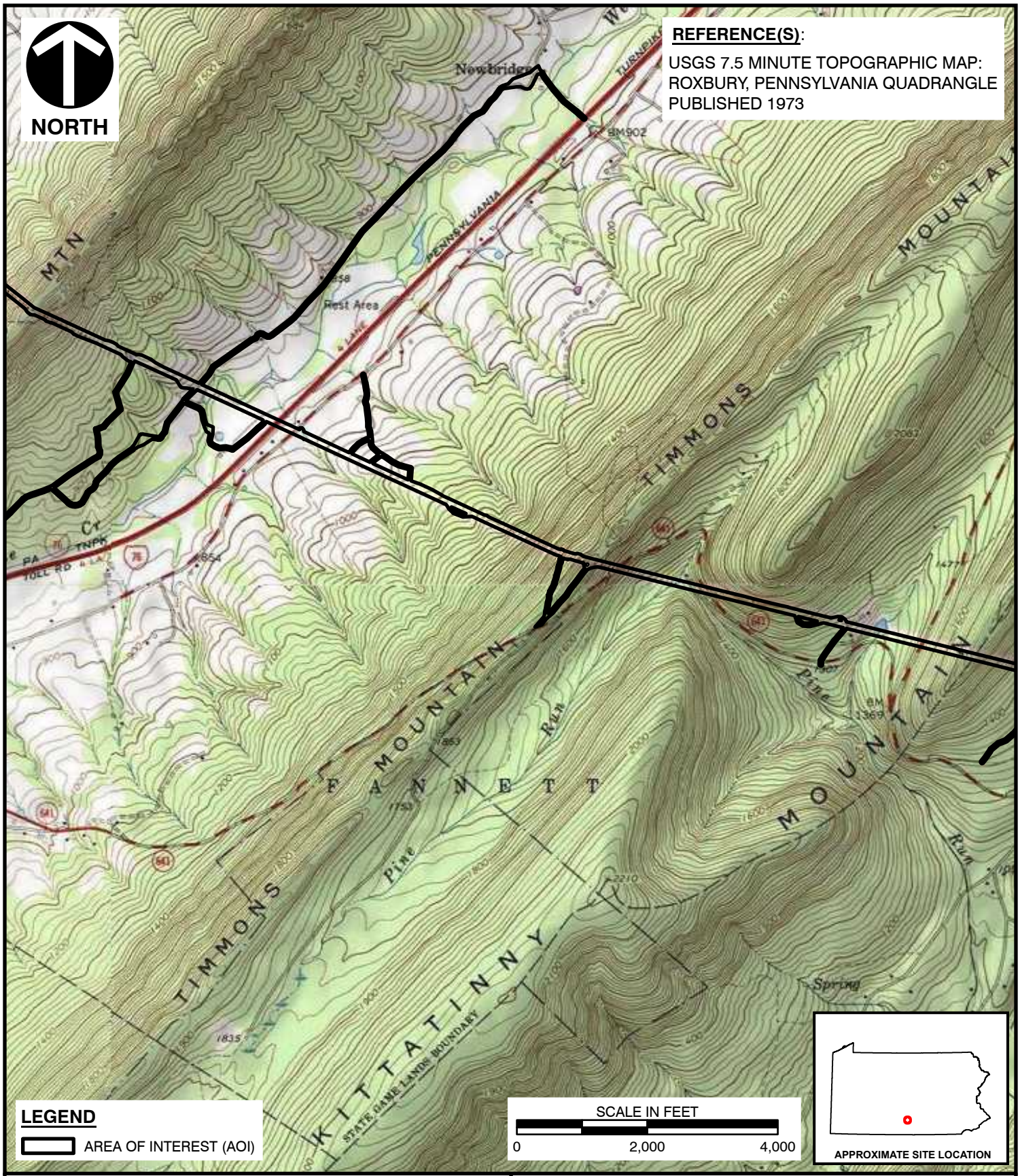
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

SITE LOCATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	1C
DATE:	4/22/2025	SCALE:	1"=2,000'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

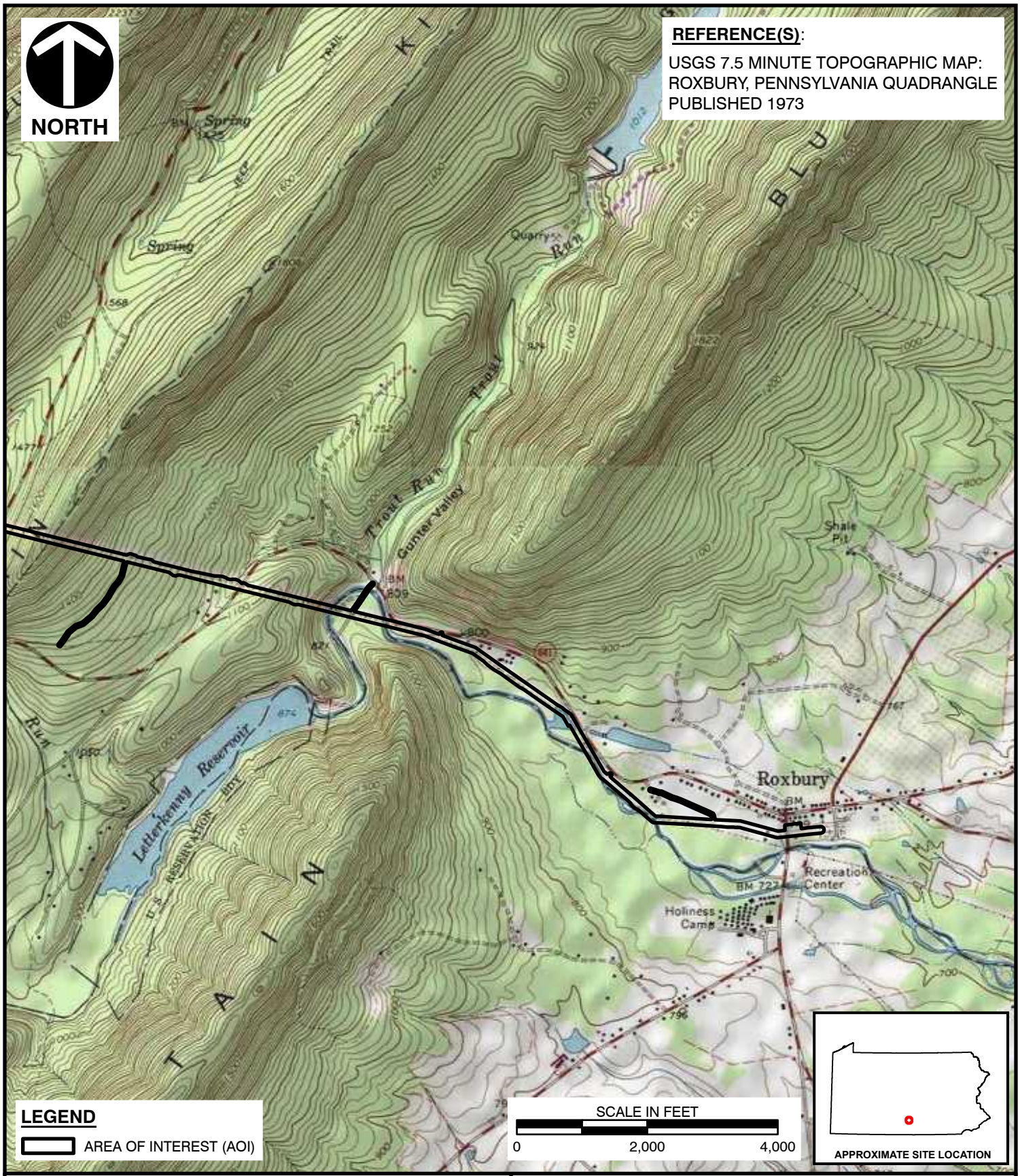
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

SITE LOCATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	1D
DATE:	4/22/2025	SCALE:	1"=2,000'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

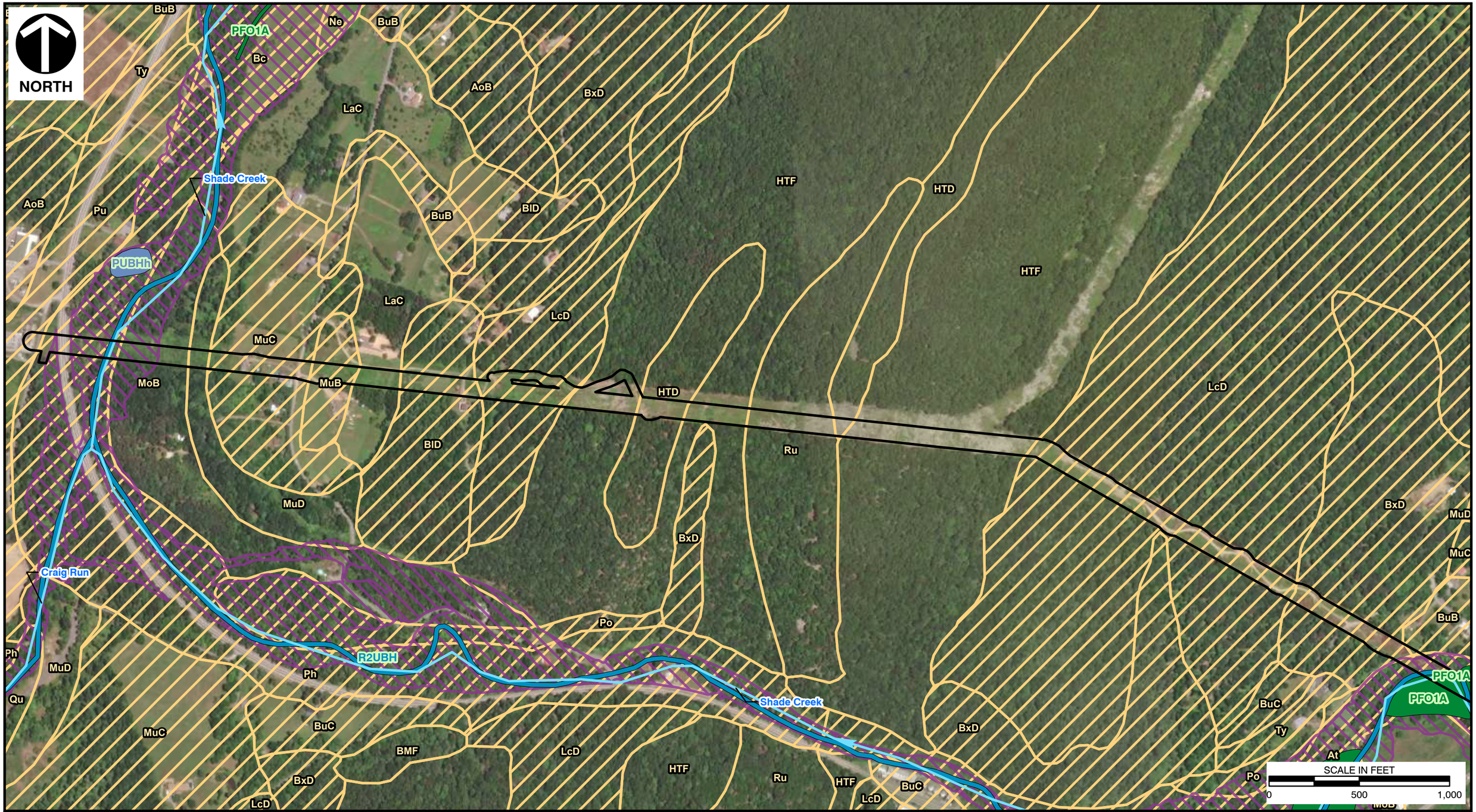
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

SITE LOCATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	1E
DATE:	4/22/2025	SCALE:	1"=2,000'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

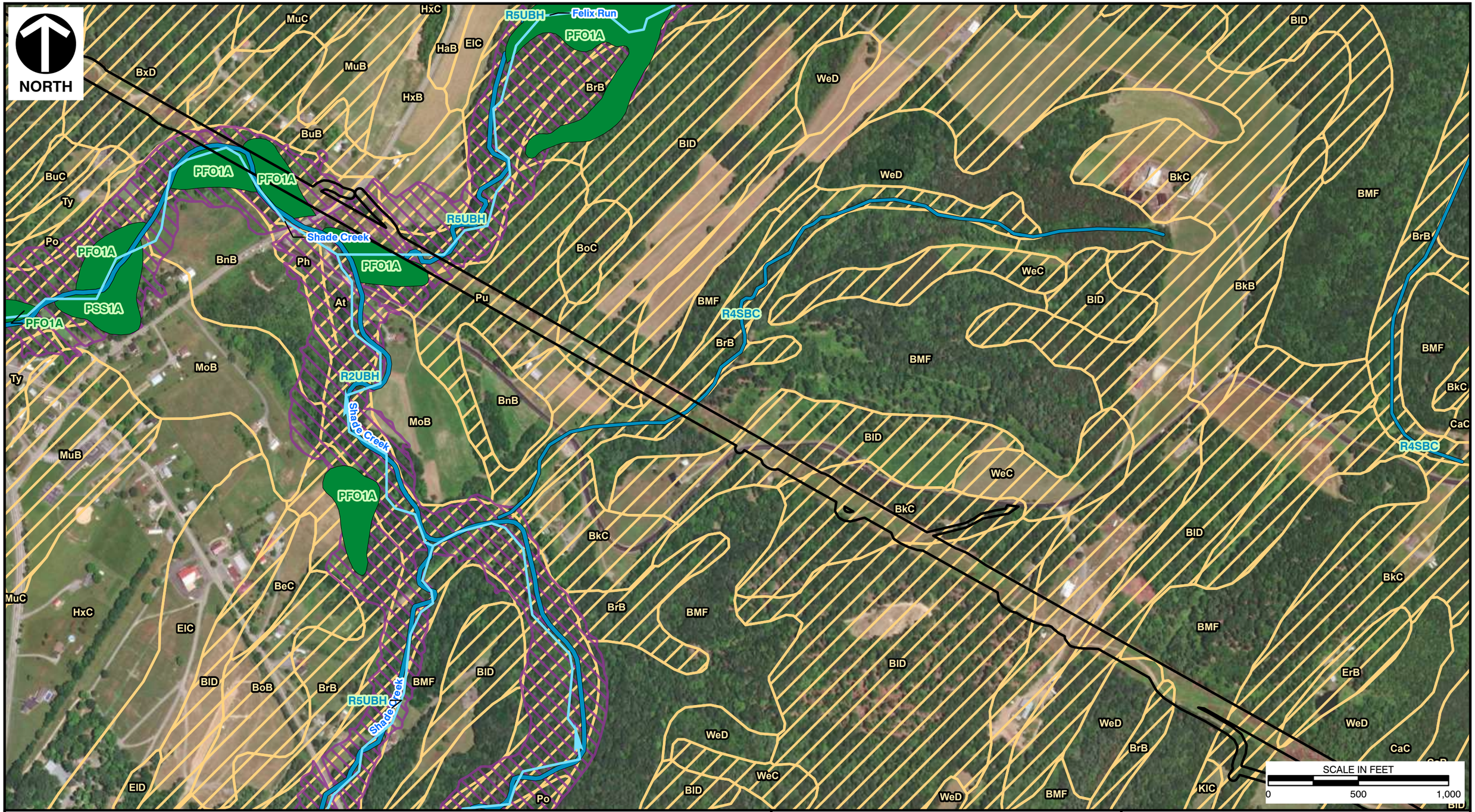
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2A
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)

LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER FORESTED/SHRUB WETLAND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2B
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file



LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- FRESHWATER EMERGENT WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2C
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-3101-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER EMERGENT WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

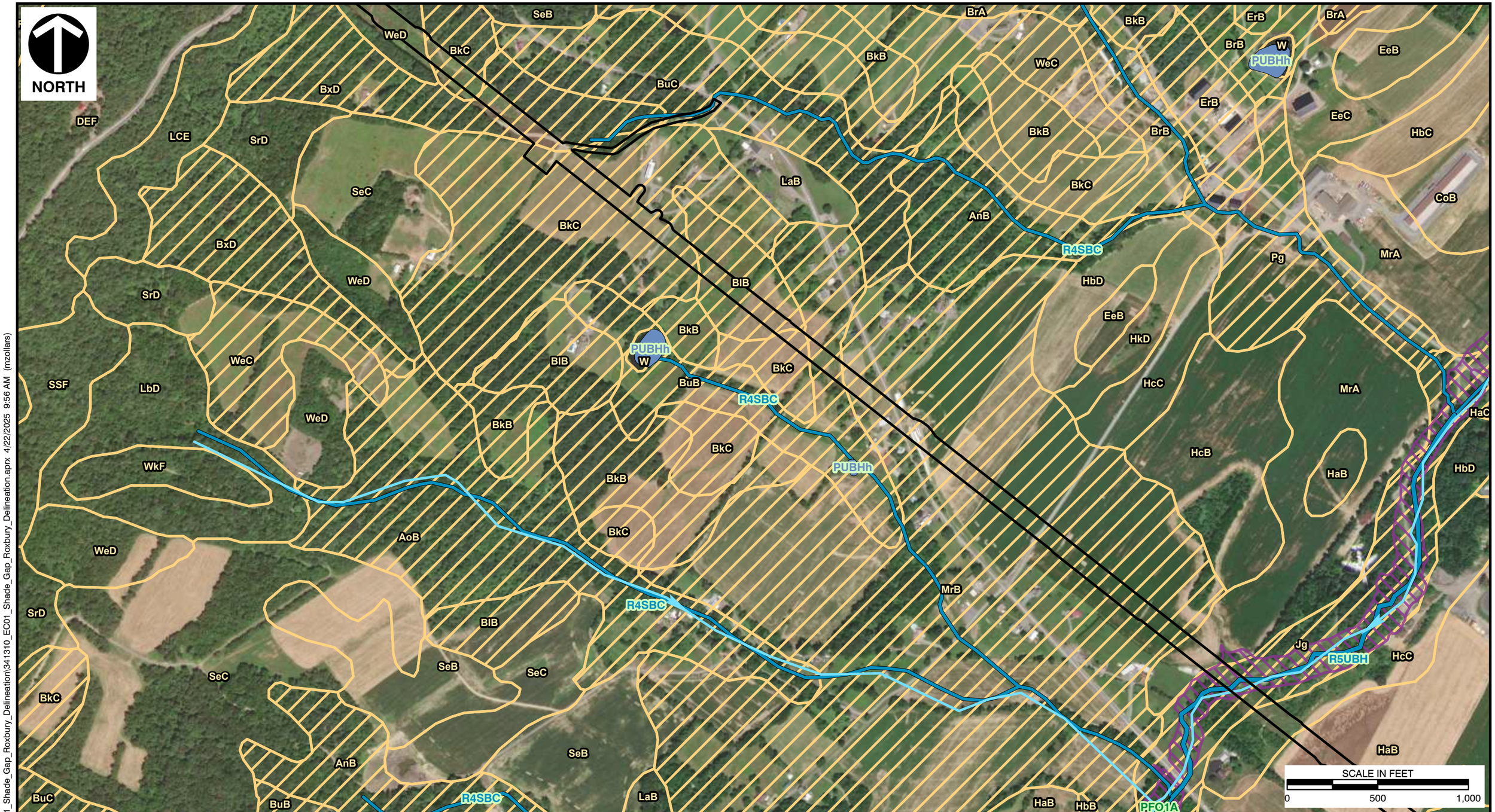
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2D
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

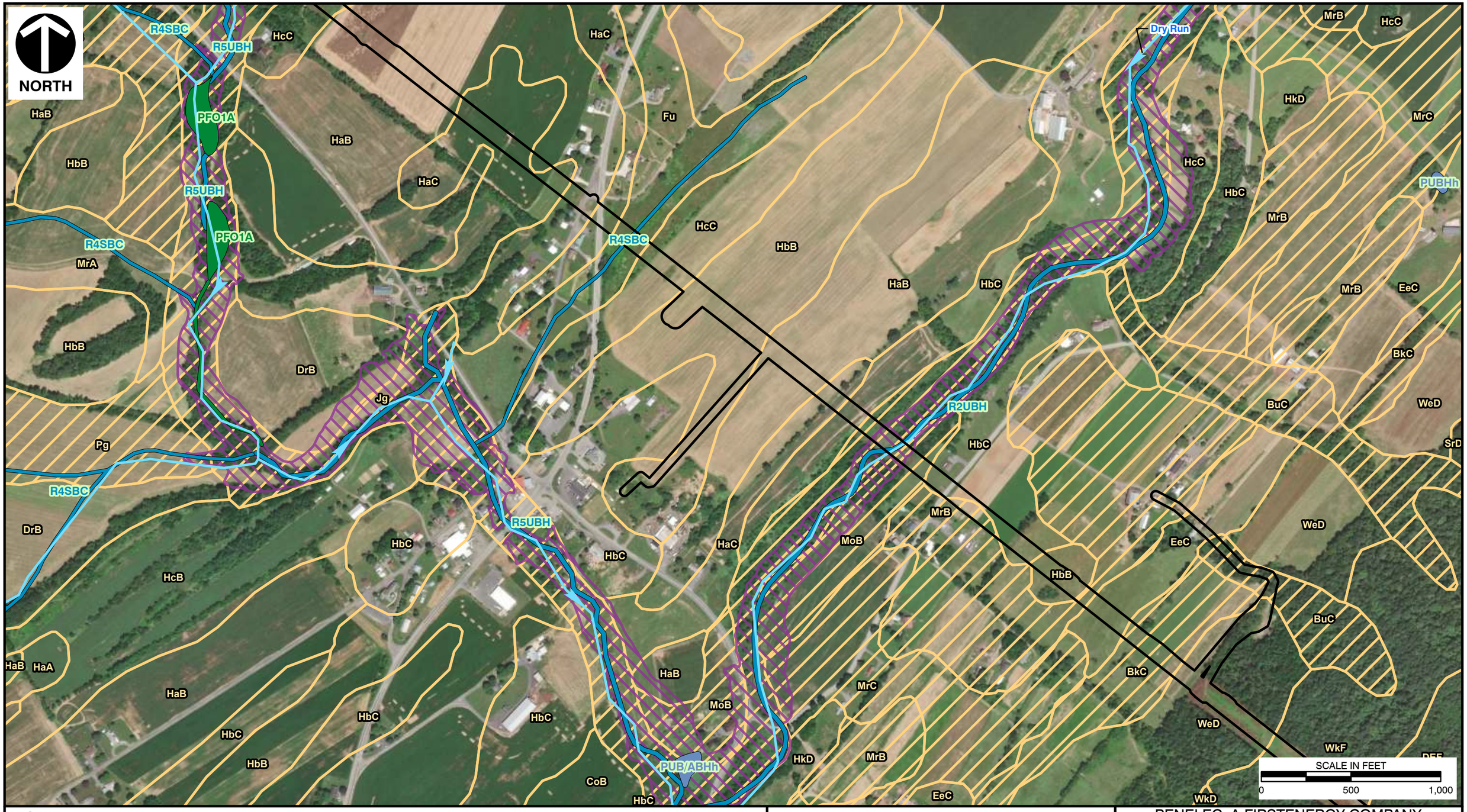
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2E
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2F
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)

NORTH

SSF
SeC
BhC
WeD
R4SBC
Mb
As
PFO1A
Pu
Ph
BkB
BuB
Freshwater Emergent Wetland
AnB
AgB
WeC
DEF
WkD
BkC
West Branch Conococheague Creek
R2UBH
PFO1/SS1A
WkF
SeB
SrD
PUBHh
WeB
SCALE IN FEET
0
500
1,000

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)

LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

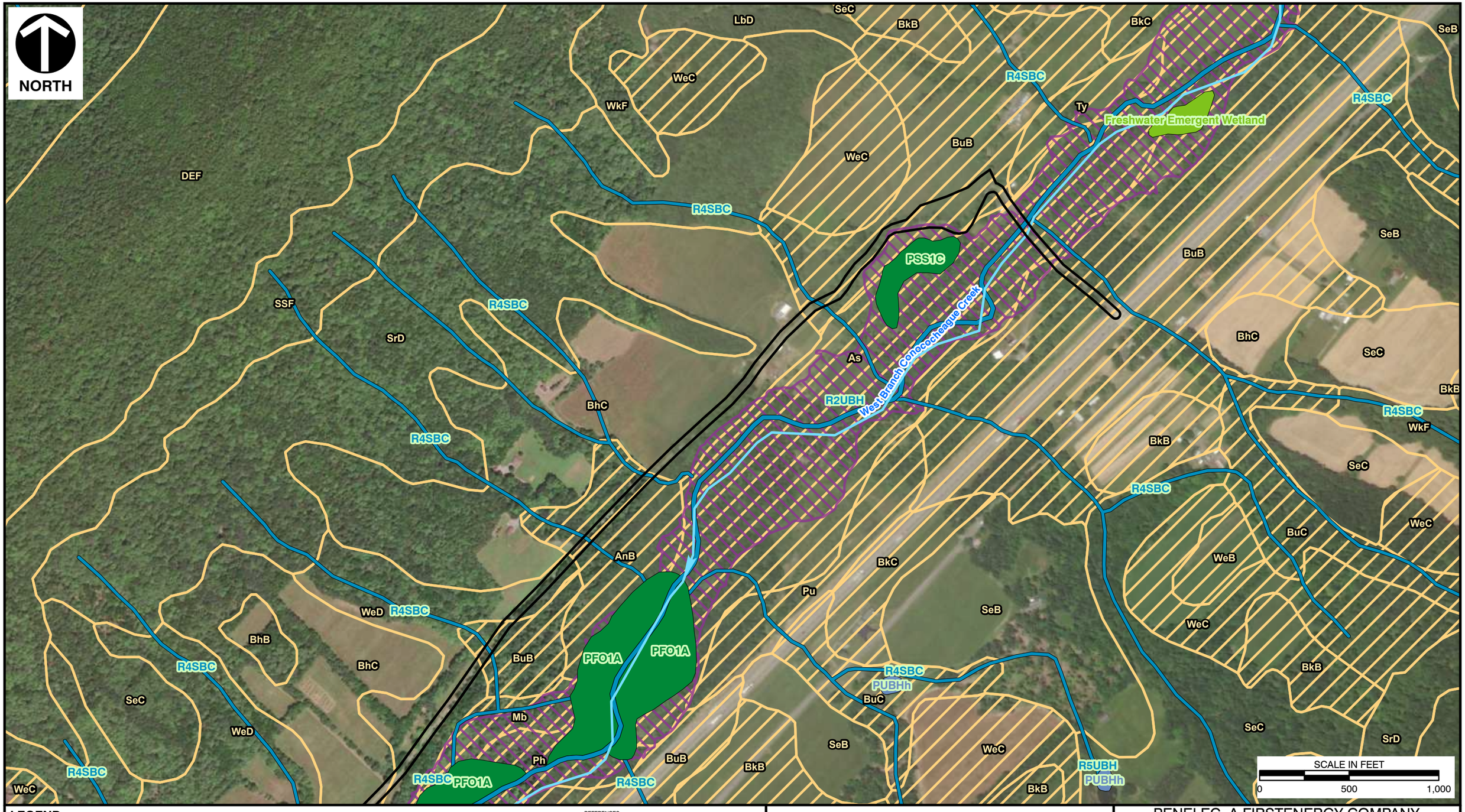
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2G
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file



LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2H
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)

NORTH

BkC
BkB
R4SBC
WeC
SrD
WeD
BxB
WeB
SeC
SeB
WkF
SSF
DEF
LgB
LCE
BxD
Pine Run
R5UBH
PUBHh
W
DED

SCALE IN FEET
0 500 1,000

LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	21
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)

NORTH

BxB
SrD
R4SBC
BxD
DED
DEF
LbD
SSF
HRD
SrD
BxD
LhD
HRF
WkF
SrD
HRF
Trout Run
SSF
R5UBH
BxB
HRF
R4SBC
SrD
LhD
R5UBH
Ph
HRF
R2UBH
Conodoguinet Creek
Pu
PSS1A
WkF
Conodoguinet Creek
HRF
SSF
DEF
LhD
BuB
SeC
SrB
HRD
HRF
HRB
R5UBH
Pine Run
BxB
DEF
SeB
W
L1UBHh

SCALE IN FEET
0 500 1,000

LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER FORESTED/SHRUB WETLAND
- LAKE
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

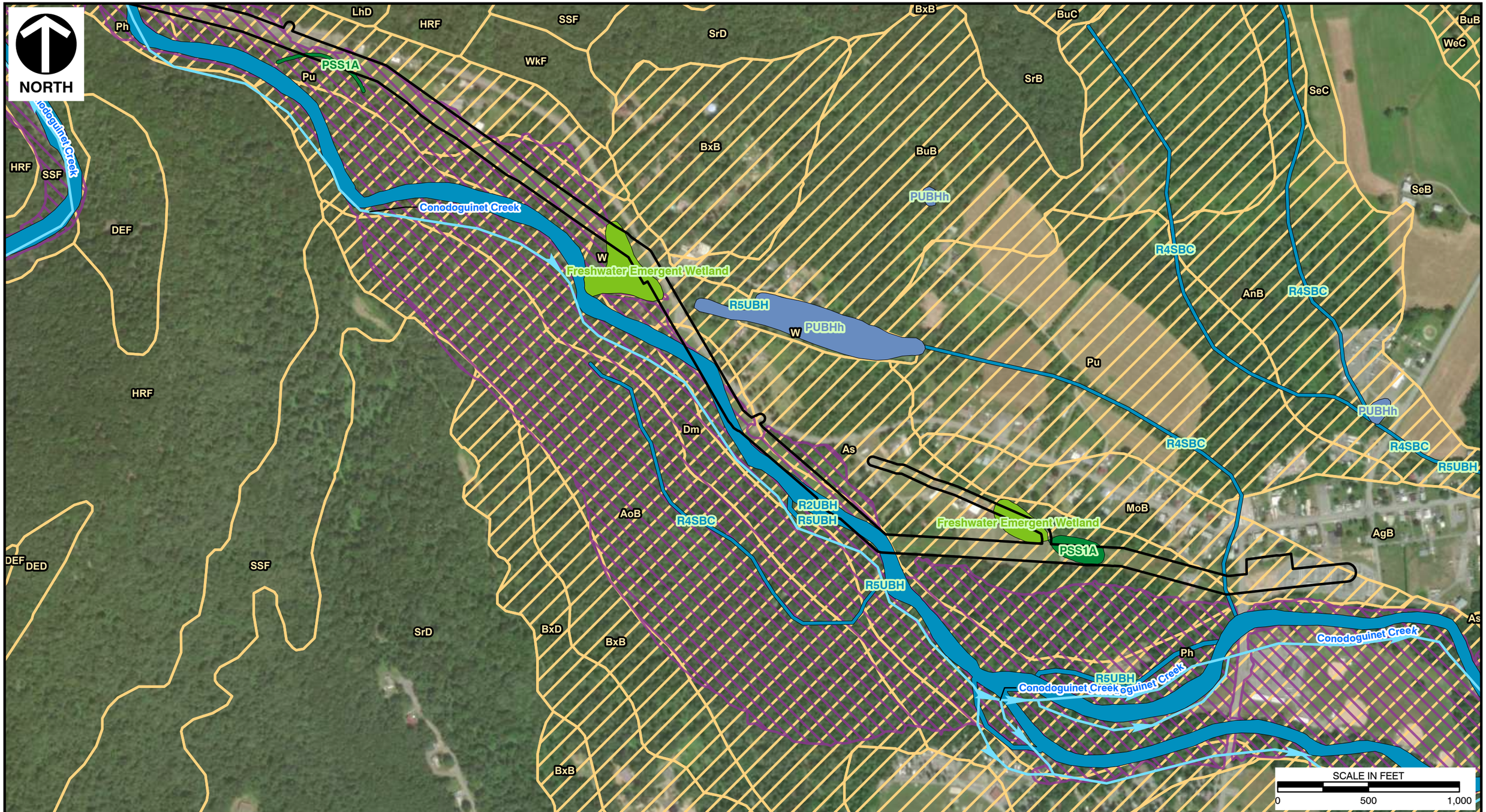
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2J
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

CEC
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2K
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)

NORTH

HaA HaB HaC HcC CoB EeC Fu EeD BrB BkC BkB Freshwater Emergent Wetland PUBHh PSS1A ErB BuB Pu AnB HbC EeC Pu AgB Mb BrA PFO1A Ph R2UBH West Branch Conococheague Creek R5UBH R4SBC WeD WkF WeC EeB CoB BkB ErB WeC BrA R4SBC Me SeB SeB WkD HcC

SCALE IN FEET
0 500 1,000

LEGEND

- STREAM/RIVER
- NON-HYDRIC SOIL
- HYDRIC SOIL
- 1% ANNUAL CHANCE FLOOD HAZARD
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 4/23/2025.
3. USGS NATIONAL HYDROGRAPHY DATASET (NHD) FRAMEWORK WEB SERVICE: HTTP://FRAMEWORKWFS.USGS.GOV/FRAMEWORK/WMS/WMS.CGI. ACCESSED 4/23/2025.
4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 4/23/2025.
5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 4/23/2025

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

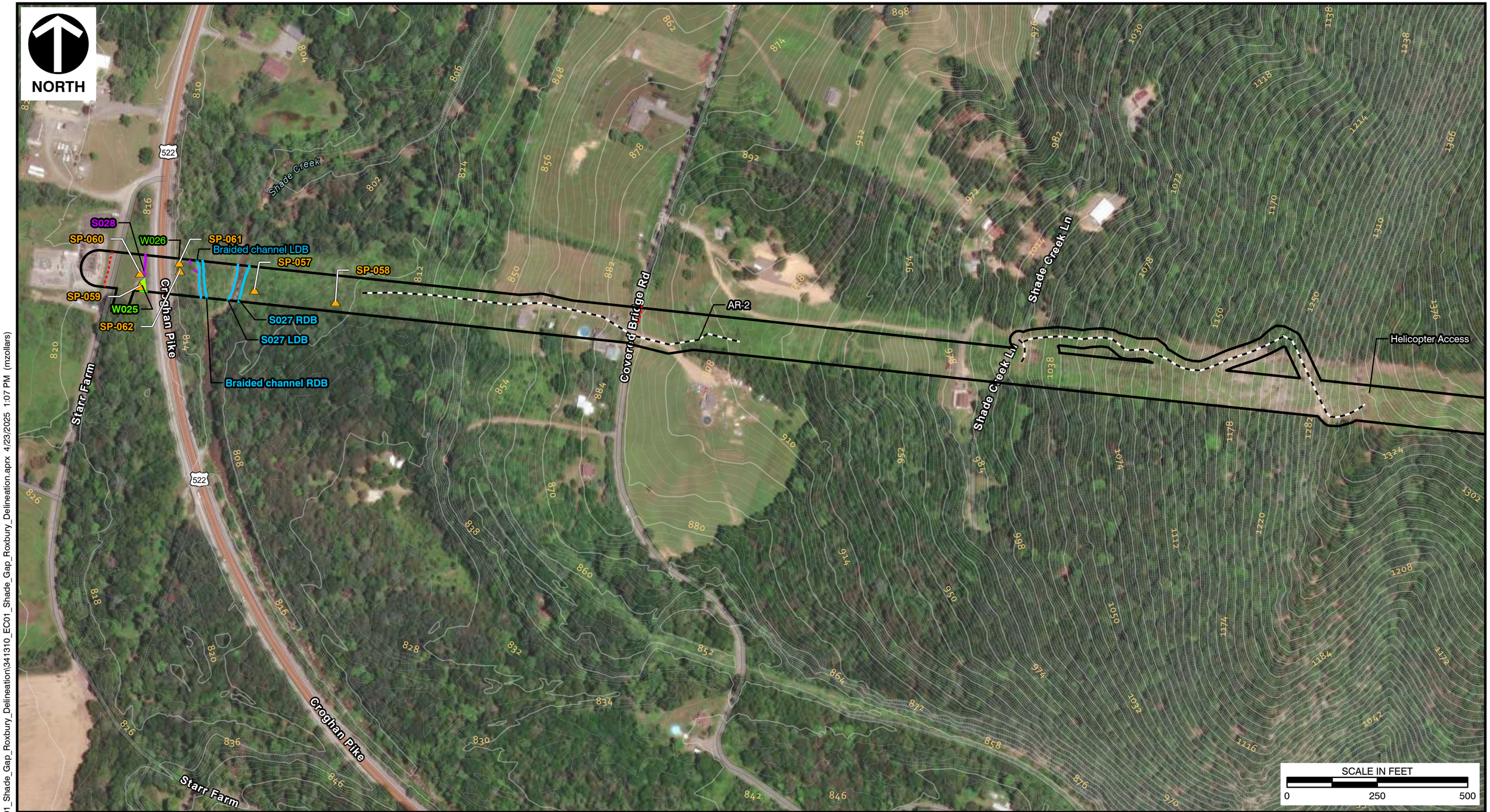
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND HUNTINGDON COUNTIES, PENNSYLVANIA

ENVIRONMENTAL DATA REVIEW MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	2L
DATE:	4/23/2025	SCALE:	1" =500'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/22/2025 9:56 AM (mzollars)



LEGEND

- SAMPLING POINT
- CULVERT LINE
- ACCESS ROUTES
- DITCH
- EROSIONAL FEATURE
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3A
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

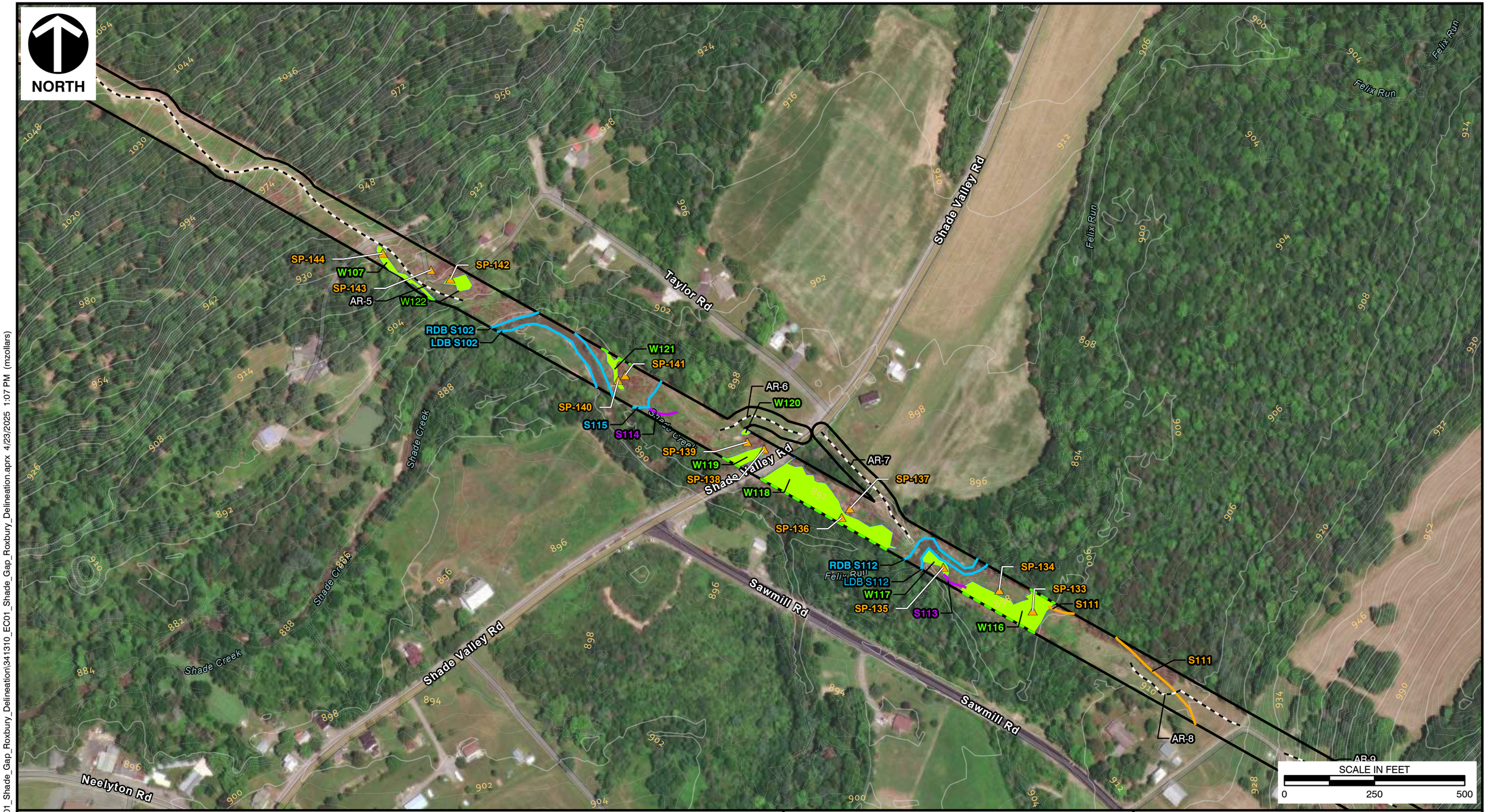
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3B
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3C
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

NORTH

S111
AR-8
AR-9
SP-132
SP-131
W115
AR-10
AR-11
AR-12
SP-056
W024
S026
SP-055
Sawmill Rd
Cisney Ln

SCALE IN FEET
0 250 500

LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- SWALE
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

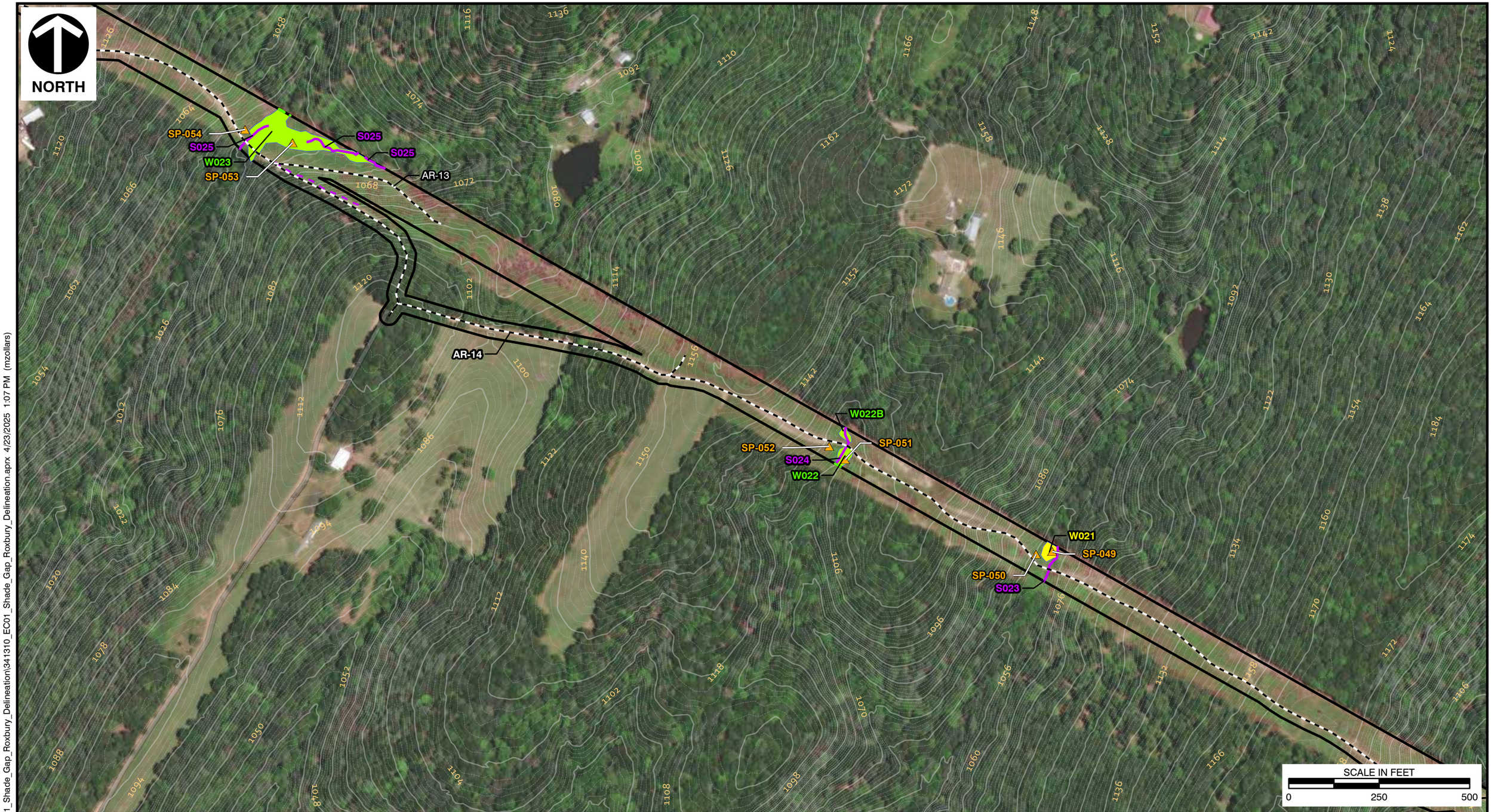
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3D
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EROSIONAL FEATURE
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- WETLAND - PSS
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3E
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

NORTH

SP-047
W020
AR-14
SP-048
S022
SP-046
W019
SP-045
S021
Fawn Ln
Fawn Ln
Deer Dr
SP-043
SP-044
W018
S020
SP-077
SP-41
W017
S019
S018
SP-042

SCALE IN FEET
0 250 500

LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3F
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

NORTH

Mt Foot Rd

Mt Foot Rd

Mt Foot Rd

W033B
W033D
W033C
SP-075
W033
SP-074
SP-076
AR-15
SP-077
W034
S034
W033E
SP-41
W017
S019
S018
SP-042
SP-039
W016B
SP-040
W016
SP-038
W015
W015B
S017
SP-037
AR-17

SCALE IN FEET
0 250 500

LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

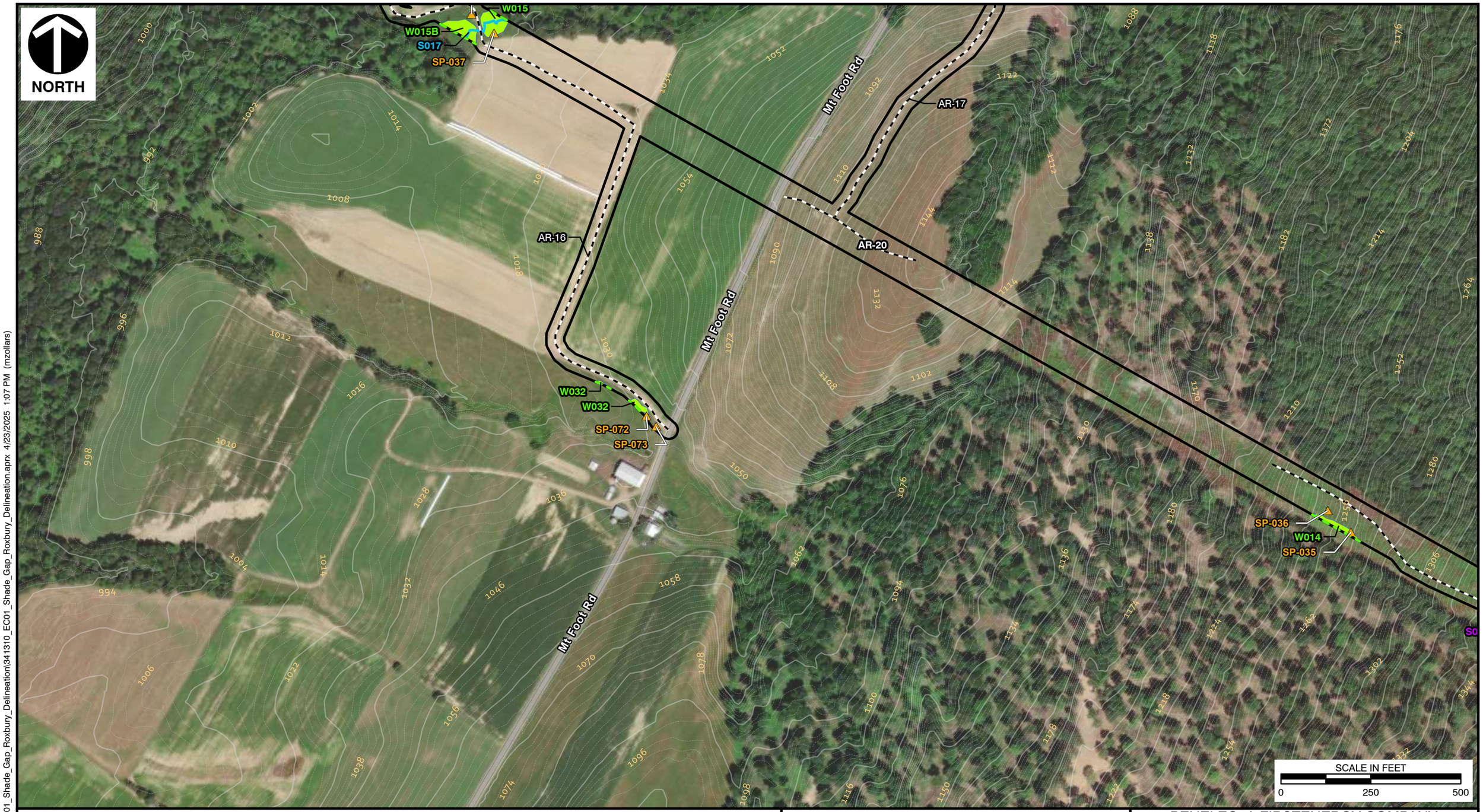
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3G
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3H
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

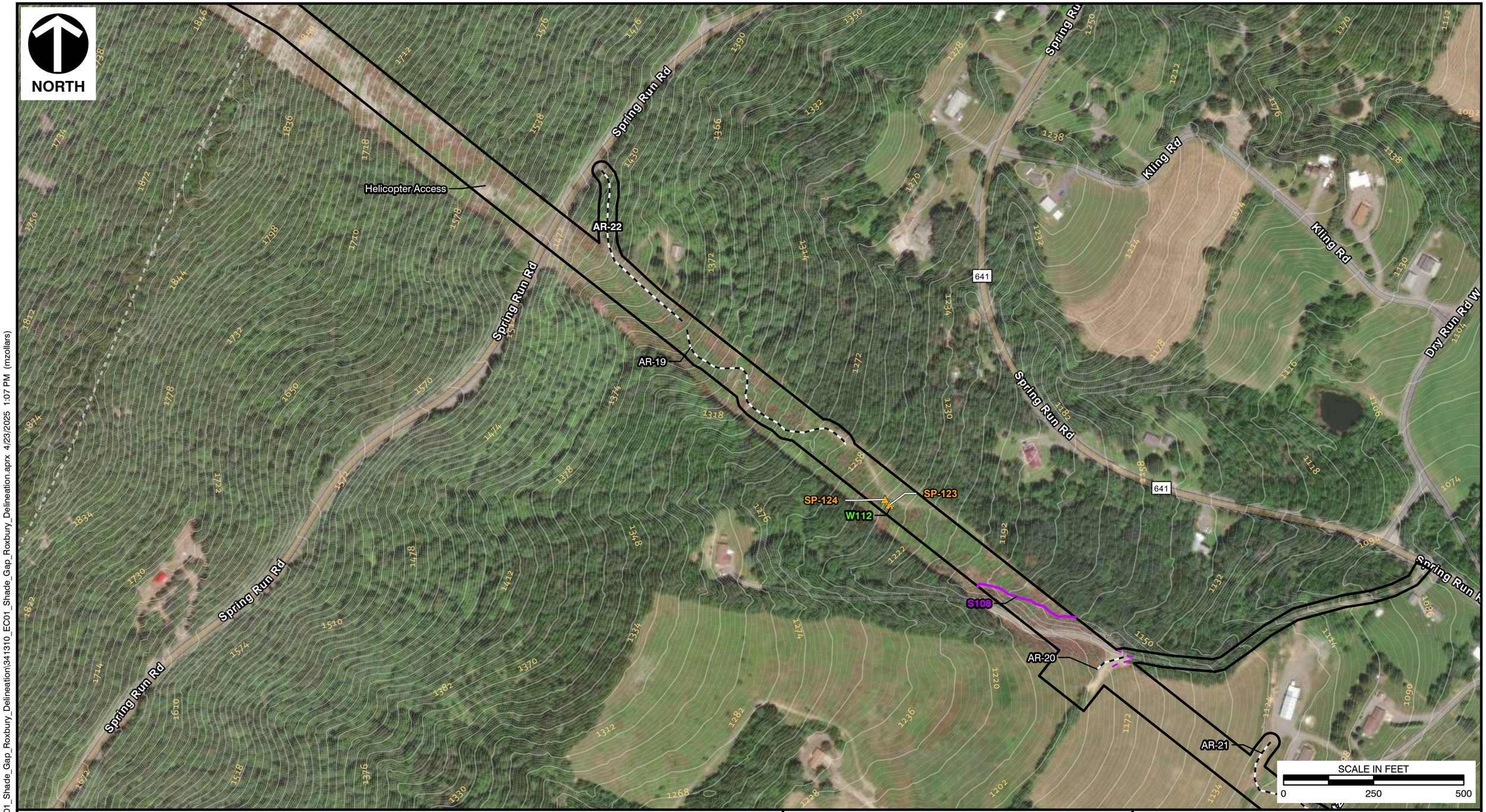
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3I
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EROSIONAL FEATURE
- INTERMITTENT STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

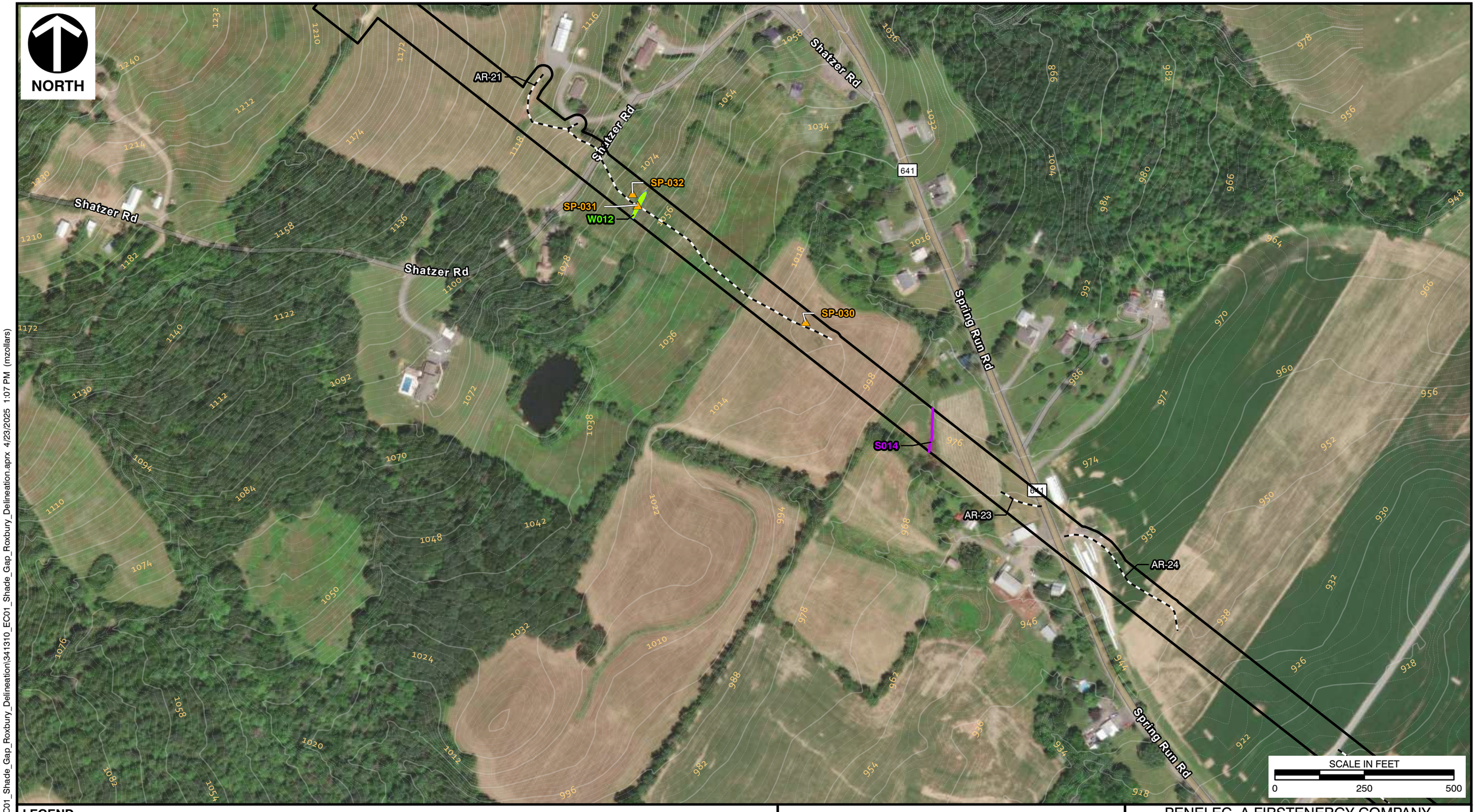
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3J
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- INTERMITTENT STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3K
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

NORTH

AR-25

AR-26

SP-120

SP-121

SP-122

SP-029

W111

S107

Spring Run Rd

Junkin Rd

641

SCALE IN FEET

0 250 500

LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

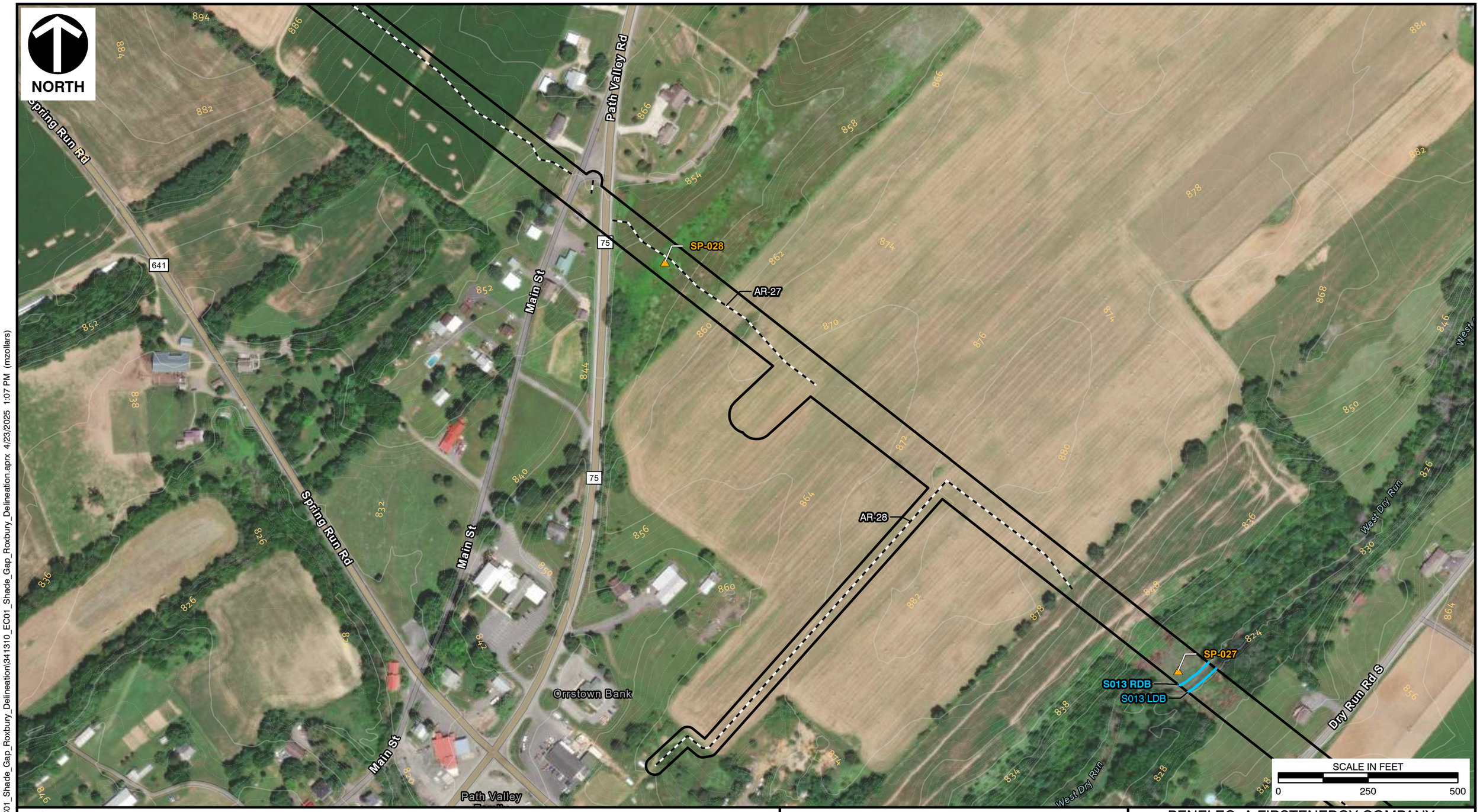
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3L
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- PERENNIAL STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

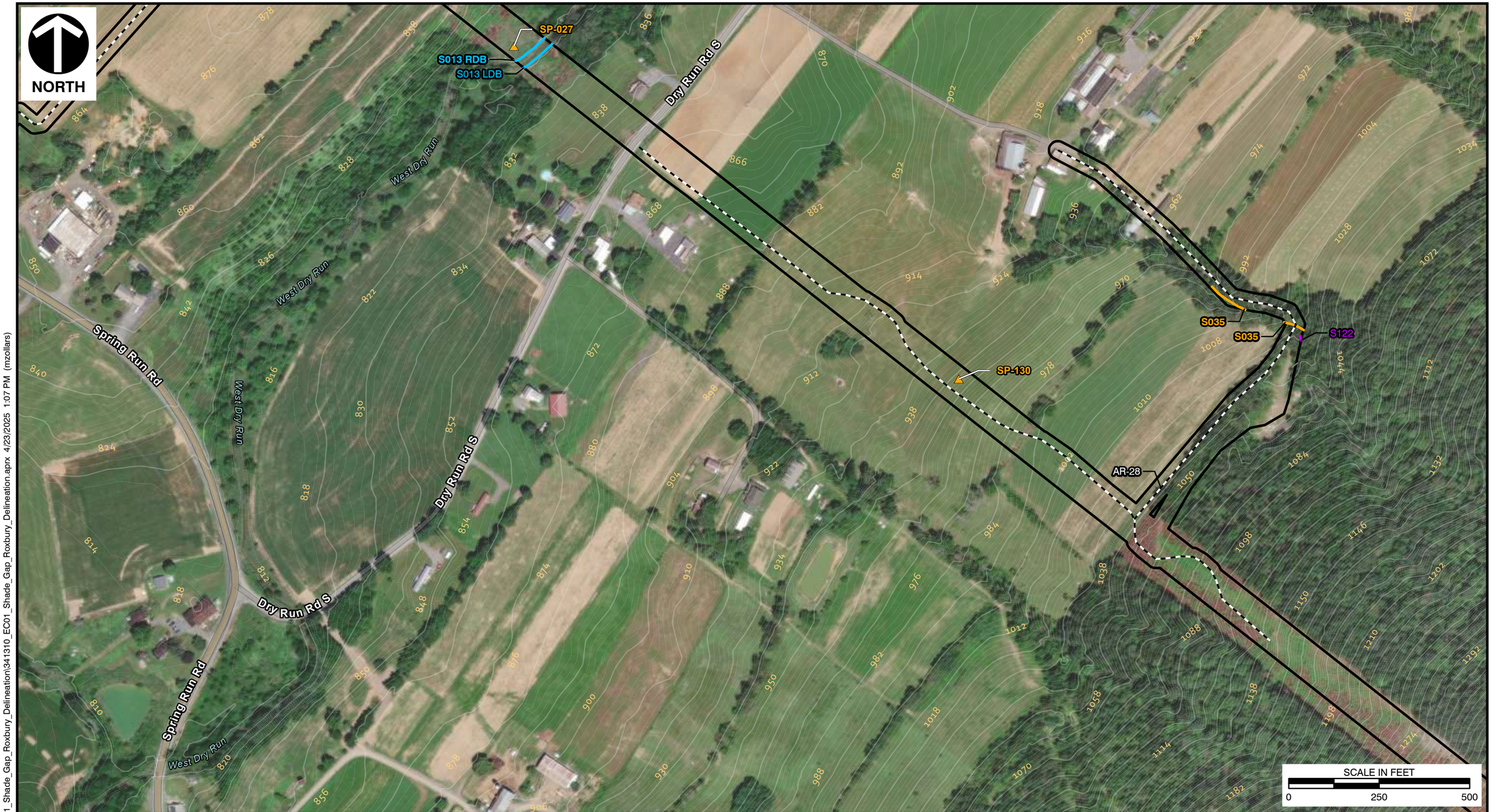
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3M
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- ▲ SAMPLING POINT
- - - - ACCESS ROUTES
- – – – <ALL OTHER VALUES>
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3N
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

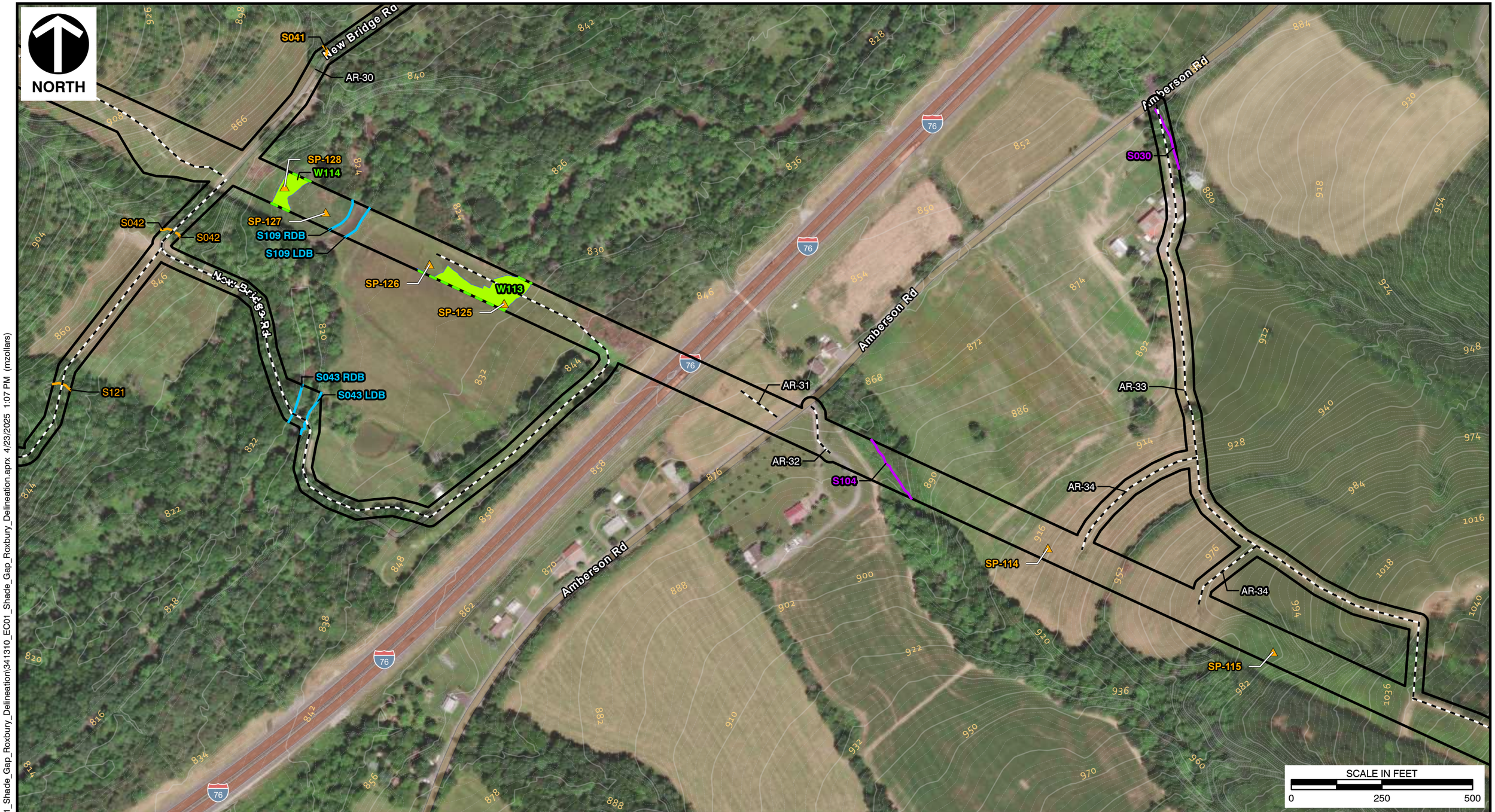
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	30
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3P
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PSS
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

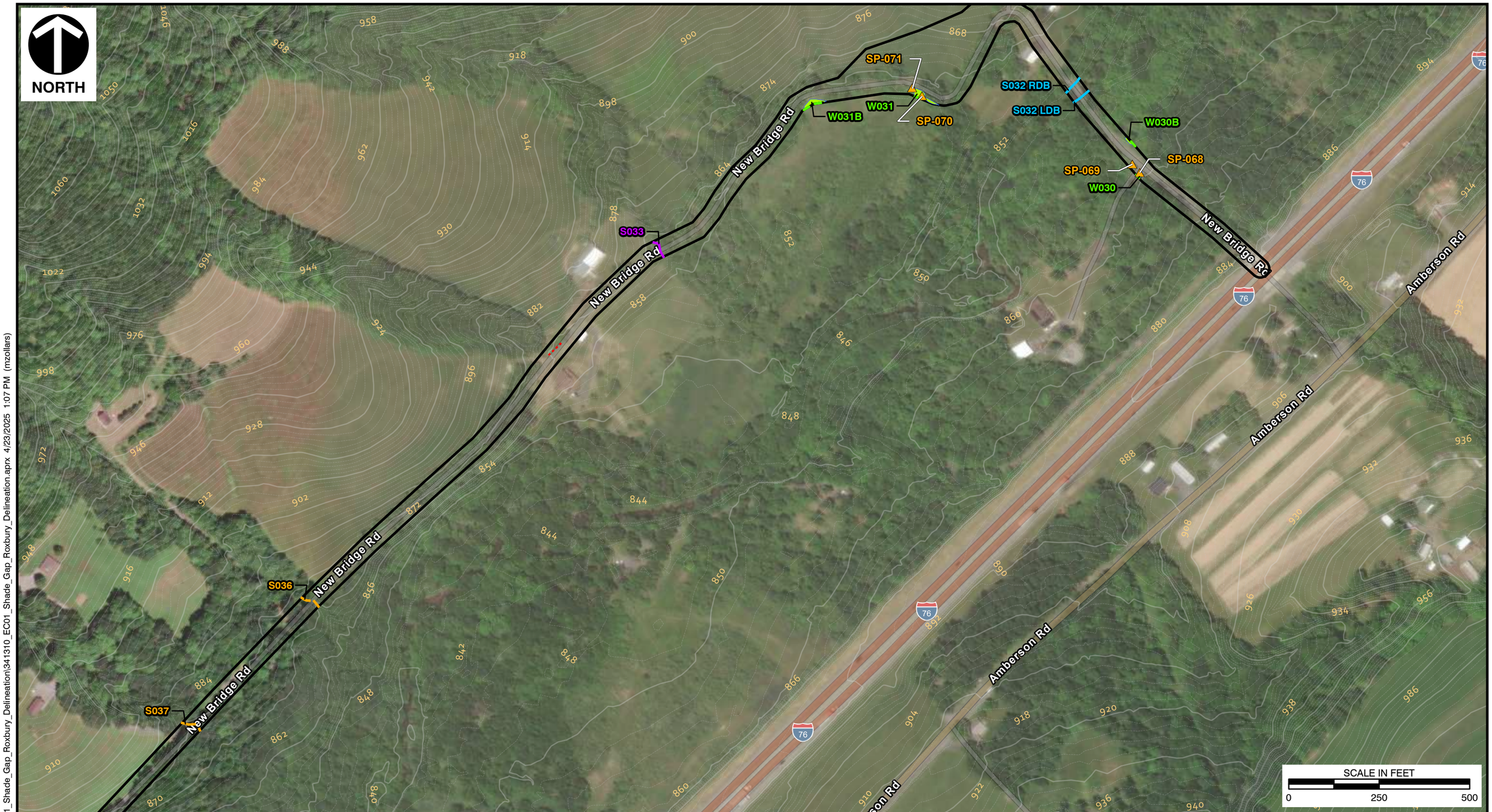
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3P.1
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- DITCH
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3P.2
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

LEGEND

- CULVERT LINE
- ACCESS ROUTES
- <ALL OTHER VALUES>
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3P.3
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file



LEGEND

- CULVERT LINE
- ACCESS ROUTES
- <ALL OTHER VALUES>
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310

FIGURE NO: 3P.4

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3Q
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file



P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- WETLAND - PUB
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3R
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- DITCH
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- WETLAND - PUB
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

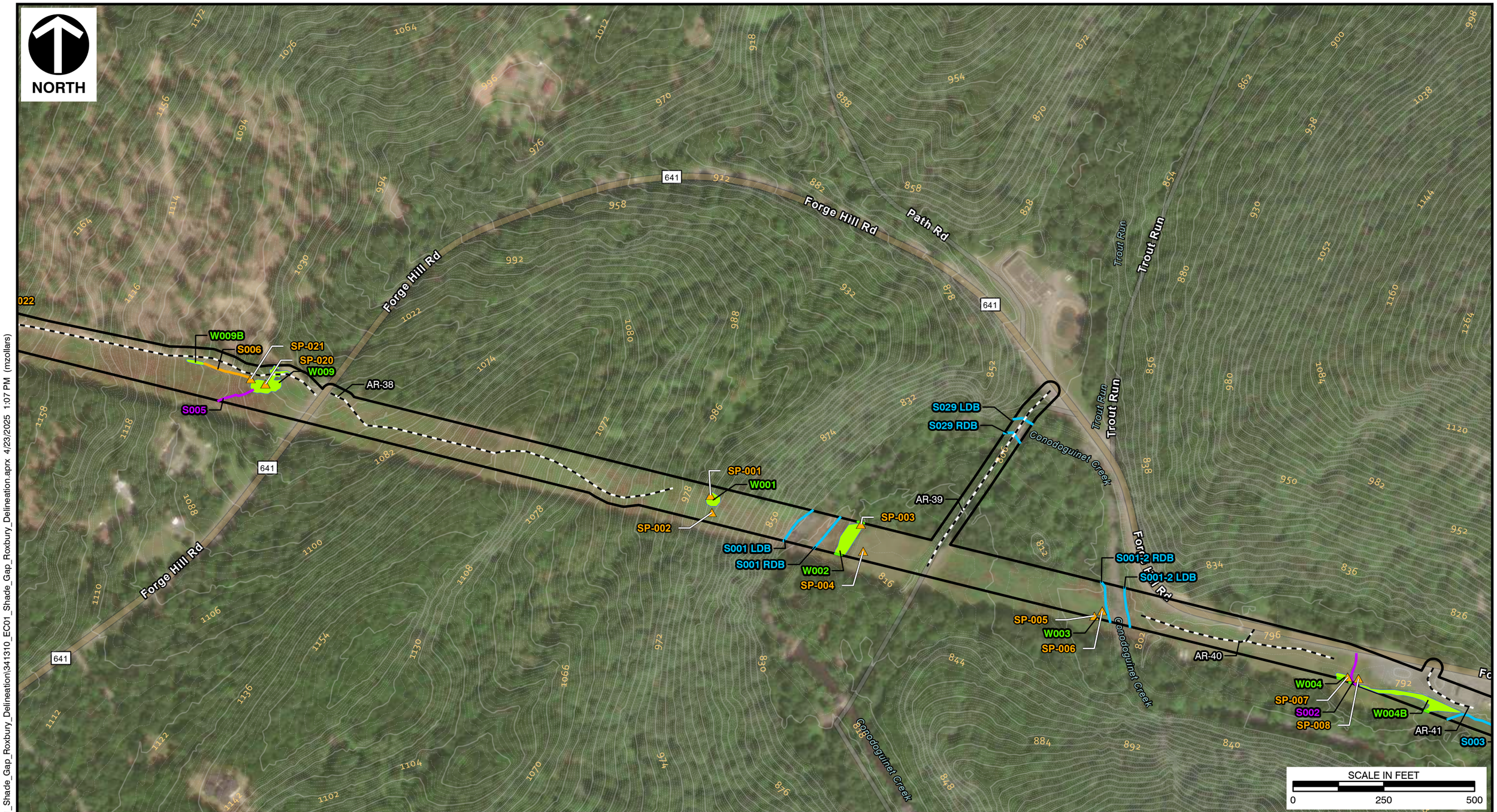
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3S
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3T
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

NORTH

AR-40
W004
SP-007
S002
SP-008
W004B
AR-41
S003
SP-009
W005
SP-010
SP-011
Forge Hill Rd
W006
SP-012
SP-013
W006B
AR-42
W006C
SP-015
SP-014
W007B
SP-145
SP-146
SP-016
S004
SP-017
W008
SP-018
Conodoguinet Creek

SCALE IN FEET
0 250 500

LEGEND

- SAMPLING POINT
- CULVERT LINE
- ACCESS ROUTES
- DITCH
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

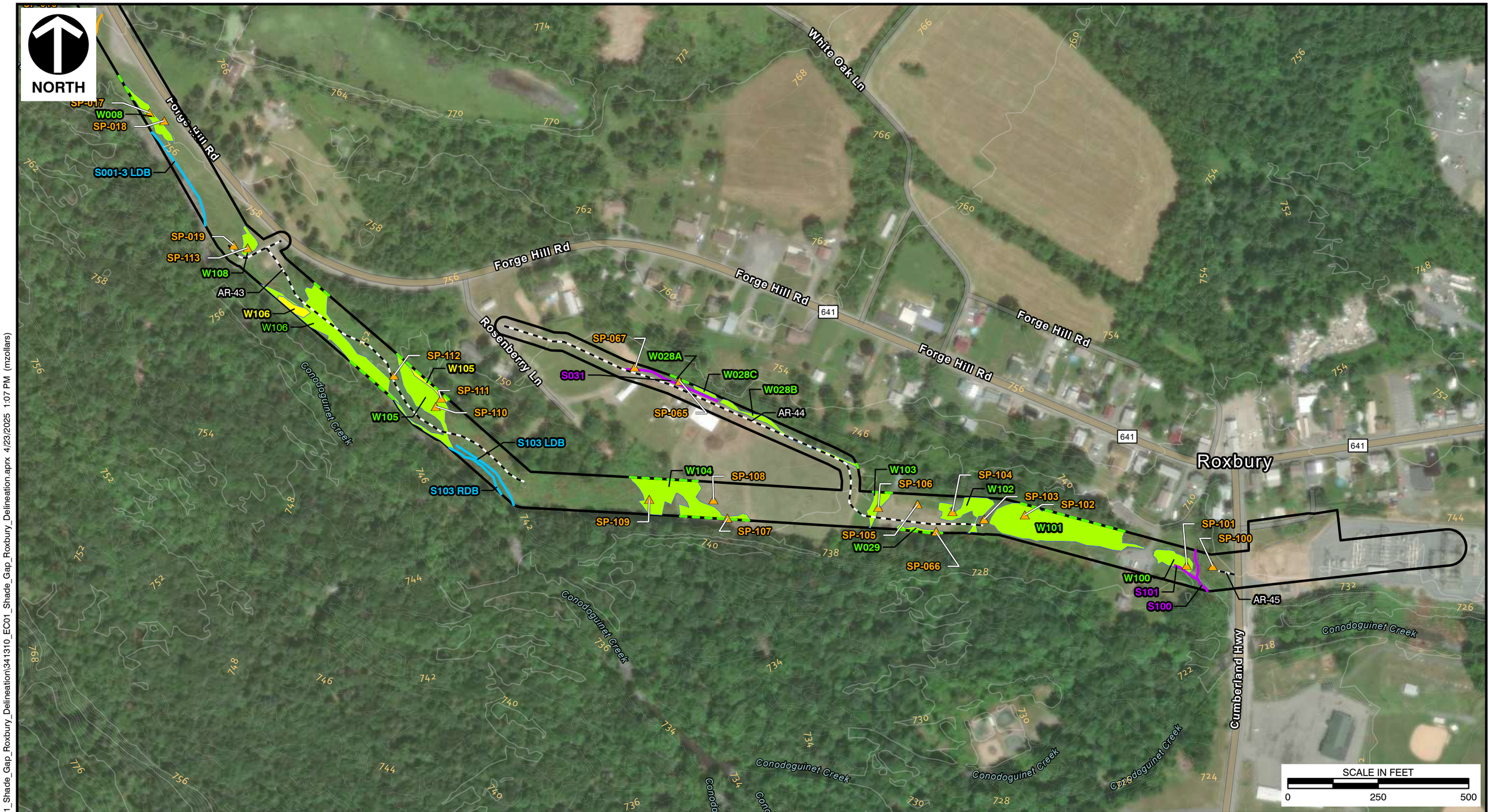
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3U
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- CULVERT LINE
- ACCESS ROUTES
- <ALL OTHER VALUES>
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- WETLAND - PSS
- AREA OF INTEREST (AOI)

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 4/23/2025

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

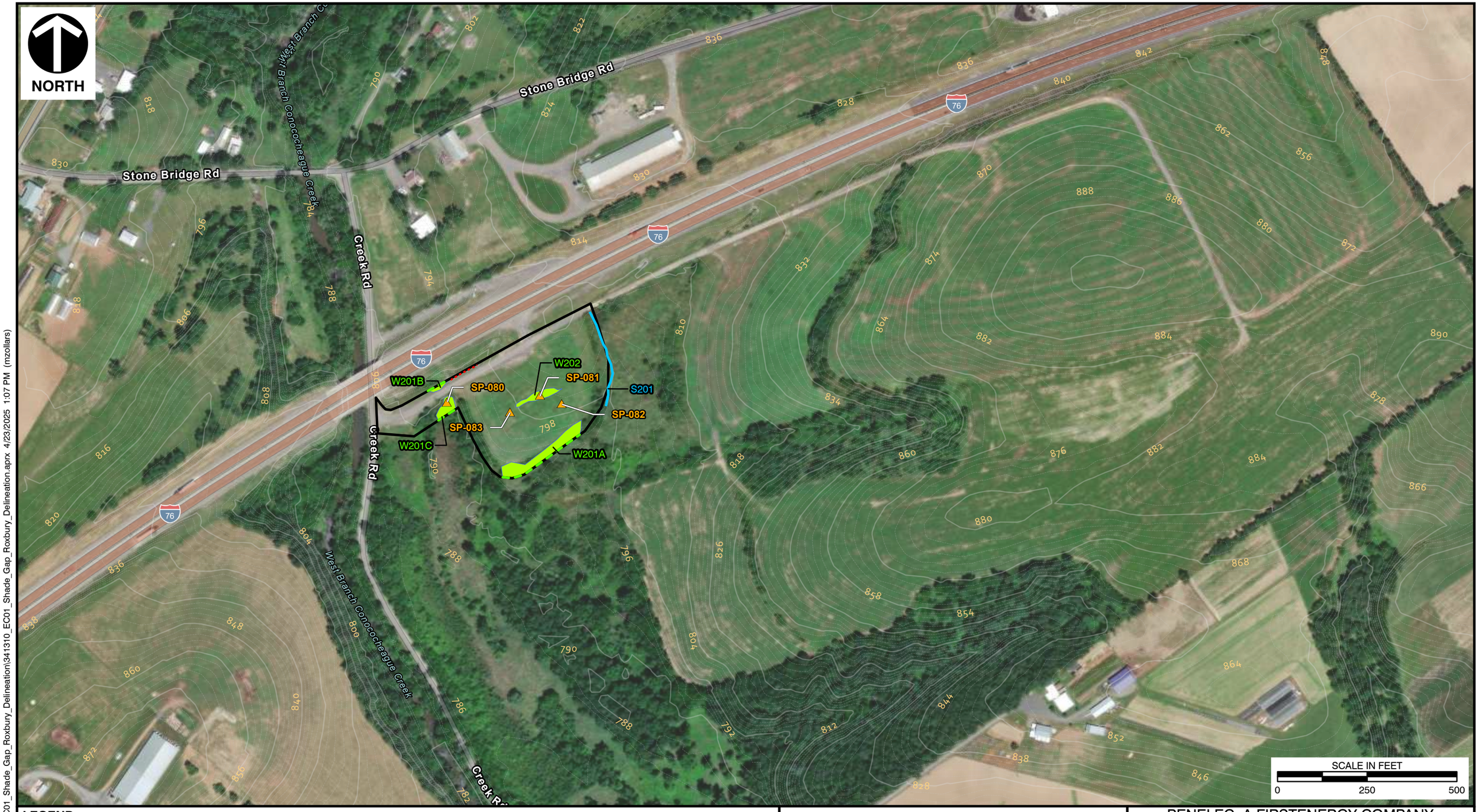
PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3V
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)



LEGEND

- SAMPLING POINT
- ACCESS ROUTES
- DITCH
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- AREA OF INTEREST (AOI)

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 4/23/2025
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

PENELEC, A FIRSTENERGY COMPANY
SHADE GAP - ROXBURY LINE REBUILD
FRANKLIN AND
HUNTINGDON COUNTIES, PENNSYLVANIA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3W
DATE:	4/23/2025	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 4/23/2025 1:07 PM (mzollars)

APPENDIX A

PHOTOGRAPHIC SUMMARY



1. Wetland Sample Point, SP-001, W001
Facing Southeast



2. Wetland Overview, W001, PEM
Facing South



3. Upland Sample Point, SP-002
Facing Southeast



4. Wetland Sample Point, SP-003, W002
Facing Southeast



5. Wetland Overview, W002, PEM
Facing East



6. Upland Sample Point, SP-004
Facing Northwest

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



7. Wetland Sampling Point, SP-005, W003
Facing South



8. Wetland Overview, W003, PEM
Facing West



9. Upland Sample Point, SP-006
Facing South



10. Wetland Sample point, SP-007, W004 & W004B
Facing Southwest



11. Wetland Overview, W004, PEM
Facing Southwest



12. Wetland Overview, W004B, PEM
Facing Northwest

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



13. Upland Sample Point, SP-008
Facing Southeast



14. Wetland Sample Point, SP-009, W005
Facing Southwest



15. Wetland Overview, W005, PEM
Facing Northwest



16. Upland Sample Point, SP-010
Facing Southeast



17. Upland Sample Point, SP-011
Facing Northwest



18. Wetland Sample Point, SP-012, W006 & W006B
Facing East

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



19. Wetland Overview, W006, PEM
Facing Southeast



20. Wetland Overview, W006B, PEM
Facing Northeast



21. Upland Sample Point, SP-013
Facing Southeast



22. Wetland Sample Point, SP-014, W007
Facing Southwest



23. Wetland Overview, W007, PEM
Facing East



24. Upland Sample Point, SP-015
Facing Southeast

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



25. Upland Sample Point, SP-016
Facing Northwest



26. Wetland Sample Point, SP-017, W008
Facing South



27. Wetland Overview, W008, PEM
Facing Northwest



28. Upland Sample Point, SP-018
Facing Northwest



29. Upland Sample Point, SP-019
Facing Northwest



30. Wetland Sample Point, SP-020, W009 & W009B
Facing Southeast

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



31. Wetland Overview, W009, PEM
Facing Southeast



32. Wetland Overview, W009B, PEM
Facing West



33. Upland Sample Point, SP-021
Facing Southeast



34. Wetland Sample Point, SP-022, W010, W010B & W010C
Facing Southwest



35. Wetland Overview, W010, PEM
Facing Southwest



36. Wetland Overview, W010B, PEM
Facing Northwest

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



37. Wetland Overview, W010C, PEM
Facing Southwest



38. Upland Sample Point, SP-023
Facing Northeast



39. Wetland Sample Point, SP-024, W011
Facing Northeast



40. Wetland Overview, W011, PUB
Facing Southeast



41. Upland Sample Point, SP-025
Facing Southeast



42. Upland Sample Point, SP-026
Facing West

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



43. Upland Sample Point SP-027
Facing North



44. Upland Sample Point, SP-028
Facing South



45. Upland Sample Point, SP-029
Facing Northwest



46. Upland Sample Point, SP-030
Facing Southwest



47. Wetland Sample Point, SP-031, W012
Facing South



48. Wetland Overview, W012, PEM
Facing West

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



49. Upland Sample Point, SP-032
Facing Southeast



50. Wetland Sample Point, SP-033, W013
Facing South



51. Wetland Overview, W013, PEM
Facing Northwest



52. Upland Sample Point, SP-034
Facing Northwest



53. Wetland Sample Point, SP-035, W014
Facing West



54. Wetland Overview, W014, PEM
Facing West

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



55. Upland Sample Point, SP-036
Facing West



56. Wetland Sample Point, SP-037, W015 & W015B
Facing Northeast



57. Wetland Overview, W015, PEM
Facing North



58. Wetland Overview, W015B, PEM
Facing East



59. Upland Sample Point, SP-038
Facing Southeast



60. Wetland Sample Point, SP-039, W016 & W016B
Facing Southeast

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



61. Wetland Overview, W016, PEM
Facing South



62. Wetland Overview, W016B, PEM
Facing North



63. Upland Sample Point, SP-040
Facing Southwest



64. Wetland Sample Point, SP-041, W017
Facing Southeast



65. Wetland Overview, W017, PEM
Facing South



66. Upland Sample Point, SP-042
Facing Southeast

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



67. Wetland Sample Point, SP-043, W018
Facing Southeast



68. Wetland Overview, W018, PEM
Facing South



69. Upland Sample Point, SP-044
Facing South



70. Wetland Sample Point, SP-045, W019
Facing Northwest



71. Wetland Overview, W019, PEM
Facing Southeast



72. Upland Sample Point, SP-046
Facing South

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



73. Wetland Sample Point, SP-047, W020
Facing South



74. Wetland Overview, W020, PEM
Facing Southwest



75. Upland Sample Point, SP-048
Facing South



76. Wetland Sample Point, SP-049, W021
Facing North



77. Wetland Overview, W021, PSS
Facing North



78. Upland Sample Point, SP-050
Facing Northwest

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



79. Wetland Sample Point, SP-051, W022 & W022B
Facing Northwest



80. Wetland Overview, W022, PEM
Facing South



81. Wetland Overview, W022B, PEM
Facing Northwest



82. Upland Sample Point, SP-052
Facing Southeast



83. Wetland Sample Point, SP-053, W023
Facing Northeast



84. Wetland Overview, W023, PEM
Facing East

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



85. Upland Sample Point, SP-054
Facing East



86. Wetland Sample Point, SP-055, W024
Facing Southwest



87. Wetland Overview, W024, PEM
Facing Southwest



88. Upland Sample Point, SP-056
Facing Southeast



89. Upland Sample Point, SP-057
Facing Northwest



90. Upland Sample Point, SP-058
Facing Southeast

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



91. Wetland Sample Point, SP-059, W025
Facing North



92. Wetland Overview, W025, PEM
Facing South



93. Upland Sample Point, SP-060
Facing Southeast



94. Wetland Sample Point, SP-061, W026
Facing North



95. Wetland Overview, W026, PEM
Facing Southeast



96. Upland Sample Point, SP-062
Facing Southeast

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



97. Upland Sample Point, SP-100
Facing Northwest



98. Wetland Sample Point, SP-101, W100
Facing Northwest



99. Wetland Overview, W100, PEM
Facing West



100. Wetland Sample Point, SP-102, W101
Facing Southeast



101. Wetland Overview, W101, PEM
Facing West



102. Upland Sample Point, SP-103
Facing North

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



103.Wetland Sample Point, SP-104, W102
Facing West



104.Wetland Overview, W102, PEM
Facing Southeast



105.Upland Sample Point, SP-105
Facing East



106. Wetland Sample Point, SP-106, W103
Facing West



107.Wetland Overview, W103, PEM
Facing East



108.Wetland Sample Point, SP-107, W104
Facing West

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



109.Wetland Overview, W104, PEM
Facing West



110.Upland Sample Point, SP-108
Facing West



111.Wetland Sample Point, SP-109, W104
Facing East



112.Wetland Sample Point, SP-110, W105 & W106
Facing Southwest



113.Wetland Overview, W105, PEM
Facing West



114.Wetland Overview, W106, PEM
Facing West

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



115.Wetland Sample Point, SP-111, W105 & W106
Facing North



116.Wetland Overview, W105, PSS
Facing West



117.Wetland Overview, W106, PSS
Facing Southwest



118.Upland Sample Point, SP-112
Facing West



119.Wetland Sample Point, SP-113, W108
Facing East



120.Wetland Overview, W108, PEM
Facing Northwest

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



121.Upland Sample Point, SP-114
Facing East



122.Upland Sample Point, SP-115
Facing Southeast



123.Upland Sample Point, SP-116
Facing East



124.Wetland Sample Point, SP-117, W109
Facing North



125.Wetland Overview, W109, PEM
Facing Northwest



126.Upland Sample Point, SP-118
Facing North

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



127.Wetland Sample Point, SP-119, W110
Facing Northeast



128.Wetland Overview, W110, PEM
Facing Northeast



129.Wetland Sample Point, SP-120, W111
Facing East



130.Wetland Overview, W111, PEM
Facing Northeast



131.Upland Sample Point, SP-121
Facing Southeast



132.Upland Sample Point, SP-122
Facing North

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



133.Wetland Sample Point, SP-123, W112
Facing Northeast



134.Wetland Overview, W112, PEM
Facing Northeast



135.Upland Sample Point, SP-124
Facing South



136.Wetland Sample Point, SP-125, W113
Facing North



137.Wetland Overview, W113, PEM
Facing East



138.Upland Sample Point, SP-126
Facing North

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



139.Upland Sample Point, SP-127
Facing North



140.Wetland Sample Point, SP-128, W114
Facing Southwest



141.Wetland Overview, W114, PEM
Facing North



142.Upland Sample Point, SP-129
Facing North



143.Upland Sample Point, SP-130
Facing Southeast



144.Upland Sample Point, SP-131
Facing East

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



145.Wetland Sample Point, SP-132 W115
Facing Southwest



146.Wetland Overview, W115, PEM
Facing Southwest



147. Wetland Sample Point, SP-133, W116
Facing West



148.Wetland Overview, W116, PEM
Facing South



149.Upland Sample Point, SP-134
Facing Northwest



150.Wetland Sample Point, SP-135, W117
Facing North

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



151.Wetland Overview, W117, PEM
Facing South



152.Wetland Sample Point, SP-136, W118
Facing Southwest



153.Wetland Overview, W118, PEM
Facing Northwest



154.Upland Sample Point, SP-137
Facing South



155.Wetland Sample Point, SP-138, W119 & W120
Facing West



156.Wetland Overview, W119, PEM
Facing South

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



157.Wetland Overview, W120, PEM
Facing East



158.Upland Sample Point, SP-139
Facing West



159.Wetland Sample Point, SP-140, W121
Facing West



160.Wetland Overview, W121, PEM
Facing North



161.Upland Sample Point, SP-141
Facing West



162.Wetland Sample Point, SP-142, W122
Facing Northwest

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



163.Wetland Overview, W122, PEM
Facing Southwest



164.Upland Sample Point, SP-143
Facing West



165.Wetland Sample Point, SP-144, W107
Facing North



166.Wetland Overview, W107, PEM
Facing South



167.Wetland Sample Point, SP-063, W027
Facing South



168.Wetland Overview, W027, PEM
Facing South

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19 and October 7-9, 2024



169.Upland Sample Point, SP-064
Facing West



170.Wetland Sample Point, SP-065, W028A, W028B, & W028C
Facing West



171.Wetland Overview, W028A, PEM
Facing North



172.Wetland Overview, W028B, PEM
Facing South



173.Wetland Overview, W028C, PEM
Facing South



174.Wetland Sample Point, SP-066, W029
Facing South

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



175.Wetland Overview, W029, PEM
Facing South



176.Upland Sample Point, SP-067
Facing South



177.Wetand Sample Point, SP-068, W030 & W030B
Facing South



178.Wetland Overview, W030, PEM
Facing South



179.Wetland Overview, W030B, PEM
Facing South



180.Upland Sample Point, SP-069
Facing South

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



181.Wetland Sample Point, SP-070, W031 & W031B
Facing South



182.Wetland Overview, W031, PEM
Facing South



183.Wetand Overview, W031B, PEM
Facing South



184.Upland Sample Point, SP-071
Facing South



185.Wetland Sample Point, SP-072, W032
Facing South



186.Wetland Overview, W032, PEM
Facing South

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



187.Upland Sample Point, SP-073
Facing South



188.Wetland Sample Point, SP-074, W033, W033B, W033C, W033D, W033 E Facing South



189.Wetand Overview, W033, PEM
Facing South



190.Wetland Overview, W033B, PEM
Facing South



191.Wetland Overview, W033C, PEM
Facing South



192.Wetland Overview, W033D, PEM
Facing South

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



193.Upland Sample Point, SP-075
Facing South



194.Wetland Sample Point, SP-076, W034
Facing South



195.Wetand Overview, W034, PEM
Facing South



196.Upland Sample Point, SP-077
Facing South



197.Wetland Sample Point, SP-078, W035
Facing South



198.Wetland Overview, W035, PEM
Facing South

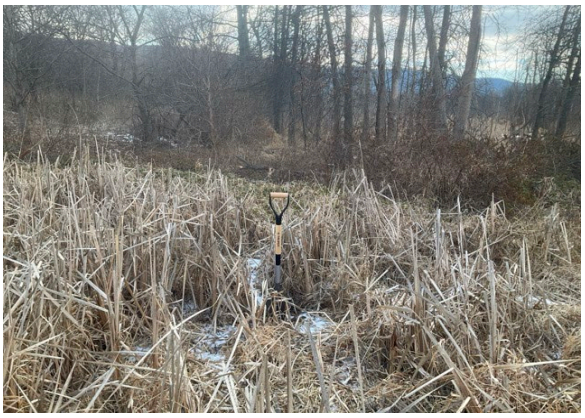
Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



199.Upland Sample Point, SP-079
Facing South



200. Wetland Sample Point, SP-080, W201A, B, C
Facing East



201. Overview of Wetland W201A, PEM
Facing Southeast



202. Overview of Wetland W201B, PEM
Facing North



203. Overview of Wetland W201C, PEM
Facing South



204. Wetland Sample Point, SP-081, W202
Facing West

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024 & February 10, 2025



205. Overview of Wetland W202, PEM
Facing Southwest



206. Upland Sample Point, SP-082,
Facing South



207. Upland Sample Point, SP-083
Facing Southwest



208. Wetland Sample Point, SP-145, W07B
Facing Northwest



209. Upland Sample Point, SP-146
Facing Northwest

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: February 10, 2025



1. Stream S001, Perennial
Facing Upstream



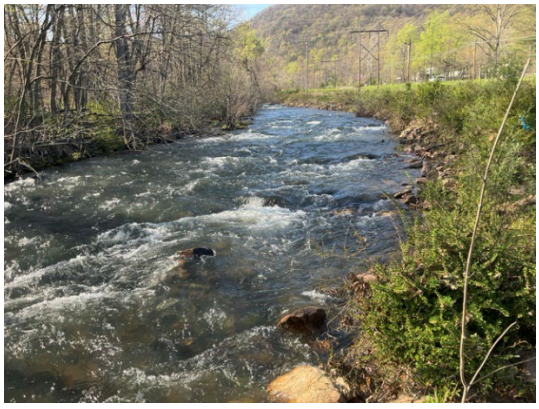
2. Stream S001, Perennial
Facing Downstream



3. Stream S001-2, Perennial
Facing Upstream



4. Stream S001-2, Perennial
Facing Downstream



5. Stream S001-3, Perennial
Facing Upstream



6. Stream S001-3, Perennial
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



7. Stream S002, Intermittent
Facing Upstream



8. Stream S002, Intermittent
Facing Downstream



9. Stream S003, Perennial
Facing Upstream



10. Stream S003, Perennial
Facing Downstream



11. Stream S004, Ephemeral
Facing Upstream



12. Stream S004, Ephemeral
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



13. Stream S005, Intermittent
Facing Upstream



14. Stream S005, Intermittent
Facing Downstream



15. Stream S006,
Facing Upstream



16. Stream S006,
Facing Downstream



17. Stream S007, Intermittent
Facing Upstream



18. Stream S007, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



19. Stream S008, Ephemeral
Facing Upstream



20. Stream S008, Ephemeral
Facing Downstream



21. Stream S009, Intermittent
Facing Upstream



22. Stream S009, Intermittent
Facing Downstream



23. Stream S010, Intermittent
Facing Upstream



24. Stream S010, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



25. Stream S011, Perennial
Facing Upstream



26. Stream S011, Perennial
Facing Downstream



27. Stream S012, Intermittent
Facing Upstream



28. Stream S012, Intermittent
Facing Downstream



29. Stream S013, Perennial
Facing Upstream



30. Stream S013, Perennial
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



31. Stream S014, Intermittent
Facing Upstream



32. Stream S014, Intermittent
Facing Downstream



33. Stream S015, Intermittent
Facing Upstream



34. Stream S015, Intermittent
Facing Downstream



35. Stream S016, Ephemeral
Facing Upstream



36. Stream S016, Ephemeral
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



37. Stream S017, Perennial
Facing Upstream



38. Stream S017, Perennial
Facing Downstream



39. Stream S018, Perennial
Facing Upstream



40. Stream S018, Perennial
Facing Downstream



41. Stream S019, Intermittent
Facing Upstream



42. Stream S019, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



43. Stream S020, Intermittent
Facing Upstream



44. Stream S020, Intermittent
Facing Downstream



45. Stream S021, Intermittent
Facing Upstream



46. Stream S021, Intermittent
Facing Downstream



47. Stream S022, Intermittent
Facing Upstream



48. Stream S022, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



49. Stream S023, Intermittent
Facing Upstream



50. Stream S023, Intermittent
Facing Downstream



51. Stream S024, Intermittent
Facing Upstream



52. Stream S024, Intermittent
Facing Downstream



53. Stream S025, Intermittent
Facing Upstream



54. Stream S025, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



55. Stream S026, Intermittent
Facing Upstream



56. Stream S026, Intermittent
Facing Downstream



57. Stream S027, Perennial
Facing Upstream



58. Stream S027, Perennial
Facing Downstream



59. Stream S028, Intermittent
Facing Upstream



60. Stream S028, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



61. Stream S029, Perennial
Facing Upstream



62. Stream S029, Perennial
Facing Downstream



63. Stream S030, Intermittent
Facing Upstream



64. Stream S030, Intermittent
Facing Downstream



65. Stream S031, Intermittent
Facing Upstream



66. Stream S031, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



67. Stream S032, Perennial
Facing Upstream



68. Stream S032, Perennial
Facing Downstream



69. Stream S033, Intermittent
Facing Upstream



70. Stream S033, Intermittent
Facing Downstream



71. Stream S034, Perennial
Facing Upstream



72. Stream S034, Perennial
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



73. Stream S035, Ephemeral Facing Upstream



74. Stream S035, Ephemeral Facing Downstream



75. Stream S036, Ephemeral Facing Upstream



76. Stream S036, Ephemeral Facing Downstream



77. Stream S037, Ephemeral Facing Upstream



78. Stream S037, Ephemeral Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



79. Stream S038, Ephemeral
Facing Upstream



80. Stream S038, Ephemeral
Facing Downstream



81. Stream S039, Ephemeral
Facing Upstream



82. Stream S039, Ephemeral
Facing Downstream



83. Stream S040, Intermittent
Facing Upstream



84. Stream S040, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



85. Stream S041, Ephemeral Facing Upstream



86. Stream S041, Ephemeral Facing Downstream



87. Stream S042, Ephemeral Facing Upstream



88. Stream S042, Ephemeral Facing Downstream



89. Stream S043, Perennial Facing Upstream



90. Stream S043, Perennial Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: October 7-9, 2024



91. Stream S100, Intermittent
Facing Upstream



92. Stream S100, Intermittent
Facing Downstream



93. Stream S101, Intermittent
Facing Upstream



94. Stream S101, Intermittent
Facing Downstream



95. Stream S102, Perennial
Facing Upstream



96. Stream S102, Perennial
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



97. Stream S103, Perennial
Facing Upstream



98. Stream S103, Perennial
Facing Downstream



99. Stream S104, Intermittent
Facing Upstream



100.Stream S104, Intermittent
Facing Downstream



101.Stream S105, Intermittent
Facing Upstream



102.Stream S105, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



103.Stream S106, Perennial
Facing Upstream



104.Stream S106, Perennial
Facing Downstream



105.Stream S107, Perennial
Facing Upstream



106.Stream S107, Perennial
Facing Downstream



107.Stream S108, Perennial
Facing Upstream



108.Stream S108, Perennial
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



109.Stream S109, Perennial
Facing Upstream



110.Stream S109, Perennial
Facing Downstream



111.Stream S110, Intermittent
Facing Upstream



112.Stream S110, Intermittent
Facing Downstream



113.Stream S111, Ephemeral
Facing Upstream



114.Stream S111, Ephemeral
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



115.Stream S112, Perennial
Facing Upstream



116.Stream S112, Perennial
Facing Downstream



117.Stream S113, Intermittent
Facing Upstream



118.Stream S113, Intermittent
Facing Downstream



119.Stream S114, Intermittent
Facing Upstream



120.Stream S114, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024



121.Stream S115, Perennial
Facing Upstream



122.Stream S115, Perennial
Facing Downstream



123.Stream S116, Ephemeral
Facing Upstream



124. Stream S116, Ephemeral
Facing Downstream



125. Stream S117, Ephemeral
Facing Upstream



126. Stream S117, Ephemeral
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: April 16-19, 2024 & March 31, 2025



127.Stream S118, Intermittent
Facing Upstream



128.Stream S118, Intermittent
Facing Downstream



129.Stream S119, Intermittent
Facing Upstream



130. Stream S119, Intermittent
Facing Downstream



131.Stream S120, Ephemeral
Facing Upstream



132.Stream S120, Ephemeral
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: March 31, 2025



133.Stream S121, Ephemeral
Facing Upstream



134.Stream S121, Ephemeral
Facing Downstream



135.Stream S122, Intermittent
Facing Upstream



136. Stream S122, Intermittent
Facing Downstream



137.Stream S201, Intermittent
Facing Upstream



138. Stream S201, Intermittent
Facing Downstream

Civil & Environmental Consultants, Inc.
Pittsburgh, PA 15205
Phone: (800) 365-2324
www.cecinc.com

Penelec, A FirstEnergy Company
Shade Gap-Roxbury
341-310

Photographs Taken: February 10 and March 31, 2025

APPENDIX B

WETLAND DETERMINATION DATA SHEETS

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-001

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 25-50%

Subregion (LRR or MLRA): LRR N Lat: 40.119373 Long: -77.688188 Datum: NAD83 (2011)

Soil Map Unit Name: HRF - Hazleton-Dekalb complex, 25 to 75 percent slopes, extremely stony NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located in powerline ROW on hillslope.

Wetland ID: W001; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:
Multiple indicators present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-001

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha angustifolia	35	Y	OBL
2. Phalaris arundinacea	20	Y	FACW
3. Symphyotrichum lateriflorum	10	N	FACW
4. Carex vulpinoidea	10	N	OBL
5. Onoclea sensibilis	10	N	FACW
6. Rosa multiflora	10	N	FACU
7. Viola sororia	5	N	FAC
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present.

SOIL Sampling Point: SP-001

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	95	5YR 4/6	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted soils

Depth (inches): 6

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at 6 inches due to shallow aquitard.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-002

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 25-50%

Subregion (LRR or MLRA): LRR N Lat: 40.119279 Long: -77.688166 Datum: NAD83 (2011)

Soil Map Unit Name: HRF - Hazleton-Dekalb complex, 25 to 75 percent slopes, extremely stony NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located on hillslope adjacent to W001.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No Hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-002

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dichanthelium clandestinum	30	Y	FAC
2. Andropogon virginicus	15	Y	FACU
3. Rosa multiflora	10	Y	FACU
4. Apocynum androsaemifolium	10	Y	FACU
5. Potentilla simplex	10	Y	FACU
6. Solidago canadensis	10	Y	FACU
7. Verbascum thapsus	5	N	FACU
8. Viola sororia	5	N	FAC
9. Onoclea sensibilis	5	N	FACW
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-002

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loam/Clayey	Rock fill refusal at 6 inches.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted rock

Depth (inches): 6

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Silty clay loam.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-003

Investigator(s): AFG/FDD Section, Township, Range: Letterkenny Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.119128 Long: -77.686690 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo silt loam NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located on floodplain adjacent to S001.

Wetland ID: W002; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 3
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology is present, including surface water. Saturation and water table present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-003

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Salix nigra	3	N	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	3 = Total Cover		
50% of total cover: 1.5	20% of total cover: 0.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Microstegium vimineum	25	Y	FAC
2. Carex lurida	15	Y	OBL
3. Juncus effusus	10	N	FACW
4. Onoclea sensibilis	10	N	FACW
5. Scirpus cyperinus	5	N	FACW
6. Impatiens capensis	5	N	FACW
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
50% of total cover: 35	20% of total cover: 14		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	18	x 1 =	18
FACW species	30	x 2 =	60
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	73 (A)		153 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present

SOIL Sampling Point: SP-003

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	90	5YR 5/8	10	C	M	Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

S5 indicator present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-004

Investigator(s): AFG/FDD Section, Township, Range: Letterkenny Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.118973 Long: -77.686690 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo silt loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located in maintained grass field adjacent to W002.

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-004

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	80	Y	FACU
2. Taraxacum officinale	10	N	FACU
3. Daucus carota	5	N	UPL
4. Potentilla simplex	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass

SOIL Sampling Point: SP-004

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

Rock shovel refusal at approximately 10 inches.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-005

Investigator(s): AFG/FDD Section, Township, Range: Letterkenny Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.118394 Long: -77.684486 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo silt loam NWI classification: -

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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☐ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

PEM wetland located in depression near floodplain.

Wetland ID: W003; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple indicators present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-005

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Symplocarpus foetidus	20	Y	OBL
2. Hypericum punctatum	15	Y	FAC
3. Solidago gigantea	15	Y	FACW
4. Viola sororia	10	N	FAC
5. Apocynum androsaemifolium	10	N	FACU
6. Myosoton aquaticum	10	N	FACW
7. Alliaria petiolata	5	N	FACU
8.			
9.			
10.			
11.			
	85 = Total Cover		
50% of total cover: 42.5	20% of total cover: 17		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation is present.

SOIL Sampling Point: SP-005

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/1	95	5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

Shovel refusal at 10 inches due to rock.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-006

Investigator(s): AFG/FDD Section, Township, Range: Letterkenny Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.118506 Long: -77.684418 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo silt loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

upland sample point located adjacent to W003 on floodplain.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

one secondary indicator present, does not meet for hydrology.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-006

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Lonicera japonica	60	Y	FACU
2. Poa pratensis	20	Y	FACU
3. Rosa multiflora	10	N	FACU
4. Solidago canadensis	5	N	FACU
5. Alliaria petiolata	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation.

SOIL Sampling Point: SP-006

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Loam/Clayey	
2-16	10YR 4/3	100					Sandy	Sandy/loam/ clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soils.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-007

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.117986 Long: -77.681965 Datum: NAD83 (2011)

Soil Map Unit Name: Pu - Purdy silty clay loam NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located in concave depression adjacent to S002

Wetland ID: W004; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 4
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple hydrology indicators, including surface water.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-007

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Lonicera japonica	30	Y	FACU
2. Hemerocallis fulva	20	Y	FACU
3. Symplocarpus foetidus	20	Y	OBL
4. Rumex crispus	10	N	FAC
5. Hypericum punctatum	10	N	FAC
6. Ranunculus repens	10	N	FAC
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	5	x 2 =	10
FAC species	30	x 3 =	90
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	105 (A)		320 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present

SOIL Sampling Point: SP-007

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 4

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at 4 inches due to rock refusal.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-008

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.117995 Long: -77.681774 Datum: NAD83 (2011)

Soil Map Unit Name: Pu - Purdy silty clay loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W004 and S002.

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-008

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Hemerocallis fulva	70	Y	FACU
2. Chamaecrista nictitans	10	N	FACU
3. Glechoma hederacea	10	N	FACU
4. Galium aparine	5	N	FACU
5. Dipsacus fullonum	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 1 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL Sampling Point: SP-008

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

Shovel refusal at 10 inches due to rock refusal.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-009

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.117379 Long: -77.679680 Datum: NAD83 (2011)

Soil Map Unit Name: Pu - Purdy silty clay loam NWI classification: -

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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

PEM wetland located on floodplain.

Wetland ID: W005; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

multiple hydrology indicators present, including surface water.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-009

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Hemerocallis fulva	35	Y	FACU
2. Carex lurida	15	Y	OBL
3. Poa palustris	15	Y	FACW
4. Symplocarpus foetidus	10	N	OBL
5. Barbarea vulgaris	10	N	FACU
6. Rumex obtusifolius	5	N	FACU
7. Alliaria petiolata	5	N	FACU
8. Rosa multiflora	5	N	FACU
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present.

SOIL Sampling Point: SP-009

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/2	95	7.5YR 5/8	95	C	M	Loam/Clayey	Sandy/ clay/loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at 12 inches due to rock.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-010

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.117313 Long: -77.679432 Datum: NAD83 (2011)

Soil Map Unit Name: Pu - Purdy silty clay loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Upland located adjacent to W005

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology is present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-010

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Lonicera japonica	30	Y	FACU
2. Rosa multiflora	20	Y	FACU
3. Rubus allegheniensis	20	Y	FACU
4. Microstegium vimineum	20	Y	FAC
5. Barbarea vulgaris	10	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation is not present.

SOIL Sampling Point: SP-010

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Concrete

Depth (inches): 2

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at 2 inches due to concreate.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-011

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.117095 Long: -77.678691 Datum: NAD83 (2011)

Soil Map Unit Name: Pu - Purdy silty clay loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Upland located in open field with surface water.

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 2

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water present

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-011

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	45	Y	FACU
2. Trifolium repens	20	Y	FACU
3. Daucus carota	15	N	UPL
4. Phleum pratense	15	N	FACU
5. Rosa multiflora	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL Sampling Point: SP-011

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rock shovel refusal at 8 inches

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-012

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.116588 Long: -77.677778 Datum: NAD83 (2011)

Soil Map Unit Name: Pu - Purdy silty clay loam NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland in maintained yard.

Wetland ID: W006; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:
multiple indicators present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-012

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Lysimachia nummularia	40	Y	FACW
2. Poa palustris	40	Y	FACW
3. Taraxacum officinale	10	N	FACU
4. Trifolium repens	10	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present.

SOIL

Sampling Point: SP-012

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	95	5YR 4/6	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F6 indicator present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-013

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.116522 Long: -77.677695 Datum: NAD83 (2011)

Soil Map Unit Name: Pu - Purdy silty clay loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located in maintained yard.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-013

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	30	Y	FACU
2. Poa pratensis	30	Y	FACU
3. Viola subsinuata	15	N	FACU
4. Trifolium repens	15	N	FACU
5. Taraxacum officinale	10	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present

SOIL Sampling Point: SP-013

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Loam/Clayey	
2-16	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soils present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-014

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.115158 Long: -77.675303 Datum: NAD83 (2011)

Soil Map Unit Name: As - Atkins silt loam NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located in concave depression in ROW.

Wetland ID: W007; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☑ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 1

Water Table Present? Yes ☑ No ☐ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple indicators present, including surface water.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-014

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha angustifolia	45	Y	OBL
2. Onoclea sensibilis	20	Y	FACW
3. Symplocarpus foetidus	20	Y	OBL
4. Ranunculus repens	5	N	FAC
5. Impatiens capensis	5	N	FACW
6. Pycnanthemum flexuosum	5	N	FACW
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present.

SOIL Sampling Point: SP-014

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 3/1	95	7.5YR 5/8	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at 8 inches due to concreate/ bed rock layer

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-015

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.115124 Long: -77.675183 Datum: NAD83 (2011)

Soil Map Unit Name: As - Atkins silt loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located on access road to pole between wetland complex.

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

Hydrology not present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-015

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	40	Y	FACU
2. Trifolium pratense	25	Y	FACU
3. Taraxacum officinale	10	N	FACU
4. Securigera varia	10	N	NA
5. Ambrosia artemisiifolia	5	N	FACU
6. Daucus carota	5	N	UPL
7. Potentilla simplex	5	N	FACU
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation not present.

SOIL Sampling Point: SP-015

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 6

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at 6 inches due to compact gravel.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-016

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.114022 Long: -77.673844 Datum: NAD83 (2011)

Soil Map Unit Name: As - Atkins silt loam NWI classification: PEM1/2F

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located in concave depression near culvert outlet.

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

one secondary indicator present, hydrology does not pass.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-016

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Cerastium arvense	20	Y	UPL
2. Vernonia angustifolia	15	Y	FACU
3. Solidago canadensis	10	Y	FACU
4. Dipsacus fullonum	10	Y	FACU
5. Juncus effusus	10	Y	FACW
6. Carex lurida	10	Y	OBL
7. Allium schoenoprasum	10	Y	FACU
8. Barbarea vulgaris	10	Y	FACU
9. Taraxacum officinale	5	N	FACU
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL Sampling Point: SP-016

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	95	7.5YR 4/6	5	C	M	Loam/Clayey	
8-16	2.5Y 5/2	90	7.5YR 5/8	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-017

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.113112 Long: -77.673141 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo silt loam NWI classification: R2UBH

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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

PEM wetland located on floodplain.

Wetland ID: W008; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 1

Water Table Present? Yes ☑ No ☐ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

multiple hydrology indicators present, including surface water, water table, and saturation.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-017

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Salix nigra	5	Y	OBL
2. Alnus incana	3	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha angustifolia	35	Y	OBL
2. Symplocarpus foetidus	15	Y	OBL
3. Juncus effusus	15	Y	FACW
4. Equisetum fluviatile	15	Y	OBL
5. Scirpus cyperinus	10	N	FACW
6. Ludwigia alternifolia	5	N	FACW
7. Microstegium vimineum	5	N	FAC
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 250 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

hydric vegetation present.

SOIL Sampling Point: SP-017

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/1	95	5YR 5/8	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F6 indicator present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-018

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.113019 Long: -77.672971 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo silt loam NWI classification: R2UBH

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located on hillslope adjacent to W008 near pole.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

Hydrology not present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-018

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	45	Y	FACU
2. Barbarea vulgaris	10	Y	FACU
3. Dipsacus fullonum	10	Y	FACU
4. Trifolium repens	10	Y	FACU
5. Poa pratensis	10	Y	FACU
6. Prunella vulgaris	5	N	FACU
7. Allium schoenoprasum	5	N	FACU
8. Rosa multiflora	5	N	FACU
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 5 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

hydric vegetation not present.

SOIL Sampling Point: SP-018

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 4/2	100					Loam/Clayey	
3-16	7.5YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

hydric soils not present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-019

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.112069 Long: -77.672324 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo silt loam NWI classification: R2UBH

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located adjacent to werland

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-019

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	40	Y	FACU
2. Potentilla simplex	20	Y	FACU
3. Andropogon virginicus	15	N	FACU
4. Rosa multiflora	10	N	FACU
5. Daucus carota	5	N	UPL
6. Smilax rotundifolia	5	N	FAC
7. Pycnanthemum flexuosum	5	N	FACW
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL Sampling Point: SP-019

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rocky shovel refusal at 6 inches.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-020

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.120239 Long: -77.692575 Datum: NAD83 (2011)

Soil Map Unit Name: SrD - Sideling gravelly loam, 8 to 25 percent slopes, extremely stony NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located near stream on powerline ROW.

Wetland ID: W009; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

multiple hydrology indicators present, including surface water.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-020

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	25	Y	FACW
2. Juncus effusus	20	Y	FACW
3. Onoclea sensibilis	15	Y	FACW
4. Microstegium vimineum	15	Y	FAC
5. Carex lurida	10	N	OBL
6. Pycnanthemum flexuosum	10	N	FACW
7. Euthamia graminifolia	5	N	FAC
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present.

SOIL Sampling Point: SP-020

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 4/1	90	7.5YR 5/8	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

F3 indicator met. Rocky refusal at 10 inches.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-021

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.120235 Long: -77.692714 Datum: NAD83 (2011)

Soil Map Unit Name: SrD - Sideling gravelly loam, 8 to 25 percent slopes, extremely stony NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☐
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located adjacent to W009 and S005 on hillslope.

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-021

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	25	Y	FACU
2. Phalaris arundinacea	20	Y	FACW
3. Potentilla simplex	15	Y	FACU
4. Houstonia caerulea	10	N	FACU
5. Andropogon virginicus	10	N	FACU
6. Erigeron annuus	10	N	FACU
7. Rosa multiflora	5	N	FACU
8. Daucus carota	5	N	UPL
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

hydric vegetation not present.

SOIL Sampling Point: SP-021

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	100					Loam/Clayey	
1-4	10YR 4/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rocky

Depth (inches): 4

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rocky fill shovel refusal at 4 inches. soils not present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-022

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.120649 Long: -77.695460 Datum: NAD83 (2011)

Soil Map Unit Name: SrD - Sideling gravelly loam, 8 to 25 percent slopes, extremely stony NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

W010 located where S007 loses bed and banks.

Wetland ID: W010; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

multiple indicators present, including surface water, water table, and saturation.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-022

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	20	Y	FACW
2. Juncus effusus	15	Y	FACW
3. Eleocharis palustris	15	Y	OBL
4. Epilobium coloratum	10	N	FACW
5. Scirpus atrovirens	10	N	OBL
6. Euthamia graminifolia	5	N	FAC
7.			
8.			
9.			
10.			
11.			
	75 = Total Cover		
50% of total cover: 37.5	20% of total cover: 15		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

hydric vegetation present.

SOIL Sampling Point: SP-022

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 6/2	90	7.5YR 5/8	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ☑ No ☐

Remarks:

F3 indicator met.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-023

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.120742 Long: -77.695586 Datum: NAD83 (2011)

Soil Map Unit Name: SrD - Sideling gravelly loam, 8 to 25 percent slopes, extremely stony NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located on Hillslope adjacent to S008

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-023

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Andropogon virginicus	25	Y	FACU
2. Potentilla simplex	10	Y	FACU
3. Rubus allegheniensis	10	Y	FACU
4. Houstonia caerulea	5	N	FACU
5. Viola lanceolata	5	N	OBL
6.			
7.			
8.			
9.			
10.			
11.			
	55 = Total Cover		
50% of total cover: 27.5	20% of total cover: 11		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL Sampling Point: SP-023

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rocky fill shovel refusal.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-024

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.122997 Long: -77.707320 Datum: NAD83 (2011)

Soil Map Unit Name: W - Water NWI classification: PUBHh

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

Are Vegetation Yes, 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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

PUB continues out of boundary

Wetland ID: W011; Cowardin Class: PUB

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☑ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☑ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 36
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple indicators present, including 36 inches of surface water. Inundation visible on aerial imagery.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-024

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 5 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0 = Total Cover		

50% of total cover: _____ 20% of total cover: _____

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Yes Problematic Hydrophytic Vegetation[1] (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/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.)

No vegetation present due to area being inundated year round. PUB wetland

SOIL Sampling Point: SP-024

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

A10 indicator present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-025

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.123113 Long: -77.708016 Datum: NAD83 (2011)

Soil Map Unit Name: BxD - Buchanan cobbly loam, 8 to 25 percent slopes, extremely stony NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point adjacent to PUB wetland along power line right-of-way.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-025

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Lonicera morrowii	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	45	Y	FACU
2. Securigera varia	15	Y	UPL
3. Andropogon virginicus	10	N	FACU
4. Solidago canadensis	10	N	FACU
5. Potentilla simplex	10	N	FACU
6. Rubus phoenicolasius	5	N	FACU
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover: 47.5	20% of total cover: 19		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL

Sampling Point: SP-025

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/4	100					Loam/Clayey	

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

[2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 3

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal due to gravely fill material.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-026

Investigator(s): AFG/FDD Section, Township, Range: Lurgan Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.125110 Long: -77.718670 Datum: NAD83 (2011)

Soil Map Unit Name: BxD - Buchanan cobbly loam, 8 to 25 percent slopes, extremely stony NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located between S012 and W110.

Wetland ID: Upland ; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-026

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Andropogon virginicus	45	Y	FACU
2. Dactylis glomerata	20	Y	FACU
3. Viola sagittata	15	N	FAC
4. Potentilla simplex	10	N	FACU
5. Verbascum thapsus	10	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation not observed

SOIL Sampling Point: SP-026

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					Sandy	Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: rocky fill

Depth (inches): 6

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rocky fill shovel refusal. No hydric soils present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-027

Investigator(s): AFG/FDD Section, Township, Range: Fannett Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.142998 Long: -77.764723 Datum: NAD83 (2011)

Soil Map Unit Name: Jg - Jugtown silt loam NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Upland located adjacent to S013. No soils.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes due to two secondary indicators.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-027

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	90	Y	FACW
2. Conium maculatum	10	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present.

SOIL Sampling Point: SP-027

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3	100					Loam/Clayey	
3-16	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Hydric soils not present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-028

Investigator(s): AFG/FDD Section, Township, Range: Fannett Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.146083 Long: -77.769804 Datum: NAD83 (2011)

Soil Map Unit Name: Fu - Funkstown silt loam NWI classification: R4SBC

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located in NWI riverine.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

Hydrology does not pass

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-028

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	90	Y	FACU
2. Taraxacum officinale	10	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 1 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation not present.

SOIL Sampling Point: SP-028

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No soils present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-029

Investigator(s): AFG/FDD Section, Township, Range: Fannett Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.149913 Long: -77.776443 Datum: NAD83 (2011)

Soil Map Unit Name: HcC - Hagerstown-Carbo silty clay loams, 8 to 15 percent slopes, very rocky NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located on Hillslope above a stream

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-029

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	35	Y	FACU
2. Poa pratensis	30	Y	FACU
3. Andropogon virginicus	15	N	FACU
4. Apocynum androsaemifolium	10	N	FACU
5. Crown vetch	10	N	UPL
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL Sampling Point: SP-029

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soils present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-030

Investigator(s): AFG/FDD Section, Township, Range: Fannett Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.155875 Long: -77.785988 Datum: NAD83 (2011)

Soil Map Unit Name: BIB - Blairton channery silt loam, 3 to 8 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located in depression in corn field.

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

Hydrology does not pass.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-030

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Zea mays	70	Y	UPL
2. Poa pratensis	10	N	FACU
3. Solanum carolinense	5	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85 = Total Cover		
50% of total cover: 42.5	20% of total cover: 17		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-030

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/2	100					Loam/Clayey	Silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Soils do not pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-031

Investigator(s): AFG/FDD Section, Township, Range: Fannett Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.156799 Long: -77.787674 Datum: NAD83 (2011)

Soil Map Unit Name: BkC - Berks channery silt loam, 8 to 15 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located in pasture

Wetland ID: W012; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes with multiple indicators.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-031

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	40	Y	FACW
2. Carex lurida	35	Y	OBL
3. Juncus effusus	15	N	FACW
4. Barbarea vulgaris	5	N	FACU
5. Trifolium repens	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Hydric vegetation present.

SOIL Sampling Point: SP-031

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 5/1	90	5YR 4/6	10	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compact soils

Depth (inches): 10

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal due to compact soils at 10 inches

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-032

Investigator(s): AFG/FDD Section, Township, Range: Fannett Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.156883 Long: -77.787730 Datum: NAD83 (2011)

Soil Map Unit Name: BkC - Berks channery silt loam, 8 to 15 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W012

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

no hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-032

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	50	Y	FACU
2. Dactylis glomerata	35	Y	FACU
3. Taraxacum officinale	10	N	FACU
4. Daucus carota	5	N	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No hydric vegetation present.

SOIL Sampling Point: SP-032

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soils present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-033

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.165176 Long: -77.802822 Datum: NAD83 (2011)

Soil Map Unit Name: LcD - Laidig extremely stony loam, 8 to 30 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to road abutting S015

Wetland ID: W013; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes with multiple indicators.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-033

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Lythrum salicaria	55	Y	FACW
2. Juncus effusus	20	Y	FACW
3. Typha angustifolia	15	N	OBL
4. Euthamia graminifolia	10	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-033

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5YR 3/1	95	7.5YR 5/8	5	C	PL,M	Loam/Clayey	
4-16	2.5YR 6/2	90	7.5YR 5/8	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

Multiple indicators met

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-034

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.165194 Long: -77.802878 Datum: NAD83 (2011)

Soil Map Unit Name: LcD - Laidig extremely stony loam, 8 to 30 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W013

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-034

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Rosa multiflora	30	Y	FACU
2. Rubus allegheniensis	20	Y	FACU
3. Smilax rotundifolia	15	N	FAC
4. Microstegium vimineum	10	N	FAC
5. Securigera varia	10	N	UPL
6. Solidago canadensis	10	N	FACU
7. Dipsacus fullonum	5	N	FACU
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-034

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 4

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at 4 inches due to rocky fill refusal.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntigdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-035

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.166069 Long: -77.805107 Datum: NAD83 (2011)

Soil Map Unit Name: LcD - Laidig extremely stony loam, 8 to 30 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM W014 located on plain in ROW

Wetland ID: W014; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 1

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes. Saturation present 1 inch below grade and water table present two inches below grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-035

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa palustris	65	Y	FACW
2. Onoclea sensibilis	20	Y	FACW
3. Mentha spicata	10	N	FACW
4. Barbarea vulgaris	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes

SOIL Sampling Point: SP-035

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5Y 4/1	90	5YR 4/6	10	C	PL,M	Loam/Clayey	
7-16	2.5Y 6/2	95	7.5YR 5/8	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

Soils pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-036

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.166251 Long: -77.805334 Datum: NAD83 (2011)

Soil Map Unit Name: LcD - Laidig extremely stony loam, 8 to 30 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W014

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-036

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dichanthelium clandestinum	25	Y	FAC
2. Dactylis glomerata	20	Y	FACU
3. Rubus allegheniensis	15	Y	FACU
4. Cirsium vulgare	10	N	FACU
5. Potentilla simplex	10	N	FACU
6. Fragaria virginiana	10	N	FACU
7. Verbascum thapsus	10	N	FACU
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass

SOIL Sampling Point: SP-036

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					Loam/Clayey	
3-8	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at 8 inches due to rocky fill refusal

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-037

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.169873 Long: -77.813640 Datum: NAD83 (2011)

Soil Map Unit Name: At - Atkins silt loam NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located on floodplain of S017

Wetland ID: W015; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes. Saturation and water table present to the surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-037

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	45	Y	FACW
2. Symplocarpus foetidus	35	Y	OBL
3. Impatiens capensis	10	N	FACW
4. Rubus allegheniensis	10	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-037

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	90	7.5YR 5/6	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

Soil passes with F3 indicator.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-038

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.170015 Long: -77.813860 Datum: NAD83 (2011)

Soil Map Unit Name: At - Atkins silt loam NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W016 and S017

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-038

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	40	Y	FACU
2. Dichanthelium clandestinum	20	Y	FAC
3. Potentilla simplex	10	N	FACU
4. Rosa multiflora	10	N	FACU
5. Rubus allegheniensis	10	N	FACU
6. Enemion biternatum	5	N	FACU
7. Solidago rugosa	5	N	FAC
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-038

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/2	100					Loam/Clayey	
6-16	2.5Y 6/3	98	7.5YR 5/8	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

no hydric soils present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-039

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.170362 Long: -77.814783 Datum: NAD83 (2011)

Soil Map Unit Name: BrB - Brinkerton silt loam, 3 to 8 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located on concave depression.

Wetland ID: W016; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes. Surface water present. Water table and saturation present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-039

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	35	Y	FACW
2. Onoclea sensibilis	15	Y	FACW
3. Agrimonia parviflora	15	Y	FACW
4. Symplocarpus foetidus	10	N	OBL
5. Carex lurida	10	N	OBL
6. Impatiens capensis	5	N	FACW
7. Euthamia graminifolia	5	N	FAC
8. Scirpus polyphyllus	5	N	OBL
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes

SOIL Sampling Point: SP-039

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 4/1	95	5YR 4/6	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

Soils pass with F3 indicator.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-040

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.170585 Long: -77.815516 Datum: NAD83 (2011)

Soil Map Unit Name: BrB - Brinkerton silt loam, 3 to 8 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjcent to pole on old access road..

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-040

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	50	Y	FACU
2. Dactylis glomerata	40	Y	FACU
3. Apocynum androsaemifolium	5	N	FACU
4. Dichanthelium clandestinum	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-040

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					Loam/Clayey	Silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 3

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at 3 inches due to gravel fill on old access road

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-041

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.171052 Long: -77.816030 Datum: NAD83 (2011)

Soil Map Unit Name: BID - Berks-Weikert channery silt loams, 15 to 25 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland W017 connects to stream S018

Wetland ID: W017; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes. Surface water present. Water table and saturation present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-041

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Microstegium vimineum	25	Y	FAC
2. Carex lurida	20	Y	OBL
3. Dichanthelium clandestinum	15	Y	FAC
4. Scirpus atrovirens	10	N	OBL
5. Euthamia graminifolia	10	N	FAC
6. Solidago gigantea	10	N	FACW
7. Impatiens capensis	10	N	FACW
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-041

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 3/1	95	7.5YR 4/6	5	C	M	Loam/Clayey	
3-16	2.5Y 5/2	95	7.5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Soil passes with multiple indicators.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-042

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.171004 Long: -77.816134 Datum: NAD83 (2011)

Soil Map Unit Name: BID - Berks-Weikert channery silt loams, 15 to 25 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W017

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-042

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	35	Y	FACU
2. Poa pratensis	20	Y	FACU
3. Daucus carota	15	N	UPL
4. Viola sagittata	10	N	FAC
5. Rosa multiflora	10	N	FACU
6. Achillea millefolium	10	N	FACU
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass

SOIL Sampling Point: SP-042

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 2

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at 2 inches due to rocky fill. Soil does not pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-043

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.173059 Long: -77.820978 Datum: NAD83 (2011)

Soil Map Unit Name: At - Atkins silt loam NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland W018 in located in a floodplain abutting S020

Wetland ID: W018; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes. Surface water present to one inch. Water table and saturation present to top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-043

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	30	Y	FACW
2. Microstegium vimineum	30	Y	FAC
3. Solidago rugosa	20	Y	FAC
4. Impatiens capensis	10	N	FACW
5. Scirpus atrovirens	5	N	OBL
6. Ludwigia alternifolia	5	N	FACW
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-043

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 5/1	90	7.5YR 5/8	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

Shovel refusal at 10 inches

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-044

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.173017 Long: -77.821025 Datum: NAD83 (2011)

Soil Map Unit Name: At - Atkins silt loam NWI classification: R4SBC

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W018

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-044

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Andropogon virginicus	20	Y	FACU
2. Potentilla simplex	15	Y	FACU
3. Oxalis stricta	15	Y	FACU
4. Daucus carota	10	N	UPL
5. Achillea millefolium	10	N	FACU
6. Rubus allegheniensis	10	N	FACU
7. Dactylis glomerata	10	N	FACU
8. Rosa multiflora	5	N	FACU
9. Barbarea vulgaris	5	N	FACU
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-044

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 3

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rock shovel refusal at 3 inches.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-045

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.174658 Long: -77.824811 Datum: NAD83 (2011)

Soil Map Unit Name: BMF - Berks-Weikert association, steep NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

W019 Wetland sample point located in floodplain abuts S021

Wetland ID: W019; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☑ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology passes. Water table and saturation present to the top of grade. Surface water present up to one inch.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-045

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	30	Y	FACW
2. Dichanthelium clandestinum	25	Y	FAC
3. Onoclea sensibilis	20	Y	FACW
4. Myosoton aquaticum	10	N	FACW
5. Solidago gigantea	5	N	FACW
6. Asclepias incarnata	5	N	OBL
7. Symphyotrichum lateriflorum	5	N	FACW
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes

SOIL Sampling Point: SP-045

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 3/1	90	7.5YR 4/6	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

passes with F6 indicator

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-046

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hilllslope Local relief (concave, convex, none): Convex Slope (%): 25-50%

Subregion (LRR or MLRA): LRR N Lat: 40.174735 Long: -77.824845 Datum: NAD83 (2011)

Soil Map Unit Name: BMF - Berks-Weikert association, steep NWI classification: R4BSC

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located on hilllslope adjacent to W019

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
No Hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-046

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	35	Y	FACU
2. Dichanthelium clandestinum	20	Y	FAC
3. Cerastium arvense	10	N	UPL
4. Potentilla simplex	10	N	FACU
5. Andropogon virginicus	10	N	FACU
6. Verbascum thapsus	5	N	FACU
7. Enemion biternatum	5	N	FACU
8. Barbarea vulgaris	5	N	FACU
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-046

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					Loam/Clayey	
1-16	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soils.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-047

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.175472 Long: -77.826724 Datum: NAD83 (2011)

Soil Map Unit Name: BMF - Berks-Weikert association, steep NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Wetland W020 located on floodplain abutting S022

Wetland ID: W020; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology present. Water table and saturation present to the top of grade. Surface water present up to an inch.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-047

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Onoclea sensibilis	20	Y	FACW
2. Phalaris arundinacea	20	Y	FACW
3. Scirpus cyperinus	15	Y	FACW
4. Juncus effusus	15	Y	FACW
5. Carex lurida	15	Y	OBL
6. Solidago rugosa	10	N	FAC
7. Symphyotrichum puniceum	5	N	OBL
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-047

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 3/1	90	5YR 4/6	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F6 indicator present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-048

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.175424 Long: -77.826616 Datum: NAD83 (2011)

Soil Map Unit Name: BMF - Berks-Weikert association, steep NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjcand ttp S022 and W020

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-048

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago canadensis	20	Y	FACU
2. Achillea millefolium	15	Y	FACU
3. Microstegium vimineum	15	Y	FAC
4. Dactylis glomerata	15	Y	FACU
5. Rosa multiflora	10	N	FACU
6. Barbarea vulgaris	10	N	FACU
7. Apocynum androsaemifolium	10	N	FACU
8. Daucus carota	5	N	UPL
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass

SOIL Sampling Point: SP-048

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					Loam/Clayey	
3-10	10YR 6/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

Rocky fill shovel refusal at 10 in

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-049

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.177440 Long: -77.831129 Datum: NAD83 (2011)

Soil Map Unit Name: BMF - Berks-Weikert association, steep NWI classification: R4SBC

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PSS W021 in floodplain abuts S023

Wetland ID: W021; Cowardin Class: PSS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology present. Saturation and water table present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-049

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Crataegus marshallii	45	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Herb Stratum (Plot size: 5 ft radius)			
1. Onoclea sensibilis	20	Y	FACW
2. Microstegium vimineum	20	Y	FAC
3. Dichanthelium clandestinum	20	Y	FACW
4. Phalaris arundinacea	15	N	FACW
5. Myosoton aquaticum	10	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	85 = Total Cover		
50% of total cover: 42.5	20% of total cover: 17		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-049

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	95	5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntindon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-050

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.177470 Long: -77.831285 Datum: NAD83 (2011)

Soil Map Unit Name: BMF - Berks-Weikert association, steep NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to W021 and S023

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-050

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	30	Y	FACU
2. Dichanthelium clandestinum	20	Y	FAC
3. Andropogon virginicus	15	N	FACU
4. Rubus allegheniensis	15	N	FACU
5. Potentilla simplex	10	N	FACU
6. Achillea millefolium	10	N	FACU
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass

SOIL Sampling Point: SP-050

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 12

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rocky shovel refusal at 12in

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-051

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.178204 Long: -77.833222 Datum: NAD83 (2011)

Soil Map Unit Name: BID - Berks-Weikert channery silt loams, 15 to 25 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Wetland sample point located in floodplain of S024

Wetland ID: W022; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology is present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-051

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Onoclea sensibilis	35	Y	FACW
2. Microstegium vimineum	20	Y	FAC
3. Dichanthelium clandestinum	15	N	FAC
4. Eupatorium perfoliatum	10	N	FACW
5. Solidago rugosa	10	N	FAC
6. Impatiens capensis	10	N	FACW
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL

Sampling Point: SP-051

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	95	5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-052

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.178324 Long: -77.833337 Datum: NAD83 (2011)

Soil Map Unit Name: BID - Berks-Weikert channery silt loams, 15 to 25 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to wetland on Hillslope

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No hydrology present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-052

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	35	Y	FACU
2. Andropogon virginicus	15	Y	FACU
3. Achillea millefolium	15	Y	FACU
4. Houstonia caerulea	10	N	FACU
5. Potentilla simplex	10	N	FACU
6. Solanum carolinense	5	N	FACU
7. Viola sagittata	5	N	FAC
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover: 47.5	20% of total cover: 19		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass

SOIL Sampling Point: SP-052

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					Loam/Clayey	
1-16	10YR 3/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Soils do not pass

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-053

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.180649 Long: -77.838658 Datum: NAD83 (2011)

Soil Map Unit Name: BMF - Berks-Weikert association, steep NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland on floodplain stream S025 flows through the wetland.

Wetland ID: W023; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology present. Surface water up to two inches deep. Water table and Saturation present to top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-053

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Onoclea sensibilis	30	Y	FACW
2. Juncus effusus	20	Y	FACW
3. Microstegium vimineum	20	Y	FAC
4. Carex lurida	15	N	OBL
5. Scirpus cyperinus	10	N	FACW
6. Viola lanceolata	5	N	OBL
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes

SOIL Sampling Point: SP-053

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	95	7.5YR 5/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator present, soils pass

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-054

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.180742 Long: -77.839110 Datum: NAD83 (2011)

Soil Map Unit Name: WeD - Weikert channery silt loam, 15 to 25 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located on hillslope adjacent to W023 and S025

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No Hydrology Present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-054

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	45	Y	FACU
2. Achillea millefolium	10	Y	FACU
3. Rosa multiflora	10	Y	FACU
4. Potentilla simplex	10	Y	FACU
5. Andropogon virginicus	10	Y	FACU
6. Solidago canadensis	10	Y	FACU
7. Daucus carota	5	N	UPL
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 6 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-054

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Soils do not pass

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-055

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.182380 Long: -77.842911 Datum: NAD83 (2011)

Soil Map Unit Name: BID - Berks-Weikert channery silt loams, 15 to 25 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM Wetland W024 located in valley abutting S026

Wetland ID: W024; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology Present. Surface water present up to an inch. Saturation and water table present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-055

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Juncus effusus	30	Y	FACW
2. Phalaris arundinacea	20	Y	FACW
3. Onoclea sensibilis	15	N	FACW
4. Carex lurida	15	N	OBL
5. Pycnanthemum flexuosum	10	N	FACW
6. Barbarea vulgaris	10	N	FACU
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-055

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	95	7.5YR 5/8	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at 6 inches due to shallow aquitard/compact rock

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-056

Investigator(s): AFG/FDD Section, Township, Range: Dublin Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 25-50%

Subregion (LRR or MLRA): LRR N Lat: 40.182535 Long: -77.842991 Datum: NAD83 (2011)

Soil Map Unit Name: BID - Berks-Weikert channery silt loams, 15 to 25 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located on hillslope adjcacent to wetland

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator is present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-056

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	30	Y	FACU
2. Achillea millefolium	15	Y	FACU
3. Potentilla simplex	15	Y	FACU
4. Andropogon virginicus	10	N	FACU
5. Verbascum thapsus	10	N	FACU
6. Rosa multiflora	10	N	FACU
7. Viola sagittata	5	N	FAC
8. Fragaria vesca	5	N	UPL
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass

SOIL Sampling Point: SP-056

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Rocky fill shovel refusal at 6 inches. Soils do not pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/19/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-057

Investigator(s): AFG/FDD Section, Township, Range: Cromwell Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.193721 Long: -77.884055 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo and Basher silt loams NWI classification: R2UBH

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located in NWI on floodplain

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present. Hydrology does not pass.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-057

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Conium maculatum	20	Y	FACW
2. Phalaris arundinacea	20	Y	FACW
3. Barbarea vulgaris	15	Y	FACU
4. Galium aparine	10	N	FACU
5. Rudbeckia hirta	10	N	FACU
6. Erythronium rostratum	10	N	UPL
7. Verbascum thapsus	5	N	FACU
8. Solidago rugosa	5	N	FAC
9. Symplocarpus foetidus	5	N	OBL
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes.

SOIL Sampling Point: SP-057

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/4	100					Loam/Clayey	Silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Soils do not pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/19/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-058

Investigator(s): AFG/FDD Section, Township, Range: Cromwell Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.193652 Long: -77.883270 Datum: NAD83 (2011)

Soil Map Unit Name: MoB - Monongahela silt loam, 2 to 10 percent slope NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located adjacent to pole

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-058

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	25	Y	FACU
2. Potentilla simplex	20	Y	FACU
3. Solidago canadensis	15	Y	FACU
4. Securigera varia	15	Y	UPL
5. Andropogon virginicus	5	N	FACU
6. Fragaria vesca	5	N	FACU
7. Viola sagittata	5	N	FAC
8. Houstonia caerulea	5	N	FACU
9. Pycnanthemum flexuosum	5	N	FACW
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-058

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 4

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at 4 inches due to rocky fill. Soils do not pass

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/19/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-059

Investigator(s): AFG/FDD Section, Township, Range: Cromwell Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.193763 Long: -77.885191 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo and Basher silt loams NWI classification: -

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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

PEM wetland located in concave depression

Wetland ID: W025; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 4
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology present. Surface water up to 4 inches. Water table and saturation present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-059

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha angustifolia	95	Y	OBL
2. Lonicera japonica	5	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes

SOIL Sampling Point: SP-059

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

A10 indicator met, soil passes. Rock refusal at 10 inches

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/19/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-060

Investigator(s): AFG/FDD Section, Township, Range: Cromwell Township

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.193859 Long: -77.885215 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo and Basher silt loams NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to S028 amd W026

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-060

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Antennaria neglecta	15	Y	UPL
2. Houstonia caerulea	15	Y	FACU
3. Potentilla simplex	15	Y	FACU
4. Dactylis glomerata	15	Y	FACU
5. Solidago canadensis	10	N	FACU
6. Ludwigia alternifolia	5	N	FACW
7. Juncus effusus	5	N	FACW
8. Andropogon virginicus	5	N	FACU
9. Equisetum fluviatile	5	N	OBL
10. Pycnanthemum flexuosum	5	N	FACW
11. Fragaria vesca	5	N	UPL
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-060

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Loam/Clayey	
4-12	10YR 5/3	98	7.5YR 5/8	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at 12 inches due to rocky fill. Soils don't pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/19/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-061

Investigator(s): AFG/FDD Section, Township, Range: Cromwell Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.193934 Long: -77.884831 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo and Basher silt loams NWI classification: -

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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

Wetland sample post located in concave floodplain

Wetland ID: W026; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology is present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-061

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha angustifolia	35	Y	OBL
2. Phalaris arundinacea	30	Y	FACW
3. Brassica rapa	15	N	UPL
4. Conium maculatum	10	N	FACW
5. Galium asprellum	10	N	OBL
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation passes

SOIL Sampling Point: SP-061

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	90	5YR 4/6	10	C	PL,M	Loam/Clayey	Silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator present, soils pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/19/2024

Applicant/Owner: First Energy State: PA Sampling Point: SP-062

Investigator(s): AFG/FDD Section, Township, Range: Cromwell Township

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.193866 Long: -77.884824 Datum: NAD83 (2011)

Soil Map Unit Name: Ph - Philo and Basher silt loams NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Upland sample point located adjacent to W026

Wetland ID: Upland; Cowardin Class:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Hydrology is present

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-062

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Lonicera morrowii	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Barbarea vulgaris	25	Y	FACU
2. Microstegium vimineum	20	Y	FAC
3. Rudbeckia hirta	15	Y	FACU
4. Conium maculatum	15	Y	FACW
5. Crown vetch	10	N	UPL
6. Alliaria petiolata	5	N	FACU
7. Cirsium vulgare	5	N	FACU
8. Pycnanthemum flexuosum	5	N	FACW
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 5 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

Vegetation does not pass.

SOIL Sampling Point: SP-062

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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:

Shovel refusal at 10 inches due to rocky fill. Soils do not pass.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/07/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-063

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.119957 Long: -77.699102 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to access road in concave depression.

Wetland ID: W027; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water observed 0.5 inches above grade. Water table and saturation observed to surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-063

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Betula alleghaniensis	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Microstegium vimineum	65	Y	FAC
2. Carex lurida	20	Y	OBL
3. Scirpus cyperinus	10	N	FACW
4. Euthamia graminifolia	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-063

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 5/2	95	7.5YR 5/8	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 5

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at approximately 5inches due to shallow aquitard.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/07/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-064

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.120145 Long: -77.699009 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to PEM wetland access road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-064

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Robinia pseudoacacia	10	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Microstegium vimineum	45	Y	FAC
2. Andropogon virginicus	35	Y	FACU
3. Solidago rugosa	15	N	FAC
4. Eupatorium serotinum	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-064

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					Loam/Clayey	
1-10	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Rocky shovel refusal at approximately 10 inches.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/07/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-065

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.111054 Long: -77.667913 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located in maintained residential yard

Wetland ID: W028; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water observed 0.5 inches above grade. Water table and saturation observed to surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-065

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Echinochloa crus-galli	35	Y	FAC
2. Carex frankii	20	Y	OBL
3. Cyperus esculentus	15	N	FACW
4. Juncus effusus	15	N	FACW
5. Persicaria maculosa	15	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-065

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	95	7.5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at approximately 6 inches due to shallow aquitard.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/07/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-066

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.109918 Long: -77.665372 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located in open maintained meadow.

Wetland ID: W029; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 0.5

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water observed 0.5 inches above grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-066

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Echinochloa crus-galli	35	Y	FAC
2. Poa palustris	30	Y	FACW
3. Trifolium repens	15	N	FACU
4. Cyperus esculentus	10	N	FACW
5. Holcus lanatus	10	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-066

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	95	7.5YR 5/8	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shovel refusal at approximately 8 inches due to shallow aquitard.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/07/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-067

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.111168 Long: -77.668350 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Upland sample point located in maintained mowed residential lawn adjacent to S031 and W028.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☐	No ☑	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water observed 0.5 inches above grade, due to recent rain.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-067

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: ____	20% of total cover: ____		

Sapling/Shrub Stratum (Plot size: 15 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: ____	20% of total cover: ____		

Herb Stratum (Plot size: 5 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Poa pratensis	45	Y	FACU
2. Trifolium repens	25	Y	FACU
3. Rumex crispus	10	N	FAC
4. Digitaria ischaemum	10	N	UPL
5. Setaria pumila	5	N	FAC
6. Persicaria maculosa	5	N	FACW
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: ____	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-067

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Shovel refusal at approximately 6 inches due to rock refusal.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-068

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.145379 Long: -77.725013 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to residential driveway and access road.

Wetland ID: W030; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches): 4
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Water observed 4 inches below grade. Saturation observed to surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-068

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Microstegium vimineum	30	Y	FAC
2. Typha angustifolia	20	Y	OBL
3. Euthamia graminifolia	15	N	FAC
4. Carex lurida	15	N	OBL
5. Solidago gigantea	15	N	FACW
6. Cyperus esculentus	5	N	FACW
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-068

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 3/1	95	5YR 4/6	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

Rocky fill gravel mixed throughout.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-069

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.145460 Long: -77.725087 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to PEM wetland and access road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-069

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	70	Y	FACU
2. Trifolium repens	20	Y	FACU
3. Taraxacum officinale	10	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-069

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 5

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Shovel refusal at approximately 3 inches due to rocky fill.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-070

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.145986 Long: -77.727168 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to access road in concave depression. Wetland has a PSS complex that continues out of boundary.

Wetland ID: W031; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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-070

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Microstegium vimineum	30	Y	FAC
2. Scirpus cyperinus	25	Y	FACW
3. Agrimonia parviflora	15	N	FACW
4. Persicaria sagittata	10	N	OBL
5. Juncus effusus	10	N	FACW
6. Verbena urticifolia	5	N	FAC
7. Euthamia graminifolia	5	N	FAC
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-070

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5YR 4/1	90	7.5YR 5/8	10	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-071

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.146040 Long: -77.727267 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to PEM wetland and access road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-071

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Verbesina alternifolia	40	Y	FAC
2. Solidago canadensis	20	Y	FACU
3. Rubus allegheniensis	15	N	FACU
4. Microstegium vimineum	15	N	FAC
5. Elymus canadensis	10	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-071

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Loam/Clayey	
2-16	10YR 4/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-072

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.166958 Long: -77.812100 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to access road in concave depression. Wetland is located in an active cattle pasture and continues out of boundary.

Wetland ID: W032; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water observed at 1 inch in concave crown tracts in areas of wetland. Saturation and water table observed to surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-072

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Carex lurida	30	Y	OBL
2. Symphyotrichum puniceum	20	Y	OBL
3. Persicaria sagittata	15	N	OBL
4. Bidens frondosa	15	N	FACW
5. Epilobium coloratum	10	N	FACW
6. Cyperus esculentus	5	N	FACW
7. Echinochloa crus-galli	5	N	FAC
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-072

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5YR 3/1	95	7.5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-073

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.166865 Long: -77.811993 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to access road and PEM wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-073

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Trifolium repens	30	Y	FACU
2. Poa pratensis	30	Y	FACU
3. Setaria faberi	15	N	UPL
4. Plantago major	10	N	FACU
5. Symphyotrichum lateriflorum	5	N	FACW
6. Rumex crispus	5	N	FAC
7. Taraxacum officinale	5	N	FACU
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-073

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-074

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.172528 Long: -77.813105 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to access road.

Wetland ID: W034; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water observed 1 inch throughout wetland. Water table and saturation observed to surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-074

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Persicaria sagittata	20	Y	OBL
2. Poa palustris	15	Y	FACW
3. Carex lurida	15	Y	OBL
4. Typha angustifolia	10	N	OBL
5. Cyperus esculentus	10	N	FACW
6. Echinochloa crus-galli	10	N	FAC
7. Persicaria maculosa	10	N	FACW
8. Setaria pumila	10	N	FAC
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-074

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 5/1	95	5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

Shovel refusal at approximately 10 inches due to rocky fill.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-075

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.172636 Long: -77.812827 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located adjacent to access road and PEM wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-075

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris angusta	50	Y	FACW
2. Dipsacus fullonum	20	Y	FACU
3. Solidago canadensis	15	N	FACU
4. Setaria pumila	10	N	FAC
5. Rosa multiflora	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-075

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-076

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.172238 Long: -77.815117 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to access road in concave depression. Wetland continues out of boundary.

Wetland ID: W036; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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-076

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Scirpus cyperinus	30	Y	FACW
2. Juncus effusus	15	Y	FACW
3. Carex vulpinoidea	15	Y	OBL
4. Solidago rugosa	15	Y	FAC
5. Microstegium vimineum	15	Y	FAC
6. Euthamia graminifolia	10	N	FAC
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

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	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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-076

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 4/2	95	7.5YR 5/8	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

Shove refusal at approximately 5 inches due to disturbed rocky soil.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/08/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-077

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Hilllslope Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.172325 Long: -77.815179 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located on Hillslope adjacent to PEM wetland and access road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-077

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Solidago canadensis	25	Y	FACU
2. Rubus allegheniensis	25	Y	FACU
3. Solidago altissima	20	Y	FACU
4. Microstegium vimineum	15	N	FAC
5. Euthamia graminifolia	10	N	FAC
6. Oxalis stricta	5	N	FACU
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-077

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

Disturbed soils with rocky fill mixed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/09/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-078

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.135594 Long: -77.741418 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland located adjacent to access road in concave depression.

Wetland ID: W035; Cowardin Class: PSS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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-078

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Salix nigra	35	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	35 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7		
Herb Stratum (Plot size: 5 ft radius)			
1. Microstegium vimineum	30	Y	FAC
2. Carex lurida	15	Y	OBL
3. Scirpus polyphyllus	10	N	OBL
4. Typha angustifolia	5	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-078

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	95	5YR 4/6	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Shallow aquifers at approximately 6 inches.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap to Roxbury City/County: Shippensbrugh Sampling Date: 10/09/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-079

Investigator(s): AFC/JMF Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.135595 Long: -77.741315 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland located adjacent to wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-079

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	50	Y	FACU
2. Phleum pratense	20	Y	FACU
3. Dactylis glomerata	15	N	FACU
4. Dipsacus fullonum	10	N	FACU
5. Trifolium repens	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	N	
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (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/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-079

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap-Roxbury City/County: Franklin County Sampling Date: 02/10/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-080

Investigator(s): FDD EJK Section, Township, Range: Metal Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.119702 Long: -77.775517 Datum: NAD83 (2011)

Soil Map Unit Name: BkB - Berks channery silt loam, 3 to 8 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland sample point located in a depression along access road. Wetland continues outside boundary. This sample point represents W201A and W201B

Wetland ID: W201; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water present up to two inches deep. Water table and saturation is present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-080

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	10	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	10 = Total Cover		

50% of total cover: 5 20% of total cover: 2

Herb Stratum (Plot size: 5 ft radius)			
1. Typha latifolia	80	Y	OBL
2. Phalaris arundinacea	10	N	FACW
3. Dichanthelium clandestinum	5	N	FAC
4. Microstegium vimineum	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
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: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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-080

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					Loam/Clayey	
2-16	10YR 4/2	95	5YR 4/6	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Sade Gap-Rxbury City/County: Franklin County Sampling Date: 02/10/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-081

Investigator(s): FDD EJK Section, Township, Range: Metal Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.119453 Long: -77.775259 Datum: NAD83 (2011)

Soil Map Unit Name: BkB - Berks channery silt loam, 3 to 8 percent slopes NWI classification: -

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

PEM wetland sample point located in meadow adjacent to highway

Wetland ID: W202; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Surface water present up to an inch deep. Water table present two inches below grade. Saturation is present to the top of grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-081

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 5 ft radius)			
1. Poa palustris	40	Y	FACW
2. Trifolium repens	30	Y	FACU
3. Phalaris arundinacea	15	N	FACW
4. Symphyotrichum lateriflorum	10	N	FACW
5. Solidago canadensis	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
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: 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	0	x 1 =	0
FACW species	65.0	x 2 =	130
FAC species	0	x 3 =	0
FACU species	35.0	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	100.0 (A)		270 (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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-081

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	95	7.5YR 5/6	5	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap-Roxbry City/County: Franklin County Sampling Date: 02/10/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-082

Investigator(s): FDD EJK Section, Township, Range: Metal Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.119373 Long: -77.775056 Datum: NAD83 (2011)

Soil Map Unit Name: BkB - Berks channery silt loam, 3 to 8 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located in meadow

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No hydrology present

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-082

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Trifolium repens	40	Y	FACU
2. Symphyotrichum lateriflorum	35	Y	FACW
3. Solidago altissima	15	N	FACU
4. Poa pratensis	5	N	FACU
5. Solidago canadensis	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
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: 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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-082

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Loam/Clayey	
2-16	10YR 4/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap-Roxbury City/County: Franklin County Sampling Date: 02/10/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-083

Investigator(s): FDD EJK Section, Township, Range: Metal Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.119296 Long: -77.775583 Datum: NAD83 (2011)

Soil Map Unit Name: BkB - Berks channery silt loam, 3 to 8 percent slopes NWI classification: -

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point located in meadow

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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-083

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago altissima	40	Y	FACU
2. Poa pratensis	20	Y	FACU
3. Symphyotrichum lateriflorum	20	Y	FACW
4. Phalaris arundinacea	10	N	FACW
5. Microstegium vimineum	10	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
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: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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-083

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-100

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.109615 Long: -77.662603 Datum: NAD83 (2011)

Soil Map Unit Name: MoB, Monongahela silt loam, 3 to 8 percent slopes NWI classification:

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 _____, 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 ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located upslope of a PEM wetland complex along an existing power line right of way. The sample point is below Route 997.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-100

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus idaeus	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Lonicera japonica	45	Y	FACU
2. Dactylis glomerata	30	Y	FACU
3. Glechoma hederacea	15	N	FACU
4. Dipsacus fullonum	10	N	FACU
5. Oenothera biennis	5	N	FACU
6. Verbascum thapsus	3	N	FACU
7.			
8.			
9.			
10.			
11.			
	108 = Total Cover		
50% of total cover: 54	20% of total cover: 21.6		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-100

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	100					Loam/Clayey	
12-16	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-101

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.109641 Long: -77.662898 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W100.
Multiple streams flow through the wetland and it is located downslope of Route 997.

Wetland ID: W100; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 4
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation visible on aerial imagery via Google Earth 2023.

Remarks:
Multiple wetland hydrology indicators observed.
Saturation observed to the soil surface.
The water table was observed at 4" below grade.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-101

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Fraxinus pennsylvanica	5	Y	FACW
2. Cornus amomum	3	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha angustifolia	60	Y	OBL
2. Typha latifolia	40	Y	OBL
3. Cardamine bulbosa	5	N	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-101

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	98	7.5YR 4/6	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F6 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-102

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.110007 Long: -77.664486 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W101. The sample point is located along an existing power line right of way and is hydrologically connected to W100 by culvert.

Wetland ID: W101; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 6

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation visible on aerial imagery via Google Earth 2023.

Remarks:
Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-102

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	5	Y	FACW
2. Lonicera morrowii	3	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	65	Y	FACW
2. Typha latifolia	10	N	OBL
3. Typha angustifolia	8	N	OBL
4. Solidago gigantea	5	N	FACW
5. Juncus effusus	3	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	91 = Total Cover		
50% of total cover: 45.5	20% of total cover: 18.2		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-102

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	98	7.5YR 4/4	2	C	M	Loam/Clayey	
6-16	10YR 5/1	96	7.5YR 4/6	4	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-103

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.109997 Long: -77.664886 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located on a berm between wetland W101 and wetland W102.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

Not wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-103

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	8	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	40	Y	FACU
2. Solidago altissima	30	Y	FACU
3. Dipsacus fullonum	18	N	FACU
4. Alliaria petiolata	10	N	FACU
5. Galium mollugo	5	N	FACU
6. Lonicera japonica	5	N	FACU
7.			
8.			
9.			
10.			
11.			
	108 = Total Cover		
50% of total cover: 54	20% of total cover: 21.6		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-103

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					Loam/Clayey	Rocky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted gravel

Depth (inches): 12

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No hydric soil indicators observed.
Shovel refusal on compacted gravel at 12".

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-104

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.110082 Long: -77.665236 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification: PSS1A

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within a PSS1A NWI mapped wetland. The area appeared to be fenced off and maintained for domestic animals.

Wetland ID: W102; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.
Water table and saturation observed at the soil surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-104

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Lysimachia nummularia	45	Y	FACW
2. Phalaris arundinacea	35	Y	FACW
3. Rumex crispus	5	N	FAC
4. Cardamine bulbosa	3	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	88 = Total Cover		
50% of total cover: 44	20% of total cover: 17.6		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-104

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	98	7.5YR 4/4	2	C	M	Loam/Clayey	
6-16	10YR 5/1	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-105

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.110029 Long: -77.665522 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification: PSS1A

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located within a fenced pasture between multiple wetlands.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-105

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Trifolium pratense	30	Y	FACU
2. Trifolium repens	20	Y	FACU
3. Taraxacum officinale	20	Y	FACU
4. Cardamine hirsuta	15	N	FACU
5. Plantago major	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-105

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 4/2	100					Loam/Clayey	
4-16	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-106

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.110079 Long: -77.665947 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification: PSS1A

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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

The sample point is located within PEM wetland W103. The area is comprised of an existing power line right of way in an unmaintained field.

Wetland ID: W103; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 0.5

Water Table Present? Yes ☑ No ☐ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

The water table and saturation were observed at the soil surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-106

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	5	Y	FACU
2. Lonicera morrowii	5	Y	FACU
3. Cornus amomum	3	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
	13 = Total Cover		
50% of total cover: 6.5	20% of total cover: 2.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	65	Y	FACW
2. Packera aurea	15	N	FACW
3. Solidago gigantea	5	N	FACW
4. Dipsacus fullonum	5	N	FACU
5. Hypericum punctatum	5	N	FAC
6. Mentha arvensis	3	N	FACW
7.			
8.			
9.			
10.			
11.			
	98 = Total Cover		
50% of total cover: 49	20% of total cover: 19.6		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	91	x 2 =	182
FAC species	5	x 3 =	15
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	111 (A)		257 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-106

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	98	7.5YR 4/6	2	C	M	Loam/Clayey	
4-16	2.5Y 5/2	97	10YR 5/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-107

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.109981 Long: -77.667470 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W104. The sample point represents an enclosed cattle pasture near the edge of the wood line.

Wetland ID: W104; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☑ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 6
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.
The water table and saturation were observed at the soil surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-107

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	8	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Ranunculus sceleratus	35	Y	OBL
2. Poa palustris	15	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No shrubs or woody vines observed within the plot.

SOIL

Sampling Point: SP-107

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 5/1	95	7.5YR 4/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted rock

Depth (inches): 12

Hydric Soil Present? Yes ☑ No ☐

Remarks:

F3 indicator observed.
Shovel refusal on compacted gravel at 12".

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-108

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.110113 Long: -77.667562 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located within a fenced cattle pasture along an existing power line right of way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-108

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Trifolium pratense	40	Y	FACU
2. Trifolium repens	30	Y	FACU
3. Taraxacum officinale	20	Y	FACU
4. Plantago major	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover: 47.5	20% of total cover: 19		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-108

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					Loam/Clayey	
4-13	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted rock

Depth (inches): 13

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No hydric soil indicators observed.
Shovel refusal on compacted gravel at 13”

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-109

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.110127 Long: -77.668225 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W104. The sample point represents the change in vegetation outside of the fenced cattle pasture.

Wetland ID: W104; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 6

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-109

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	65	Y	FACW
2. Barbarea vulgaris	10	N	FACU
3. Rumex crispus	8	N	FAC
4. Lamium purpureum	5	N	UPL
5. Taraxacum officinale	3	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	91 = Total Cover		
50% of total cover: 45.5	20% of total cover: 18.2		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL

Sampling Point: SP-109

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 5/2	95	5YR 5/4	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-110

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.110862 Long: -77.670359 Datum: NAD83 (2011)

Soil Map Unit Name: Ph, Philo silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within a PEM/PSS wetland complex that drains into Conodoguinet Creek. The sample point is representative of the PEM component within wetlands W105 and W106.

Wetland ID: W105; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 3
Water Table Present?	Yes ☑	No ☐	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 8

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation visible on aerial imagery via Google Earth 2023.

Remarks:
Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-110

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	5	Y	FACW
2. Alnus serrulata	3	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Juncus effusus	45	Y	FACW
2. Typha latifolia	30	Y	OBL
3. Phalaris arundinacea	20	N	FACW
4. Mentha arvensis	15	N	FACW
5. Ludwigia alternifolia	5	N	FACW
6. Scirpus cyperinus	5	N	FACW
7. Impatiens capensis	3	N	FACW
8. Ranunculus acris	2	N	FAC
9.			
10.			
11.			
	125 = Total Cover		
50% of total cover: 62.5	20% of total cover: 25		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-110

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	95	7.5YR 4/6	5	C	M	Loam/Clayey	
4-16	5Y 5/1	90	10YR 6/6	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-111

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.110928 Long: -77.670322 Datum: NAD83 (2011)

Soil Map Unit Name: Ph, Philo silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located representative of the PSS component of wetlands W105 and W106. The sample point is within the floodplain of Conodoguinet Creek.

Wetland ID: W105; Cowardin Class: PSS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 3

Water Table Present? Yes ☑ No ☐ Depth (inches): 10

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 8

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:
Multiple wetland hydrology indicators observed.
Drainage throughout the wetland. Connects to a large perennial stream.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-111

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	30	Y	FACW
2. Viburnum dentatum	15	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Herb Stratum (Plot size: 5 ft radius)			
1. Impatiens capensis	25	Y	FACW
2. Phalaris arundinacea	20	Y	FACW
3. Onoclea sensibilis	10	N	FACW
4. Symplocarpus foetidus	5	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-111

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	95	7.5YR 4/4	95	C	M	Loam/Clayey	
4-16	5Y 5/1	90	10YR 5/6	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-112

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.111069 Long: -77.670726 Datum: NAD83 (2011)

Soil Map Unit Name: Ph, Philo silt loam NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located along an existing power line right of way between multiple wetlands.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary wetland hydrology indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-112

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	10	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	45	Y	FACU
2. Lonicera japonica	20	Y	FACU
3. Anthoxanthum odoratum	18	N	FACU
4. Potentilla simplex	10	N	FACU
5. Solidago altissima	5	N	FACU
6. Allium schoenoprasum	2	N	FACU
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-112

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 4/2	97	5YR 5/6	3	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted gravel

Depth (inches): 10

Hydric Soil Present? Yes ☑ No ☐

Remarks:

F3 indicator observed.
Shovel refusal on compacted gravel at 10”

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-113

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.112067 Long: -77.672162 Datum: NAD83 (2011)

Soil Map Unit Name: Ph, Philo silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W108. The sample point is along an existing power line right of way in a depression below Forge Hill Road.

Wetland ID: W108; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☑ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 6

Water Table Present? Yes ☑ No ☐ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

The water table and saturation were observed at the soil surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-113

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	15	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Herb Stratum (Plot size: 5 ft radius)			
1. Scirpus atrovirens	60	Y	OBL
2. Juncus effusus	20	Y	FACW
3. Ludwigia alternifolia	10	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-113

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	98	7.5YR 4/6	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted rock

Depth (inches): 8

Hydric Soil Present? Yes ☑ No ☐

Remarks:

F3 indicator observed.
Shovel refusal on compacted gravel at 8".

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-114

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.130493 Long: -77.736998 Datum: NAD83 (2011)

Soil Map Unit Name: WeC, Weikert channery silt loam, 8 to 15 percent slopes NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located within a maintained field along an existing power line right of way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-114

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Tridens flavus	45	Y	FACU
2. Poa pratensis	30	Y	FACU
3. Anthoxanthum odoratum	20	N	FACU
4. Trifolium pratense	10	N	FACU
5. Taraxacum officinale	5	N	FACU
6. Erigeron pulchellus	5	N	FACU
7.			
8.			
9.			
10.			
11.			
	115 = Total Cover		
50% of total cover: 57.5	20% of total cover: 23		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-114

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	100					Loam/Clayey	
2-16	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-115

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.129726 Long: -77.734785 Datum: NAD83 (2011)

Soil Map Unit Name: WkF, Weikert very channery silt loam, 25 to 65 percent slopes NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located along an existing power line right of way. The area was an unmaintained scrubby field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-115

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	15	Y	FACU
2. Rubus occidentalis	5	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago altissima	45	Y	FACU
2. Solidago canadensis	25	Y	FACU
3. Dactylis glomerata	15	N	FACU
4. Alliaria petiolata	10	N	FACU
5. Barbarea vulgaris	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-115

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3	100					Loam/Clayey	
3-16	10YR 5/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-116

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.127905 Long: -77.729938 Datum: NAD83 (2011)

Soil Map Unit Name: SeC, Sideling gravelly loam, 8 to 15 percent slopes NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located on an existing power line right of way near the edge of a wood line.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary wetland hydrology indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-116

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	60	Y	FACW
2. Barbarea vulgaris	15	N	FACU
3. Stellaria media	10	N	UPL
4. Solidago altissima	10	N	FACU
5. Dennstaedtia punctilobula	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-116

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3	100					Loam/Clayey	
3-16	10YR 5/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-117

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.125141 Long: -77.719198 Datum: NAD83 (2011)

Soil Map Unit Name: BxD, Buchanan cobbly loam, 8 to 25 percent slopes, extremely stony NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within a PEM wetland below a gravel access road. The wetland receives drainage from an intermittent stream above. The wetland exhibited multiple drainage patterns throughout.

Wetland ID: W109; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 4
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:
Multiple wetland hydrology indicators observed.
The water table and saturation were observed at the soil surface.
Receives hydrology from a culvert outlet above.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-117

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Betula alleghaniensis	5	Y	FAC
2. Rubus allegheniensis	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size: 5 ft radius)			
1. Juncus canadensis	30	Y	OBL
2. Persicaria sagittata	15	Y	OBL
3. Solidago gigantea	10	N	FACW
4. Juncus effusus	10	N	FACW
5. Lycopus virginicus	2	N	OBL
6. Viola sororia	2	N	FAC
7. Houstonia caerulea	2	N	FACU
8.			
9.			
10.			
11.			
	71 = Total Cover		
50% of total cover: 35.5	20% of total cover: 14.2		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-117

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/3	100					Loam/Clayey	
2-10	2.5Y 6/2	96	10YR 5/6	4	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted gravel

Depth (inches): 10

Hydric Soil Present? Yes ☑ No ☐

Remarks:

F3 indicator observed.
Shovel refusal on compacted gravel at 10".

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-118

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.125096 Long: -77.719162 Datum: NAD83 (2011)

Soil Map Unit Name: BxD, Buchanan cobbly loam, 8 to 25 percent slopes, extremely stony NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located on a maintained power line right of way adjacent to a PEM wetland and intermittent stream.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary wetland hydrology indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-118

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Betula alleghaniensis	15	Y	FAC
2. Rubus allegheniensis	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 5 ft radius)			
1. Dichanthelium clandestinum	45	Y	FAC
2. Solidago altissima	30	Y	FACU
3. Maianthemum canadense	25	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-118

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					Loam/Clayey	
4-10	7.5YR 4/4	100					Loam/Clayey	Rocky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted gravel

Depth (inches): 10

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No hydric soil indicators observed.
Shovel refusal on compacted gravel at 10".

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-119

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.124994 Long: -77.718540 Datum: NAD83 (2011)

Soil Map Unit Name: DEF, Dekalb-Hazleton cobbly sandy loams, 25 to 75 percent slopes, rubbly NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W110. The wetland is along an existing access road adjacent to multiple streams.

Wetland ID: W110; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 4
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation visible on aerial imagery via Google Earth 2023.

Remarks:
Multiple wetland hydrology indicators observed.
The water table and saturation were observed at the soil surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-119

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Betula alleghaniensis	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Juncus canadensis	25	Y	OBL
2. Andropogon virginicus	18	Y	FACU
3. Agrostis gigantea	15	N	FACW
4. Microstegium vimineum	15	N	FAC
5. Viola sororia	5	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	78 = Total Cover		
50% of total cover: 39	20% of total cover: 15.6		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	15	x 2 =	30
FAC species	25	x 3 =	75
FACU species	18	x 4 =	72
UPL species	0	x 5 =	0
Column Totals:	83 (A)		202 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.
Various moss spp. observed throughout the wetland, but were not included in the calculations.

SOIL Sampling Point: SP-119

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/2	98	7.5YR 4/6	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted gravel

Depth (inches): 6

Hydric Soil Present? Yes ☑ No ☐

Remarks:

F3 indicator observed.
Shovel refusal on compacted gravel at 6".

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-120

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.150445 Long: -77.776969 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W111. The sample point is within a depression along an existing power line right of way and receives hydrology from a nearby stream.

Wetland ID: W111; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 4
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 2

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation visible on aerial imagery via Google Earth 2023.

Remarks:
Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-120

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Salix nigra	5	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	70	Y	FACW
2. Typha latifolia	25	Y	OBL
3. Bidens frondosa	10	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-120

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5YR 4/2	98	5YR 4/4	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-121

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.150305 Long: -77.776938 Datum: NAD83 (2011)

Soil Map Unit Name: Jg, Jugtown silt loam NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located on an upland island within a PEM wetland. The sample point is along an existing power line right of way on a raised berm.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-121

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Lonicera morrowii	12	Y	FACU
2. Rubus occidentalis	5	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	17 = Total Cover		
50% of total cover: 8.5	20% of total cover: 3.4		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	40	Y	FACW
2. Alliaria petiolata	25	Y	FACU
3. Solidago altissima	20	N	FACU
4. Chelidonium majus	10	N	UPL
5. Lonicera japonica	10	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-121

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5YR 4/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-122

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.151363 Long: -77.778701 Datum: NAD83 (2011)

Soil Map Unit Name: MrB, Murrill gravelly loam, 3 to 8 percent slopes NWI classification:

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

Are Vegetation Yes, 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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

The sample point is located within a maintained wheat field along an existing power line right of way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-122

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Triticum aestivum	85	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85 = Total Cover		
50% of total cover: 42.5	20% of total cover: 17		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 1 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.
Vegetation has been altered for farming/agriculture.
Based on the surrounding vegetation, the area is assumed to be upland.

SOIL Sampling Point: SP-122

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-123

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.159563 Long: -77.792379 Datum: NAD83 (2011)

Soil Map Unit Name: BkC, Berks channery silt loam, 8 to 15 percent slopes NWI classification:

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 ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

The sample point is located within a PEM wetland along an existing power line right of way. The sample point is in a small depression.

Wetland ID: W112; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 0.5

Water Table Present? Yes ☑ No ☐ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 4

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-123

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Spiraea japonica	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Scirpus cyperinus	45	Y	FACW
2. Microstegium vimineum	35	Y	FAC
3. Solidago gigantea	15	N	FACW
4. Onoclea sensibilis	5	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-123

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	98	7.5YR 4/4	2	C	M	Loam/Clayey	
4-16	2.5Y 5/1	95	10YR 5/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-124

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.159566 Long: -77.792467 Datum: NAD83 (2011)

Soil Map Unit Name: NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located upslope of a PEM wetland on a scrubby existing power line right of way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-124

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Spiraea japonica	25	Y	FACU
2. Rubus allegheniensis	5	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago altissima	45	Y	FACU
2. Dactylis glomerata	35	Y	FACU
3. Solidago canadensis	15	N	FACU
4. Daucus carota	5	N	UPL
5. Solanum carolinense	2	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	102 = Total Cover		
50% of total cover: 51	20% of total cover: 20.4		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-124

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					Loam/Clayey	
2-16	7.5YR 7/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-125

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.132337 Long: -77.742363 Datum: NAD83 (2011)

Soil Map Unit Name: Ph, Philo silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within a PEM wetland along an existing power line right of way below Interstate-76.

Wetland ID: W113; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 4
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.
Surface water observed throughout the wetland, but not at the sample point location.
Snapping turtle observed within the wetland.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-125

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha latifolia	40	Y	OBL
2. Typha angustifolia	25	Y	OBL
3. Phalaris arundinacea	20	N	FACW
4. Persicaria sagittata	10	N	OBL
5. Juncus effusus	5	N	FACW
6. Verbena hastata	2	N	FACW
7. Onoclea sensibilis	2	N	FACW
8.			
9.			
10.			
11.			
	104 = Total Cover		
50% of total cover: 52	20% of total cover: 20.8		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-125

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	95	7.5YR 4/6	5	C	PL,M	Loam/Clayey	
5-16	10YR 5/2	92	7.5YR 5/6	8	C	M,PL	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-126

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): None (flat) Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.132646 Long: -77.743067 Datum: NAD83 (2011)

Soil Map Unit Name: Ph, Philo silt loam NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located within a valley along an existing power line right of way. The sample point is the upland pair to wetland W113.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-126

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	40	Y	FACU
2. Tridens flavus	30	Y	FACU
3. Pycnanthemum virginianum	18	N	FAC
4. Daucus carota	15	N	UPL
5. Juncus effusus	2	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-126

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/2	100					Loam/Clayey	
6-16	2.5Y 5/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-127

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.133005 Long: -77.744152 Datum: NAD83 (2011)

Soil Map Unit Name: As, Atkins silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within the floodplain of a large perennial stream. The floodplain appeared to be a higher elevation than the normal water table levels.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple secondary wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-127

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	60	Y	FACW
2. Symplocarpus foetidus	20	N	OBL
3. Alliaria petiolata	15	N	FACU
4. Boehmeria cylindrica	5	N	FACW
5. Impatiens capensis	2	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	102 = Total Cover		
50% of total cover: 51	20% of total cover: 20.4		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-127

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-128

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.133259 Long: -77.744495 Datum: NAD83 (2011)

Soil Map Unit Name: BkC, Berks channery silt loam, 8 to 15 percent slopes NWI classification: R4SBC

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within a PEM wetland at the toe of slope along an existing power line right of way. The wetland receives hydrology from a nearby perennial stream.

Wetland ID: W114; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 6
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.
Surface water observed throughout the wetland, but not at the sample point.
Wood turtles and wood frogs observed throughout the wetland.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-128

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	55	Y	FACW
2. Symplocarpus foetidus	30	Y	OBL
3. Alliaria petiolata	15	N	FACU
4. Boehmeria cylindrica	5	N	FACW
5. Floerkea proserpinacoides	2	N	FAC
6. Claytonia virginica	2	N	FAC
7.			
8.			
9.			
10.			
11.			
	109 = Total Cover		
50% of total cover: 54.5	20% of total cover: 21.8		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-128

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	90	5YR 4/6	10	C	PL,M	Loam/Clayey	
6-16	2.5Y 5/2	92	5YR 5/4	8	C	M,PL	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-129

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.134725 Long: -77.749076 Datum: NAD83 (2011)

Soil Map Unit Name: WkD, Weikert very channery silt loam, 15 to 25 percent slopes NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located along a maintained power line right of way on a hillslope.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-129

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rosa multiflora	8	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	40	Y	FACU
2. Poa pratensis	30	Y	FACU
3. Tridens flavus	25	Y	FACU
4. Daucus carota	10	N	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-129

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					Loam/Clayey	
4-16	7.5YR 4/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-130

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.140425 Long: -77.760286 Datum: NAD83 (2011)

Soil Map Unit Name: EeC, Edom-Carbo silty clay loams, 8 to 15 percent slopes NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located along a maintained power line right of way in a fenced cattle pasture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-130

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Dactylis glomerata	35	Y	FACU
2. Trifolium pratense	20	Y	FACU
3. Trifolium repens	20	Y	FACU
4. Taraxacum officinale	15	N	FACU
5. Ranunculus acris	5	N	FAC
6. Viola sororia	5	N	FAC
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-130

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-131

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.184879 Long: -77.848397 Datum: NAD83 (2011)

Soil Map Unit Name: BMF, Berks-Weikert association, steep NWI classification: R4SBC

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located on a raised mound between multiple wetland fingers in PEM wetland W115.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-131

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	10	Y	FACU
2. Rubus idaeus	5	Y	FAC
3. Berberis thunbergii	3	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	18 = Total Cover		
50% of total cover: 9	20% of total cover: 3.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	30	Y	FACU
2. Phalaris arundinacea	25	Y	FACW
3. Lonicera japonica	15	N	FACU
4. Apocynum cannabinum	15	N	FACU
5. Andropogon virginicus	10	N	FACU
6. Pycnanthemum virginianum	5	N	FAC
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 4 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-131

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					Loam/Clayey	
3-16	10YR 5/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-132

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.185007 Long: -77.848537 Datum: NAD83 (2011)

Soil Map Unit Name: BrB, Brinkerton silt loam, 3 to 8 percent slopes NWI classification: R4SBC

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W115. The sample point coincides with an NWI mapped wetland, and exhibits drainage thoughout.

Wetland ID: W115; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 4
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation visible on aerial imagery via Google Earth 2023.

Remarks:
Multiple wetland hydrology indicators observed.
The water table and saturation were observed at the soil surface.
Multiple drainage patterns throughout the wetland.
Box turtle observed within the wetland.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-132

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus idaeus	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Cinna arundinacea	15	Y	FACW
2. Onoclea sensibilis	12	Y	FACW
3. Solidago gigantea	10	Y	FACW
4. Impatiens capensis	5	N	FACW
5. Microstegium vimineum	5	N	FAC
6. Symplocarpus foetidus	2	N	OBL
7.			
8.			
9.			
10.			
11.			
	49 = Total Cover		
50% of total cover: 24.5	20% of total cover: 9.8		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-132

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 4/2	92	10YR 5/6	8	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-133

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.186766 Long: -77.852868 Datum: NAD83 (2011)

Soil Map Unit Name: Pu, Purdy silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within a PEM wetland complex along an existing power line right of way.

Wetland ID: W116; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.
The water table and saturation were observed at the soil surface.
Wood turtles observed throughout the wetland.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-133

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cornus amomum	8	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.6		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha latifolia	30	Y	OBL
2. Typha angustifolia	25	Y	OBL
3. Symplocarpus foetidus	12	N	OBL
4. Onoclea sensibilis	10	N	FACW
5. Solidago gigantea	10	N	FACW
6. Impatiens capensis	8	N	FACW
7. Acorus calamus	5	N	OBL
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-133

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/1	93	7.5YR 5/6	7	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-134

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): None (flat) Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.186923 Long: -77.853236 Datum: NAD83 (2011)

Soil Map Unit Name: Pu, Purdy silt loam NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point associated with wetlands W116 and W117. The sample point is located along an existing power line right of way, slightly upslope of the wetlands.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-134

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Berberis thunbergii	10	Y	FACU
2. Lonicera morrowii	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago altissima	40	Y	FACU
2. Poa pratensis	25	Y	FACU
3. Dichanthelium clandestinum	20	N	FAC
4. Erythronium rostratum	5	N	UPL
5. Potentilla simplex	5	N	FACU
6. Barbarea vulgaris	5	N	FACU
7. Verbascum thapsus	3	N	FACU
8.			
9.			
10.			
11.			
	103 = Total Cover		
50% of total cover: 51.5	20% of total cover: 20.6		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-134

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	100					Loam/Clayey	
8-16	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-135

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.187143 Long: -77.853831 Datum: NAD83 (2011)

Soil Map Unit Name: At, Atkins silt loam NWI classification: R5UBH

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W117 along the floodplain of a perennial stream. The wetland receives hydrology from multiple streams and exhibited drainage patterns throughout.

Wetland ID: W117; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 3
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

The water table and saturation were observed at the soil surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-135

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Symplocarpus foetidus	55	Y	OBL
2. Phalaris arundinacea	35	Y	FACW
3. Conium maculatum	10	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-135

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 4/2	98	10YR 5/6	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-136

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.187601 Long: -77.854841 Datum: NAD83 (2011)

Soil Map Unit Name: At, Atkins silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W118 along the floodplain of a Shade Creek.

Wetland ID: W118; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-136

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus idaeus	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Symplocarpus foetidus	45	Y	OBL
2. Impatiens capensis	15	N	FACW
3. Alliaria petiolata	10	N	FACU
4. Conium maculatum	10	N	FACW
5. Rumex crispus	5	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	85 = Total Cover		
50% of total cover: 42.5	20% of total cover: 17		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	45	x 1 =	45
FACW species	25	x 2 =	50
FAC species	10	x 3 =	30
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	90 (A)		165 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-136

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	95	7.5YR 5/6	5	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-137

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.187556 Long: -77.854782 Datum: NAD83 (2011)

Soil Map Unit Name: At, Atkins silt loam NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located slightly upslope of PEM wetland W118 within the floodplain of Shade Creek.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary wetland hydrology indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-137

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Lonicera morrowii	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago altissima	65	Y	FACU
2. Erythronium rostratum	15	N	UPL
3. Symplocarpus foetidus	10	N	OBL
4. Galium aparine	5	N	FACU
5. Impatiens capensis	5	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 2 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-137

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/3	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-138

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.188026 Long: -77.855572 Datum: NAD83 (2011)

Soil Map Unit Name: At, Atkins silt loam NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W119. The sample point is representative of wetlands W119 and W120.

Wetland ID: W119; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 6

Water Table Present? Yes ☑ No ☐ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

The water table and saturation were observed at the soil surface.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-138

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Typha latifolia	45	Y	OBL
2. Typha angustifolia	35	Y	OBL
3. Lonicera japonica	10	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

Yes 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-138

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	94	7.5YR 4/4	6	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-139

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): None (flat) Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.188103 Long: -77.855778 Datum: NAD83 (2011)

Soil Map Unit Name: At, Atkins silt loam NWI classification:

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 ____, 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 ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located on a man-made berm between PEM wetlands W119 and W120. The sample point is along an existing power line right of way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-139

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft radius)			
1. Poa pratensis	35	Y	FACU
2. Lonicera japonica	25	Y	FACU
3. Dactylis glomerata	20	N	FACU
4. Securigaria varia	10	N	UPL
5. Tridens flavus	10	N	FACU
6. Clinopodium vulgare	5	N	NA
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-139

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Loam/Clayey	Rocky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: Compacted fill

Depth (inches): 6

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No wetland hydrology indicators observed.
Shovel refusal on compacted fill at 6".

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-140

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR N Lat: 40.188548 Long: -77.857016 Datum: NAD83 (2011)

Soil Map Unit Name: At, Atkins silt loam NWI classification: PFO1A

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W121. The sample point is located within a concave depression along the floodplain of Shade Creek.

Wetland ID: W121; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0.5
Water Table Present?	Yes ☑	No ☐	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 8

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:
Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-140

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	45	Y	FACW
2. Lonicera japonica	25	Y	FACU
3. Symplocarpus foetidus	20	N	OBL
4. Alliaria petiolata	15	N	FACU
5. Solidago gigantea	5	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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	20	x 1 =	20
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	110 (A)		280 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-140

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	98	7.5YR 4/6	2	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-141

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.188607 Long: -77.856963 Datum: NAD83 (2011)

Soil Map Unit Name: At, Atkins silt loam NWI classification: PFO1A

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located on a raised mound within the floodplain of Shade Creek. The sample point is the upland pair to W121.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

One secondary wetland hydrology indicator observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-141

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Lonicera morrowii	10	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago altissima	40	Y	FACU
2. Lonicera japonica	30	Y	FACU
3. Erythronium rostratum	15	N	UPL
4. Galium aparine	5	N	FACU
5. Andropogon virginicus	5	N	FACU
6. Taraxacum officinale	5	N	FACU
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-141

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	100					Loam/Clayey	
2-16	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-142

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.189320 Long: -77.858780 Datum: NAD83 (2011)

Soil Map Unit Name: BxD, Buchanan channery loam, 8 to 25 percent slopes, rubbly NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W122. The sample point is along an existing power line right of way on a seeping hillslope.

Wetland ID: W122; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.
The water table and saturation were observed at the soil surface.
Below a groundwater seep.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-142

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Poa palustris	30	Y	FACW
2. Scirpus cyperinus	25	Y	FACW
3. Microstegium vimineum	25	Y	FAC
4. Lonicera japonica	10	N	FACU
5. Pycnanthemum virginianum	5	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover: 47.5	20% of total cover: 19		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-142

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 5/2	95	7.5YR 5/6	5	C	M,PL	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/23/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-142

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.189320 Long: -77.858780 Datum: NAD83 (2011)

Soil Map Unit Name: BxD, Buchanan channery loam, 8 to 25 percent slopes, rubbly NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W122. The sample point is along an existing power line right of way on a seeping hillslope.

Wetland ID: W122; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 2
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.
The water table and saturation were observed at the soil surface.
Below a groundwater seep.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-142

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 5 ft radius)			
1. Poa palustris	30	Y	FACW
2. Scirpus cyperinus	25	Y	FACW
3. Microstegium vimineum	20	Y	FAC
4. Lonicera japonica	15	N	FACU
5. Pycnanthemum virginianum	5	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover: 47.5	20% of total cover: 19		

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-142

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 5/2	95	7.5YR 5/6	5	C	M,PL	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-143

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None (flat) Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.189398 Long: -77.858951 Datum: NAD83 (2011)

Soil Map Unit Name: BxD, Buchanan channery loam, 8 to 25 percent slopes, rubbly NWI classification:

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Representative upland sample point located between two PEM wetlands on a hillslope along a maintained power line right of way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-143

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Photo	15	Y	NA
2. Berberis thunbergii	10	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	25 = Total Cover		
50% of total cover: 12.5	20% of total cover: 5		
Herb Stratum (Plot size: 5 ft radius)			
1. Solidago altissima	40	Y	FACU
2. Microstegium vimineum	25	Y	FAC
3. Dichanthelium clandestinum	15	N	FAC
4. Clematis virginiana	10	N	FAC
5. Pycnanthemum virginianum	10	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of 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: 3 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees or woody vines observed within the plot.

SOIL Sampling Point: SP-143

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Loam/Clayey	
2-16	10YR 5/4	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Huntingdon County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-144

Investigator(s): CWI, LEM Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-25%

Subregion (LRR or MLRA): LRR N Lat: 40.189578 Long: -77.859404 Datum: NAD83 (2011)

Soil Map Unit Name: BxD, Buchanan channery loam, 8 to 25 percent slopes, rubbly NWI classification:

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

The sample point is located within PEM wetland W106. The sample point is below a gravel driveway and a groundwater seep.

Wetland ID: W106; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 1
Water Table Present?	Yes ☑	No ☐	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 6

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Multiple wetland hydrology indicators observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-144

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	3	Y	FACU
2. Sambucus nigra	2	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft radius)			
1. Phalaris arundinacea	45	Y	FACW
2. Symplocarpus foetidus	30	Y	OBL
3. Typha latifolia	20	N	OBL
4. Scirpus cyperinus	12	N	FACW
5. Lonicera japonica	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	112 = Total Cover		
50% of total cover: 56	20% of total cover: 22.4		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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.)

No trees, shrubs or woody vines observed within the plot.

SOIL Sampling Point: SP-144

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	75	7.5YR 5/8	30	C	PL,M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

F3 indicator observed.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 03/31/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-145

Investigator(s): CMCh, EJK Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None (flat) Slope (%): 0-2%

Subregion (LRR or MLRA): LRRN Lat: 40.114541 Long: -77.674448 Datum: NAD83 (2011)

Soil Map Unit Name: As NWI classification: NA

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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

Wetland sample point adjacent to stream floodplain and electrical pole.

Wetland ID: W07B; Cowardin Class: PEM

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☑ No ☐ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes ☑ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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-145

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 5 ft radius)			
1. Juncus effusus	30	Y	FACW
2. Phalaris arundinacea	25	Y	FACW
3. Microstegium vimineum	20	Y	FAC
4. Typha latifolia	10	N	OBL
5. Euthamia graminifolia	10	N	FAC
6. Solidago gigantea	5	N	FACW
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
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 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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-145

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					Loam/Clayey	
4-16	10YR 4/2	90	10YR 4/6	10	C	M	Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shade Gap - Roxbury City/County: Franklin County Sampling Date: 03/31/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: SP-146

Investigator(s): CMCh, EJK Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-10%

Subregion (LRR or MLRA): LRR N Lat: 40.114426 Long: -77.674352 Datum: NAD83 (2011)

Soil Map Unit Name: As NWI classification: NA

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 ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Upland sample point adjacent to W107 on risen area with blackberry bushes.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

No wetland hydrology indicators present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP-146

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Rubus allegheniensis	75	Y	FACU
2. Lonicera morrowii	5	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		
Herb Stratum (Plot size: 5 ft radius)			
1. Microstegium vimineum	35	Y	FAC
2. Solidago altissima	20	Y	FACU
3. Carex scoparia	2	N	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	57 = Total Cover		
50% of total cover: 28.5	20% of total cover: 11.4		
Woody Vine Stratum (Plot size: 30 ft radius)			
1. None			
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: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (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:

No 1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

No 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

No Problematic Hydrophytic Vegetation[1] (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/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-146

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	5YR 3/2	100					Loam/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) **(MLRA 147, 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 Soils[3]:

- ☐ 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)

[3]Indicators 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 ☑

Remarks:

No hydric soil indicators present.

APPENDIX C

STREAM DATA FORMS

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S001 **STREAM NAME:** Conodoguinet Creek **TYPE:** Perennial

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream exits and reenters the AOI throughout various portions of the project area. Each measurement is representative of the respective section of stream.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

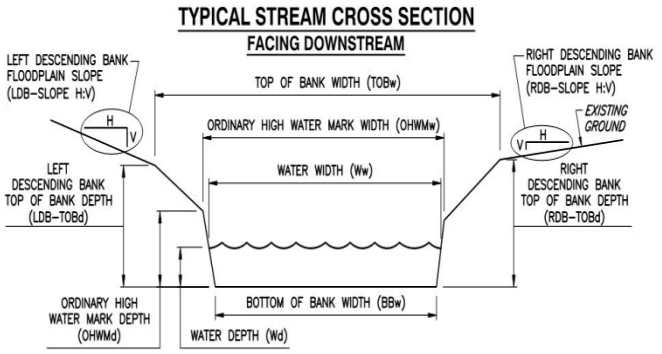
Top of Bank

TOBw: 85ft

RDB-TOBd: 3ft **LDB-TOBd:** 6ft

Wetted Channel

Ww: 75ft **Wd:** 2ft



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on RBD both ROW areas are shrubby. LDB open field.

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Ephemeroptera, plechoptera, trichoperta

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S001-2 **STREAM NAME:** Conodoguinet Creek **TYPE:** Perennial

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S001 crossed back into boundary.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

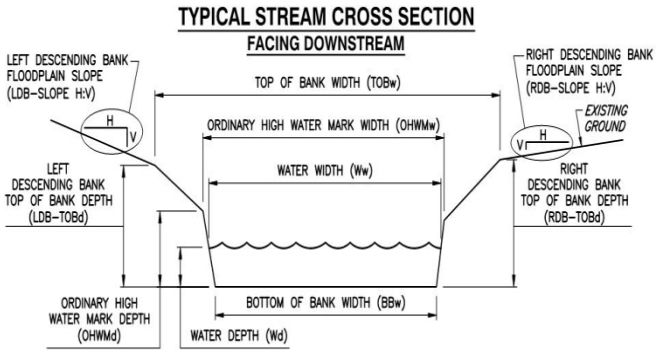
Top of Bank

TOBw: 58ft

RDB-TOBd: 50ft **LDB-TOBd:** 8ft

Wetted Channel

Ww: 75ft **Wd:** 3ft



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Shrub on both sides of stream banks.

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Ephemeroptera, plechoptera, trichoperta

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S001-3 **STREAM NAME:** Conodoguinet Creek **TYPE:** Perennial

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S001 crosses back into boundary only LDB in boundary.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

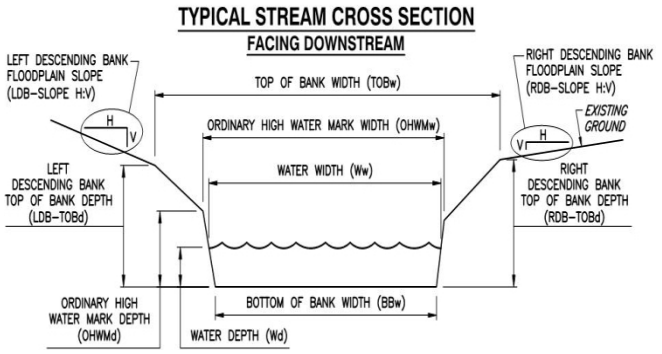
Top of Bank

TOBw: 68ft

RDB-TOBd: 4ft **LDB-TOBd:** 3ft

Wetted Channel

Ww: 60ft **Wd:** 3ft



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forested on RDB open field on LDB

Canopy Cover: 25 - 49%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No

Describe: Ephemeroptera, plechoptera, trichoperta

Fish or Herptiles observed? ☑ Yes ☐ No

Describe: Fish observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S002 **STREAM NAME:** UNT to Conodoguinet Creek **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S002 starts at culvert and flows out of study boundary.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

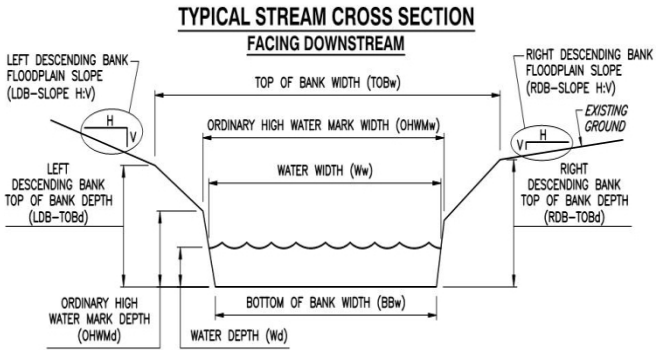
Top of Bank

TOBw: 4ft

RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 1.5ft **Wd:** 1in



Primary Substrate:

☐ Clay ☐ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field/ shrub on both banks in ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S003 **STREAM NAME:** UNT to Conodoguinet Creek **TYPE:** Perennial

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream flows in and then back out of boundary. Adjacent to several wetlands.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

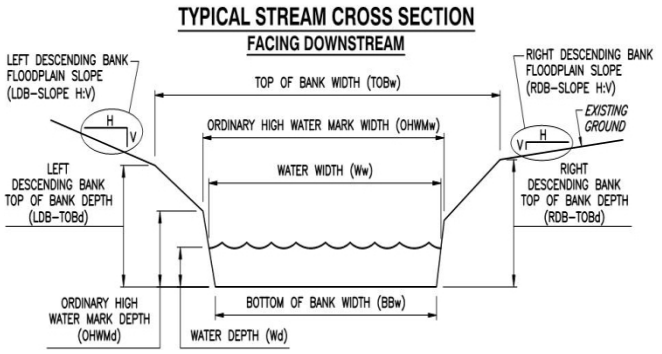
Top of Bank

TOBw: 10ft

RDB-TOBd: 2ft **LDB-TOBd:** 4ft

Wetted Channel

Ww: 8ft **Wd:** 1.5ft



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Shrub on both banks

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No

Describe: Ephemeropter, tricoptera, plecoptera

Fish or Herptiles observed? ☑ Yes ☐ No

Describe: Fish frogs and salamanders observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S004 **STREAM NAME:** UNT to Conodoguinet Creek **TYPE:** Ephemeral

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Road culvert flows into stream.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

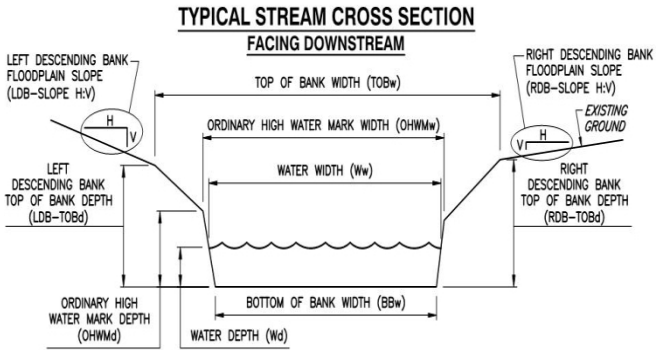
Top of Bank

TOBw: 8ft

RDB-TOBd: 4ft **LDB-TOBd:** 3ft

Wetted Channel

Ww: 1.5ft **Wd:** 2in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☐ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☑ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field/shrub

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S005 **STREAM NAME:** UNT **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S005 flows into W009 where bed and banks are lost

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

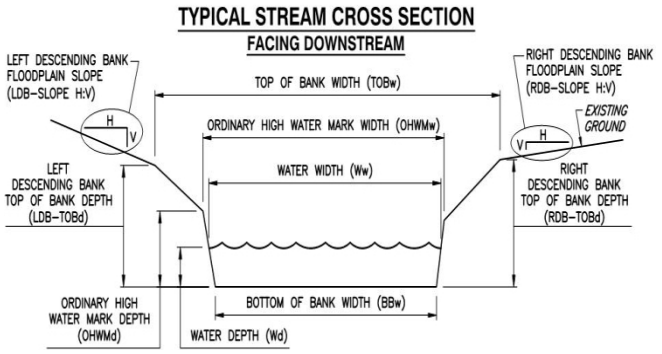
Top of Bank

TOBw: 3ft

RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 2ft **Wd:** 2in



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S006 **STREAM NAME:** UNT **TYPE:** Ephemeral

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☐ Cloudy ☑ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Flows into boundary, confluences into W009

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

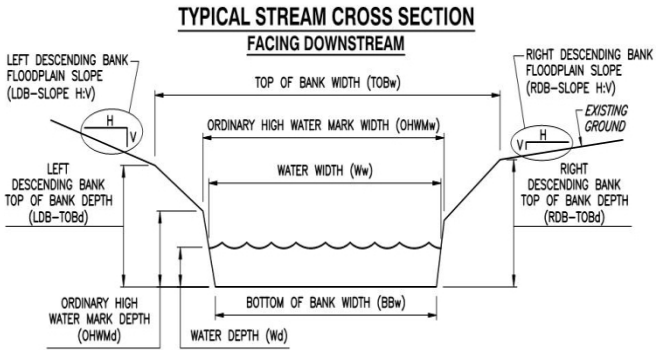
Top of Bank

TOBw: 1.5ft

RDB-TOBd: 4in **LDB-TOBd:** 5in

Wetted Channel

Ww: 0.5ft **Wd:** 1in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S007 **STREAM NAME:** UNT **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Gains flow in W010C and loses bed and banks shortly after W010.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

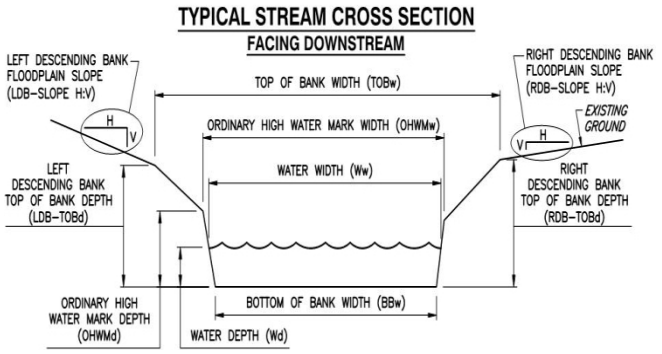
Top of Bank

TOBw: 3ft

RDB-TOBd: 8in **LDB-TOBd:** 6in

Wetted Channel

Ww: 1.5ft **Wd:** 2-3in



Primary Substrate:

☑ Clay ☐ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: In field/shrub ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No

Describe: Ephemeroptera and trichoptera

Fish or Herptiles observed? ☐ Yes ☑ No

Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S008 **STREAM NAME:** UNT **TYPE:** Ephemeral

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Starts by branching off S007. Loses bed and banks in W010.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

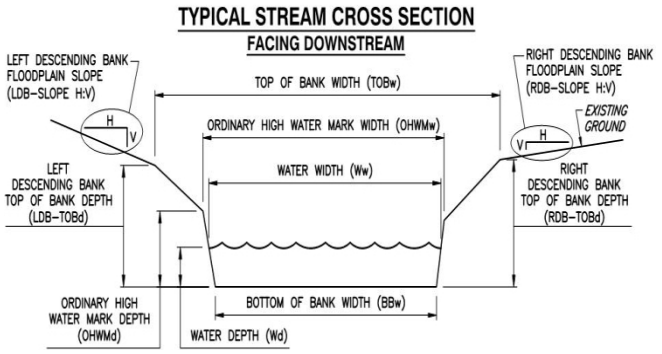
Top of Bank

TOBw: 2ft

RDB-TOBd: 4in **LDB-TOBd:** 5in

Wetted Channel

Ww: 8in **Wd:** 1in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open shrub field ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S009 **STREAM NAME:** UNT **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Confluences with S010

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

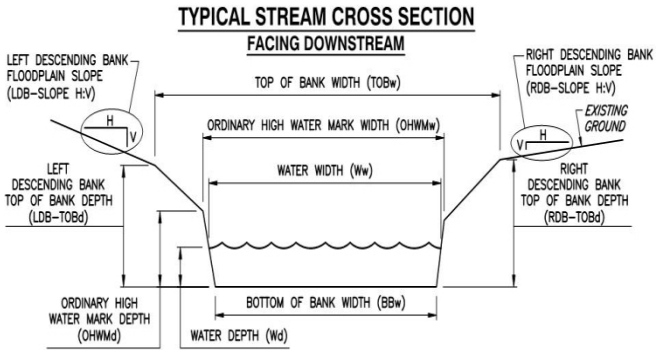
Top of Bank

TOBw: 2ft

RDB-TOBd: 2ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 2ft **Wd:** 2in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Ope field/shrub ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S010 **STREAM NAME:** UNT to Pine Run **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Flows into boundary, then confluences into PUB

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

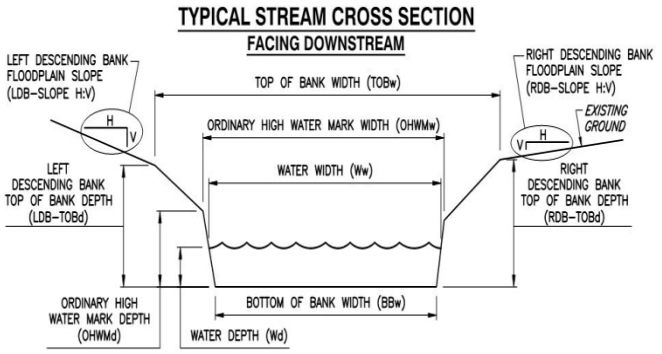
Top of Bank

TOBw: 3ft

RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 1.5ft **Wd:** 2in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field/shrub

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S011 **STREAM NAME:** Pine Run **TYPE:** Perennial

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S011 continues out of boundary

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

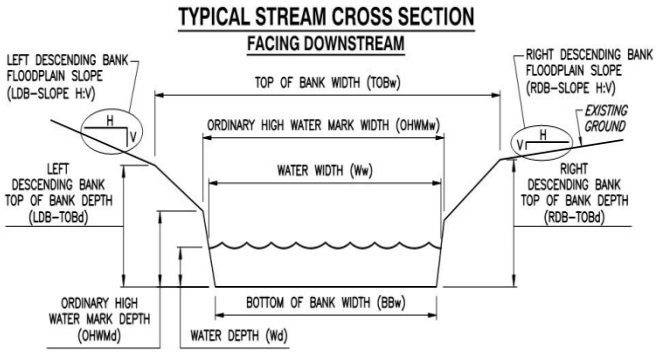
Top of Bank

TOBw: 20ft

RDB-TOBd: 12ft **LDB-TOBd:** 10ft

Wetted Channel

Ww: 15ft **Wd:** 1-8in



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forested on both banks

Canopy Cover: 50 - 74%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No

Describe: Ephemeroptera, trichoptera, plechoptera

Fish or Herptiles observed? ☑ Yes ☐ No

Describe: Obersved fish in pool

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S012 **STREAM NAME:** Pine Run **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Confluences with S011

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

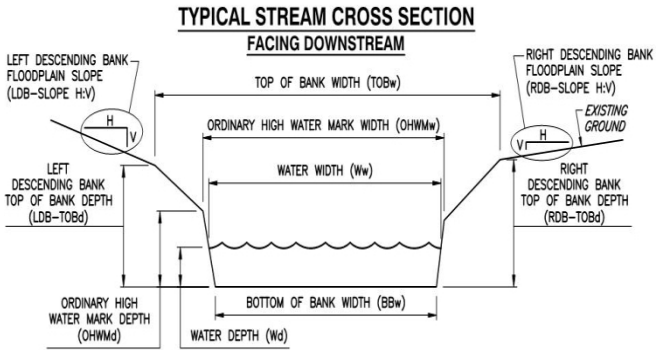
Top of Bank

TOBw: 6ft

RDB-TOBd: 1ft **LDB-TOBd:** 1.5ft

Wetted Channel

Ww: 4ft **Wd:** 4in



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forested and open field ROW

Canopy Cover: 25 - 49%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera and plecoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S013 **STREAM NAME:** West Dry Run **TYPE:** Perennial

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S013 continues out of boundary

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

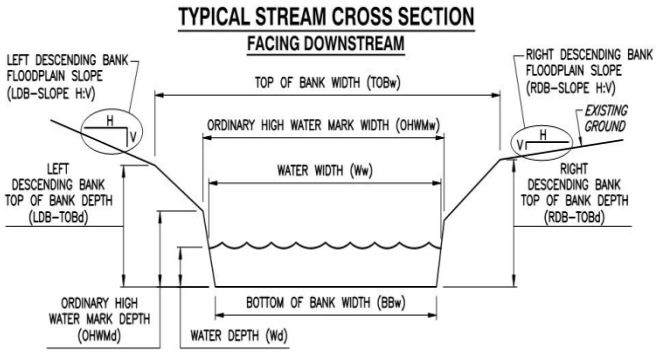
Top of Bank

TOBw: 23ft

RDB-TOBd: 4ft **LDB-TOBd:** 3ft

Wetted Channel

Ww: 20ft **Wd:** 1-3ft



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: Open field on RDB and residential on LDB

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Ephemeroptera, trichoptera, plecoptera

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S014 **STREAM NAME:** UNT to Spring Run **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Continues out of boundary in residential yards and pastures.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

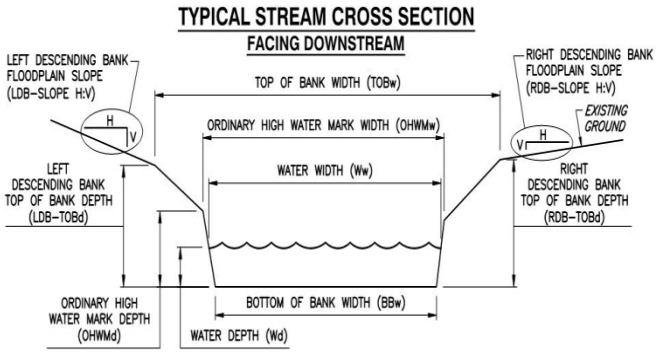
Top of Bank

TOBw: 8ft

RDB-TOBd: 3ft **LDB-TOBd:** 2.5ft

Wetted Channel

Ww: 1ft **Wd:** 1-2in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: Residential maintained lawn on both banks

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S015 **STREAM NAME:** UNT **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S015 abuts W013 and flows into culvert

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

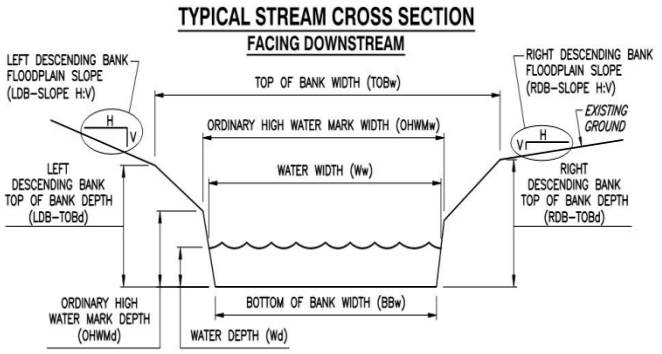
Top of Bank

TOBw: 3ft

RDB-TOBd: 6in **LDB-TOBd:** 10in

Wetted Channel

Ww: 1.5ft **Wd:** 1-2in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field and wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S016 **STREAM NAME:** UNT **TYPE:** Ephemeral

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Man made drainage , that flows into S015

Hydrological Characteristics:

Tributary is Manipulated (Man-Altered)

Stream Channel Properties:

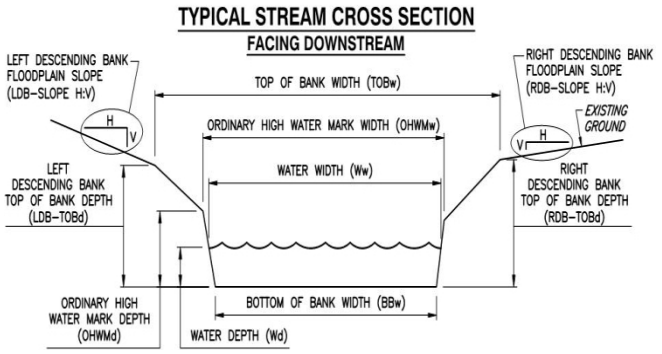
Top of Bank

TOBw: 3.5ft

RDB-TOBd: 2ft **LDB-TOBd:** 1.5ft

Wetted Channel

Ww: 0.5ft **Wd:** 1in



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☐ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW and wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S017 **STREAM NAME:** Trib 12852 to Shade Creek **TYPE:** Perennial

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and abuts W015

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

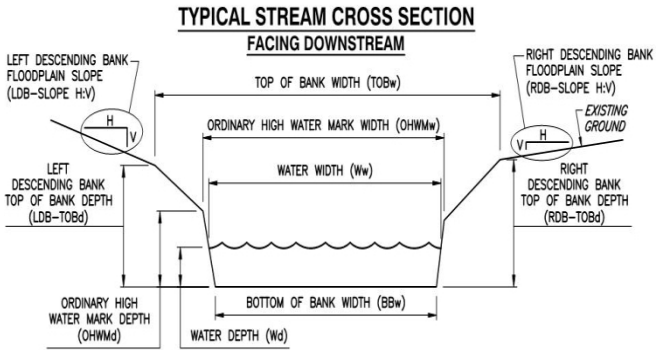
Top of Bank

TOBw: 4ft

RDB-TOBd: 1ft **LDB-TOBd:** 1.5ft

Wetted Channel

Ww: 2ft **Wd:** 1-8in



Primary Substrate:

☑ Clay ☐ Silt ☑ Sand ☐ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☐ Open Field ☑ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Located between wetland and agricultural fields

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No

Describe: Ephemeroptera, trichoptera, plechoptera

Fish or Herptiles observed? ☑ Yes ☐ No

Describe: Fish and frogs observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S018 **STREAM NAME:** Shade Creek **TYPE:** Perennial

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S018 abuts W016. Continues outside of boundary.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

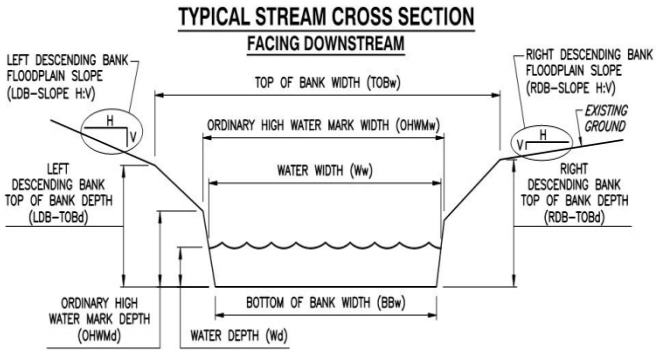
Top of Bank

TOBw: 4ft

RDB-TOBd: 1.5ft **LDB-TOBd:** 2ft

Wetted Channel

Ww: 2.5ft **Wd:** 1-10in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field on RDB and wetland on LDB

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Ephemeroptera, trichoptera, plecoptera

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S019 **STREAM NAME:** UNT to Shade Creek **TYPE:** Ephemeral

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Starts at formation of bed and banks. Confluences with W017

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

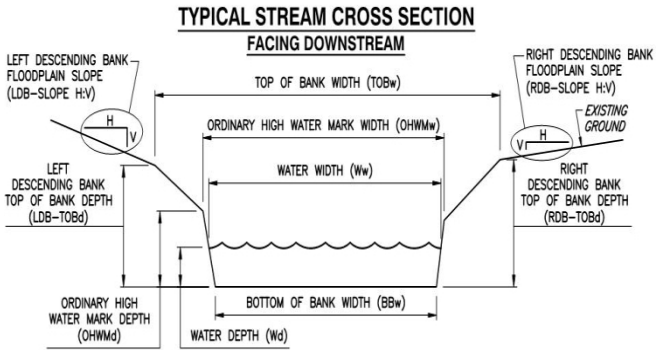
Top of Bank

TOBw: 1ft

RDB-TOBd: 4in **LDB-TOBd:** 5in

Wetted Channel

Ww: 0.5ft **Wd:** 0.5-1in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S020 **STREAM NAME:** Trib 12845 to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S020 countinues out of boundary. Adjacent to wetland

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

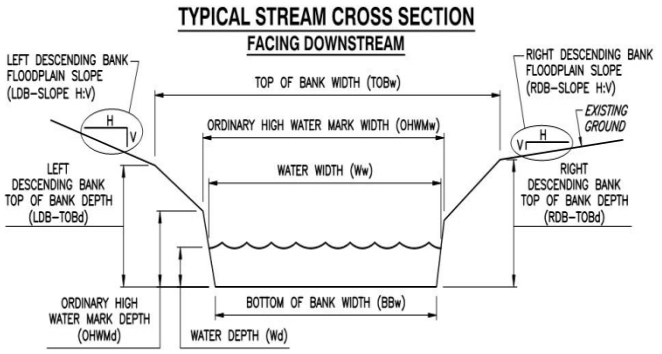
Top of Bank

TOBw: 4ft

RDB-TOBd: 1.5ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 2ft **Wd:** 1-7in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S021 **STREAM NAME:** Trib 12843 to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Continues out of boundary. Adjacent to wetland

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

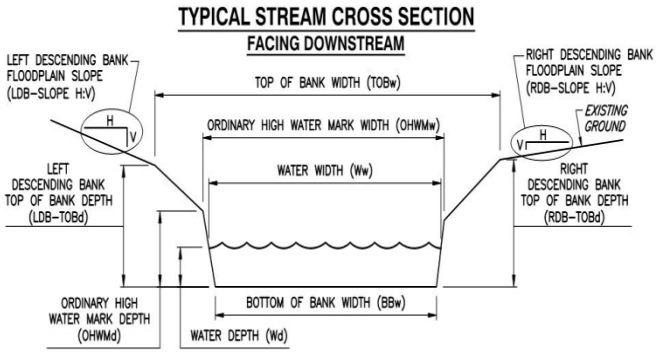
Top of Bank

TOBw: 4ft

RDB-TOBd: 1ft **LDB-TOBd:** 1.5ft

Wetted Channel

Ww: 2.5ft **Wd:** 1-6in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW wetland abuts stream

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S022 **STREAM NAME:** UNT to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S022 abuts W020 and continues out of boundary

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

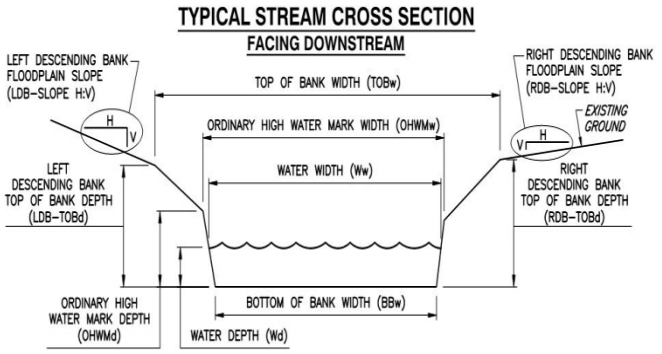
Top of Bank

TOBw: 2ft

RDB-TOBd: 2ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 0.5ft **Wd:** 1-2in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW and wetland that abuts stream

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Flatworm

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S023 **STREAM NAME:** Trib 12837 to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S023 abuts W021 countinues out of boundary

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

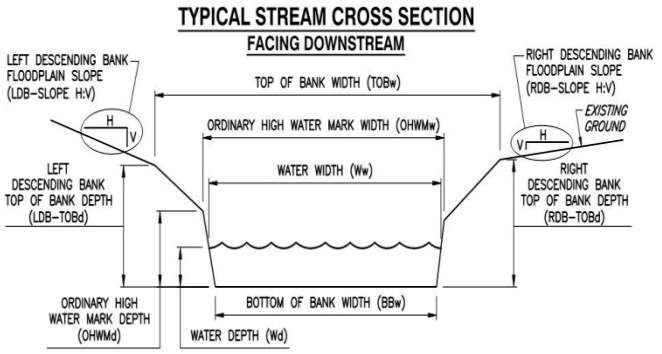
Top of Bank

TOBw: 4ft

RDB-TOBd: 2ft **LDB-TOBd:** 2.5ft

Wetted Channel

Ww: 1.5ft **Wd:** 1-4in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW and wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera and plechoptera

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Frogs observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S024 **STREAM NAME:** UNT to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream adjacent to Wetland. Continues out of boundary.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

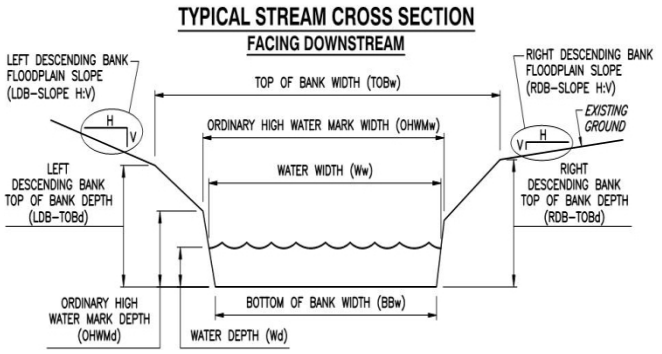
Top of Bank

TOBw: 2ft

RDB-TOBd: 1ft **LDB-TOBd:** 6in

Wetted Channel

Ww: 1ft **Wd:** 1-2in



Primary Substrate:

☑ Clay ☐ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW and wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Frogs and tadpoles

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S025 **STREAM NAME:** Trib 12838 to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Continues out of boundary and abuts wetland.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

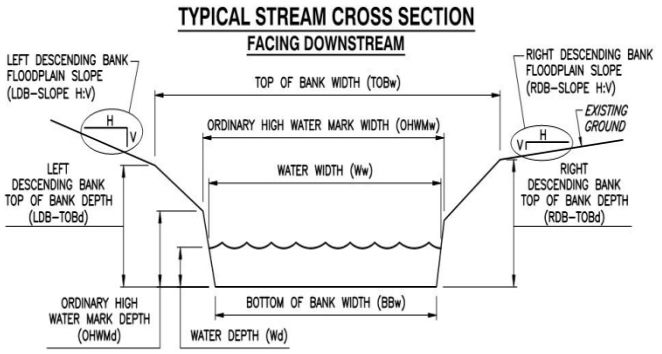
Top of Bank

TOBw: 2ft

RDB-TOBd: 6in **LDB-TOBd:** 4in

Wetted Channel

Ww: 1ft **Wd:** 2-3in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☐ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field RPW and abuts wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S026 **STREAM NAME:** UNT to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Originates in wetland, then continues out of boundary.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

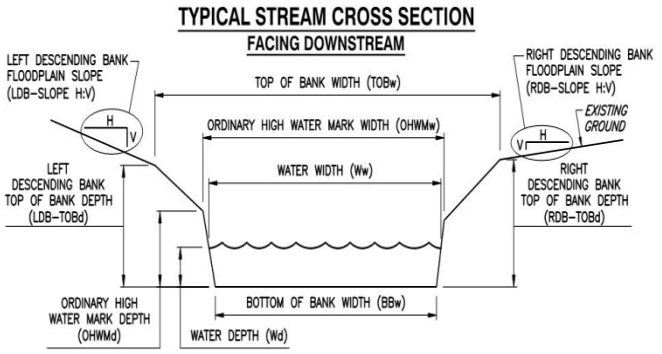
Top of Bank

TOBw: 3ft

RDB-TOBd: 1ft **LDB-TOBd:** 10in

Wetted Channel

Ww: 0.5ft **Wd:** 0.5-1in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW and wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/19/24

STREAM ID: S027 **STREAM NAME:** Shade Creek **TYPE:** Perennial

MUNICIPALITY: Cromwell Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Braided channel between stream main channel and top of bank. Continues out of boundary.

Hydrological Characteristics:

Tributary is

Stream Channel Properties:

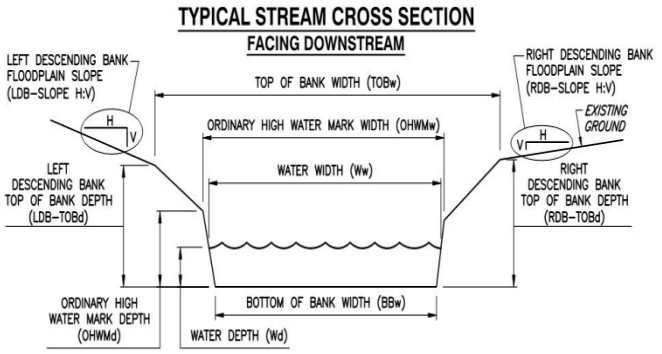
Top of Bank

TOBw: 125ft

RDB-TOBd: 3.5ft **LDB-TOBd:** 4ft

Wetted Channel

Ww: 27ft **Wd:** 1-3ft



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW forest outside of boundary

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Ephemeroptera, plechoptera, trichoptera,

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish observed

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/19/24

STREAM ID: S028 **STREAM NAME:** UNT to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Cromwell Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFG/FDD

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
S028 flow into culvert. Eventually confluences with S027

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

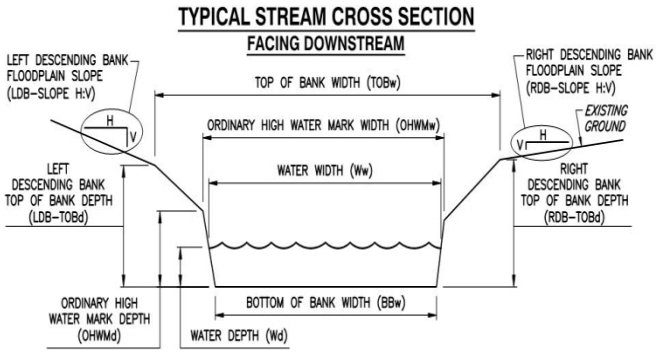
Top of Bank

TOBw: 4ft

RDB-TOBd: 4ft **LDB-TOBd:** 3.5ft

Wetted Channel

Ww: 2.5ft **Wd:** 1-4in



Primary Substrate:

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Open field ROW and wetland adjacent to stream

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No

Describe: Trichoptera, plechoptera, Gastropoda

Fish or Herptiles observed? ☐ Yes ☑ No

Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 10/07/24

STREAM ID: S029 **STREAM NAME:** Conodoguinet Creek **TYPE:** Perennial

MUNICIPALITY: Lurgan Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMF

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continuation of S001. Stream continues out of boundary. Stream has drivable bridge that crosses.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 50ft

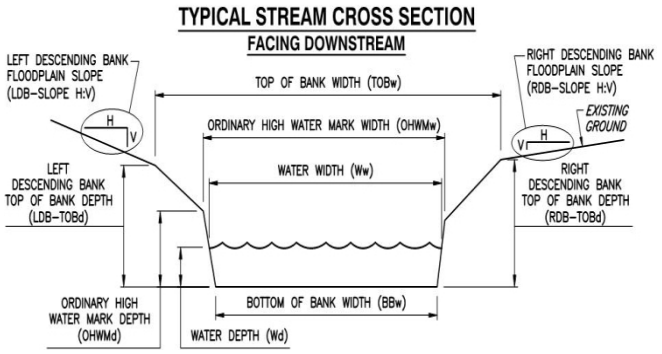
RDB-TOBd: 4ft **LDB-TOBd:** 4.5ft

Ordinary High Water Mark (OHWM)

OHWMw: 48 ft **OHWMd:** 3 ft

Wetted Channel

Ww: 45ft **Wd:** 1-3ft



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe: Moderate erosion with under cut banks and scour.

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing bridge

Canopy Cover: 50 - 74%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Ephemeroptera, Trichoptera, Plechoptera

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish sp.

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 10/07/24

STREAM ID: S030 **STREAM NAME:** **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream run adjacent to access road/residential driveway. Stream continues outside of boundary.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 3ft

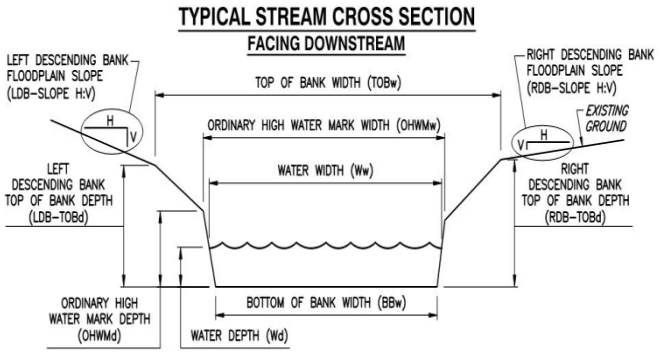
RDB-TOBd: 1ft **LDB-TOBd:** 1.5ft

Ordinary High Water Mark (OHWM)

OHWMw: 2 ft **OHWMd:** 5 in

Wetted Channel

Ww: 1.5ft **Wd:** 1-4in



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: Forest on both banks with residential drive way.

Canopy Cover: 25 - 49%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Plechoptera and trichoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/07/24
STREAM ID: S031 **STREAM NAME:** **TYPE:** Intermittent
MUNICIPALITY: Lurgan Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP
WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)
Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream gains bed and banks at culvert outlet. Stream loses bed and banks in W028.

Hydrological Characteristics:

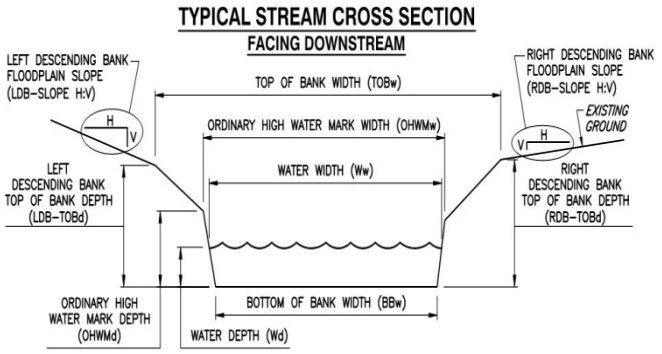
Tributary is Manipulated (Man-Altered)

Stream Channel Properties:

Top of Bank

TOBw: 2ft

RDB-TOBd: 6in **LDB-TOBd:** 4in



Ordinary High Water Mark (OHWM)

OHWMw: 1 ft **OHWMd:** 3 in

Wetted Channel

Ww: 1ft **Wd:** 1in

Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☑ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☑ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: Open field and residential yard that turns into crown pasture.

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/08/24

STREAM ID: S032 **STREAM NAME:** West Branch Conococheague Creek **TYPE:** Perennial

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues outside of boundary. Stream has road crossing bridge.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 48ft

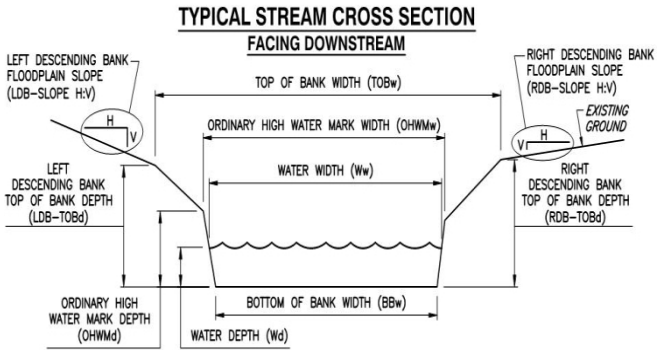
RDB-TOBd: 4ft **LDB-TOBd:** 3.5ft

Ordinary High Water Mark (OHWM)

OHWMw: 46 ft **OHWMd:** 2.5 ft

Wetted Channel

Ww: 45ft **Wd:** 1-3ft



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe: Moderate erosion with under cut banks and scour

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: Forest on both banks with road crossing bridge with residential yard on RDB.

Canopy Cover: 50 - 74%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: E,P,T

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish sp.

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/08/24

STREAM ID: S033 **STREAM NAME:** **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream is located in cow pasture. Stream continues out of boundary and flows under access road through culverts.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 4ft

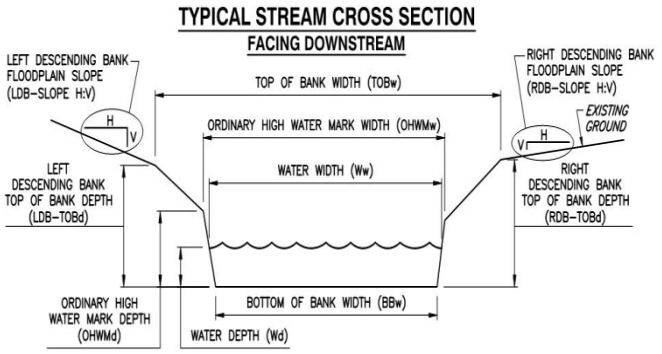
RDB-TOBd: 2ft **LDB-TOBd:** 2.5ft

Ordinary High Water Mark (OHWM)

OHWMw: 8 in **OHWMd:** 4 in

Wetted Channel

Ww: 6in **Wd:** 0.5in



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☐ Moderate ☑ Severe ☐ Very Severe
LDB: ☐ Slight ☐ Moderate ☑ Severe ☐ Very Severe
Describe: Sever erosion in action cow pasture.

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☑ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing bridge

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Plechoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/08/24

STREAM ID: S034 **STREAM NAME:** **TYPE:** Perennial

MUNICIPALITY: Dublin Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream has wetland upstream that is out of boundary. Stream is man minipulated with rock filled material where big pool was created. Stream continues out of boundary.

Hydrological Characteristics:

Tributary is Manipulated (Man-Altered)

Stream Channel Properties:

Top of Bank

TOBw: 8ft

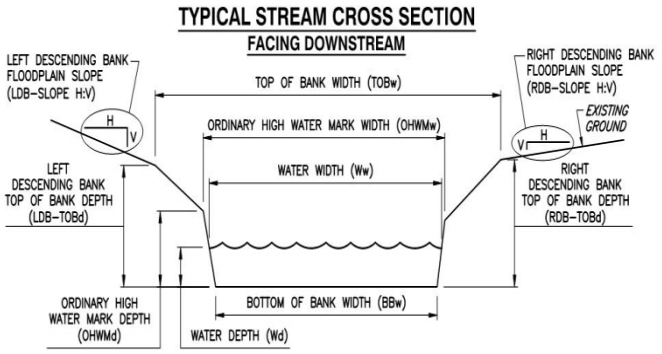
RDB-TOBd: 3.5ft **LDB-TOBd:** 3ft

Ordinary High Water Mark (OHWM)

OHWMw: 5 ft **OHWMd:** 6 in

Wetted Channel

Ww: 2.5ft **Wd:** 1-36in



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe: Moderate erosion with scour

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☑ Farmland ☑ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing.

Canopy Cover: 50 - 74%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Trichoptera

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish sp.

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/08/24

STREAM ID: S035 **STREAM NAME:** **TYPE:** Ephemeral

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Continues out of boundary.

Hydrological Characteristics:

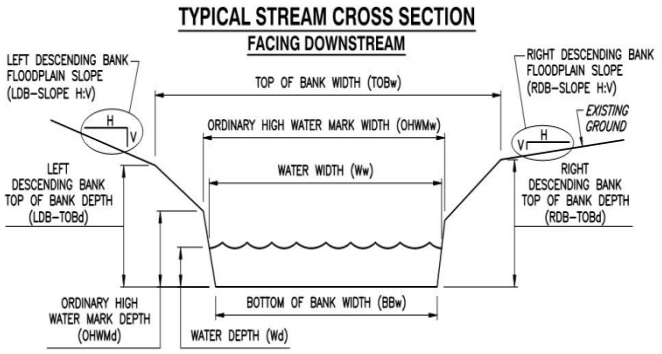
Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 4ft

RDB-TOBd: 2ft **LDB-TOBd:** 1.5ft



Ordinary High Water Mark (OHWM)

OHWMw: 2 ft **OHWMd:** 4 in

Wetted Channel

Ww: **Wd:**

Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing/culverts.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S036 **STREAM NAME:** **TYPE:** Ephemeral

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and flows through culvert under access road.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 4ft

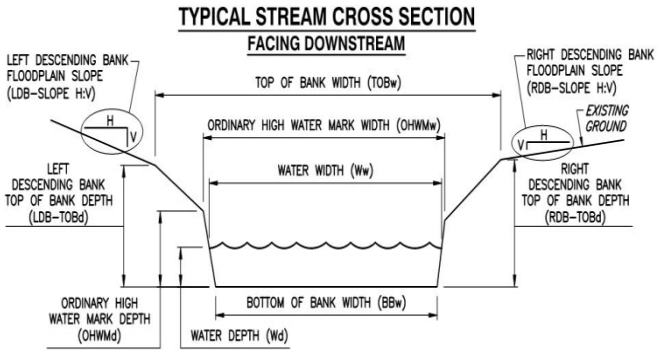
RDB-TOBd: 1ft **LDB-TOBd:** 1.5ft

Ordinary High Water Mark (OHWM)

OHWMw: 2 ft **OHWMd:** 3 in

Wetted Channel

Ww: **Wd:**



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing and culvert.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S037 **STREAM NAME:** **TYPE:** Ephemeral

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and flows through culvert under access road.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 3ft

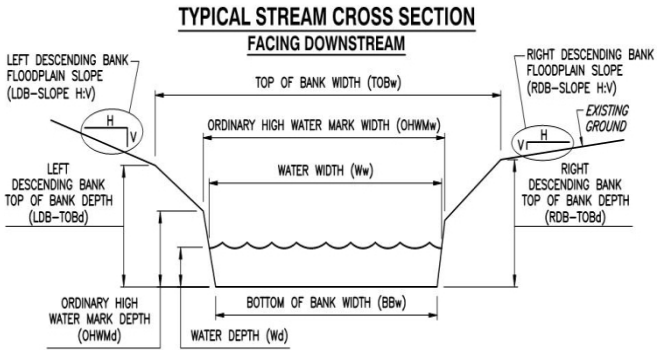
RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Ordinary High Water Mark (OHWM)

OHWMw: 1.5 ft **OHWMd:** 2 in

Wetted Channel

Ww: **Wd:**



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing and culvert.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S038 **STREAM NAME:** **TYPE:** Ephemeral

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and flows through culvert under access road.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 2.5ft

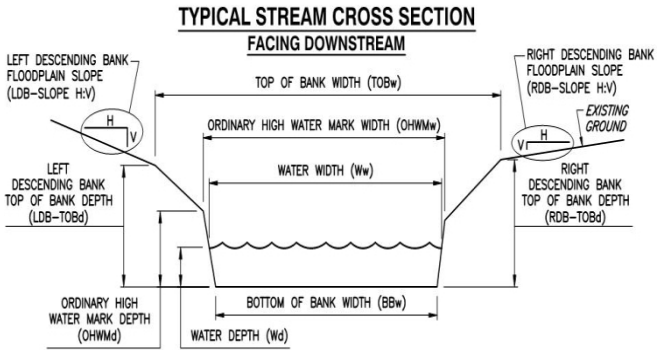
RDB-TOBd: 1.5ft **LDB-TOBd:** 1ft

Ordinary High Water Mark (OHWM)

OHWMw: 1 ft **OHWMd:** 2 in

Wetted Channel

Ww: **Wd:**



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing and culvert.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S039 **STREAM NAME:** **TYPE:** Ephemeral

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and flows through culvert under access road.

Hydrological Characteristics:

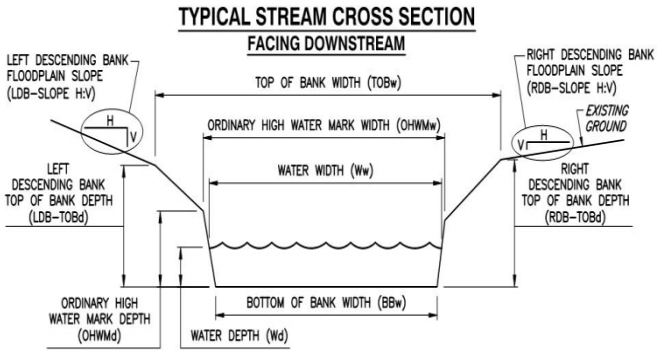
Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 4.5ft

RDB-TOBd: 2ft **LDB-TOBd:** 2.5ft



Ordinary High Water Mark (OHWM)

OHWMw: 2.5 ft **OHWMd:** 4 in

Wetted Channel

Ww: **Wd:**

Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe: Slight scour on both banks with moderate erosion.

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing and culvert.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S040 **STREAM NAME:** **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and flows through culvert under access road. Stream loses bed and banks at culvert inlet where PSS wetland begins.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 3ft

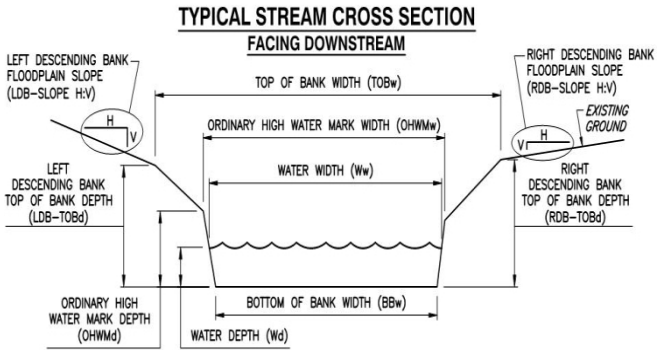
RDB-TOBd: 1.5ft **LDB-TOBd:** 2ft

Ordinary High Water Mark (OHWM)

OHWMw: 2 ft **OHWMd:** 4 in

Wetted Channel

Ww: 1ft **Wd:** 1in



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing and culvert.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Plechoptera

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S041 **STREAM NAME:** **TYPE:** Ephemeral

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and flows through culvert under access road.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 3ft

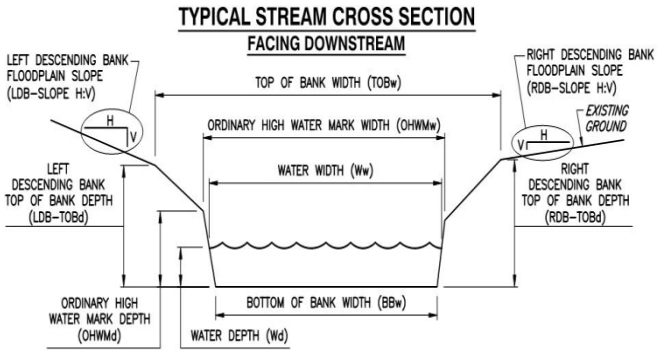
RDB-TOBd: 1ft **LDB-TOBd:** 8in

Ordinary High Water Mark (OHWM)

OHWMw: 1 ft **OHWMd:** 3 in

Wetted Channel

Ww: **Wd:**



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☐ Defined bed and banks ☑ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing and culvert.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S042 **STREAM NAME:** **TYPE:** Ephemeral

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and flows through culvert under access road.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 4ft

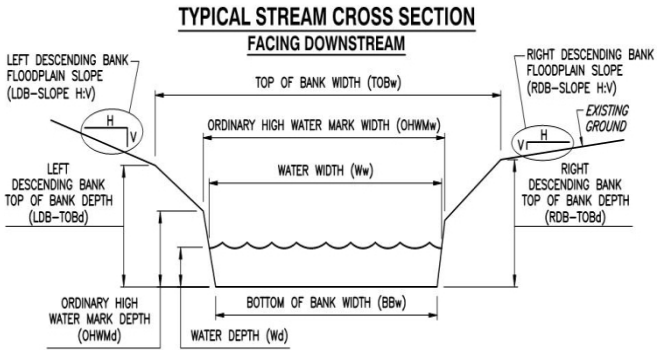
RDB-TOBd: 1ft **LDB-TOBd:** 1.5ft

Ordinary High Water Mark (OHWM)

OHWMw: 2.5 ft **OHWMd:** 2 in

Wetted Channel

Ww: **Wd:**



Primary Substrate:

☑ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Little to no erosion

The tributary has… ☐ Defined bed and banks ☑ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing and culvert.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap **DATE:** 10/09/24

STREAM ID: S043 **STREAM NAME:** West Branch Conococheague Creek **TYPE:** Perennial

MUNICIPALITY: Fannett Township **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** AFC/JMP

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
Stream continues out of boundary and has a crossing bridge.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

Top of Bank

TOBw: 45ft

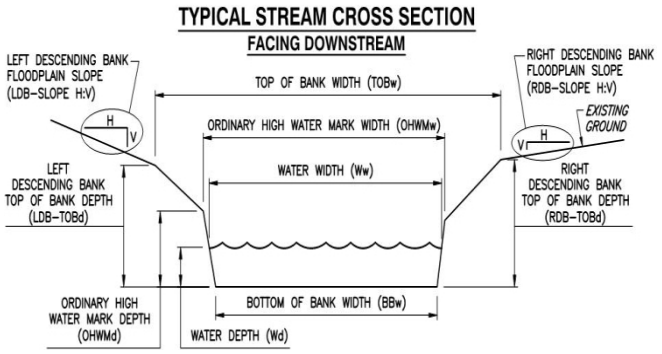
RDB-TOBd: 4ft **LDB-TOBd:** 4.5ft

Ordinary High Water Mark (OHWM)

OHWMw: 42 ft **OHWMd:** 3 ft

Wetted Channel

Ww: 40ft **Wd:** 1-3ft



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe: Moderate erosion on both banks with under cut roots and scour

The tributary has… ☑ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Forest on both banks with road crossing bridge.

Canopy Cover: 75 - 100%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: E,P,T

Fish or Herptiles observed? ☑ Yes ☐ No
Describe: Fish sp.

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S100 **STREAM NAME:** Trib 10813 To Conodoguinet Creek **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream is adjacent to a PEM wetland.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

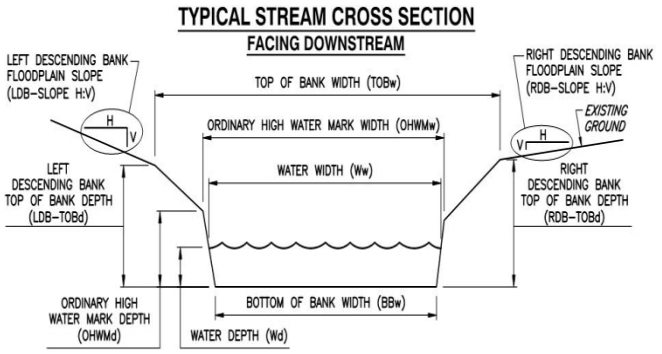
Top of Bank

TOBw: 2ft

RDB-TOBd: 6in **LDB-TOBd:** 6in

Wetted Channel

Ww: 1ft **Wd:** 2in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☐ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: PEM wetland/ maintained lawn

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Flatworms, snails

Fish or Herptiles observed? ☐ Yes ☐ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S101 **STREAM NAME:** UNT To Trib 10813 To Conodoguinet Creek **TYPE:** Intermittent

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream starts from a groundwater seep abutting a PEM wetland and confluences with another stream before exiting the AOI.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

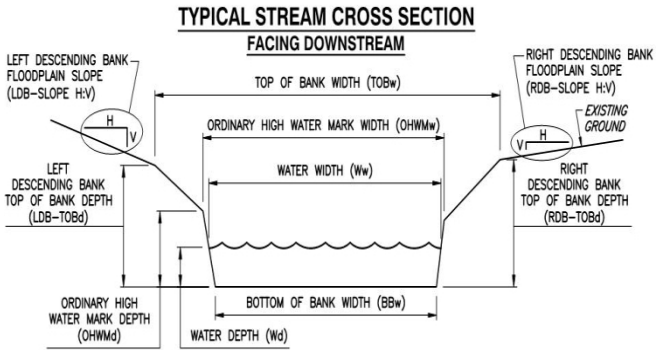
Top of Bank

TOBw: 3.5ft

RDB-TOBd: 5in **LDB-TOBd:** 5in

Wetted Channel

Ww: 2.5ft **Wd:** 3.5in



Primary Substrate:

☑ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☐ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: PEM wetland/ maintained lawn

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Flatworms, snails

Fish or Herptiles observed? ☐ Yes ☐ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S102 **STREAM NAME:** Shade Creek **TYPE:** Perennial

MUNICIPALITY: Shade Gap **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. Receives input from Felix Run to the East of Route 35.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

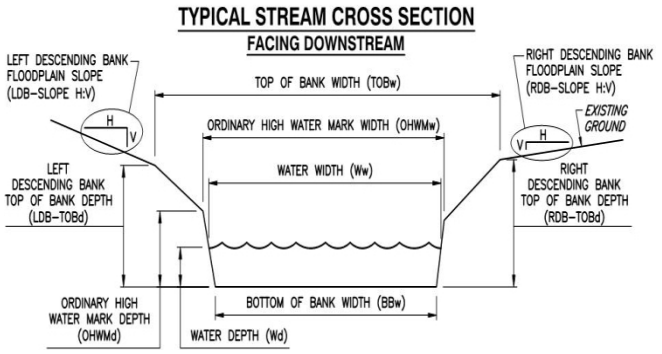
Top of Bank

TOBw: 30ft

RDB-TOBd: 1.5in **LDB-TOBd:** 3ft

Wetted Channel

Ww: 27ft **Wd:** 1ft



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☐ Moderate ☑ Severe ☐ Very Severe
Describe: Sloughing banks, undercut banks, overhanging vegetation

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Stonefly, caddisfly, mayfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/16/24

STREAM ID: S103 **STREAM NAME:** Conodoguinet Creek **TYPE:** Perennial

MUNICIPALITY: Lurgan Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. This portion of the stream is a backwater channel.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

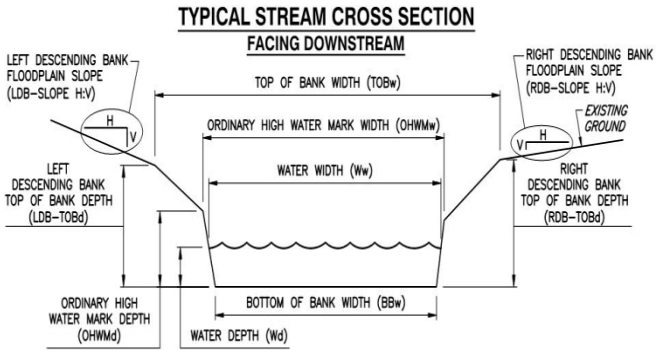
Top of Bank

TOBw: 10ft

RDB-TOBd: 2ft **LDB-TOBd:** 2ft

Wetted Channel

Ww: 7ft **Wd:** 1ft



Primary Substrate:

☐ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Mixed forest/power line right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Caddisfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S104 **STREAM NAME:** Trib 59734 To West Branch Conococheague Creek **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☐ Cloudy ☑ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream exhibited high flow at the time of the visit.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

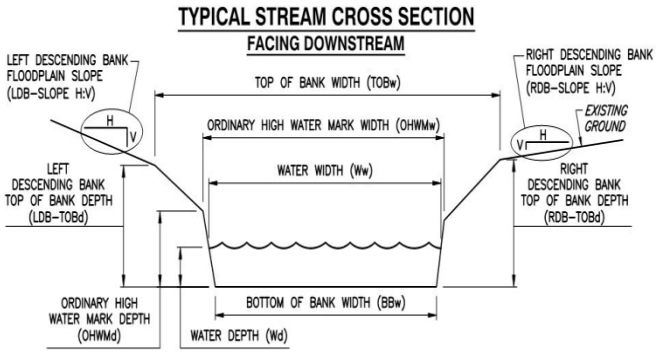
Top of Bank

TOBw: 2.5ft

RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 2ft **Wd:** 9in



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☑ Residential

Describe: Scrubby forest/maintained lawn

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Stonefly, caddisfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S105 **STREAM NAME:** UNT to Pine Run **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☐ Cloudy ☑ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream receives hydrology from a groundwater seep along the existing power line right of way.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

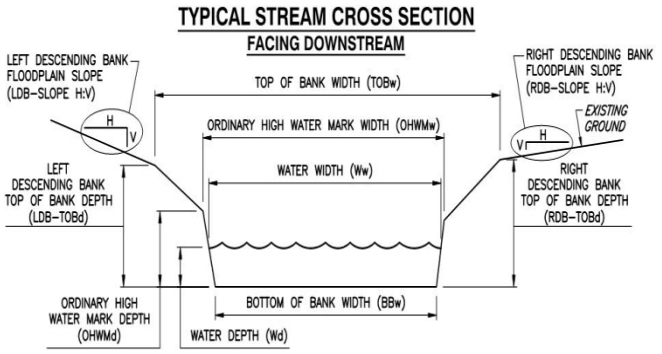
Top of Bank

TOBw: 1.5ft

RDB-TOBd: 6in **LDB-TOBd:** 1ft

Wetted Channel

Ww: 1ft **Wd:** 3in



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Stonefly, caddisfly, peltoperlidae

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S106 **STREAM NAME:** UNT to Pine Run **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☐ Cloudy ☑ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

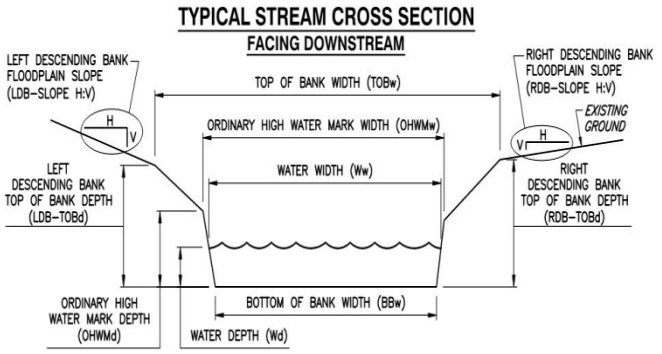
Top of Bank

TOBw: 2.5ft

RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 1.5ft **Wd:** 8in



Primary Substrate:

☑ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☑ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way/mixed hardwood forest

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S107 **STREAM NAME:** Trib 59689 To Dry Run **TYPE:** Perennial

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☐ Cloudy ☑ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. Stream appeared high at the time of the visit.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

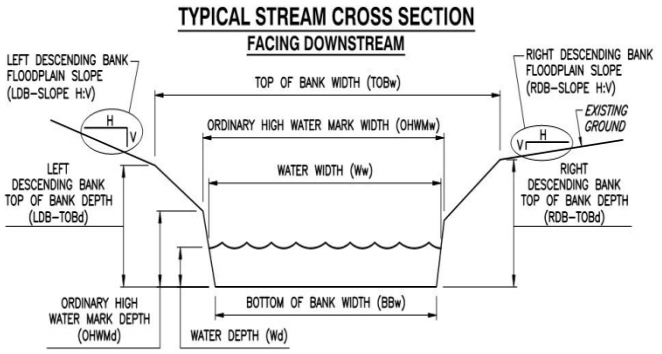
Top of Bank

TOBw: 7.5ft

RDB-TOBd: 2ft **LDB-TOBd:** 2ft

Wetted Channel

Ww: 6ft **Wd:** 1ft



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☑ Wetland ☐ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way/PEM wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Stonefly, caddisfly, mayfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/17/24

STREAM ID: S108 **STREAM NAME:** Trib 59699 Of Dry Run **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☑ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream is located along the existing power line right of way in a valley.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

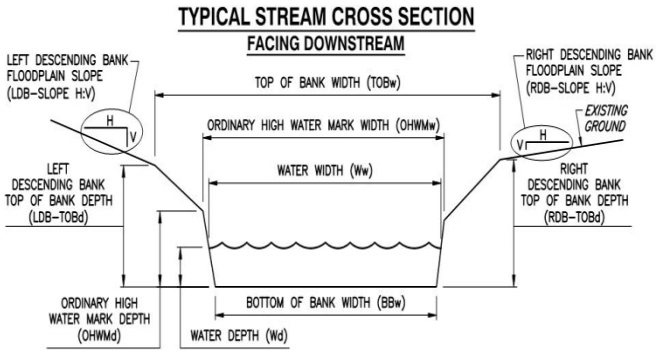
Top of Bank

TOBw: 2.5ft

RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 1.5ft **Wd:** 3.5in



Primary Substrate:

☐ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Unmaintained portion of a power line right of way.

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Stonefly, caddisfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S109 **STREAM NAME:** West Branch Conococheague Creek **TYPE:** Perennial

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☑ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream was too deep to sample for Macroinvertebrates.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

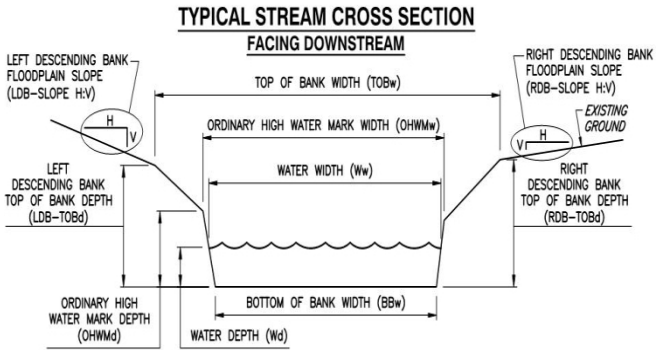
Top of Bank

TOBw: 37ft

RDB-TOBd: 6in **LDB-TOBd:** 4ft

Wetted Channel

Ww: 34ft **Wd:** 2.5ft



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S110 **STREAM NAME:** Trib 59732 To West Branch Conococheague Creek **TYPE:** Intermittent

MUNICIPALITY: Fannett Township **COUNTY:** Franklin **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☑ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream is located along maintained power line right of way in a valley.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

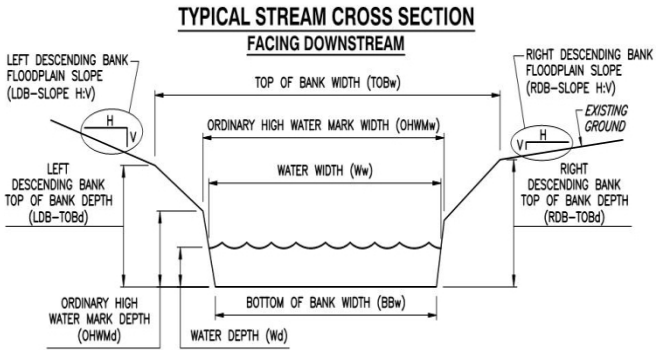
Top of Bank

TOBw: 3ft

RDB-TOBd: 6in **LDB-TOBd:** 6in

Wetted Channel

Ww: 1.5ft **Wd:** 4in



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Stonefly, caddisfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S111 **STREAM NAME:** UNT to Felix Run **TYPE:** Ephemeral

MUNICIPALITY: Shade Gap **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream is located within a fenced horse pasture along an existing power line right of way.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

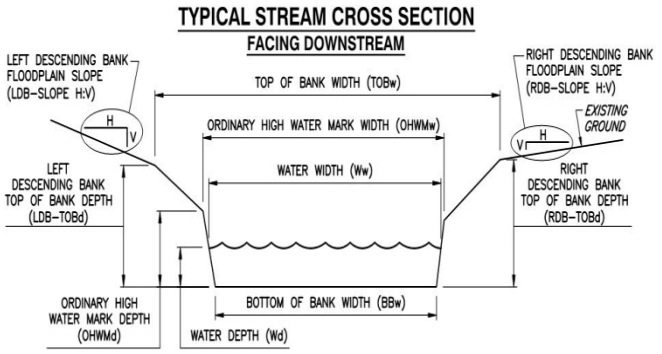
Top of Bank

TOBw: 2.5ft

RDB-TOBd: 1ft **LDB-TOBd:** 1ft

Wetted Channel

Ww: 6in **Wd:** 2in



Primary Substrate:

☐ Clay ☑ Silt ☐ Sand ☐ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way/horse pasture

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S112 **STREAM NAME:** Felix Run **TYPE:** Perennial

MUNICIPALITY: Shade Gap **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

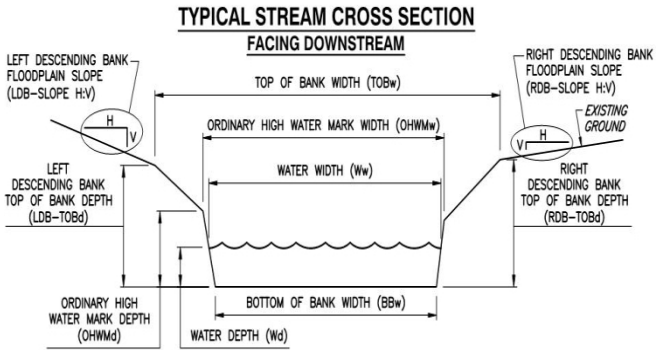
Top of Bank

TOBw: 35ft

RDB-TOBd: 3ft **LDB-TOBd:** 7ft

Wetted Channel

Ww: 28ft **Wd:** 3ft



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☐ Moderate ☑ Severe ☐ Very Severe
Describe: Sloughing banks, undercut banks, exposed root wads

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☐ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S113 **STREAM NAME:** UNT to Felix Run **TYPE:** Intermittent

MUNICIPALITY: Shade Gap **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream starts at upslope wetland drainage and loses bed and banks in a floodplain wetland below.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

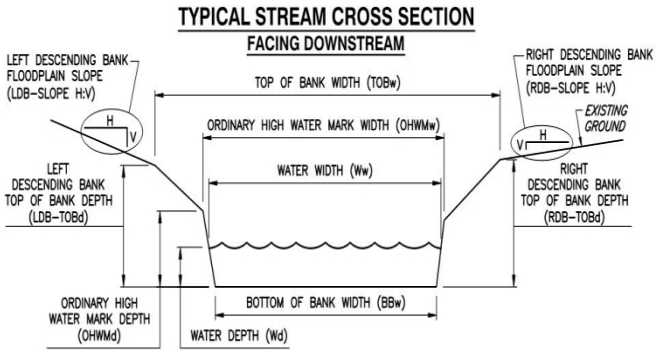
Top of Bank

TOBw: 3.5ft

RDB-TOBd: 2ft **LDB-TOBd:** 2ft

Wetted Channel

Ww: 1.5ft **Wd:** 4in



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☐ Open Field ☐ Farmland ☑ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way/PEM wetland

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Flatworms, caddisfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S114 **STREAM NAME:** UNT to Shade Creek **TYPE:** Intermittent

MUNICIPALITY: Shade Gap **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream starts at a groundwater seep and confluences with stream S115.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

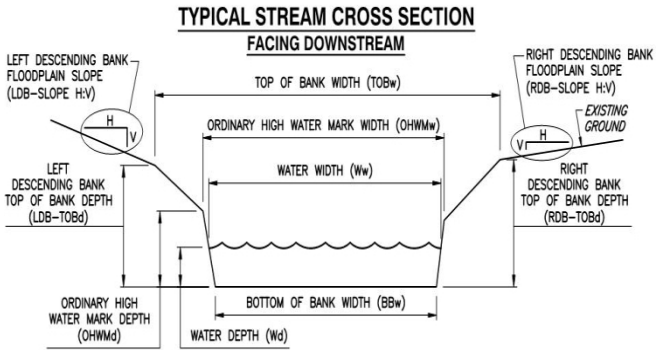
Top of Bank

TOBw: 7ft

RDB-TOBd: 2ft **LDB-TOBd:** 2ft

Wetted Channel

Ww: 4ft **Wd:** 7in



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
LDB: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☐ Yes ☑ No
Describe:

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 04/18/24

STREAM ID: S115 **STREAM NAME:** UNT to Shade Creek **TYPE:** Perennial

MUNICIPALITY: Shade Gap **COUNTY:** Huntingdon **STATE:** PA **INVESTIGATORS:** CWI, LEM

WEATHER CONDITIONS: ☑ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☑ Yes ☐ No ☐ Unknown

Remarks:
The stream continues upstream and downstream beyond the AOI. The stream is located within a valley along the existing power line right of way.

Hydrological Characteristics:

Tributary is Natural

Stream Channel Properties:

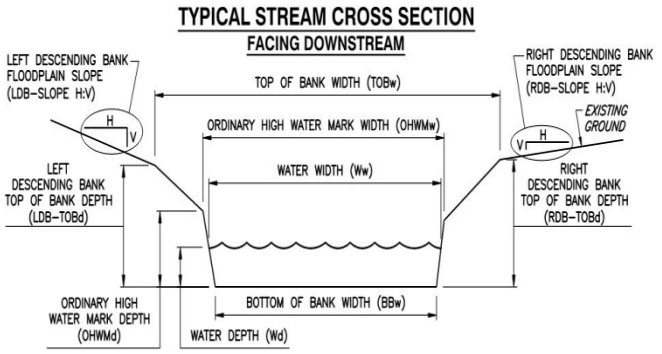
Top of Bank

TOBw: 30ft

RDB-TOBd: 2.5in **LDB-TOBd:** 2.5ft

Wetted Channel

Ww: 25ft **Wd:** 3ft



Primary Substrate:

☐ Clay ☑ Silt ☑ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☑ Vegetation ☐ Artificial

Flow Characteristics:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

Bank Erosion:

RDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
LDB: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe: Sloughing banks, exposed root wads, undercut banks

The tributary has… ☐ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics:

Adjacent Landuse Characteristics:

☐ Forested ☑ Open Field ☐ Farmland ☐ Wetland ☑ Mixed-Use
☐ Industrial ☐ Mining ☐ Residential

Describe: Maintained right of way

Canopy Cover: 0 - 24%

Biological Characteristics:

Macroinvertebrates Observed? ☑ Yes ☐ No
Describe: Stonefly, caddisfly, mayfly

Fish or Herptiles observed? ☐ Yes ☑ No
Describe:

Pennsylvania Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Roxbury **DATE:** 03/31/25 **INVESTIGATORS:** CMCh, EJK

COUNTY: Franklin County **STATE:** PA **LOCATION:**

STREAM NAME: **STREAM ID:** S116 **FLOW CLASSIFICATION:** Ephemeral

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

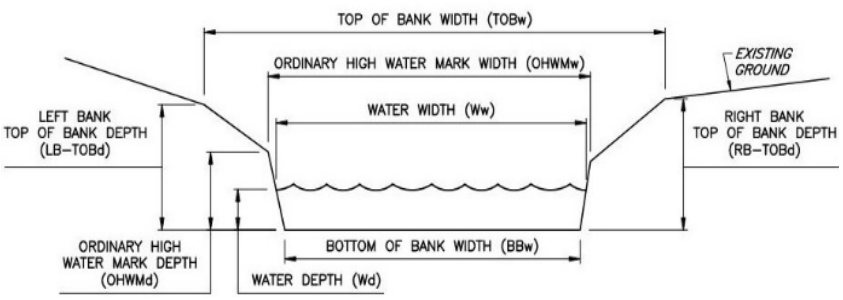
Has there been precipitation at the site within the past 5 days? ☐ Yes ☐ No ☑ Unknown

Remarks:
Stream crosses gravel road and is deeply incised on downstream side.

AVERAGE STREAM CHANNEL DIMENSIONS (ft)

TOBw: 2 **RB-TOBd:** 2 **LB-TOBd:** 2
OHWMw: 1.5 **OHWMd:** 1.5
Ww: 0 **Wd:** 0
BBw: 1

TYPICAL STREAM CROSS SECTION
FACING DOWNSTREAM



OHWM INDICATORS:

Geomorphic: ☑ Break in slope / defined bed & banks ☐ Shelving ☐ Bedforms (bar deposition / scour lines)
Sediment: ☐ Changes in soil (alluvial / hydric vs. colluvial / residual) ☐ Sorting ☐ Mudcracks
Vegetation: ☑ Absence of terrestrial vegetation ☐ Vegetation matted down or bent ☐ Exposed roots
☐ Hydrophytic emergent cover ☐ Periphyton / algae cover >10% ☐ Moss/lichen trim lines
☐ Change in type or density (Explain:)
Ancillary: ☐ Wrack / organic debris lines ☐ Leaf litter disturbed or washed away ☑ Water staining

PRIMARY SUBSTRATE (Check all >20%):

☐ Clay ☑ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial ☐ Bedrock

FLOW CHARACTERISTICS:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

BANK EROSION:

Right Bank Facing Downstream: ☐ Slight ☐ Moderate ☑ Severe ☐ Very Severe
Left Bank Facing Downstream: ☐ Slight ☐ Moderate ☑ Severe ☐ Very Severe
Describe:

CANOPY COVER: ☐ 0-25% ☑ 26-50% ☐ 51-75% ☐ 76-100%

BIOLOGICAL CHARACTERISTICS:

Macroinvertebrates Observed? (If Yes, check below) ☐ Yes ☑ No

☐ Plecoptera (Stonefly) ☐ Ephemeroptera (Mayfly) ☐ Trichoptera (Caddisfly) ☐ Coleoptera (Aquatic Beetles)
☐ Diptera (True Fly) ☐ Decapoda (Crawfish) ☐ Gastropoda (Snails) ☐ Isopoda (Sowbugs)
☐ Megaloptera (Alderfly) ☐ Odonata (Dragonfly) ☐ Platyhelminthes (Flatworms)
☐ Other Taxa:

Fish or Herptiles observed? (If Yes, check below) ☐ Yes ☑ No
Describe:

Pennsylvania Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 03/31/25 **INVESTIGATORS:** CMCh, EJK

COUNTY: Franklin County **STATE:** PA **LOCATION:**

STREAM NAME: **STREAM ID:** S117 **FLOW CLASSIFICATION:** Ephemeral

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

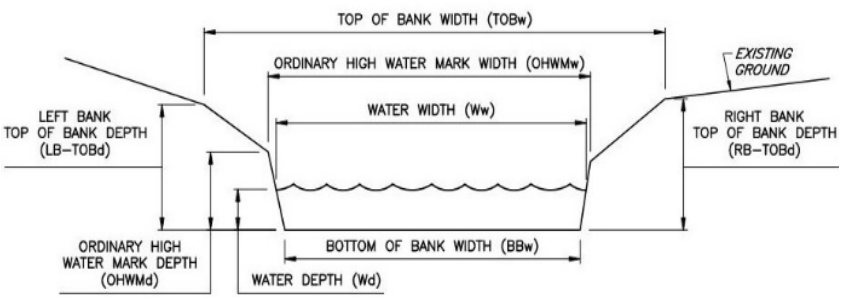
Has there been precipitation at the site within the past 5 days? ☐ Yes ☐ No ☐ Unknown

Remarks:
Stream flows across road through culvert.

AVERAGE STREAM CHANNEL DIMENSIONS (ft)

TOBw: 4 **RB-TOBd:** 1.5 **LB-TOBd:** 1.5
OHWMw: 2 **OHWMd:** 1
Ww: 0 **Wd:** 0
BBw: 1

TYPICAL STREAM CROSS SECTION
FACING DOWNSTREAM



OHWM INDICATORS:

Geomorphic: ☑ Break in slope / defined bed & banks ☐ Shelving ☐ Bedforms (bar deposition / scour lines)
Sediment: ☐ Changes in soil (alluvial / hydric vs. colluvial / residual) ☐ Sorting ☐ Mudcracks
Vegetation: ☐ Absence of terrestrial vegetation ☐ Vegetation matted down or bent ☐ Exposed roots
☐ Hydrophytic emergent cover ☐ Periphyton / algae cover >10% ☐ Moss/lichen trim lines
☐ Change in type or density (Explain:)
Ancillary: ☐ Wrack / organic debris lines ☐ Leaf litter disturbed or washed away ☐ Water staining

PRIMARY SUBSTRATE (Check all >20%):

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial ☐ Bedrock

FLOW CHARACTERISTICS:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

BANK EROSION:

Right Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Left Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

CANOPY COVER: ☐ 0-25% ☐ 26-50% ☑ 51-75% ☐ 76-100%

BIOLOGICAL CHARACTERISTICS:

Macroinvertebrates Observed? (If Yes, check below) ☐ Yes ☑ No

☐ Plecoptera (Stonefly) ☐ Ephemeroptera (Mayfly) ☐ Trichoptera (Caddisfly) ☐ Coleoptera (Aquatic Beetles)
☐ Diptera (True Fly) ☐ Decapoda (Crawfish) ☐ Gastropoda (Snails) ☐ Isopoda (Sowbugs)
☐ Megaloptera (Alderfly) ☐ Odonata (Dragonfly) ☐ Platyhelminthes (Flatworms)
☐ Other Taxa:

Fish or Herptiles observed? (If Yes, check below) ☐ Yes ☑ No
Describe:

Pennsylvania Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 03/31/25 **INVESTIGATORS:** CMCh, EJK

COUNTY: Franklin County **STATE:** PA **LOCATION:**

STREAM NAME: **STREAM ID:** S118 **FLOW CLASSIFICATION:** Intermittent

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

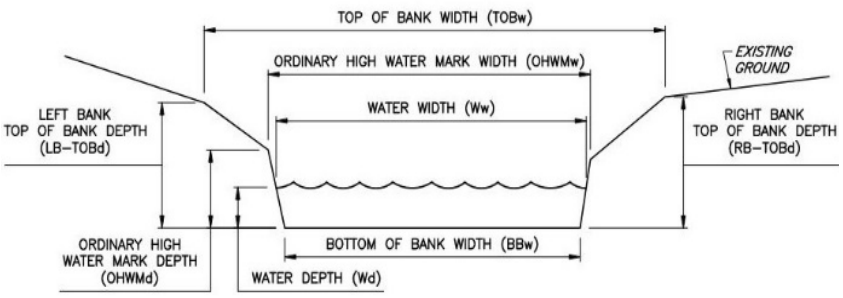
Has there been precipitation at the site within the past 5 days? ☐ Yes ☐ No ☑ Unknown

Remarks:
Stream flows under access road through culvert.

AVERAGE STREAM CHANNEL DIMENSIONS (ft)

TOBw: 12 **RB-TOBd:** 4 **LB-TOBd:** 4
OHWMw: 8 **OHWMd:** 2
Ww: 6 **Wd:** 0.5
BBw:

TYPICAL STREAM CROSS SECTION
FACING DOWNSTREAM



OHWM INDICATORS:

Geomorphic: ☑ Break in slope / defined bed & banks ☐ Shelving ☐ Bedforms (bar deposition / scour lines)
Sediment: ☐ Changes in soil (alluvial / hydric vs. colluvial / residual) ☐ Sorting ☐ Mudcracks
Vegetation: ☐ Absence of terrestrial vegetation ☐ Vegetation matted down or bent ☐ Exposed roots
☐ Hydrophytic emergent cover ☐ Periphyton / algae cover >10% ☐ Moss/lichen trim lines
☐ Change in type or density (Explain:)
Ancillary: ☐ Wrack / organic debris lines ☐ Leaf litter disturbed or washed away ☐ Water staining

PRIMARY SUBSTRATE (Check all >20%):

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial ☐ Bedrock

FLOW CHARACTERISTICS:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

BANK EROSION:

Right Bank Facing Downstream: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Left Bank Facing Downstream: ☐ Slight ☑ Moderate ☐ Severe ☐ Very Severe
Describe:

CANOPY COVER: ☐ 0-25% ☐ 26-50% ☑ 51-75% ☐ 76-100%

BIOLOGICAL CHARACTERISTICS:

Macroinvertebrates Observed? (If Yes, check below) ☐ Yes ☑ No

☐ Plecoptera (Stonefly) ☐ Ephemeroptera (Mayfly) ☐ Trichoptera (Caddisfly) ☐ Coleoptera (Aquatic Beetles)
☐ Diptera (True Fly) ☐ Decapoda (Crawfish) ☐ Gastropoda (Snails) ☐ Isopoda (Sowbugs)
☐ Megaloptera (Alderfly) ☐ Odonata (Dragonfly) ☐ Platyhelminthes (Flatworms)
☐ Other Taxa:

Fish or Herptiles observed? (If Yes, check below) ☐ Yes ☑ No
Describe:

Pennsylvania Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 03/31/25 **INVESTIGATORS:** CMCh, EJK

COUNTY: Franklin County **STATE:** PA **LOCATION:**

STREAM NAME: **STREAM ID:** S119 **FLOW CLASSIFICATION:** Intermittent

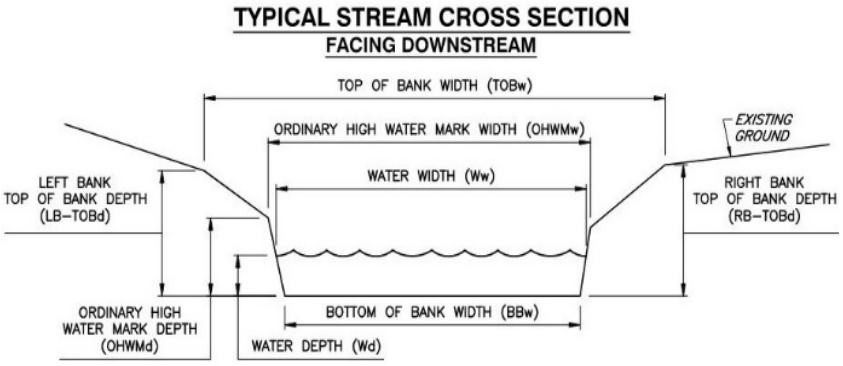
WEATHER CONDITIONS: ☐ Sunny ☑ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☐ Yes ☐ No ☑ Unknown

Remarks:
Stream flows under access road through concrete culvert near building.

AVERAGE STREAM CHANNEL DIMENSIONS (ft)

TOBw: 5 **RB-TOBd:** 2 **LB-TOBd:** 2
OHWMw: 1.5 **OHWMd:** 1
Ww: 0.75 **Wd:** 0.2
BBw:



OHWM INDICATORS:

Geomorphic: ☑ Break in slope / defined bed & banks ☐ Shelving ☐ Bedforms (bar deposition / scour lines)
Sediment: ☐ Changes in soil (alluvial / hydric vs. colluvial / residual) ☐ Sorting ☐ Mudcracks
Vegetation: ☐ Absence of terrestrial vegetation ☐ Vegetation matted down or bent ☐ Exposed roots
☐ Hydrophytic emergent cover ☐ Periphyton / algae cover >10% ☐ Moss/lichen trim lines
☐ Change in type or density (Explain:)
Ancillary: ☐ Wrack / organic debris lines ☐ Leaf litter disturbed or washed away ☐ Water staining

PRIMARY SUBSTRATE (Check all >20%):

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial ☐ Bedrock

FLOW CHARACTERISTICS:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

BANK EROSION:

Right Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Left Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

CANOPY COVER: ☑ 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100%

BIOLOGICAL CHARACTERISTICS:

Macroinvertebrates Observed? (If Yes, check below) ☐ Yes ☑ No

☐ Plecoptera (Stonefly) ☐ Ephemeroptera (Mayfly) ☐ Trichoptera (Caddisfly) ☐ Coleoptera (Aquatic Beetles)
☐ Diptera (True Fly) ☐ Decapoda (Crawfish) ☐ Gastropoda (Snails) ☐ Isopoda (Sowbugs)
☐ Megaloptera (Alderfly) ☐ Odonata (Dragonfly) ☐ Platyhelminthes (Flatworms)
☐ Other Taxa:

Fish or Herptiles observed? (If Yes, check below) ☐ Yes ☑ No
Describe:

Pennsylvania Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 03/31/25 **INVESTIGATORS:** CMCh, EJK

COUNTY: Franklin County **STATE:** PA **LOCATION:**

STREAM NAME: **STREAM ID:** S120 **FLOW CLASSIFICATION:** Ephemeral

WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

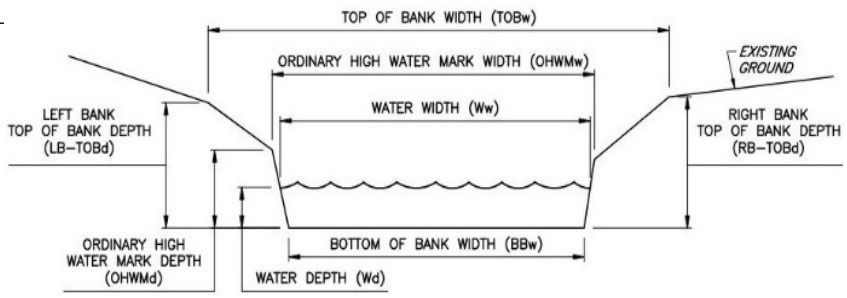
Has there been precipitation at the site within the past 5 days? ☐ Yes ☐ No ☐ Unknown

Remarks:
Subtle channel that starts downslope of road near hunting stand.

AVERAGE STREAM CHANNEL DIMENSIONS (ft)

TOBw: 2 **RB-TOBd:** 1 **LB-TOBd:** 1
OHWMw: 1 **OHWMd:** 0.5
Ww: 0 **Wd:** 0
BBw: 0.5

TYPICAL STREAM CROSS SECTION
FACING DOWNSTREAM



OHWM INDICATORS:

Geomorphic: ☑ Break in slope / defined bed & banks ☐ Shelving ☐ Bedforms (bar deposition / scour lines)
Sediment: ☐ Changes in soil (alluvial / hydric vs. colluvial / residual) ☐ Sorting ☐ Mudcracks
Vegetation: ☐ Absence of terrestrial vegetation ☐ Vegetation matted down or bent ☐ Exposed roots
☐ Hydrophytic emergent cover ☐ Periphyton / algae cover >10% ☐ Moss/lichen trim lines
☐ Change in type or density (Explain:)
Ancillary: ☐ Wrack / organic debris lines ☐ Leaf litter disturbed or washed away ☐ Water staining

PRIMARY SUBSTRATE (Check all >20%):

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☐ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial ☐ Bedrock

FLOW CHARACTERISTICS:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

BANK EROSION:

Right Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Left Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

CANOPY COVER: ☑ 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100%

BIOLOGICAL CHARACTERISTICS:

Macroinvertebrates Observed? (If Yes, check below) ☐ Yes ☑ No

☐ Plecoptera (Stonefly) ☐ Ephemeroptera (Mayfly) ☐ Trichoptera (Caddisfly) ☐ Coleoptera (Aquatic Beetles)
☐ Diptera (True Fly) ☐ Decapoda (Crawfish) ☐ Gastropoda (Snails) ☐ Isopoda (Sowbugs)
☐ Megaloptera (Alderfly) ☐ Odonata (Dragonfly) ☐ Platyhelminthes (Flatworms)
☐ Other Taxa:

Fish or Herptiles observed? (If Yes, check below) ☐ Yes ☑ No
Describe:

Pennsylvania Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 03/31/25 **INVESTIGATORS:** CMCh, EJK

COUNTY: Franklin County **STATE:** PA **LOCATION:**

STREAM NAME: **STREAM ID:** S121 **FLOW CLASSIFICATION:** Ephemeral

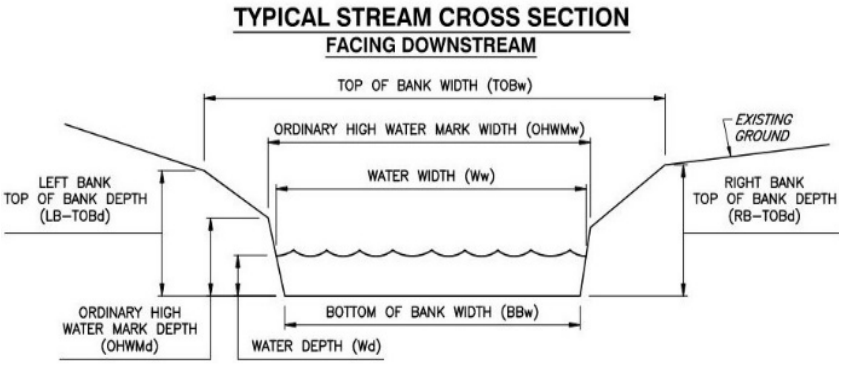
WEATHER CONDITIONS: ☐ Sunny ☐ Partly Cloudy ☑ Cloudy ☐ Rain ☐ Other (See Remarks)

Has there been precipitation at the site within the past 5 days? ☐ Yes ☐ No ☑ Unknown

Remarks:
Stream flows across ATV trail.

AVERAGE STREAM CHANNEL DIMENSIONS (ft)

TOBw: 5 **RB-TOBd:** 1.5 **LB-TOBd:** 1.5
OHWMw: 3 **OHWMd:** 0.75
Ww: 0 **Wd:** 0
BBw:



OHWM INDICATORS:

Geomorphic: ☑ Break in slope / defined bed & banks ☐ Shelving ☐ Bedforms (bar deposition / scour lines)
Sediment: ☐ Changes in soil (alluvial / hydric vs. colluvial / residual) ☐ Sorting ☐ Mudcracks
Vegetation: ☐ Absence of terrestrial vegetation ☐ Vegetation matted down or bent ☐ Exposed roots
☐ Hydrophytic emergent cover ☐ Periphyton / algae cover >10% ☐ Moss/lichen trim lines
☐ Change in type or density (Explain:)
Ancillary: ☐ Wrack / organic debris lines ☐ Leaf litter disturbed or washed away ☐ Water staining

PRIMARY SUBSTRATE (Check all >20%):

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☐ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial ☐ Bedrock

FLOW CHARACTERISTICS:

☑ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☐ Flowing water present

BANK EROSION:

Right Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Left Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

CANOPY COVER: ☐ 0-25% ☐ 26-50% ☑ 51-75% ☐ 76-100%

BIOLOGICAL CHARACTERISTICS:

Macroinvertebrates Observed? (If Yes, check below) ☐ Yes ☑ No

☐ Plecoptera (Stonefly) ☐ Ephemeroptera (Mayfly) ☐ Trichoptera (Caddisfly) ☐ Coleoptera (Aquatic Beetles)
☐ Diptera (True Fly) ☐ Decapoda (Crawfish) ☐ Gastropoda (Snails) ☐ Isopoda (Sowbugs)
☐ Megaloptera (Alderfly) ☐ Odonata (Dragonfly) ☐ Platyhelminthes (Flatworms)
☐ Other Taxa:

Fish or Herptiles observed? (If Yes, check below) ☐ Yes ☑ No
Describe:

Pennsylvania Stream Data Form

PROJECT #: 341-310 **PROJECT NAME:** Shade Gap - Roxbury **DATE:** 03/31/25 **INVESTIGATORS:** CMCh, EJK

COUNTY: Franklin County **STATE:** PA **LOCATION:**

STREAM NAME: **STREAM ID:** S122 **FLOW CLASSIFICATION:** Intermittent

WEATHER CONDITIONS: ☐ Sunny ☑ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Other (See Remarks)

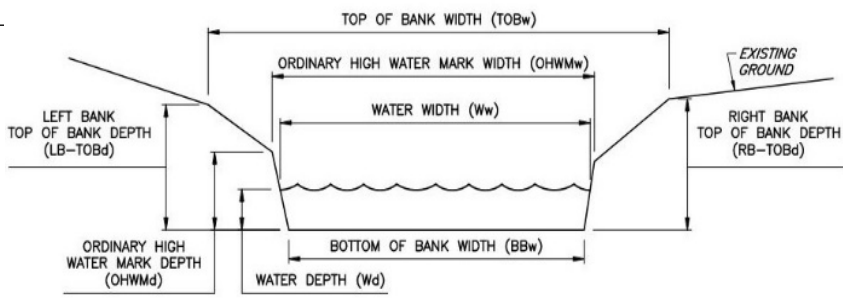
Has there been precipitation at the site within the past 5 days? ☐ Yes ☐ No ☑ Unknown

Remarks:
Stream on edge of study area along access route.

AVERAGE STREAM CHANNEL DIMENSIONS (ft)

TOBw: 8 **RB-TOBd:** 1 **LB-TOBd:** 1
OHWMw: 6 **OHWMd:** 0.5
Ww: 5 **Wd:** 2
BBw:

TYPICAL STREAM CROSS SECTION
FACING DOWNSTREAM



OHWM INDICATORS:

Geomorphic: ☑ Break in slope / defined bed & banks ☐ Shelving ☐ Bedforms (bar deposition / scour lines)
Sediment: ☐ Changes in soil (alluvial / hydric vs. colluvial / residual) ☐ Sorting ☐ Mudcracks
Vegetation: ☐ Absence of terrestrial vegetation ☐ Vegetation matted down or bent ☐ Exposed roots
☐ Hydrophytic emergent cover ☐ Periphyton / algae cover >10% ☐ Moss/lichen trim lines
☐ Change in type or density (Explain:)
Ancillary: ☐ Wrack / organic debris lines ☐ Leaf litter disturbed or washed away ☐ Water staining

PRIMARY SUBSTRATE (Check all >20%):

☐ Clay ☐ Silt ☐ Sand ☑ Gravel (0.25-2.0in) ☑ Cobble (2-10in)
☑ Boulder (>10in) ☐ Muck ☐ Vegetation ☐ Artificial ☐ Bedrock

FLOW CHARACTERISTICS:

☐ No water; streambed is dry ☐ Streambed is moist ☐ Standing water present ☑ Flowing water present

BANK EROSION:

Right Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Left Bank Facing Downstream: ☑ Slight ☐ Moderate ☐ Severe ☐ Very Severe
Describe:

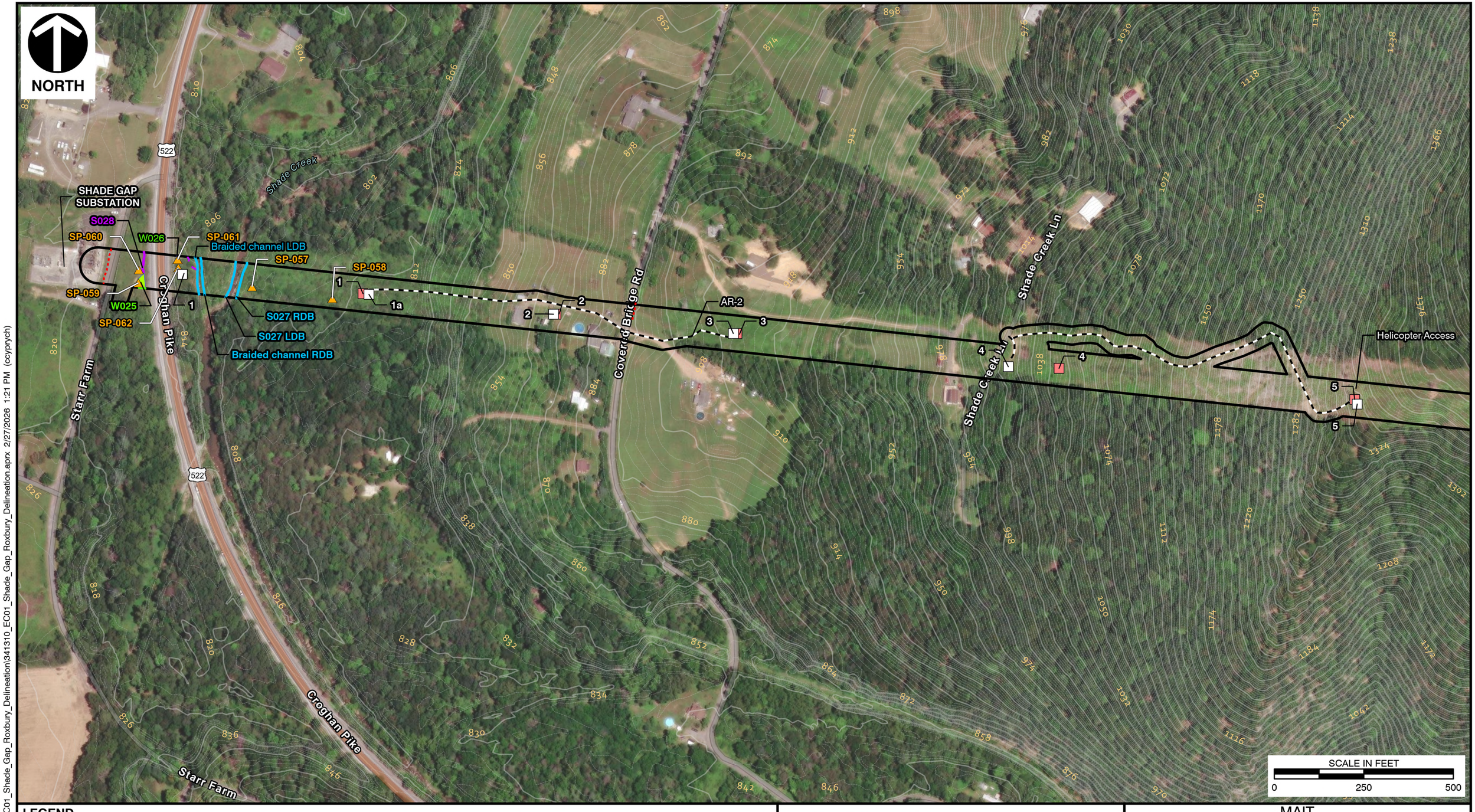
CANOPY COVER: ☐ 0-25% ☑ 26-50% ☐ 51-75% ☐ 76-100%

BIOLOGICAL CHARACTERISTICS:

Macroinvertebrates Observed? (If Yes, check below) ☑ Yes ☐ No

☐ Plecoptera (Stonefly) ☐ Ephemeroptera (Mayfly) ☑ Trichoptera (Caddisfly) ☐ Coleoptera (Aquatic Beetles)
☐ Diptera (True Fly) ☐ Decapoda (Crawfish) ☐ Gastropoda (Snails) ☐ Isopoda (Sowbugs)
☐ Megaloptera (Alderfly) ☐ Odonata (Dragonfly) ☐ Platyhelminthes (Flatworms)
☐ Other Taxa:

Fish or Herptiles observed? (If Yes, check below) ☐ Yes ☑ No
Describe:



LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- CULVERT LINE
- ACCESS ROUTES
- DITCH
- EROSIONAL FEATURE
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE. HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. ACCESSED 2/27/2026

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3A
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)

NORTH

Helicopter Access

Helicopter Access

5

6

7

8

9

10

11

12

SP-144

W107

SP-143

Shade Creek

SCALE IN FEET
0 250 500

LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 2/27/2026

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3B
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)

NORTH

Shade Valley Rd
Taylor Rd
Sawmill Rd
Shade Valley Rd
Neelyton Rd
Shade Creek
Shade Creek
Shade Creek
Felix Run
Felix Run
Felix Run
Felix Run

12
12
13
13
14
14
15
15
16
16
AR-5
AR-6
AR-7
AR-8
AR-9
SP-144
W107
SP-143
W122
SP-142
RDB S102
LDB S102
W121
SP-141
SP-140
S115
S114
SP-139
W119
SP-138
W118
SP-137
SP-136
RDB S112
LDB S112
W117
SP-135
S113
SP-134
SP-133
S111
W116
S111

SCALE IN FEET
0 250 500

LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 2/27/2026
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

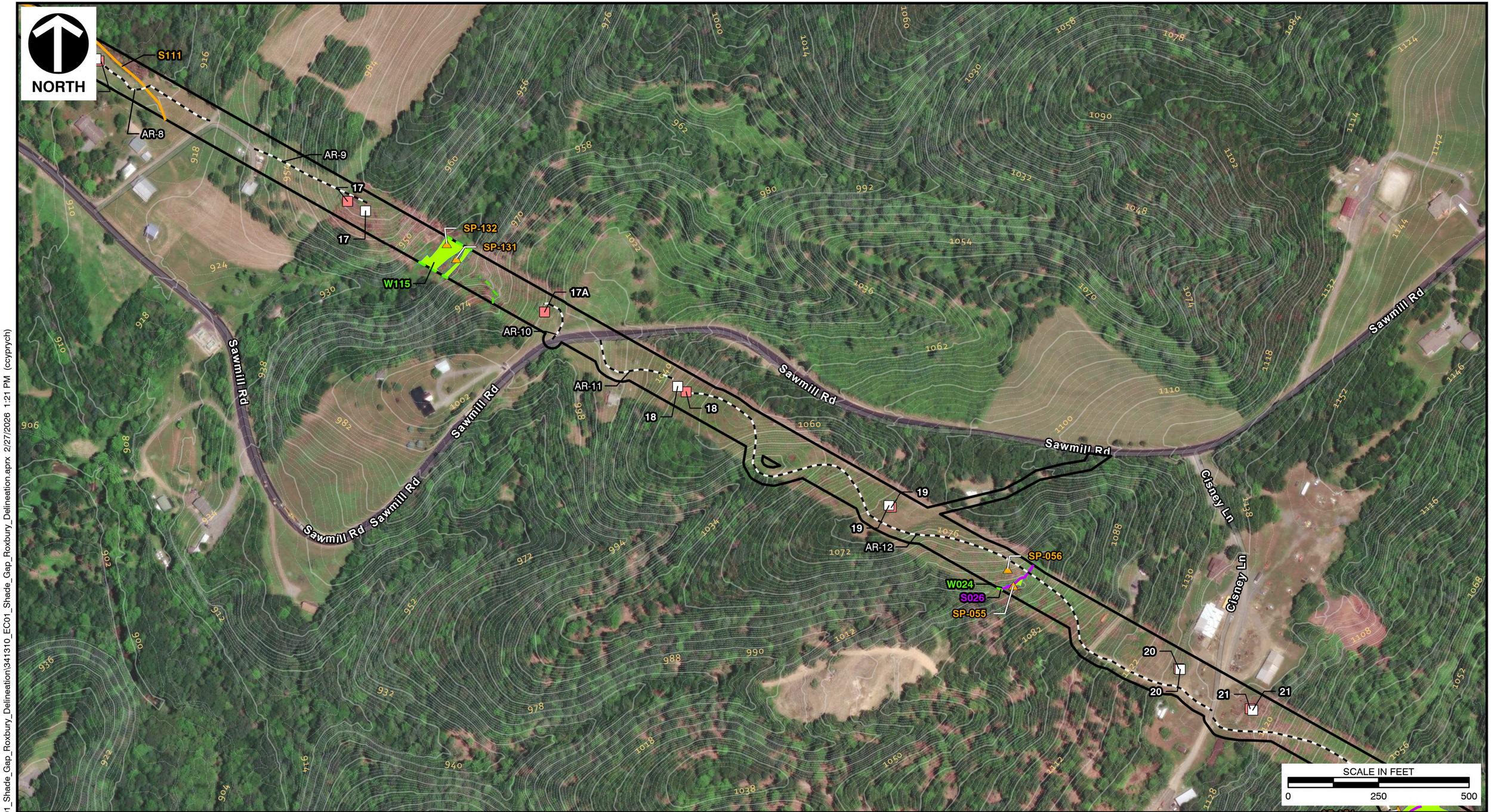
MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3C
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)



LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- SWALE
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 2/27/2026

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

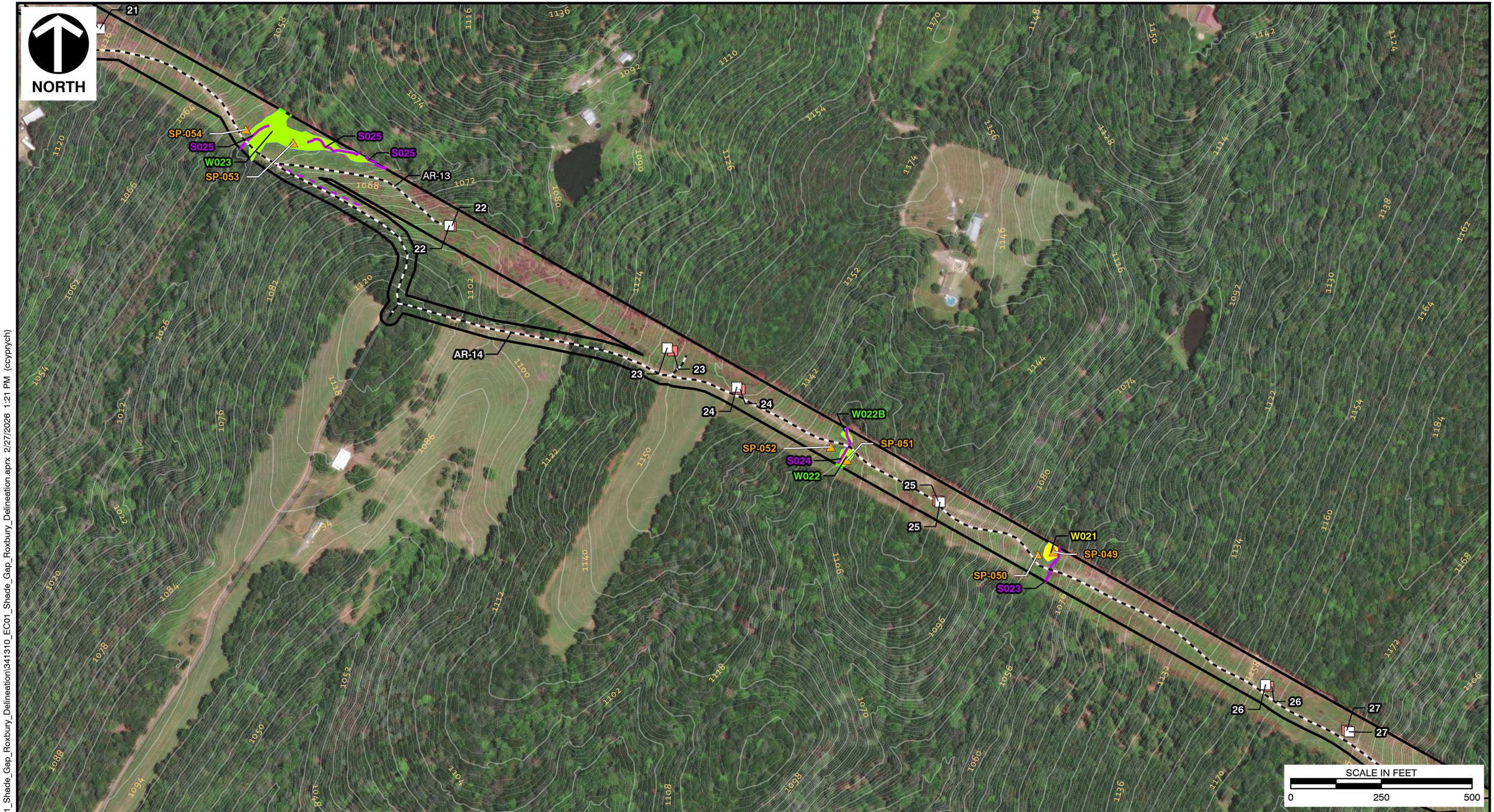
MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3D
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)



LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- EROSIONAL FEATURE
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- WETLAND - PSS
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 2/27/2026
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3E
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)



LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 2/27/2026

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3F
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)

NORTH

W033B
W033D
W033C
SP-075
W033
SP-074
SP-076
AR-15
SP-077
W034
S034
W033E
31
32
31
32
SP-41
W017
S019
S018
SP-042
SP-039
W016B
SP-040
W016
33
33
SP-038
W015
W015B
S017
SP-037
34
34
AR-17
Mt Foot Rd
Mt Foot Rd
Mt Foot Rd

SCALE IN FEET
0 250 500

LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. ACCESSED 2/27/2026
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

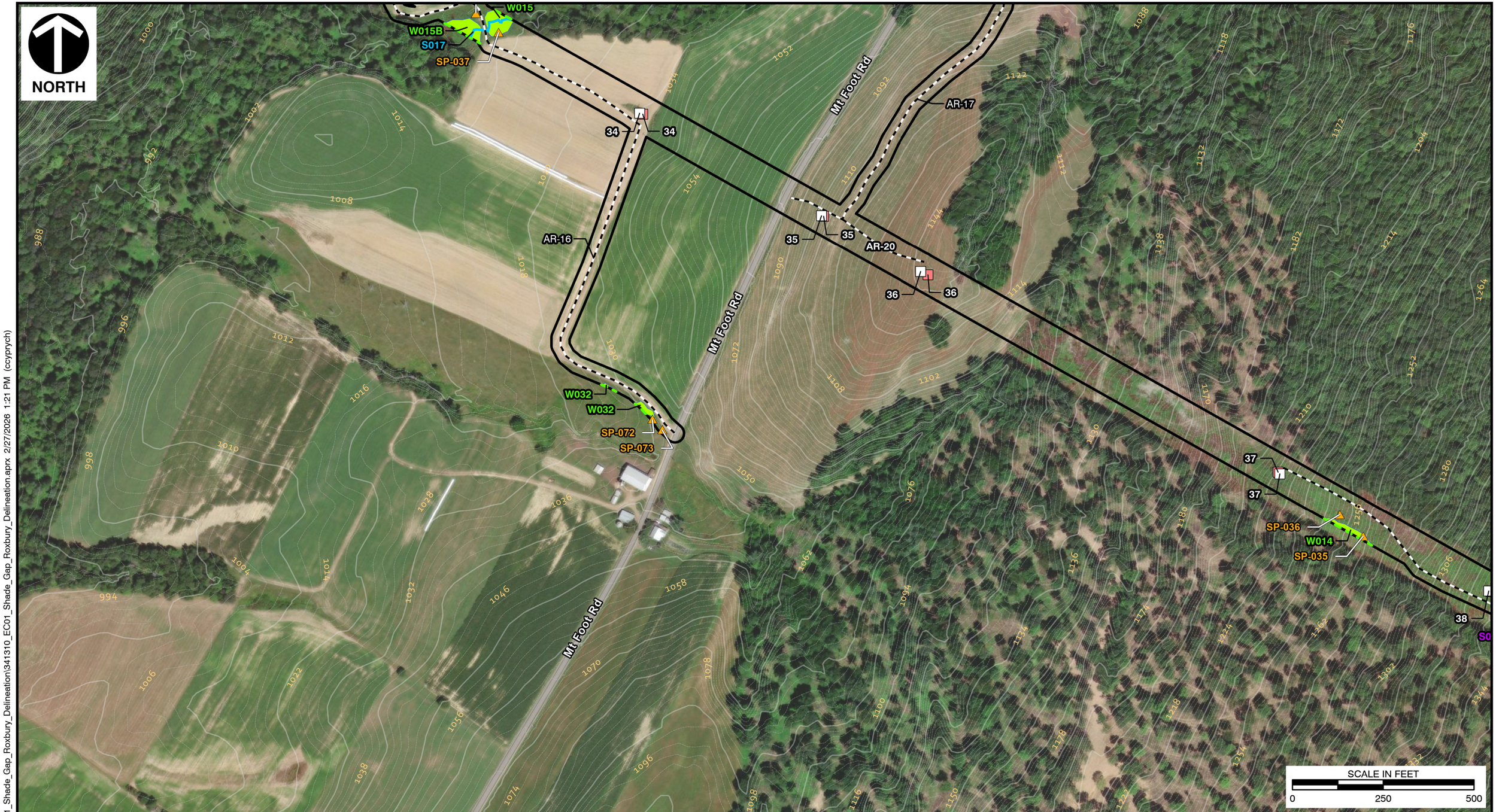
MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3G
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)



LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 2/27/2026

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3H
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)



LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 2/27/2026
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

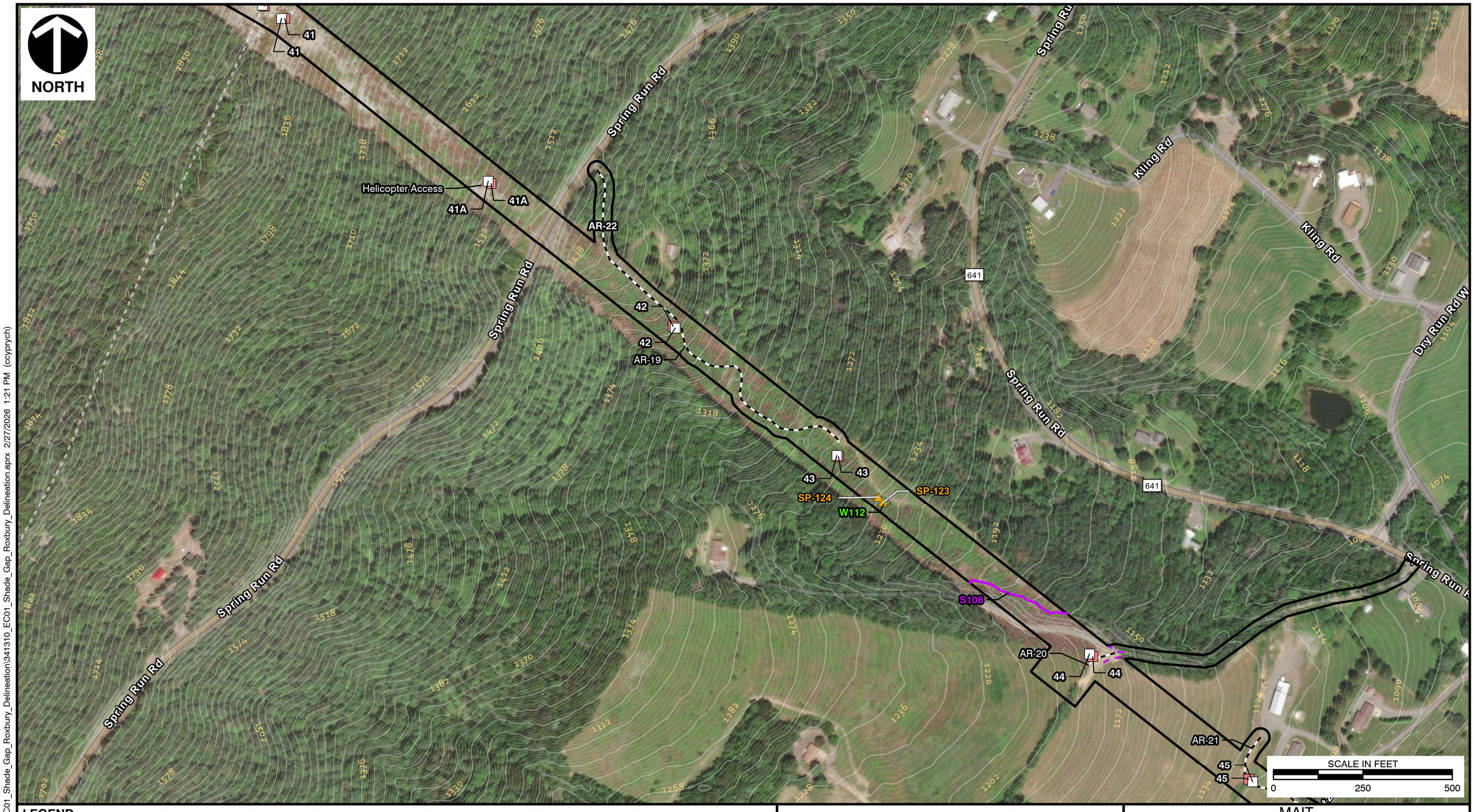
MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3I
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)



P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)

LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- EROSIONAL FEATURE
- INTERMITTENT STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 2/27/2026

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

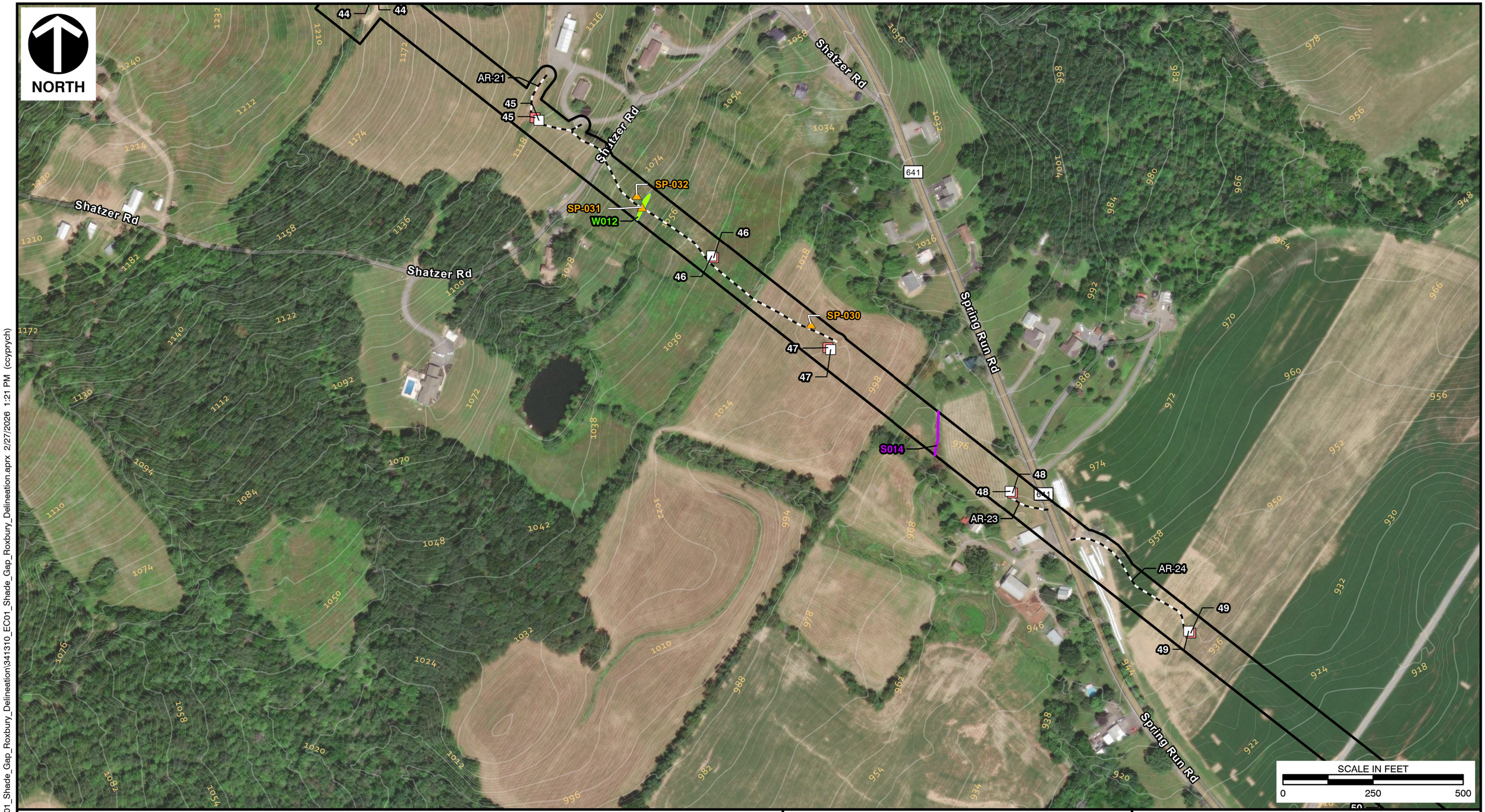
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3J
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file



LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- INTERMITTENT STREAM
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 2/27/2026
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3K
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)

NORTH

Spring Run Rd

Junkin Rd

Junkin Rd

Spring Run Rd

Spring Run Rd

Spring Run Rd

641

50

50

AR-25

SP-122

51

51

SP-120

W111

SP-121

S107

52

SP-029

52

53

53

AR-26

54

54

55

55

SCALE IN FEET

0 250 500

P:\340-000\341-3101-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)

LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- PERENNIAL STREAM
- OPEN BOUNDARY
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- WETLAND - PEM
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1.ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 2/27/2026

2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.

700 Cherrington Parkway
Moon Township, PA 15108

Ph: 412.429.2324 · 800.365.2324

www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3L
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

NORTH

55
55
56
56
SP-028
AR-27
57A
ASPEN SUBSTATION
Path Valley Rd
Main St
Spring Run Rd
641
75
Orrstown Bank
Path Valley Market
West Dry Run
Dry Run Rd S

SCALE IN FEET
0 250 500

LEGEND

- AREA OF INTEREST (AOI)
- SAMPLING POINT
- ACCESS ROUTES
- INDEX CONTOURS
- INTERMEDIATE CONTOURS
- PROPOSED STRUCTURE
- EXISTING STRUCTURE

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY, ACCESSED 2/27/2026
2. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2007

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

MAIT
SHADE GAP-ASPEN 115KV
TRANSMISSION LINE REBUILD PROJECT
HUNTINGDON & FRANKLIN COUNTIES, PA

WATERS DELINEATION MAP

DRAWN BY:	NTP	CHECKED BY:	FDD	APPROVED BY:	GAA*	FIGURE NO:	3M
DATE:	2/27/2026	SCALE:	1" =250'	PROJECT NO:	341-310		

*Hand Signature on file

P:\340-000\341-310\-GIS\Maps\EC01_Shade_Gap_Roxbury_Delineation\341310_EC01_Shade_Gap_Roxbury_Delineation.aprx 2/27/2026 1:21 PM (ccyprych)

Exhibit 8

1. PROJECT INFORMATION

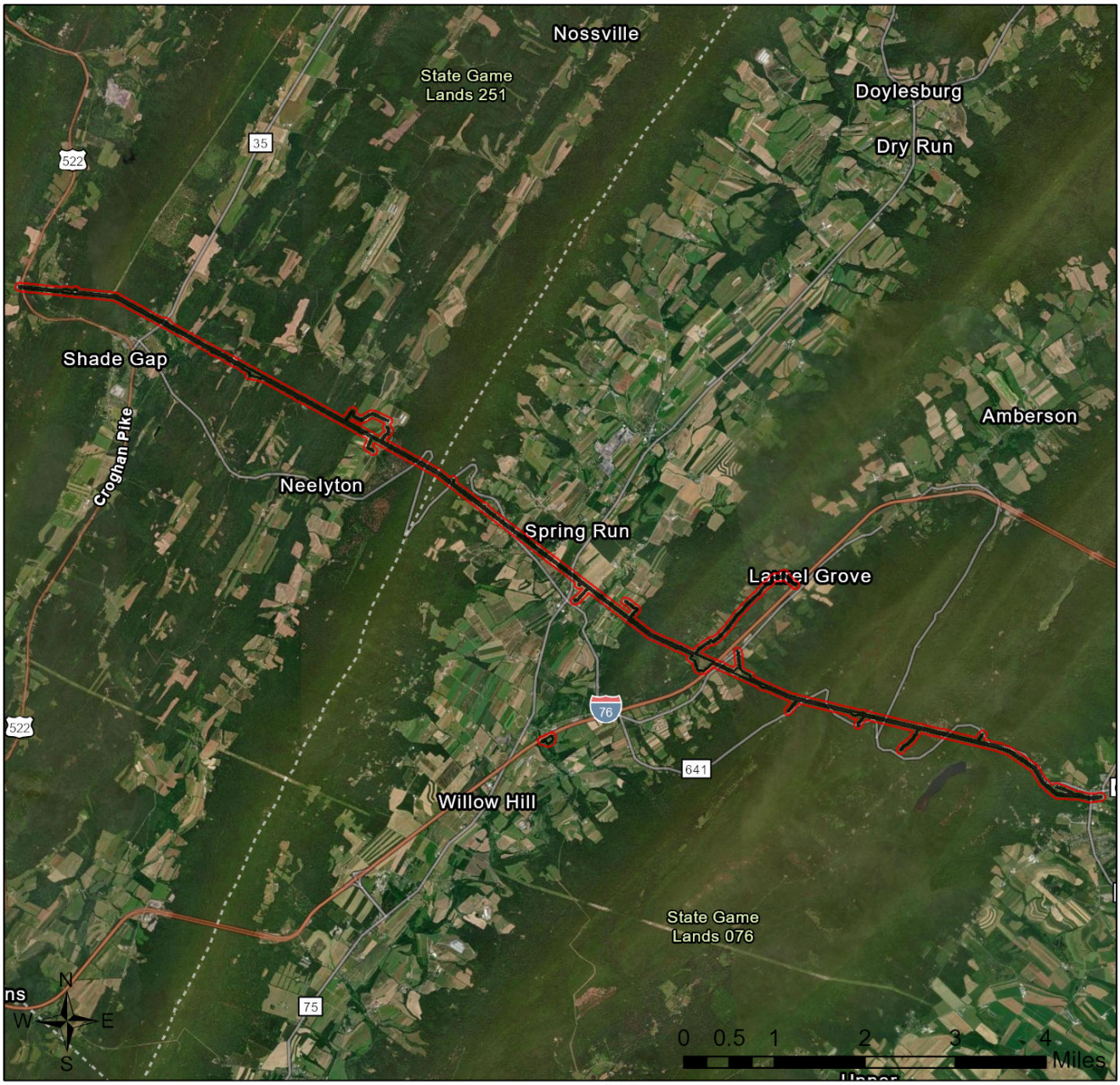
Project Name: **Shade Gap - Roxbury**
Date of Review: **3/18/2025 11:34:46 AM**
Project Category: **Energy Storage, Production, and Transfer, Energy Transfer, Power/electric line - service, replace existing above/under-ground line**
Project Area: **224.18 acres**
County(s): **Franklin; Huntingdon**
Watersheds HUC 8: **Conococheague-Opequon; Lower Juniata; Lower Susquehanna-Swatara**
Watersheds HUC 12: **Headwaters West Branch Conococheague Creek; Shade Creek; Trout Run-Conodoguinet Creek; Upper West Branch Conococheague Creek**
Decimal Degrees: **40.147954, -77.772958**
Degrees Minutes Seconds: **40° 8' 52.6357" N, 77° 46' 22.6497" W**

2. SEARCH RESULTS - LARGE PROJECT

Agency	Results	Response
PA Game Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
PA Department of Conservation and Natural Resources	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
PA Fish and Boat Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
U.S. Fish and Wildlife Service	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**

Large Project. The project area is greater than 10 miles and/or 5,165 acres and therefore is categorized as a Large Project, and is not analyzed by the PNDI tool. Coordination is therefore required with the four jurisdictional agencies to determine if potential impacts to threatened and endangered and/or special concern species and resources within the project area. Please see the DEP Information section of the receipt if a PA Department of Environmental Protection Permit is required.

Shade Gap - Roxbury



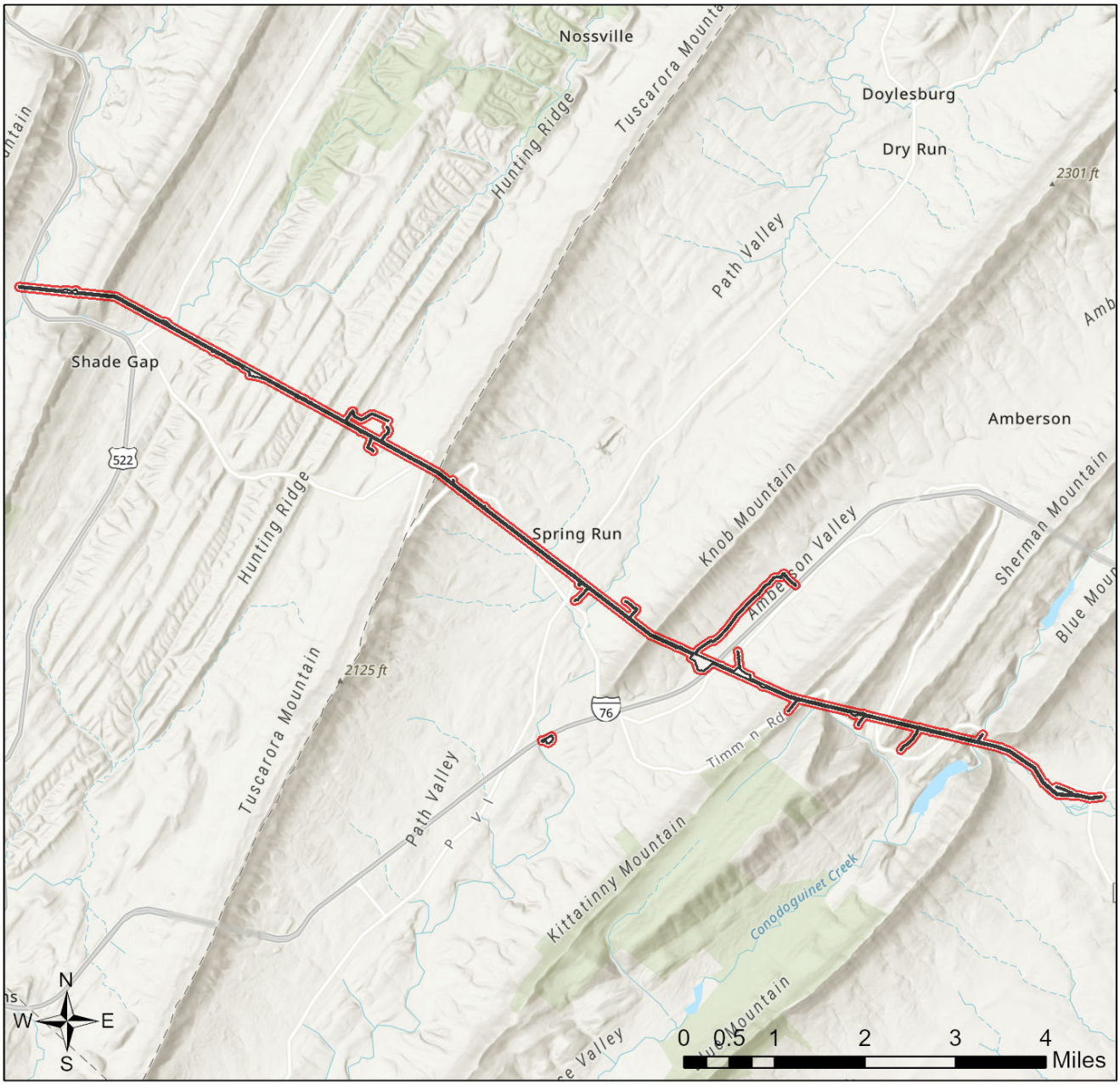
Buffered Project Boundary

Project Boundary



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Shade Gap - Roxbury



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA,

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

U.S. Fish and Wildlife Service

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).
*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: McKenzie McKeon
Company/Business Name: Civil & Environmental Consultants, Inc.
Address: 700 Cherington Parkway
City, State, Zip: Moon Township, PA 15108
Phone: (517) 652-3515 Fax: (_____)_____
Email: mmckeon@cecinc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ 3/18/2025
applicant/project proponent signature date

Exhibit 9

Pennsylvania
Department of Conservation and Natural Resources

March 18, 2025

PNDI Number: 812556
Version: Final_2; 3/18/2025

McKenzie McKeon
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Email: mmckeon@cecinc.com (hard copy will not follow)

Re: UPDATE - Shade Gap - Roxbury
Franklin and Huntingdon Counties, PA

Dear McKenzie,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number **812556 (Final_2)** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.

Recommended Best Management Practices:

- Use a conservative approach to project design that minimizes permanent and temporary disturbances to soil and native vegetation. This will conserve habitat and limit opportunities for invasive plants.
- Clean boot treads, tools, construction equipment, watercraft, and vehicles thoroughly (especially the undercarriage and wheels) before they are brought on site. This will remove invasive plant seeds and invasive earthworms/cocoons that may have been picked up at other worksites.
- Use clean project materials (e.g., weed-free straw, topsoil, rock fill, etc.) or materials native to the worksite to avoid introducing invasive species from contaminated sources.
- Do not use seed mixes that include invasive species. More information about invasive plants in Pennsylvania can be found at the following link: http://www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/Pages/default.aspx
- Use habitat appropriate seed mixes and, when available, use PA ecotypes. For example, use a riparian seed mix when reseeding along a waterway. The Bureau of Forestry Planting & Seeding Guidelines can be found at the following link for recommendations: http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20031083.pdf

- Use native plants for landscaping, revegetation, and stormwater management. Do not use nonnative invasive species. Reduce the area of lawn and impermeable surfaces to the fullest extent practicable in favor of native gardens or habitat restoration (e.g., forest, meadow, wetland, etc.). More information about lawn conversion can be found at the following link: https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx
- Plant forest buffers where trees were historically present along streams, wetlands, and bodies of water. Buffers should be a minimum of 35 feet in width (ideally at least 100 feet in width). Where trees are not appropriate (e.g., powerline rights-of-way), buffer with native shrubs and herbaceous plants. More information about riparian buffers can be found at the following link: https://www.dcnr.pa.gov/Conservation/Water/RiparianBuffers/Pages/default.aspx
- Manage road/utility rights-of-way, median strips, edges, and other green spaces for diverse native plant communities and wildlife (e.g., common and swamp milkweed for monarch butterfly). In seed mixes, include PA native wildflowers that have overlapping bloom periods and provide forage for pollinators throughout the growing season.
- Avoid blanket herbicide applications; instead, spot-treat undesirable tall woody vegetation and invasive weeds. Where mowing is necessary, reduce frequency to once every few years during the dormant season (i.e., after first frost in late fall and before bird nesting in early spring), leaving some refugia for overwintering wildlife.
- Monitor for invasive plants before, during, and after project activities and promptly control any identified infestations. Frequent monitoring allows for early detection and rapid response.

This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter and a permit has not been acquired, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative, description of project changes and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Jason Ryndock, Ecological Information Specialist, by phone (717-705-2822) or via email (c-jryndock@pa.gov).

Sincerely,



Greg Podniesinski, Section Chief
Natural Heritage Section

Exhibit 10

PNDI # 812556 **USFWS Project #** 2025-0022352

U.S. FISH AND WILDLIFE SERVICE

110 Radnor Road, Suite 101, State College, PA 16801

This responds to your inquiry about a PNDI Internet Database search that resulted in a potential conflict with a federally listed, proposed or candidate species.

PROJECT LOCATION INFORMATION

County: Franklin and Huntingdon

Township: Fannett, Letterkenny, Lurgan, Cromwell, and Dublin

USFWS COMMENTS ☑ EMAILED ☐ MAILED

To: McKenzie R. McKeon

MISC INFORMATION

Date received by FWS: November 20, 2024

Email: mmckeon@cecinc.com

Affiliation: Civil & Environmental Consultants, Inc.

SPECIFIC PROJECT: FirstEnergy Shade Gap-Roxbury Transmission Line Rebuild

FISH AND WILDLIFE SERVICE COMMENT(s):

☐ ***NO EFFECT***

Except for occasional transient species, no federally listed, proposed or candidate species under our jurisdiction are known or likely to exist in the project area. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

☑ ***NOT LIKELY TO ADVERSELY AFFECT***

The federally listed northern long-eared bat, tricolored bat occurs or may occur in or near the project area. However, based on our review of the information provided, including the project description and location (To be protective of northern long-eared bats and tricolored bat,, FirstEnergy commits to implement a time-of-year tree cutting restriction: Only cutting and removing trees from November 16 to March 31 (per phone call of January 15, 2025). No tree-cutting or removal From April 1 to November 15.), no adverse effects to this species are likely to occur. If there is any change in the location, scale, scope, layout or design of the project, further consultation or coordination with the Service will be necessary.

The above determination is valid for two years from the date of this letter. In addition, this response relates only to federally listed, proposed, and candidate species under our jurisdiction, based on an office review of the proposed project's location and anticipated impacts. No field inspection of the project area has been conducted by this office. *Please reference the above PNDI # and USFWS Project # in any future correspondence regarding this project.*

This review was conducted by the biologist listed below. He/she can be contacted at 814-206-(Extension).

☐ Pamela Shellenberger (x7459)	☐ Nicole Ranalli (x7455)	☐ Richard Novak (x7477)
☐ Monica Mestre (x7462)	☑ Jennifer Kagel (x7451)	☐ Sze Wing Yu (x7461)

SIGNATURE:

Supervisor, Pennsylvania Field Office

Exhibit 11

pennsylvania
FISH AND BOAT COMMISSION

August 13, 2025

IN REPLY REFER TO
SIR# 60646

Civil & Environmental Consultants, Inc.
McKenzie McKeon
700 Cherrington Parkway
Moon Township, Pennsylvania 15108

RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No. 812556_2
Shade Gap - Roxbury
FRANKLIN County - HUNTINGDON County

Dear McKenzie McKeon:

In prior correspondence with the Commission, due to nearby known occurrences of the Timber Rattlesnake (*Crotalus horridus*) within the vicinity of the proposed project, to further determine potential adverse impacts from the proposed project to the species of concern, a habitat evaluation was requested by the Commission (*SIR Letter dated December 4, 2024*). Subsequently, Dr. Glenn Johnson, a Pennsylvania Qualified/Recognized and properly permitted Timber Rattlesnake Biologist, conducted a habitat assessment and documented several potential denning/overwintering habitats as well as gestation/basking habitats along the three ridgelines crossed by the project area.

According to Dr. Johnson's report (*Timber Rattlesnake (Crotalus horridus) Habitat Assessment Shade Gap – Roxbury Transmission Line Rebuild Dublin Township: HUNTINGDON County – Fannett and Lurgan Townships: FRANKLIN County Pennsylvania,* dated May 2025), numerous areas of potential Timber Rattlesnake habitat were identified within the project area. Kathy Gipe of my staff had a call with you on July 8, 2025 to review the results of the habitat assessment and go over project details. Existing poles will be cut close to ground level. New poles will be installed by hand digging with assistance from a mini-excavator that will be flown in by helicopter for moving larger boulders, if needed. Due to the minimal earth disturbance required for this project and the project timeline, you have opted to not confirm presence/absence of Timber Rattlesnakes in identified habitats.

Timber Rattlesnakes occur in relatively high elevation forested, mountainous regions of the Commonwealth. They prefer forested areas to forage for small mammals (e.g., mice and chipmunks) and southerly-facing slopes for hibernating and other thermoregulatory activities. The Timber Rattlesnake is threatened by habitat loss/alteration, wanton killing, and poaching. In Pennsylvania, Timber Rattlesnakes are a protected species. Special (venomous snake) permits are needed to hunt individual rattlesnakes, and only legal sized males (>42 inches) can be taken during a restricted hunting season. However, communal overwintering and gestation sites are considered critical habitats for the species and are therefore protected through the environmental review process. Also, due to the species being venomous, projects that come in close proximity to these critical habitats will likely encounter the species and potentially pose health and human safety concerns to project workers. Therefore, in these consultations, the PFBC aims to avoid and minimize impacts to the species and address health and

human safety issues. Note that denning/overwintering habitat cannot be replaced when it is impacted.

We are concerned about direct and indirect effects that the proposed project could have on the local population of the Timber Rattlesnake **and recommend that you take the following precautions to safeguard workers and rattlesnakes:**

Within identified potential Overwintering/Denning habitat (DG-1, 5, 6, 7, 8, 11, 12, 13):

1. Work should ideally be conducted between April 15 and October 15 to avoid impacts to overwintering snakes. A PFBC approved Timber Rattlesnake biologist who has the proper permits (Scientific Collector's Permit), and the proper skills to handle this venomous species will be on-site prior to and during construction.

2. The PFBC approved Timber Rattlesnake biologist will be on-site prior to and during construction activities, during the above time frame, to inspect and clear the area (including staging areas and access roads) of Timber Rattlesnakes and to capture and remove any rattlesnakes that may interfere with work activities.

3. Timber Rattlesnakes observed on-site are to be measured, sexed, and the habitat characterized where the snake was found. All captured snakes should be released within close proximity (under 100 meters) of the capture site if possible. Rattlesnake captures and relocations are to be documented by photographs, habitat descriptions, in addition to being mapped and labeled accordingly. The biologist is to submit a report to this office (Natural Diversity Section) following the completion of the project documenting all of the activity and herpetofauna encountered.

4. If erosion control fabric is to be used at these sites, materials that are known to reduce the risk of snake entrapment should be selected, such as loosely woven natural fiber ECM. Use of monofilament/plastic netting should be avoided.

5. Workers responsible for implementing this project should be advised that Timber Rattlesnakes may be encountered and that avoidance is the best means of minimizing risks to personal safety. It is suggested a procedure be implemented for Timber Rattlesnake encounters and workers are to be advised that the Timber Rattlesnake is a state protected species and is not to be harmed. Killing of Timber Rattlesnakes is prohibited by the Commission pursuant to 58 Pa. Code Section 79.6.

Within Identified Potential Gestation Areas (G-1, 2, 6, 8):

If work within 300 feet of these areas is conducted during the dormant season of the Timber Rattlesnake, then I do not anticipate any adverse impacts to this species of special concern. **However, if work is to be conducted from April 15-October 15, then I recommend that you take the following precautions to safeguard workers and rattlesnakes:**

1. The PFBC approved Timber Rattlesnake biologist will be on-site prior to and during construction activities, during the above time frame, to inspect and clear the area (including staging areas and access roads) of Timber Rattlesnakes and to capture and remove any rattlesnakes that may interfere with work activities.

2. Timber Rattlesnakes observed on-site are to be measured, sexed, and the habitat characterized

where the snake was found. All captured snakes should be released within close proximity (under 100 meters) of the capture site if possible. Rattlesnake captures and relocations are to be documented by photographs, habitat descriptions, in addition to being mapped and labeled accordingly. The biologist is to submit a report to this office (Natural Diversity Section) following the completion of the project documenting all of the activity and herpetofauna encountered.

3. If erosion control fabric is to be used at these sites, materials that are known to reduce the risk of snake entrapment should be selected, such as loosely woven natural fiber ECM. Use of monofilament/plastic netting should be avoided.

4. Workers responsible for implementing this project should be advised that Timber Rattlesnakes may be encountered and that avoidance is the best means of minimizing risks to personal safety. It is suggested a procedure be implemented for Timber Rattlesnake encounters and workers are to be advised that the Timber Rattlesnake is a state protected species and is not to be harmed. Killing of Timber Rattlesnakes is prohibited by the Commission pursuant to 58 Pa. Code Section 79.6.

Enclosed is the list of PFBC approved rattlesnake biologists for your convenience. It is not an exhaustive list of qualified rattlesnake biologists in Pennsylvania as there may be qualified surveyors who have not asked to be placed on this list. It is not mandatory that you use someone on this list.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

If you have any questions regarding this review, please contact Kathy Gipe at 814-359-5186 or c-kgipe@pa.gov and refer to the SIR # 60646. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,



Christopher A. Urban, Chief
Natural Diversity Section

CAU/KDG/dn

Enclosure

Exhibit 12

PENNSYLVANIA GAME COMMISSION
BUREAU OF WILDLIFE MANAGEMENT
2001 ELMERTON AVENUE HARRISBURG, PA 17110-9797 | (717) 787-5529

September 29, 2025

McKenzie McKeon
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, Pennsylvania 15108
mmckeon@cecinc.com

Re: *First Energy Service Company* - Shade Gap-Roxbury Line Rebuild Project
PNDI Receipt File: *project_receipt_shade_gap_roxbury_812556_FINAL_2.pdf*
Fannett, Letterkenny, Lurgan, Cromwell, and Dublin Townships; Franklin and Huntingdon Counties, PA

Dear McKenzie McKeon,

Thank you for submitting the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt File *project_receipt_shade_gap_roxbury_812556_FINAL_2.pdf* for review. The Pennsylvania Game Commission (PGC) screened this project for potential impacts to species and resources of concern under PGC responsibility, which includes birds and mammals only. This letter serves as an updated response to the one sent to you on March 18, 2025.

Potential Impact Anticipated

PNDI records indicate species or resources of concern are located in the vicinity of the project. The PGC has received and thoroughly reviewed the information that you provided to this office, as well as PNDI data, and has determined that potential impacts to threatened, endangered, or special concern species of birds and mammals may be associated with your project. Therefore, additional measures are necessary to avoid potential impacts to the species listed below.

Common Name	Scientific Name	PA Status	Federal Status
Allegheny Woodrat	*Neotoma magister*	THREATENED	N/A

Next Steps

Civil & Environmental Consultants, Inc. (CEC) contracted Keystone Ecological Services (KES) to conduct a habitat assessment and prepare a report as well as a camera trap presence-absence survey study plan that the PGC requested for a portion of the project area (Figure 1). The habitat assessment report and presence-absence survey study plan were sent to the PGC in March 2025. The PGC reviewed and ultimately concurred with both. KES staff conducted the camera trap presence-absence survey for Allegheny woodrats from April 30 to May 27, 2025. Allegheny woodrats were recorded at 17 sites within the project area - confirmed within the surface rock both north and south of Timmons Road, including on the ROW and on both sides of the proposed access road. Results suggest that woodrat activity is concentrated on the ridgetop and upper slopes of the ROW and south of the ROW.

During a meeting between the PGC, CEC, KES and First Energy on September 22, 2025, project activities in relation to the Allegheny woodrat locations were discussed (Figure 1).

1. No heavy equipment will be used due to rocky habitat and steep terrain –hand-held equipment and portable air compressors will most likely be used.
2. Helicopters and ATVs will be used to transport materials to site (poles).
3. No tree clearing – possible tree trimming based on landowner permission. The PGC asked if limbs be kept on-site.
4. Large rock will not be moved in areas surveyed for woodrats and where woodrats were detected.
5. New utility poles will be dug down to 20-30'depths – helicopter may aid in placing new poles in place.
6. Activities at this site are estimated to be 1 to 2 weeks in duration.
7. **The PGC asked that activities be timed for areas with woodrat detections during the month of June and July, but before September.**

This response represents the most up-to-date summary of the PNDI data files and is valid for two (2) years from the date of this letter. An absence of recorded information does not necessarily imply actual conditions on site. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered.

Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for two additional years.

This finding applies to impacts to birds and mammals only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure that the U.S. Fish and Wildlife Service, the PA Department of Conservation and Natural Resources, and/or the PA Fish and Boat Commission have been contacted regarding this project as directed by the online PNDI ER Tool found at www.naturalheritage.state.pa.us.

Sincerely,

Sue Guers
Environmental Review Lead
Bureau of Wildlife Management
Phone: 717-787-4250, Extension 73412
Fax: 717-787-6957
E-mail: suguers@pa.gov

A PNHP Partner



SLG/slg

cc: Schnupp
Williams
Lovallo
Turner
Otterbein
Mesoras
Vreeland

Figure 1. Allegheny Woodrat presence/absence survey location (within purple circle) for the First Energy Shade Gap – Roxbury Transmission Line Rebuild project – NE of State Game Lands 76 in Franklin County.

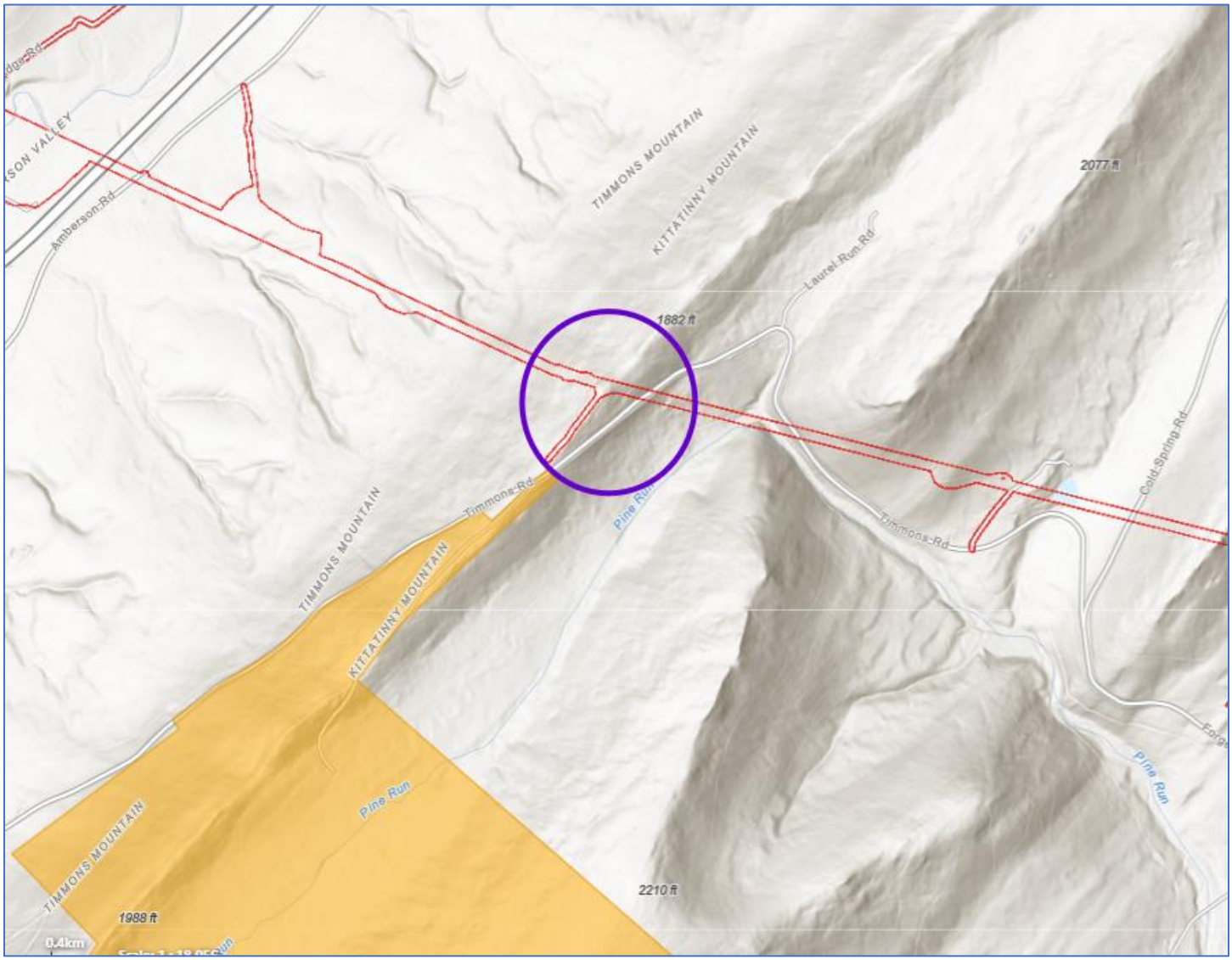


Exhibit 13

Pennsylvania State Historic Preservation Office
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

April 30, 2025

Sent Via PA-SHARE

RE: ER Project # 2025PR01709.001, Penelec Shade Gap Rebuild, Army Corps of Engineers, Metal Township, Franklin County

Dear Submitter,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources
No Above Ground Concerns - Environmental Review - No Effect - Above Ground

Based on the information received and available within our files, and as outlined in our Guidelines for Projects with Potential Visual Effects, it is our opinion that the new poles will not have a greater visual effect than the existing infrastructure and the proposed project will have No Effect on above ground historic properties, including historic buildings, districts, structures, and/or objects, should they exist. Should the scope of the project change and/or should you be made aware of historic property concerns, you will need to reinitiate consultation with our office using PA-SHARE.

For questions concerning above ground resources, please contact Sara-Ladd Manley at samanley@pa.gov.

Archaeological Resources
No Archaeological Concerns - Environmental Review - No Effect - Archaeological

Based on the information received and available in our files, in our opinion, the proposed project should have No Effect on archaeological resources. Should the scope of the project be amended to include additional ground-disturbing activity and/or should you be made aware of historic property concerns regarding archaeological resources, you will need to reinitiate consultation with our office using PA-SHARE.

For questions concerning archaeological resources, please contact Kristen Walczesky at kwalczesky@pa.gov.

Sincerely,

Barbara Frederick
Environmental Review Division Manager

Exhibit 14

MAIT Exhibit 14

Landowners Crossed by the Project & Entities the Project is Seeking Approval From

Known persons, corporations and other entities of record owning property within the proposed right-of-way:

Adomnik Barry & Michele
11565 Shade Creek Ln
Shade Gap, Pa 17255

Baer Matthew Dennis & Gillian Paige
11617 Auxiliary Dr
Shade Gap, Pa 17255

Benson Marlene & Fred
1007 Mowere Rd
Phoenixville, Pa 19460

Bloom Sandra D
20422 Spring Run Rd Po Box 118
Spring Run, Pa 17262

Brothers Kevin B
21388 Fawn Ln
Shade Gap, Pa 17255

Ciervo Alfonso V & Woodward Dawn
2148 Chestnut St
Camp Hill, Pa 17011

Cisney David W
21070 Cisney Ln
Shade Gap, Pa 17255

Clark Arthur C Jr & Patti Ann
12069 Sawmill Rd
Shade Gap, Pa 17255

Coffman Paul B & Stacy S
17622 Shatzer Rd
Spring Run, Pa 17262

Coons Edward M & Connie L
20112 Spring Run Rd
Spring Run, Pa 17262

Cramer Shannon L
11843 Taylor Rd
Shade Gap, Pa 17255

Devinney Carl E & Curry Emily D
20478 W Spring Run Rd PO Box 116
Spring Run, Pa 17262

Diven Thomas W & Sarah Ann
11 Cordell Dr
Stevens, Pa 17578-9497

Do-Right Partners
310 Haller Ln
Lewistown, Pa 17044

Doyle Landen William
20010 Sweet Water Rd
Dry Run, Pa 17220

Fenby Mark W & Shanna A
11868 Taylor Rd
Shade Gap, Pa 17255

Friese Kim L
17659 Shatzer Rd
Spring Run, Pa 17262

G & S Logging
17429 Shade Valley Rd
Blairs Mill, Pa 17213

Gipe Guy M & Sarah M
19945 Spring Run Rd
Spring Run, Pa 17262

Hammond Jay F & Cheryl G
20575 Hammond Rd
Spring Run, Pa 17262

Hart Mark W & Brenda L
20898 Back Rd

MAIT Exhibit 14

Landowners Crossed by the Project & Entities the Project is Seeking Approval From

Doylesburg, Pa 17219

Hartman Matt & Rene
3581 Aster Ave
Trevose, PA 19053

Johnson Dawn H & Drew W
20522 Hammond Rd
Spring Run, Pa 17262

Johnson Gary R Etal
21792 Shade Valley Rd
Shade Gap, Pa 17255

Keating Michael J & Laura A
22514 Maple Ln
Amberson, Pa 17210

Knoll James
4122 Lauriston St
Philadelphia, Pa 19128

Kreis John S
20960 Covered Bridge Rd
Shade Gap, Pa 17255

Lake Michael Allen
22640 Tannery Rd
Shade Gap, Pa 17255

Lake-Scott Rhonda L
21531 Lake Ln
Shade Gap, Pa 17255

Lakjer Philip R & Lena M
Po Box 179
Spring Run, Pa 17262

Lakjer Andrew B & Valerie J
PO Box 159
Spring Run, Pa 17262

Lawrence Bradley J & Magruder
17637 Shatzer Rd
Spring Run, Pa 17262

Mcallen Daniel M
9123 Path Valley Rd
Fannettsburg, Pa 17221

Mcmath Thomas L & Linda J
12007 Sawmill Rd
Shade Gap, Pa 17255

Mcmullen Michael J Etal
10153 Blue Jay Cir
Orrstown, Pa 17244

Mcnew Pamela D
Po Box 16
Orrstown, Pa 17244

Meyer Ronald & Betty
10696 Jonestown Rd
Annville, Pa 17003

Montague Leirwyn L Sr & Mary F
13260 Neelyton Rd
Neelyton, Pa 17239

Musser Michael
411 Hensley St
Lititz, Pa 17543

Mylin Stuart & Jodie L
1052 Deaver Rd
Quarryville, Pa 17566

Nagel Christopher A & Cheryl M
12700 Sawmill Rd
Shade Gap, Pa 17255

Ness Dalton J L Etal
21337 Main St
Shade Gap, Pa 17255

Pechart Sandra Etal
16966 Stewart Rd
Spring Run, Pa 17262

Pulgar Krishna Carlota Etal
565 Hilltop Rd

MAIT Exhibit 14

Landowners Crossed by the Project & Entities the Project is Seeking Approval From

Hummelstown, Pa 17036

Revercomb Robert O Iii & Maria
Po Box 54
Shade Gap, Pa 17255

Robinson Carl R Etal
22609 Mountain Foot Rd
Neelyton, Pa 17239

Robinson Dotty M
Po Box 65
Spring Run, Pa 17262

Robinson Jason Lee
16729 Path Valley Rd
Spring Run, Pa 17262

Rorer Randall D Etal
13052 Sawmill Rd
Blairs Mills, Pa 17213

Schoen Gregory R & Beaston Pamela F
16223 Amberson Rd
Spring Run, Pa 17262

Shatzer Larry J Etal
16804 Path Valley Rd
Spring Run, Pa 17262

Shontz Charles H III & Edeltraud
12209 Sawmill Rd
Shade Gap, Pa 17255

Shoop Bill F
20215 Spring Run Rd
Spring Run, Pa 17262

Smith James Robert & Katrina Kinzer
18716 Dry Run Rd
Dry Run, Pa 17220

Snider William E & Nancy E
201 S Hillcrest Ave
Quarryville, Pa 17566

Stuller Don F & Joyce A
Po Box 255
Orbisonia, Pa 17243

Taylor Donald L & Joyce H
248 South Angling Pike
Hartford City, In 47348

Tornetta Management Llc
Po Box 6010
Chambersburg, Pa 17202

Ulsh Howard I Jr & Stacie M
20685 Covered Bridge Rd
Shade Gap, Pa 17255

Warwood John R
20708 Covered Bridge Rd
Shade Gap, Pa 17255

West Charles & Joyce
12021 Sawmill Rd
Shade Gap, Pa 17255

Whitsel Kelly J Etal
21311 Croghan Pike
Orbisonia, Pa 17243

Woodward Dane K
20649 Covered Bridge Rd
Shade Gap, Pa 17255

MAIT Exhibit 14

Landowners Crossed by the Project & Entities the Project is Seeking Approval From

Entities the Project is Seeking Approval From:

Agency/Address	Permit/Clearance Required	Status
Huntingdon County Conservation District 10605 Raystown Road, Suite A Huntingdon, PA 16652	General NPDES Permit approval needed based on PA Chapter 102 Requirements.	Permit Pending
Franklin County Conservation District 185 Franklin Farm Lane Chambersburg, PA 17202	General NPDES Permit approval needed based on PA Chapter 102 Requirements.	Permit Pending
Pennsylvania Department of Environmental Protection Southcentral Regional Office 909 Elmerton Avenue Harrisburg, PA 17110	General Permit (GP)- 8 for Temporary Road Crossing and Utility Crossings and temporary access under PA Chapter 105 Waiver 3 based on Section 401 & 404 of the federal Clean Water Act	Permit Pending
Pennsylvania Game Commission Bureau of Wildlife Management Division of Environmental Review 2001 Elmerton Avenue, Harrisburg, Pennsylvania 17110	Concurrence letter for impacts to Allegheny Woodrat	Potential Impact Anticipated—additional measures provided to avoid potential impacts
Pennsylvania Department of Conservation and Natural Resources P.O. Box 8552 Harrisburg, PA 17015	Concurrence letter for impacts to plants, terrestrial invertebrates, natural communities, and geologic features	No Impacts Anticipated
U.S. Fish and Wildlife Service 110 Radnor Road, Suite 101 State College, PA 16801	Concurrence letter for impacts to Northern Long-Eared Bat and Tricolored Bat	Not Likely to Adversely Affect
Pennsylvania Fish and Boat Commission 595 East Rolling Ridge Drive Bellefonte, PA 16823	Concurrence letter for impacts to Timber Rattlesnake	Precautions provided by agency to safeguard workers and rattlesnakes

MAIT Exhibit 14

Landowners Crossed by the Project & Entities the Project is Seeking Approval From

Historic Preservation Bureau 400 North St, Ste 2, Harrisburg, PA 17120	Concurrence letter for impacts to historic and archaeological resources	No Above Ground or Archaeological Concerns

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

LETTER OF NOTIFICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FOR APPROVAL OF THE SHADE GAP-ASPEN 115 KILOVOLT TRANSMISSION LINE REBUILD PROJECT IN DUBLIN AND CROMWELL TOWNSHIPS, HUNTINGDON COUNTY AND FANNETT TOWNSHIP, FRANKLIN COUNTY, PENNSYLVANIA	:	**Docket No. _____**

VERIFICATION

I, Colin Nahill, state that I am a Transmission Specialist II for FirstEnergy Service Company; that I am authorized to make this Verification on behalf of Mid-Atlantic Interstate Transmission, LLC and that the facts set forth are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. §4904 (relating to unsworn falsification to authorities).

March 20, 2026

Colin Nahill