

EDR

Memorandum

To: Norwich Township
From: Caroline Klein, Project Manager
Date: July 8, 2025
Reference: Black Cherry Wind Project – MET A Application

INTRODUCTION

Black Cherry Wind Power, LLC (Black Cherry Wind), is proposing to install a Meteorological Evaluation Tower (MET), to support the Black Cherry Wind Project located on parcel 27-003-101, owned by Bear Head Camp in Norwich Township, McKean County, Pennsylvania (Figure 1) (hereafter, Project). In accordance with the Norwich Township Ordinance Regulating the Construction, Operation and Decommissioning of Wind Energy Facilities this application is being submitted to permit the installation of the proposed MET and includes the following:

1. Figures, including the Site Plan
2. Meteorological Tower Easement Agreement
3. Proposed Access Route
4. Wetland Delineation Report
5. PNDI Results and Agency Consultation
6. E&S Plan Approval
7. FAA Notice Criteria Tool Results.

PROJECT DESCRIPTION

The proposed Project is to construct one MET to gather meteorological data for the purpose of informing the potential development of a future wind project. The design of the MET will comply with the tower and grounding system design standard Telecommunications Industry Association's EIA/TIA-222-G.

Figure 2 and Table 1 identify the property in which the MET will be placed and identifies the surrounding parcels.

Table 1. Parcels Within and Adjacent to the Project Area

Parcel ID	Name	Mailing Address	City/State	ZIP	Proximity to Project
27-003-101	Bear Head Camp	260 Roebling Dr	Saxonburg, PA	16056	Subject Property
27-002-200	Collins Pine Company	PO Box 807	Kane, PA	16735	Adjacent
27-002-201	Collins Pine Company	PO Box 807	Kane, PA	16735	Adjacent
27-003-100	Collins Pine Company	PO Box 807	Kane, PA	16735	Adjacent

MET A is sited within forested land at the southwest corner of the subject property. The siting of MET A is shown on Figure 3, and a Site Plan is provided with the application as well. Access to the Project will be from Christian Hollow Road (a state road) and subsequently White Hollow Road (a local road). From White Hollow Road, access is via private forestry roads. None of the roads will require improvements as part of the Project. Proposed access routes to the Project can be found in Attachment B with road classifications identified by line type. Timber will be harvested prior to installation of the MET. No grubbing or grading will occur; therefore, the only ground disturbance will be associated with the small met tower foundation and the guy wire anchors. No aquatic resources will be impacted.

WETLANDS & STREAM DELINEATIONS

A wetland and stream delineation was conducted within and adjacent to the proposed MET A (MET A Study Area). The MET A Study Area includes a 200-foot radius surrounding MET A, encompassing approximately 2.89 acres. Within the MET A Study Area, EDR identified one isolated herbaceous wetland totaling 0.006 acre at the foot of a previously installed natural gas well.

The wetland would be considered jurisdictional by the Pennsylvania Department of Environmental Protection (PADEP) as it meets the classification of "other wetlands" under The Dam Safety and Encroachments Act. It is not anticipated that the wetland will be considered jurisdictional by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act due to the isolated nature of the wetland. However, final determination of jurisdictional status of the delineated wetland must be made by the USACE and PADEP. Regardless of jurisdiction, this wetland will not be impacted because of the MET A installation. There are no traditional navigable waters or state navigable waters identified within or adjacent to the Project Site; therefore, Section 10 of the Rivers and Harbor Act is not applicable to the proposed Project. The MET A Wetland Delineation Report is in Attachment C.

THREATENED AND ENDANGERED SPECIES

To determine potential impacts to state and federal threatened and endangered species, a Pennsylvania Natural Diversity Inventory (PNDI) was completed for the MET A site.

The PNDI for MET A determined there are documented occurrences of a threatened and endangered and/or special concern species and resources within the area that may be impacted as a result of the proposed Project (Attachment D), the Pennsylvania-endangered burbot – Allegheny River population (*Lota lota* pop. 4).

Consultation with the Pennsylvania Fish and Boat Commission (PFBC) determined that while protected species are known to be within the vicinity of MET A, the nature of the proposed Project and the immediate location of MET A is not expected to cause any adverse impacts to species of special concern. The clearance letter from the PFBC is provided in Attachment D.

EROSION AND SEDIMENTATION CONTROL

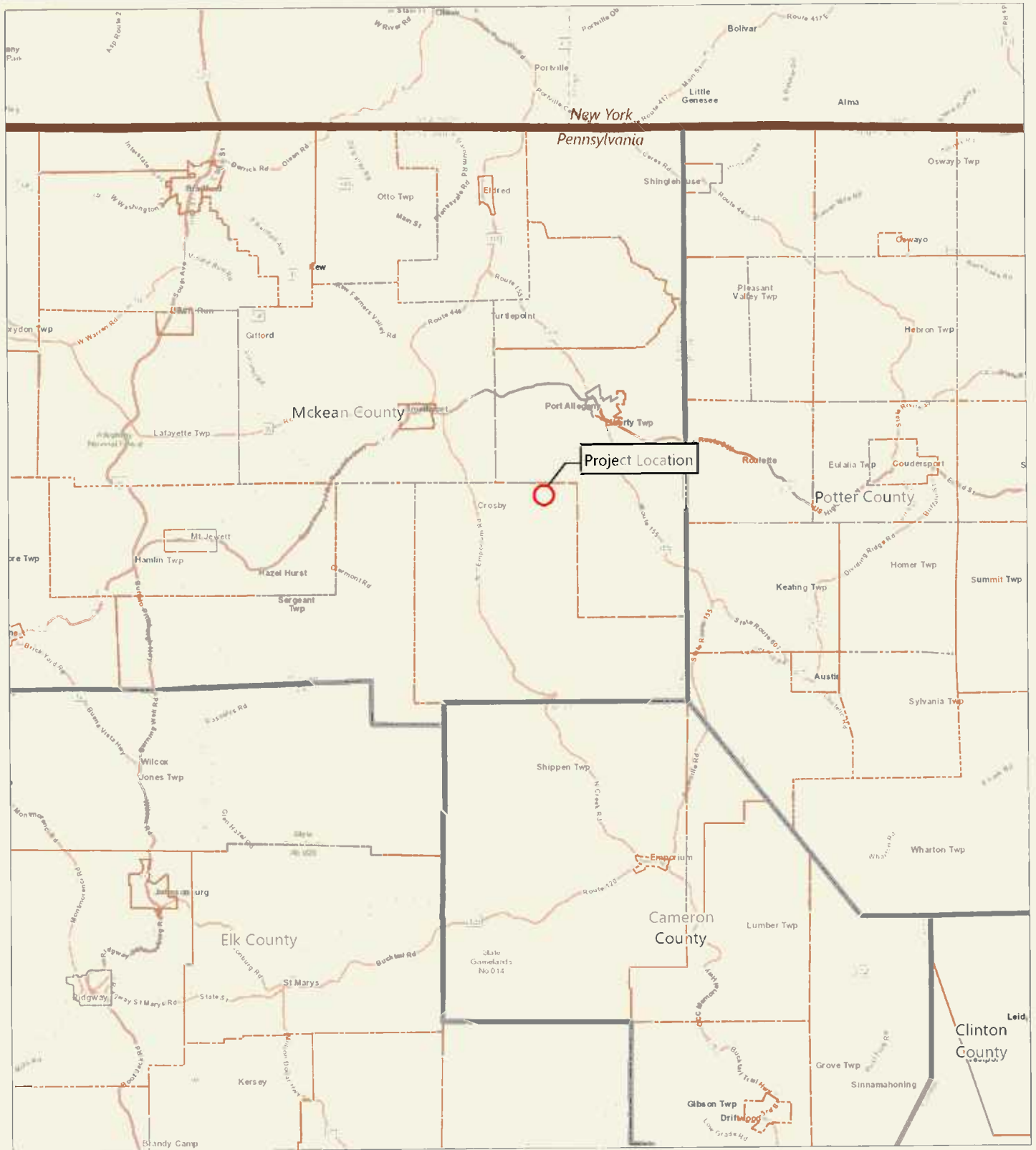
Erosion and Sedimentation Control (E&S) plans have been submitted and reviewed for MET A. The McKean County Conservation District has approved the E&S plans and stated that they adequately address E&S pollution control and meet the requirements of the Department of Environmental Protection's rules and regulations, Chapter 102, Erosion and Sediment Control and the Clean Streams Law, provided all Best Management Practices are properly implemented and maintained until the Project has been permanently stabilized. The approval letter can be found in Attachment E.

FEDERAL AVIATION ADMINISTRATION

MET A does not meet criteria for filing with the Federal Aviation Administration (FAA) and will not be artificially lighted. Results from the FAA Notice Criteria Tool can be found in Attachment F.

Figures

Figure 1. Regional Project Location - Met Tower A



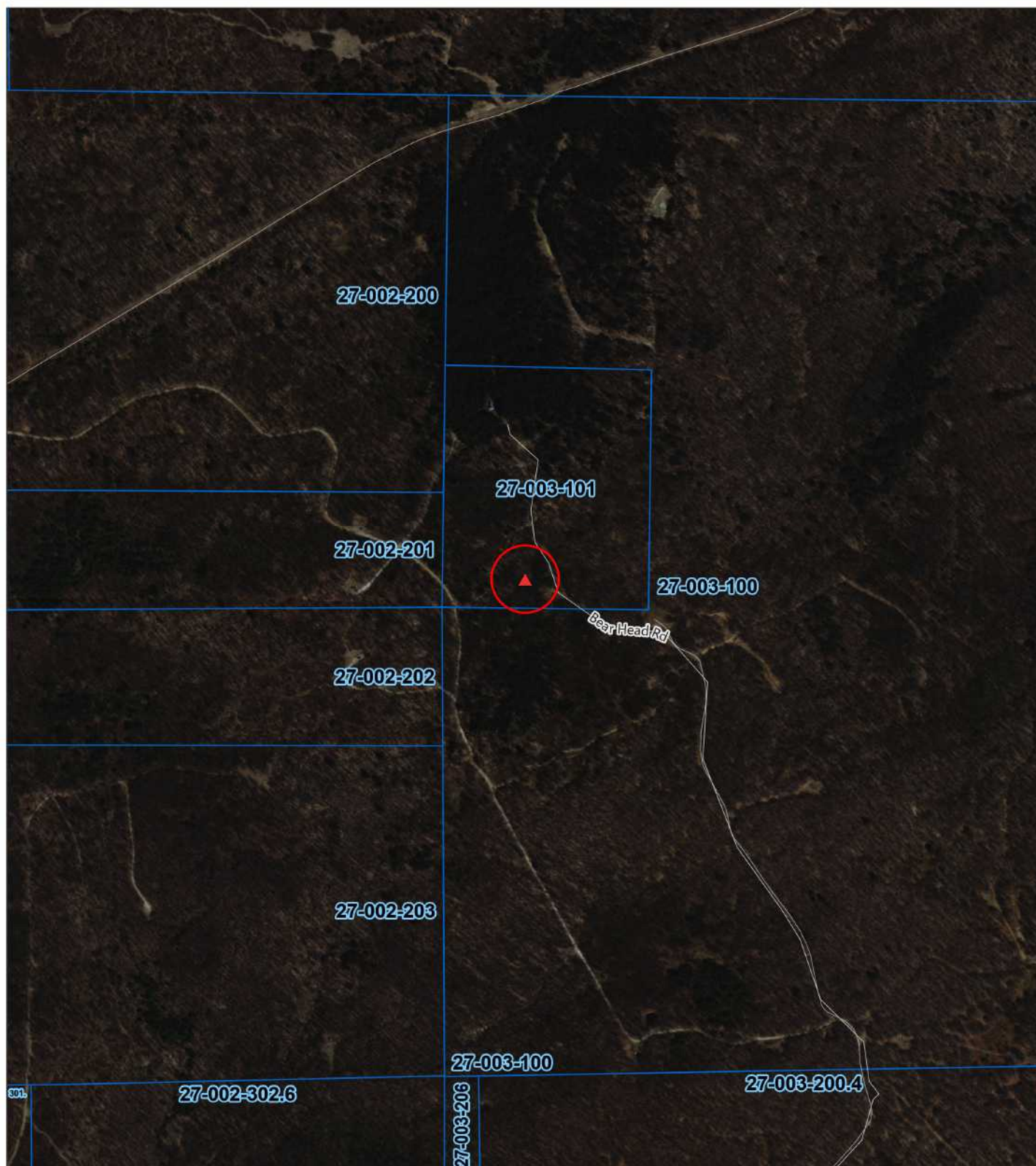
Black Cherry Wind Met Tower Project

Norwich Township, McKean County,
Pennsylvania



0 2 4 8
Miles

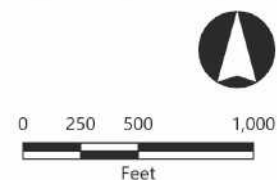
Figure 2. Parcel Boundaries - Met Tower A



Black Cherry Wind Met Tower Project

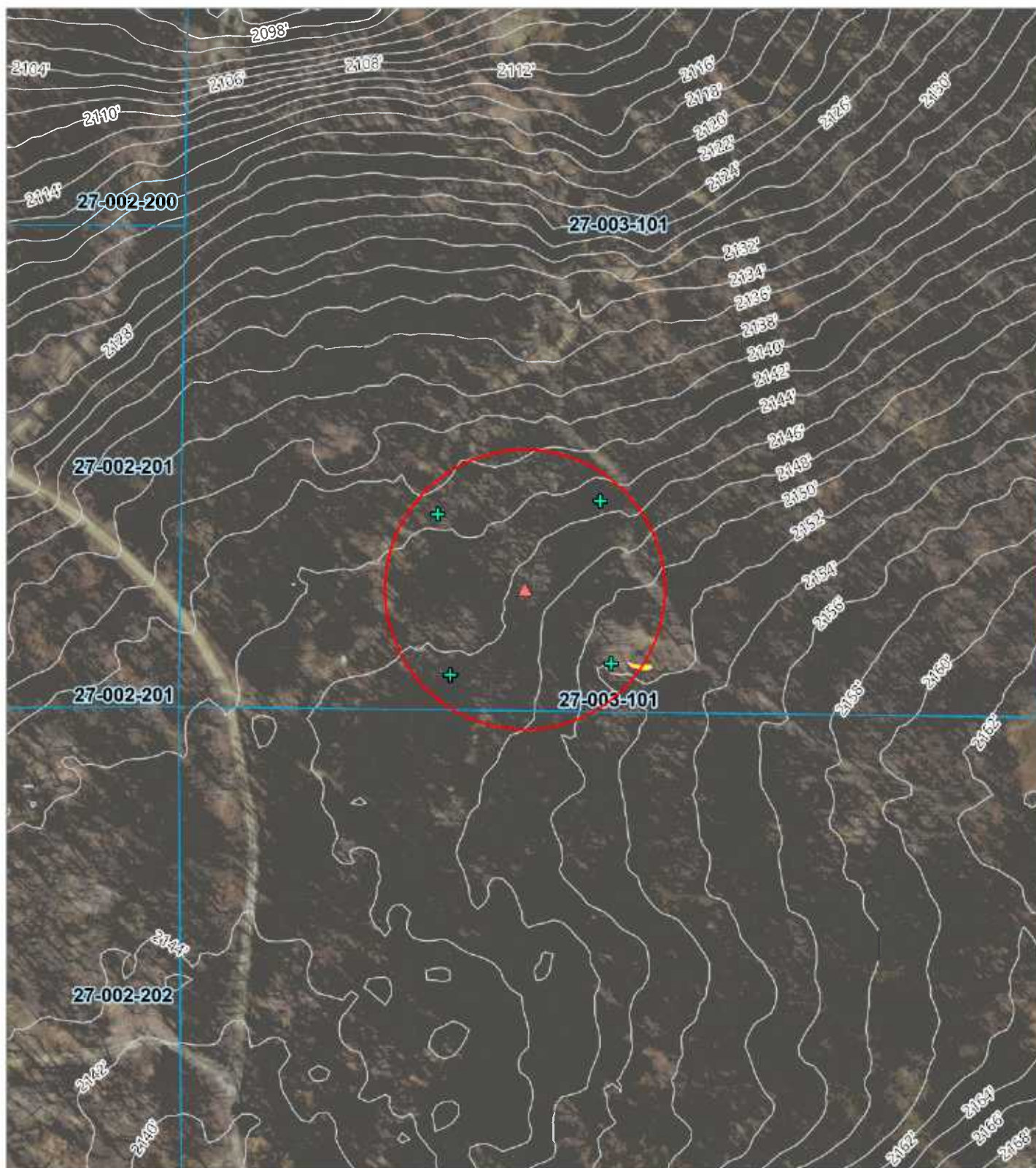
Norwich Township, McKean County,
Pennsylvania

-  Met Tower
-  200' Tower Buffer
-  Parcel Boundaries



Prepared May 12, 2025
Basemap: PEMA Orthoimagery 2018
Pennsylvania Emergency Management Agency

Figure 3. Site Plan - Met Tower A



Black Cherry Wind Met Tower Project

Norwich Township, McKean County,
Pennsylvania

- ▲ Met Tower
- + Met Tower Anchor
- 2-Foot Contour
- Delineated Wetland
- 200' Tower Buffer

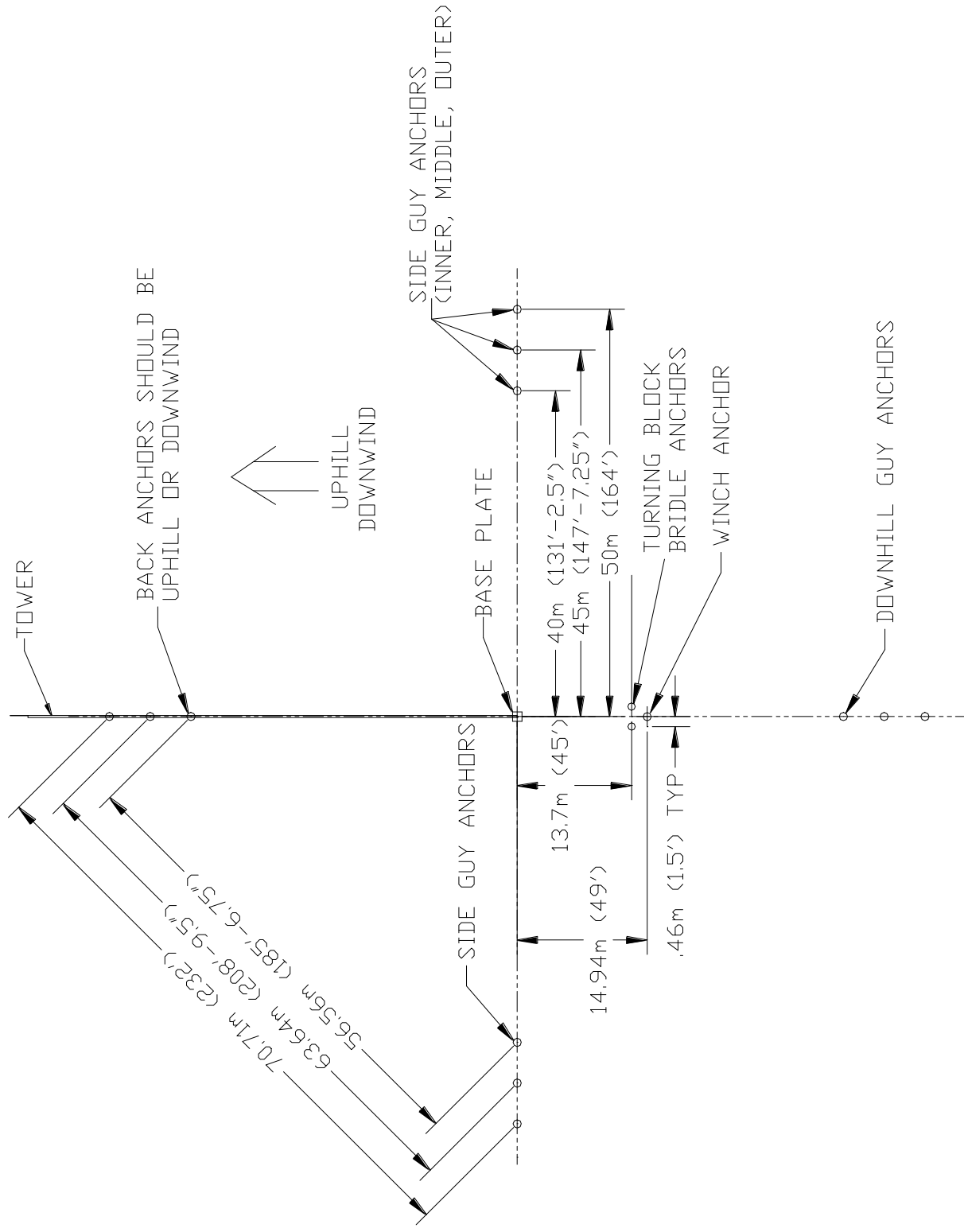


0 50 100 200
Feet

Prepared May 12, 2013
Based on: PEMA O 30100001, 2013
Pennsylvania Emergency Management Agency

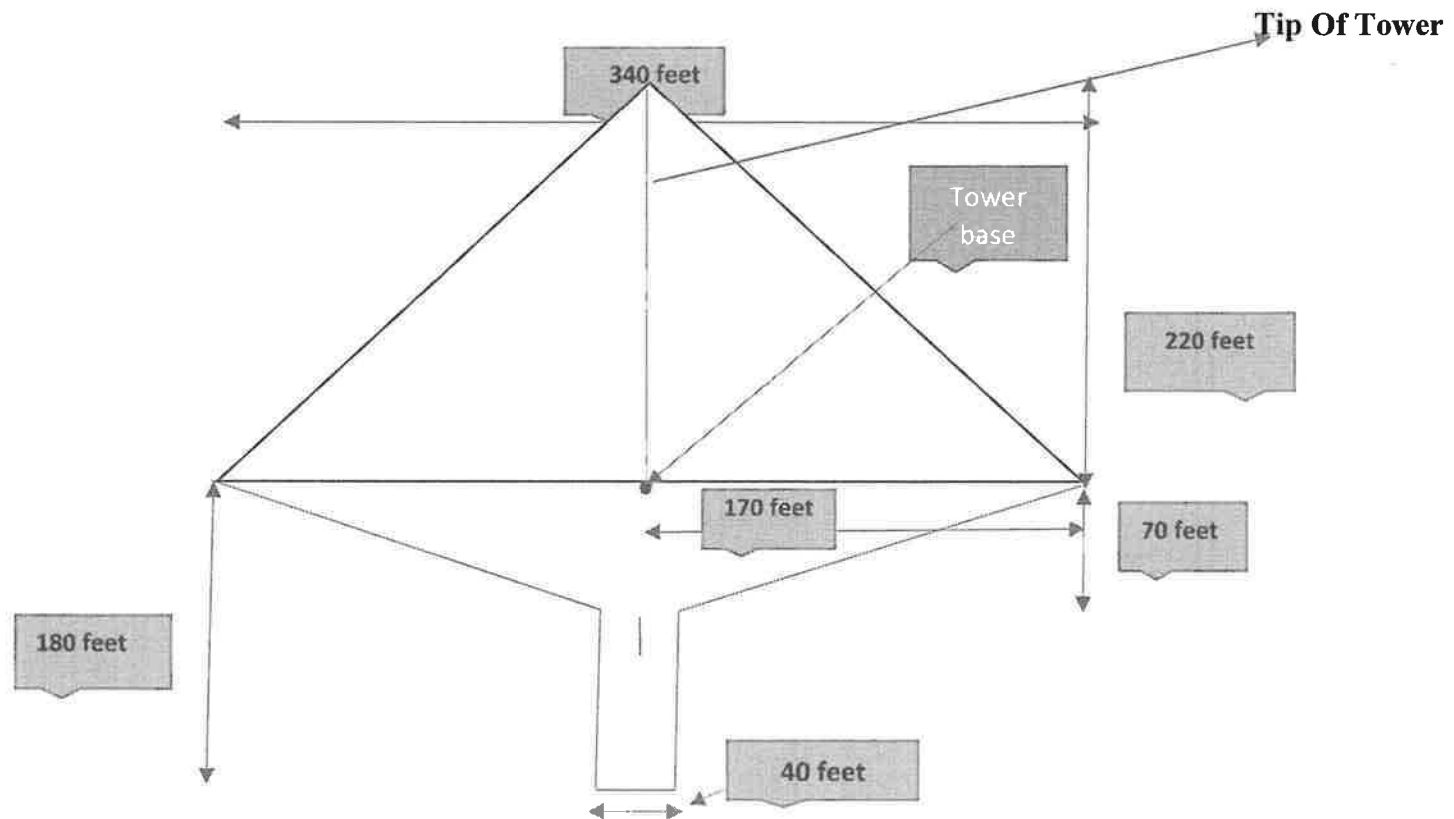
60m XHD Standard Footprint

Site Layout



Met A

Tip of tower layout is 40° Magnetic

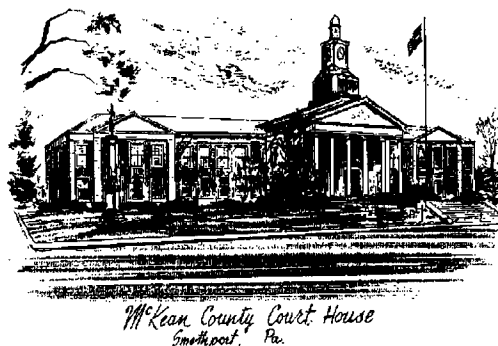


Attachment A

Meteorological Tower Easement Agreement

Book: 1086 Page: 180

MCKEAN COUNTY
RECORDER OF DEEDS
MICHELE L. VOGEL-SNYDER, RECORDER
500 WEST MAIN STREET
SMETHPORT, PA 16749
(814) 887-3250

***RETURN DOCUMENT TO:**

HUSCH BLACKWELL LLP - KANSAS CITY
4801 MAIN
KANSAS CITY, MO 64112

Instrument Number - 202501904

Recorded On 6/24/2025 At 1:16:59 PM

* Instrument Type - AGREEMENT

* Total Pages - 10

Invoice Number - 137596

* Grantor - BEARHEAD CAMP

* Grantee - BLACK CHERRY WIND POWER LLC

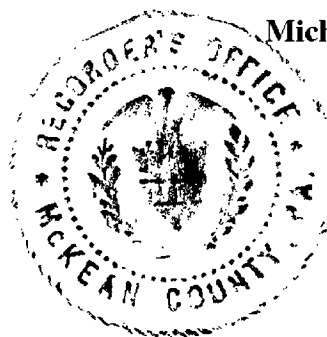
* Customer - SIMPLIFILE LC E-RECORDING

*** FEES**

STATE WRIT TAX	\$0.50
STATE JCS/ACCESS TO JUSTICE	\$40.25
COUNTY RECORDING FEES	\$23.00
COUNTY IMPROVEMENT FEE	\$2.00
ROD IMPROVEMENT FEE	\$3.00
TOTAL PAID	\$68.75

I hereby CERTIFY that this document is
Recorded in the Recorder of Deeds Office
Of McKean County, Pennsylvania

Michele L. Vogel-Snyder
Recorder of Deeds



THIS IS A CERTIFICATION PAGE

Do Not Detach

THIS PAGE IS NOW PART OF THIS LEGAL DOCUMENT

* - Information denoted by an asterisk may change during the verification process and may not be reflected on this page.

01AA5D



Prepared by:

Black Cherry Wind Power, LLC
470 Atlantic Ave, Suite 601
Boston, MA 02210

Return to:

Husch Blackwell LLP
Attn: Brandy Hutchison
4801 Main Street, Suite 1000
Kansas City, MO 64112

Municipality: Norwich Township

SPACE ABOVE LINE TO BE USED BY RECORDER

METEOROLOGICAL TOWER EASEMENT AGREEMENT

THIS METEOROLOGICAL TOWER EASEMENT AGREEMENT (“**Agreement**”) is entered into on May 29th, 2025, and made effective as of this 2nd day of June, 2025 (“**Effective Date**”) by and between Bearhead Camp (d/b/a Bear Head Camp), a Pennsylvania nonprofit corporation (“**Grantor**”), and Black Cherry Wind Power, LLC, a Delaware limited liability company (“**Grantee**”). Together, the Grantor and Grantee are referred to herein as the “**Parties**”.

RECITALS

A. Grantor is the fee owner of certain real property located in the County of McKean, in the Commonwealth of Pennsylvania, as more fully described on the attached Exhibit A (“**Premises**”).

B. Grantee is developing, constructing and operating a commercial wind energy conversion facility in McKean County, Pennsylvania (“**Project**”) and desires an easement on the Premises for the purposes set forth in this Agreement.

C. Grantor desires to grant Grantee an easement on the Premises in accordance with the terms and conditions set forth in this Agreement.

AGREEMENT

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the Parties agree as follows:

1. Recitals. The recitals and preambles set forth above are hereby made a part of and incorporated into this Agreement by this reference as if fully set forth herein

2. Easement. Grantor hereby grants and conveys to Grantee an irrevocable easement upon, through, over, across, and above the Premises for the purpose of installing, operating, maintaining, repairing, relocating and removing a meteorological tower, SODAR or LiDAR wind

measurement equipment, including any masts, supporting structures, guy wires, foundations and pads, footings and related facilities and equipment (“**Met Tower**”) in the area generally depicted on the attached Exhibit B and the rights of ingress and egress to and from the Met Tower (“**Met Tower Easement**”). The Parties agree that the Met Tower is generally depicted in Exhibit B and Grantee shall have the right to locate or relocate the Met Tower up to 100 feet in any direction from location depicted in Exhibit B (the “**Easement Area**”).

a. Grantor further hereby grants to Grantee, for the duration of the Term of this Agreement, an easement over, across and on the Premises and that real property adjacent to the Premises owned or controlled by Grantor for ingress to and egress from the Met Tower and Easement Area by means of existing roads and lanes, or otherwise by such route or routes as Grantee may construct from time to time (“**Access Easement**”) (collectively, the Met Tower Easement and Access Easement, the “**Easement**”). Grantee will prioritize, to the greatest extent possible, using the Grantor’s existing road extending from White Hollow Road as set forth in that certain Easement Agreement dated June 30, 1999, by and between Bear Head Camp, Inc. (n/k/a Bearhead Camp), and Collins Pine Company, an Oregon corporation, and recorded August 23, 1999, in the official records of McKean County, Commonwealth of Pennsylvania in Deed Book Volume 310 at Page 155, and other existing roads on the Premises as its access route to the Met Tower and Easement Area; *provided that*, to the extent necessary to reach the Met Tower and Easement Area with necessary equipment, the Access Easement shall include the right to permanently expand and improve existing roads and lanes, or to build new roads. Any new roads so built, or existing roads so expanded or improved, shall not exceed 25 feet in width at their widest point. All roads will be left in as good or better condition as compared to the condition of the roads as of the Effective Date when the Met Tower is removed from the Premises, and any roads damaged by Grantee will be repaired by Grantee when damaged.

b. For avoidance of doubt, under no circumstance shall Grantee use, or allow a third party to use, any portion of the Premises as a buffer zone for land uses on properties adjacent to the Premises.

3. No Interference. Grantor shall operate and maintain the Premises so as not to interfere with Grantee’s use of the Easement. Neither party shall erect, install, maintain or permit any physical barrier or physical impediment upon, over, or through the Access Easement.

4. Construction. Grantee shall pay the cost to permit, install, maintain, remove, reclaim, and restore the Premises. Grantee shall pay for any damage it causes to drainage tiles, soil, and permanent infrastructure on the Premises as a result of Grantee’s activities within the Premises.

5. Improvements. The Met Tower constructed, installed or placed on the Premises by Grantee shall be the sole property of Grantee and Grantor shall have no ownership or other interest in the Met Tower.

6. Term. The Term of this Agreement shall begin on the Effective Date and unless terminated earlier as provided in this Agreement shall continue until the earlier of (i) the removal of the Met Tower from the Premises, or (ii) the date five calendar years after the Effective Date (“**Term**”). Grantee shall have the right to terminate this Agreement at any time, by giving written notice of termination to Grantor.

7. Compensation. Grantee shall pay to Grantor the compensation set forth in the attached Exhibit C, which exhibit shall be removed from this Agreement prior to recording, and such removal shall not make this Agreement invalid.

8. Damages and Restoration.

a. Grantee shall be responsible for repairing any damage to the Premises to the extent such damage is caused by Grantee's use of the Premises.

b. Upon the earlier to occur of (i) Grantee's removal of the Met Tower and related facilities from the Premises and (ii) the expiration or termination of this Agreement (in either case, the "**Restoration Commencement**"), Grantee shall remove the Met Tower, if not already removed, and shall restore the Premises to a condition reasonably consistent with the surrounding geography at the time such restoration occurs. Grantee shall restore the Premises within 12 months of the Restoration Commencement. Grantee's obligations under this Agreement shall survive the expiration of the Term, or earlier termination of this Agreement and shall remain binding on Grantee until such time as Grantee completes its restoration obligations under this Section 8.

c. Grantee shall reimburse Grantor for crop and timber damages caused by Grantee's activities on the Premises as provided in the attached Exhibit C, which exhibit shall be removed from this Agreement prior to recording, and such removal shall not make this Agreement invalid.

9. Tax Program Penalties. The Parties acknowledge that the Premises is listed under, and receives preferential tax treatment due to, the Commonwealth of Pennsylvania Clean and Green Act. In anticipation of the removal of up to 2 acres of the Premises from the Clean and Green Act program for the installation of the Met Tower and use of the Easement Area, the Parties agree to manage responsibility for any penalties and tax matters associated with said removal as set forth in the attached Exhibit C, which exhibit shall be removed from this Agreement prior to recording, and such removal shall not make this Agreement invalid.

10. Dedication. Nothing contained in this Agreement shall be deemed a gift or dedication of any portion of the Premises to the general public or for any general public use or purpose whatsoever, it being the intention of the parties that this Agreement is for the exclusive benefit of Grantee.

11. Indemnification and Release. Each Party (the "**Indemnifying Party**") hereby agrees to indemnify, defend, and hold harmless the other Party, its affiliates, and each of their respective successors, assigns, directors, officers, employees, and agents (collectively, the "**Indemnified Party**") from and against any and all liabilities, damages, losses, costs, expenses (including reasonable attorneys' fees and expenses), causes of action, suits, claims, demands, or judgments of any nature whatsoever that may be imposed upon, incurred by, or asserted against the Indemnified Parties (collectively, "Claims"), as follows:

- a. Grantee shall indemnify Grantor for any Claims arising out of or in any way related to the following:

- i. The construction, maintenance, operation, or deconstruction of the Met Tower;
 - ii. Any Claims by Grantee employees or any party contracted by Grantee while on Grantor's property;
 - iii. Any third-party Claims associated with the Met Tower; and
 - iv. Any act or omission of Grantee, its employees, agents, contractors, or third party in connection with the Easement or the Met Tower.
- b. Grantor shall indemnify Grantee for any Claims arising out of or in any way related to the following:
 - i. The operation, maintenance, or use of the camp and campground;
 - ii. Any act or omission of Grantor, its employees, agents, contractors, or third party in connection with the camp and campground.

12. Successors and Assigns. The Easement shall run with the Premises and this Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors and assigns. Grantor consents to the recordation of the interest of any mortgagee or assignee of Grantee's interest in this Agreement; provided, however, that the recorded interest does not contravene the terms and conditions of this Agreement.

13. Miscellaneous. This Agreement shall be governed by the laws of the Commonwealth of Pennsylvania. If any portion of this Agreement is held to be invalid or unenforceable to any extent, the remaining provisions of this Agreement shall be valid and enforceable to the fullest extent permitted by law. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same document. This document may not be amended in any respect except by a writing executed and acknowledged by the parties hereto which shall be recorded in the Recorder of Deeds Office of Butler County, Pennsylvania.

The remainder of this page is intentionally blank.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

GRANTOR:

Bearhead Camp, (d/b/a Bear Head Camp)
a Pennsylvania nonprofit corporation

By: [Signature]

Name: WILLIAM V. BURT

Title: PRESIDENT

By: _____

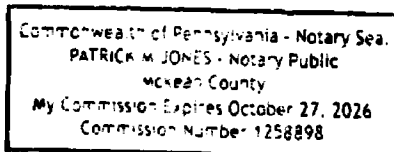
Name: _____

Title: _____

COMMONWEALTH OF PENNSYLVANIA)
COUNTY OF Mckean) SS:

The foregoing instrument was acknowledged before me on May 29, 2025 by William V. Burt, as President who represent that (s)he/they are authorized to act on behalf of Bearhead Camp, a nonprofit corporation.
(d/b/a Bear Head Camp)

In witness whereof, I hereunto set my hand and official seal.



[Signature]
Signature of notarial office

Notary Public
Title:

My Commission Expires: October 27, 2026

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

GRANTOR:

Bearhead Camp, (d/b/a Bear Head Camp)
a Pennsylvania nonprofit corporation

By: *[Signature]*

Name: Leonard J. McKernan, Jr.

Title: Secretary

By: _____

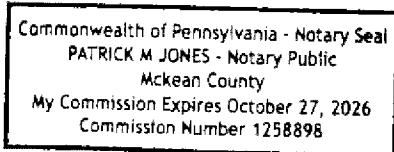
Name: _____

Title: _____

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF Mckean)

The foregoing instrument was acknowledged before me on May 29, 2025 by Leonard J. McKernan, Jr. as Secretary who represent that (s)he/they are authorized to act on behalf of Bearhead Camp, a nonprofit corporation.
(d/b/a Bear Head Camp)

In witness whereof, I hereunto set my hand and official seal.



[Signature]
Signature of notarial office


Notary Public
Title:

My Commission Expires: October 27, 2026

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

GRANTEE:

Black Cherry Wind Power, LLC, a Delaware
limited liability company

By: 


Name: William Havemeyer

Title: Manager

COMMONWEALTH OF MASSACHUSETTS §

COUNTY OF SUFFOLK §

On this 2 day of June, 2025, before me, the undersigned notary public, personally appeared William Havemeyer, proved to me through satisfactory evidence of identification, being personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose as Manager of Black Cherry Wind Power, LLC, a Delaware limited liability company.


Signature of Notary

Name: _____

My commission expires: _____

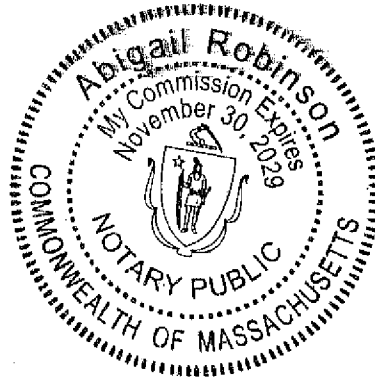


EXHIBIT A

DESCRIPTION OF PREMISES

Parcel 1:

FIRST:

BEGINNING at a point at the southwesterly corner of the tract described at item SECOND herein; thence in a southerly direction along the westerly line of Warrant 2863, 37.1 rods to a corner, being the southeasterly corner of property commonly known as the Stoneburg Farm; thence in an easterly direction and parallel to the northerly line of said Warrant 2863, 73.47 rods to a corner; thence in a northerly direction and parallel with said Warrant Line, 87.1 rods to a corner; thence in a westerly direction and parallel with said Warrant line, 41.47 rods to the northeast corner of the tract of land described at item SECOND herein, at a cherry tree; thence in a southerly direction along the easterly line of the tract of land described at item SECOND herein, 50 rods to a corner; thence in a westerly direction along the southerly line of the tract of land described as item SECOND herein, 32 rods to a point, being the place of beginning. Containing 30 acres, more or less.

EXCEPTING AND RESERVING all the oil, gas and other minerals as the same have been excepted and reserved or conveyed by predecessors in title.

SECOND:

BEGINNING at the northeasterly corner of the Gust Stoneberg Farm, being the west boundary line of Warrant No. 2863; thence in a southerly direction along the westerly boundary line 10 rods to a point; thence in an easterly direction, at right angles, 32 rods to a post on the westerly side of camp road; thence in a northerly direction, at right angles, 50 rods to a cherry tree; thence in a westerly direction, at right angles, 32 rods to a post on the westerly boundary line of Warrant 2863; thence in a southerly direction along the westerly boundary line of Warrant 2863, 40 rods to a point, being the place of beginning. Containing 10 acres and being part of Warrant 2863.

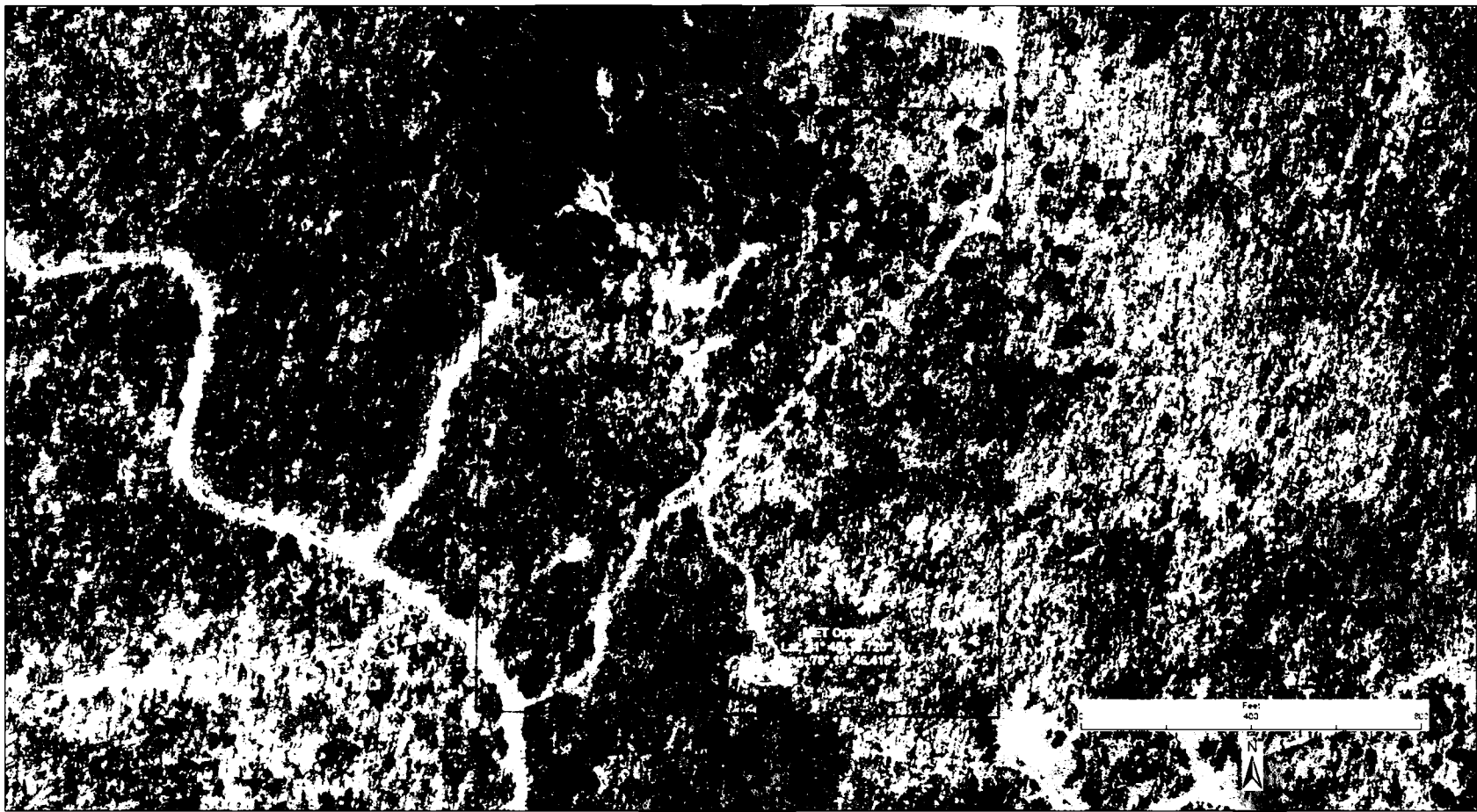
EXCEPTING AND RESERVING all the oil and gas in, under and upon said lands as the same is more fully set forth in prior instruments of record and more specifically at Deed Book Vol. 120, page 279.

Being the same tracts of land conveyed to Bearhead Camp, a Pennsylvania nonprofit corporation, by Deed from Joseph McKeirnan and William Henry, surviving Trustees for an unincorporated association known as Bearhead Camp, dated June 15, 1979, and recorded October 29, 1984, in the Office of the Recorder of Deeds for McKean County, Pennsylvania in Deed Book Vol. 24 at Page 535.

Parcel 1 Tax ID No: 27-003-101



Municipality: Norwich Township

EXHIBIT B
LOCATION OF MET TOWER



Confidential
Draft - Not for Construction
Black Cherry Wind Project
Landowner Exhibit
McKean County, Pennsylvania
Thursday, August 22, 2024

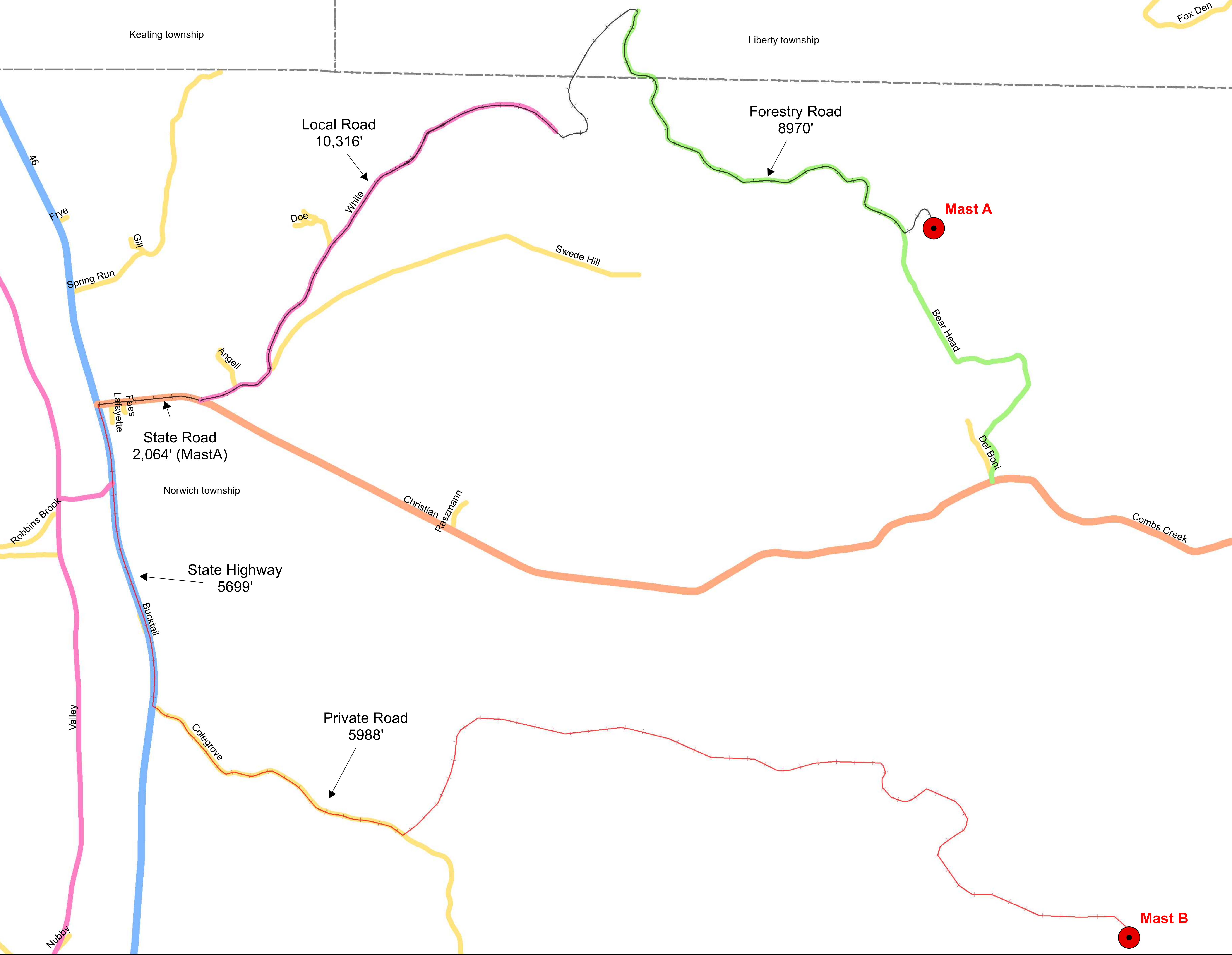
BEAR HEAD CAMP
27-003-101

- Legend**
-  Bear Head Camp Met Option 2
 -  Exhibit Parcel

SWIFT CURRENT

Attachment B

Proposed Access Route



N

Black Cherry

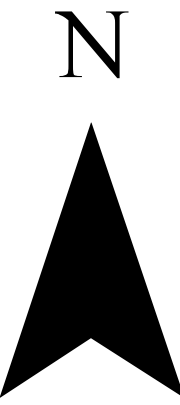
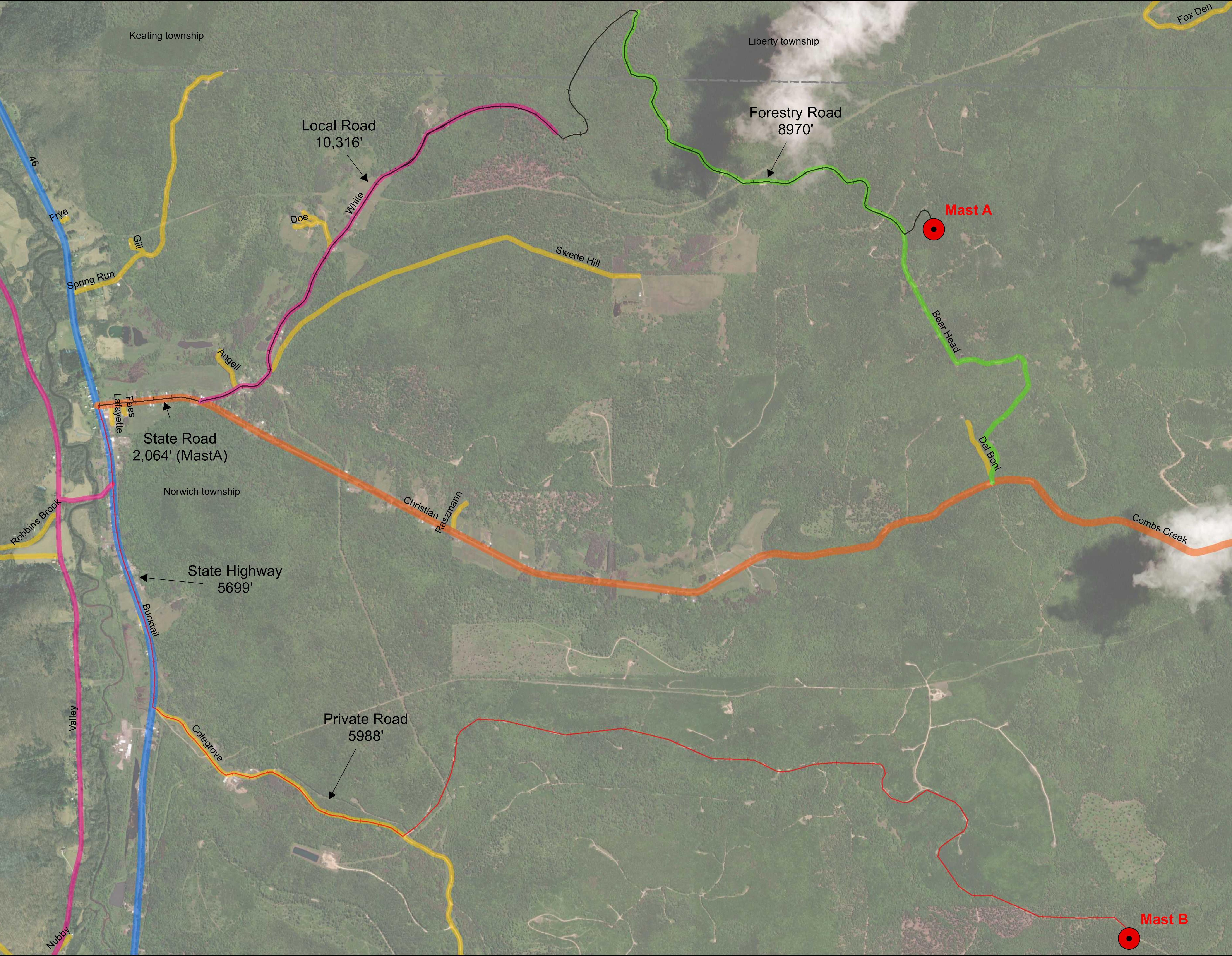
Commonwealth
of Pennsylvania
County of McKean

- MET Location
- MET A
- MET B
- Townships

- ## Road Class
- Local Road
 - Forestry Road
 - Private Road
 - State Road
 - State Highway





0 833 1,666
Feet






1 inch = 833 feet

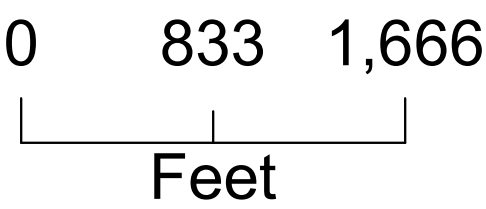


Black Cherry

Commonwealth
of Pennsylvania
County of McKean

-  MET Location
-  MET A
-  MET B
-  Townships

- ## Road Class
-  Local Road
 -  Forestry Road
 -  Private Road
 -  State Road
 -  State Highway



1 inch = 833 feet

Attachment C

Wetland Delineation Report

Wetland and Stream Delineation Report

Black Cherry Wind Project

Norwich Township

McKean County, Pennsylvania

Prepared for:



510 Bering Drive, Suite 300
Houston, TX 77057
Contact: Joey Shannon
jshannon@swiftcurrentenergy.com

Prepared by:



Environmental Design & Research,
Landscape Architecture, Engineering & Environmental Services, D.P.C.
34 Northeast Drive, Suite 1
BHershey, PA 17033
www.edrdpc.com

May 2025

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Project Location and Description	1
1.2	Purpose.....	1
2.0	REGULATORY AUTHORITIES AND PERMITS.....	2
2.1	Waters of the United States	2
2.2	Commonwealth of Pennsylvania Freshwater Wetlands and Protected Streams	5
3.0	REVIEW OF BACKGROUND DATA AND MAPPING	8
3.1	Physiography and Soils	8
3.2	Hydrology	9
3.2.1	Federal and State Mapped Wetlands and Streams.....	9
3.2.2	Mapped Floodplains.....	10
3.3	Mapped Vegetation.....	10
4.0	ON-SITE WETLAND AND STREAM DELINEATION.....	11
4.1	Methodology	11
4.1.1	Identification of Wetlands.....	11
4.1.2	Identification of Streams.....	12
4.2	Results	13
4.2.1	Wetlands	15
4.2.2	Uplands.....	15
5.0	CONCLUSIONS	17
	REFERENCES.....	18

LIST OF TABLES

Table 1. Jurisdictional Waters as Defined in the 2023 Rule, as Amended	3
Table 2. Non-Jurisdictional Waters as Defined in the 2023 Rule, as Amended.....	4
Table 3. Study Area Soil Mapping Units.....	9
Table 4. Vegetation/Land Cover Within the Study Area.....	10
Table 5. Delineated Wetlands.....	14

LIST OF APPENDICES

Appendix A. Figures	
Figure 1. Regional Project Location	
Figure 2. Topographic Mapping	
Figure 3. Study Area Soil Mapping Units	
Figure 4. Mapped Wetlands and Streams	
Figure 5. Flood Hazard Zones	
Figure 6. Study Area Land Cover	
Figure 7. Delineated Wetlands and Streams	
Appendix B. Routine Wetland Determination Data Sheets	
Appendix C. Photo Documentation	

1.0 INTRODUCTION

On behalf of Swift Current Energy (Swift Current), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) conducted an on-site wetland and stream delineation for met tower installations associated with the Black Cherry Wind Project (the Project). This *Wetland and Stream Delineation Report* summarizes the results of on-site delineations.

1.1 PROJECT LOCATION AND DESCRIPTION

Swift Current is proposing the installation of two meteorological (Met) towers, at two different locations (the Northern Study Area and Southern Study Area) that combined total approximately 5.8 acres, (herein referred to as the Study Area) in Norwich Township, McKean County, Pennsylvania (Figure 1; all figures are in Appendix A). The location of the Study Area is accessed from the west via Emporium Road (Pennsylvania Route 46). The Project will consist of two Meteorological towers (Met towers) and would collect weather data at various heights above the ground which will be used to advance the design of the proposed Black Cherry Wind Project. The majority of the Study Area is deciduous upland forest located on terraced hilltops of the Allegheny Plateau.

EDR was retained to identify all wetlands and streams within and adjacent to the proposed Project components described, hereafter referred to as the Study Area. Specifically, the Study Area includes all of the land where Facility components may be sited, plus a 250-foot radius off the center point of the proposed tower locations as well as vehicular access from the nearest roadway.

1.2 PURPOSE

The purpose of this study was to delineate and describe all wetlands and streams that occur within the Study Area and their anticipated state and/or federal jurisdiction. Specific tasks performed for this study included: 1) reviewing background resource data/mapping, 2) field delineating and flagging wetlands and streams, 3) surveying delineated wetland and stream boundaries using a Global Positioning System (GPS) unit, 4) quantifying the area of on-site wetlands and streams, and 5) describing delineated wetlands and streams based on hydrology, vegetation, soils and/or other data collected in the field.

This report describes the relevant regulatory authorities and potential permits required, summarizes the desktop review, and presents the results of the wetland and stream delineations conducted by EDR. The report also provides the necessary information to support any jurisdictional determinations by, and/or related permit application submittals to, the U.S. Army Corps of Engineers (USACE) and/or the Pennsylvania Department of Environmental Protection (PADEP), along with any other surface water impact evaluations that may be conducted in support of the Project.

2.0 REGULATORY AUTHORITIES AND PERMITS

Wetlands, streams, and other surface water features are regulated by both federal and state authorities. This section discusses the regulatory frameworks applicable to surface waters in the Commonwealth of Pennsylvania.

2.1 WATERS OF THE UNITED STATES

In accordance with Section 404 of the Clean Water Act (CWA), the USACE has regulatory jurisdiction over waters of the United States (WOTUS). According to the USACE, WOTUS include lakes, ponds, streams (as defined by an ordinary high water mark [OHWM]), tidal waters, and wetlands. Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 Code of Federal Regulations [CFR] § 328.3). Such areas are indicated by the presence of three conditions: 1) a dominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) evidence of wetland hydrology during the growing season (Environmental Laboratory, 1987).

The *Clean Water Rule: Definition of “Waters of the United States”* (the 2015 Rule), effective August 28, 2015, was adopted to provide a clear and consistent approach to defining the scope of the CWA and WOTUS. However, on December 30, 2022, the U.S. Environmental Protection Agency (USEPA) and USACE announced a final rule founded upon the pre-2015 definition of WOTUS and updated to reflect consideration of Supreme Court decisions, the scientific record, and the agencies’ technical expertise. The *Revised Definition of “Waters of the United States”* rule (the 2023 Rule) became effective on March 20, 2023 (USACE and USEPA, 2023a).

On May 25, 2023, the Supreme Court issued a decision in the *Sackett v. USEPA* case that narrowed the scope of federally protected wetlands according to the CWA. Subsequently, on August 29, 2023, the USEPA and USACE issued a final rule that amends the 2023 Rule to conform key aspects of the regulatory text to the Supreme Court’s decision in the *Sackett v. USEPA* case. The amended rule, *Revised Definition of “Waters of the United States”; Conforming*, was published in the Federal Register and became effective on September 8, 2023 (USACE and USEPA, 2023b).

Broadly, this conforming amendment:

1. Removes the significant nexus standard from the definition of adjacent wetlands, tributaries, and other waters categories of WOTUS.
2. Leaves in place the relatively permanent standard in determining WOTUS.
3. Revises the definition of “adjacent wetlands” to include only those wetlands with a direct surface water connection to a WOTUS that meets the relatively permanent standard.
4. Removes interstate wetlands from the interstate waters category of WOTUS.

This updated definition of WOTUS includes the original seven jurisdictional categories (Table 1) and eight categories that are specifically not considered WOTUS (Table 2). Due to ongoing litigation, the 2023 Rule, as amended, is only active in 23 states plus the District of Columbia. The pre-2015 regulatory regime,

consistent with the *Sackett v. USEPA* case that defines WOTUS similar to the amended 2023 Rule, is in effect in the remainder of the 27 states. As such, jurisdictional results are functionally the same when the amended 2023 Rule is applied. Pennsylvania is included in the list of states where the 2023 Rule, as amended, is in effect (USEPA, 2024). As a result, anticipated jurisdiction in this report is consistent with the 2023 Rule, as amended effective September 8, 2023.

Table 1. Jurisdictional Waters as Defined in the 2023 Rule, as Amended

Water Type	Regulatory Definition
Traditional navigable water (TNW)	A waterbody that is "navigable-in-fact." TNWs include large rivers and lakes that could be used in interstate or foreign commerce, as well as waterbodies affected by tides.
Territorial seas	Territorial seas that extend 3 miles out to sea from the coast.
Interstate waters	Waters such as streams or lakes that cross or form part of state boundaries.
Impoundments of WOTUS	Impoundments created by impounding one of the WOTUS that was jurisdictional under this rule's definition at the time the impoundment was created, and impoundments of waters that at the time of assessment meet the definition of WOTUS under the rule as a TNW, the territorial seas, interstate water, jurisdictional tributary, or jurisdictional adjacent wetland, regardless of the water's jurisdictional status at the time the impoundment was created.
Tributaries to TNWs, territorial seas, interstate waters, or impoundments	Branches of creeks, streams, rivers, lakes, ponds, ditches, and impoundments that ultimately flow into TNWs, the territorial seas, interstate waters, or impoundments of jurisdictional waters. Tributaries are jurisdictional if they meet the relatively permanent standard. ¹
Adjacent wetlands ²	Wetlands adjacent to TNWs, the territorial seas, or interstate waters. Wetlands with a continuous surface connection to relatively permanent impoundments or to jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard.
Other waters	Intrastate lakes and ponds that are not identified in the categories above but do meet the relatively permanent standard and have continuous surface water connections to the waters identified above.

¹ The relatively permanent standard identifies WOTUS as having relatively permanent, standing, or continuously flowing waters.

² The USACE and United States Environmental Protection Agency (USEPA) issued a memorandum to the field on March 12, 2025, in response to the 2023 Supreme Court Decision in *Sackett v. EPA* which further clarifies the definition of Adjacent wetlands as the wetland must abut and have a continuous surface connection to a requisite WOTUS.

Table 2. Non-Jurisdictional Waters as Defined in the 2023 Rule, as Amended

Water Type	Regulatory Definition
Waste treatment systems	Includes lagoons and treatment ponds (such as settling or cooling ponds), designed to either convey or retain, concentrate, settle, reduce, or remove pollutants, either actively or passively, from wastewater prior to discharge (or eliminating any such discharge).
Prior converted cropland	Any area that, prior to December 23, 1985, was drained or otherwise manipulated for the purpose, or having the effect, of making production of an agricultural product possible. The USEPA and USACE recognize designations of prior converted cropland made by the Secretary of Agriculture. An area is no longer considered prior converted cropland for purposes of the CWA when the area is abandoned and has reverted to wetlands. Abandonment occurs when prior converted cropland is not used for, or in support of, agricultural purposes at least once in the immediately preceding five years. For the purposes of the CWA, the USEPA has the final authority to determine whether prior converted cropland has been abandoned.
Ditches (including roadside ditches)	Excavated wholly in, and draining only, dry land and that do not carry a relatively permanent flow of water.
Artificially irrigated areas	Areas that would revert to dry land if the irrigation ceased.
Artificial lakes or ponds	Created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
Artificial reflecting or swimming pools or other small ornamental bodies of water	Created by excavating or diking dry land to retain water for primarily aesthetic reasons.
Waterfilled depressions	Created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of WOTUS.
Swales and erosional features	Gullies or small washes characterized by low volume, infrequent, or short duration flow.

A Section 404 permit from the USACE is required for activities that result in the placement of dredged or fill materials in WOTUS. In addition, Section 10 of the Rivers and Harbor Act requires a permit from the USACE to construct any structure in, under, or over any TNWs, as well as any proposed action that would alter or disturb these waters (such as excavation/dredging or deposition of materials).

2.2 COMMONWEALTH OF PENNSYLVANIA FRESHWATER WETLANDS AND PROTECTED STREAMS

The Dam Safety and Encroachments Act; The Clean Streams Law; Section 7 of the Act of June 14, 1923; sections 514, 1901-A, 1908-A, 1917-A and 1920-A of The Administrative Code of 1929; and the Flood Plain Management Act (25 Pa. Code § 105.17) gives the PADEP jurisdiction over state-protected wetlands and waterways. Any feature that meets the definition of a wetland using the three-parameter approach outlined in the *Corps of Engineers Wetlands Delineation Manual* or possesses a defined bed and bank that drains greater than 100 acres of land are considered waters of the Commonwealth. The Pennsylvania Code categorizes wetlands in two classes: "exceptional value wetlands" and "other wetlands." Exceptional value wetlands are wetlands that exhibit one or more of the following characteristics:

- Wetlands that provide habitat for fauna or flora that is listed as threatened or endangered under the Endangered Species Act of 1973, the Wild Resource Conservation Act, 30 Pa.C.S. relating to the Fish and Boat Code or 34 Pa.C.S. relating to the Game and Wildlife Code.
- Wetlands that are hydrologically connected to or located within 0.5 mile of wetlands identified as providing habitat to threatened or endangered species as previously described.
- Wetlands located in or along the floodplain of wild trout streams or waters listed as exceptional value under Chapter 93, including the floodplain of stream's tributaries to these waters.
- Wetlands within corridors of a watercourse or waterbody that has been designated as a national wild or scenic river in accordance with the Wild and Scenic Rivers Act of 1968 or designated as wild or scenic under the Pennsylvania Scenic Rivers Act.
- Wetlands that are located along an existing public or private drinking water supply. This includes wetlands that maintain the quality or quantity of the drinking water supply from surface or groundwater sources.
- Wetlands that are located in areas designated as "natural" or "wild" by the PADEP within state forest or park lands, wetlands located in areas designated as federal wilderness areas under the Wilderness Act or the federal Eastern Wilderness Act of 1975, and wetlands located in areas designated as national natural landmarks by the Secretary of the Interior under the Historic Sites Act of 1935.

Other wetlands are any wetland that does not satisfy the criteria for an exceptional value wetland.

Under sections 5(b)(1) and 402 of the Clean Streams Law, and section 1920-A of the Administrative Code of 1929, the PADEP has regulatory jurisdiction over any activity that may degrade the condition of protected water uses. According to 25 Pa. Code § 93.4a, antidegradation requirements include existing use protection for surface waters, protection for High Quality Waters and protection for Exceptional Value Waters. Protected water uses are categorized as follows:

- Aquatic Life
 - Cold Water Fishes (CWF)—Maintenance or propagation, or both, of fish species including the family *Salmonidae* and additional flora and fauna which are indigenous to a cold water habitat.

- Warm Water Fishes (WWF)—Maintenance and propagation of fish species and additional flora and fauna which are indigenous to a warm water habitat.
- Migratory Fishes (MF)—Passage, maintenance and propagation of anadromous and catadromous fishes and other fishes which move to or from flowing waters to complete their life cycle in other waters.
- Trout Stocking (TSF)—Maintenance of stocked trout from February 15 to July 31 and maintenance and propagation of fish species and additional flora and fauna which are indigenous to a warm water habitat.
- Water Supply
 - Potable Water Supply (PWS)—Used by the public as defined by the Federal Safe Drinking Water Act, 42 U.S.C.A. § 300F, or by other water users that require a permit from the Department under the Pennsylvania Safe Drinking Water Act, or the Act of June 24, 1939, after conventional treatment, for drinking, culinary and other domestic purposes, such as inclusion into foods, either directly or indirectly.
 - Industrial Water Supply (IWS)—Use by industry for inclusion into nonfood products, processing and cooling.
 - Livestock Water Supply (LWS)—Use by livestock and poultry for drinking and cleansing.
 - Wildlife Water Supply (AWS)—Use for waterfowl habitat and for drinking and cleansing by wildlife.
 - Irrigation (IRS)—Used to supplement precipitation for crop production, maintenance of golf courses and athletic fields and other commercial horticultural activities.
- Recreation and Fish Consumption
 - Boating (B)—Use of the water for power boating, sail boating, canoeing and rowing for recreational purposes when surface water flow or impoundment conditions allow.
 - Fishing (F)—Use of the water for the legal taking of fish for recreation or consumption.
 - Water Contact Sports (WC)—Use of the water for swimming and related activities.
 - Esthetics (E)—Use of the water as an esthetic setting to recreational pursuits.
- Special Protection
 - High Quality Waters (HQ)
 - Exceptional Value Waters (EV)
- Other
 - Navigation (N)—Use of the water for the commercial transfer and transport of persons, animals and goods.

A Chapter 105 permit application is required for any impacts to wetlands and streams within the Commonwealth. For impacts to WOTUS, a Joint Application for Permit under the Statewide General Permit program with the PADEP and USACE is required.

3.0 REVIEW OF BACKGROUND DATA AND MAPPING

In preparation for the field delineations, EDR reviewed publicly available data related to physiography, soils, hydrology, and vegetation in the Study Area. Mapping and data were obtained from various sources, including but not limited to the following:

- U.S. Geological Survey topographic mapping (Port Allegany and Norwich 7.5-minute quadrangles)
- U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) mapping
- Pennsylvania (PA) Modeled Wetlands
- The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (Soil Survey Staff, 2025)
- The NRCS List of Hydric Soils of the State of the Commonwealth of Pennsylvania (USDA NRCS, 2025)
- The National Land Cover Database land cover and vegetation classes (Dewitz, 2023)
- Recent aerial photography.

3.1 PHYSIOGRAPHY AND SOILS

The Study Area is located within the Deep Valleys physiographic province of Pennsylvania. The geography in this region is characterized by very deep and angular valleys, with moderate to high local relief, and is underlain by sandstone, siltstone, shale, and conglomerate rock. (Sevon, 2023).

Elevations within the Study Area range from approximately 2,120 to 2,260 feet above mean sea level, and is located on the tops of flat ridges, flanked by deep valleys (Figure 2). Elevation range within these valleys is approximately 1,600 to 1,700 feet above mean sea level. A steep gradient exists where valleys begin to develop at the margins of flat ridges, as elevation descends rapidly.

The Web Soil Survey of McKean County (Soil Survey Staff, 2025) indicates the presence of four soil mapping units within the Study Area (Figure 3). Cookport loam (CoB & CpB) is the predominant mapping unit, with Hazleton channery loam (HdB) also common within the Study Area. These soils range from well drained to somewhat poorly drained, and generally have a loam texture. Table 3 lists the soil mapping units within the Study Area and their slope, drainage class, hydric rating, and hydric classification. Hydric ratings and hydric soil classifications are based on information obtained from the NRCS Web Soil Survey (NRCS, 2025). Although soil mapping units may have a predominantly non-hydric or non-hydric rating in the online databases, this is for general use and does not supersede specific conditions documented in the field.

Table 3. Study Area Soil Mapping Units

Mapping Unit Symbol	Mapping Unit	Percent of Study Area	Slope	Drainage ¹	Hydric Rating ²	Hydric Classification ³
CoB	Cookport loam	50.0%	3-8%	MWD	5%	Predominantly non-hydric
HdB	Hazleton channery loam	46.5%	0-8%	WD	0%	Non-hydric
CpB	Cookport loam	2.2%	0-8%	MWD	5%	Predominantly non-hydric
CaB	Cavode silt loam	1.3%	3-8%	SPD	5%	Predominantly non-hydric

¹WD = well drained, MWD = moderately well drained, and SPD = somewhat poorly drained.

² Map units are composed of one or more component soil types, each of which is individually rated as hydric or not hydric. The hydric rating, as provided in the USDA Web Soil Survey, indicates the percentage of the map unit that meets hydric criteria.

³ Hydric classification categories are based on the total percentage of hydric soils in the map unit, as listed on the USDA Web Soil Survey. Hydric = 100% of map unit components rated as hydric. Predominantly hydric = 66%–99% of map unit components rated as hydric. Partially hydric = 33%–66% of map unit components rated as hydric. Predominantly non-hydric = up to 33% of map unit components rated as hydric. Non-hydric = 0% of map unit components rated as hydric.

3.2 HYDROLOGY

The Study Area is located within the Upper Allegheny Hydrologic Unit (05010001). Most of the surface water occurring within the Study Area is generated by direct precipitation and run-off from adjacent land. The average annual precipitation from 2000 to 2025 was 40.67 inches at the nearby Bradford Regional Airport weather station (NOAA, 2025).

The Study Area does not include any TNWs or any state navigable waters. The Allegheny River is the closest TNW, located approximately 30 miles west of the Study Area. The Allegheny River is approximately 325 miles long and has a drainage basin of approximately 11,580 square miles. Headwaters of the Allegheny River originate in Pennsylvania, where the river flows north into New York before turning southwest and flowing back into Pennsylvania. At the confluence of the Allegheny River and the Monongahela River, the Ohio River is formed in Pittsburgh, Pennsylvania.

The closest mapped Chapter 93 stream is an unnamed tributary to Skinner Creek, located approximately 670 feet northwest of the Northern Study Area. This unnamed tributary flows north, is designated by Chapter 93 as a High Quality (HQ) Cold Water Fishes (CWF) feature and is a first order stream.

3.2.1 Federal and State Mapped Wetlands and Streams

Review of NWI mapping indicates no NWI mapped water resources occur within the Study Area (Figure 4).

Pennsylvania Modeled Wetlands Mapping indicates the potential presence of four forested wetlands within the Study Area. Additionally, no Chapter 93 designated-use mapped streams occur within the Study Area (Figure 4).

3.2.2 Mapped Floodplains

According to Federal Emergency Management Agency map services, no portion of the Study Area is located within a mapped floodplain. The closest mapped floodplain is associated with North Branch Colegrove Brook and is located approximately 1.25 miles west of the Study Area (Figure 5).

3.3 MAPPED VEGETATION

Mapped land cover and vegetation occurring within the Study Area were evaluated by consulting current National Land Cover Database mapping (Dewitz, 2023). The Study Area primarily consists of deciduous forest (Table 4 and Figure 6).

Table 4. Vegetation/Land Cover Within the Study Area

Land Cover Class	Acres	Percentage of the Study Area
Deciduous Forest	4.3	75%
Shrub/Scrub	0.8	13.7%
Developed, Open Space	0.7	11.3%
Total	5.8	100%

Source: Dewitz, 2023.

4.0 ON-SITE WETLAND AND STREAM DELINEATION

EDR conducted field delineations of wetlands and streams at the Study Area on March 27, 2025. Precipitation for March, 2025, was less (2.19 inches) than the long-term monthly average for March 2000–2025 (2.72 inches) (NOAA, 2025).

4.1 METHODOLOGY

Wetlands and streams were identified, mapped, and classified by type according to relevant federal and state standards.

4.1.1 Identification of Wetlands

The identification of wetland boundaries was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). Determination of wetland boundaries was also guided by the methodologies presented in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0* (Regional Supplement) (USACE, 2012). Attention was given to the size of the wetland (including portions that may extend outside the Study Area), evidence of disturbance, and the identification of potential hydrologic connections between wetlands, as these factors could influence jurisdictional status. Wetland boundaries were defined in the field with sequentially numbered pink surveyor's flagging and mapped using a GPS unit with reported sub-meter accuracy.

Delineated features were characterized according to the wetlands and deepwater habitats classification system used in NWI mapping (Cowardin et al., 1979). Data were collected from sample plots in representative wetland cover types and recorded on USACE Routine Wetland Determination forms (Appendix B). The data collected at each delineated wetland included dominant vegetation, hydrology indicators, and soil characteristics. Data to confirm upland areas were also collected adjacent to wetland boundaries and in areas where aerial photograph signatures or existing wetland mapping suggested potential wet conditions. Upland data were also documented and recorded on USACE Routine Wetland Determination forms (Appendix B). Photographs were taken of each wetland delineated within the Study Area (Appendix C).

Wetland hydrology was evaluated based on the presence of primary and secondary indicators. The Regional Supplement lists the following primary indicators of wetland hydrology: (A1) surface water, (A2) high water table, (A3) saturation, (B1) water marks, (B2) sediment deposits, (B3) drift deposits, (B4) algal mat or crust, (B5) iron deposits, (B7) inundation visible on aerial imagery, (B8) sparsely vegetated concave surface, (B9) water-stained leaves, (B13) aquatic fauna, (B15) marl deposits, (C1) hydrogen sulfide odor, (C3) oxidized rhizospheres on living roots, (C4) presence of reduced iron, (C6) recent iron reduction in tilled soils, and (C7) thick muck surface. Per the Regional Supplement, the presence of any one of these primary indicators is sufficient evidence that wetland hydrology is present. In addition, the Regional Supplement identifies the following secondary indicators, which were also used by EDR to determine wetland hydrology: (B6) surface soil cracks, (B10) drainage patterns, (B16) moss trim lines, (C2) dry-season water table, (C8) crayfish burrows, (C9) saturation visible on aerial imagery, (D1) stunted or stressed plants, (D2) geomorphic position, (D3)

shallow aquitard, (D4) microtopographic relief, and (D5) results of the FAC-neutral test. In accordance with the Regional Supplement, in the absence of a primary indicator, the presence of any two secondary indicators is considered a suitable indication of wetland hydrology.

Wetland vegetation is indicated by a dominance of hydrophytic plant species, or species that have adapted to grow in areas of inundation and soil saturation. Assessment of vegetation focused on the identification of dominant plant species in four categories: trees (greater than or equal to 3 inches diameter at breast height), saplings/shrubs (less than 3 inches diameter at breast height and greater than 3.2 feet tall), herbs (all vegetation less than 3.2 feet tall), and woody vines. Dominance was determined by visually estimating those species having the greatest absolute percent cover within each stratum. Vascular plant nomenclature and wetland indicator status for dominant plant species were determined by the Wildnote field data collection application, which refers to the USDA PLANTS Database (USDA NRCS, 2021) and the National Wetland Plant List, an interagency effort compiled by the USACE (2020). The indicator status represents a plant's likelihood of occurring in wetlands. The five indicator statuses and their probability of being observed in a wetland are as follows:

- Obligate (OBL): Plants occur within wetlands more than 99% of the time
- Facultative Wetland (FACW): Plants occur within wetlands 67 to 99% of the time
- Facultative (FAC): Plants occur within wetlands 33 to 67% of the time
- Facultative Upland (FACU): Plants occur within wetlands 1 to 33% of the time
- Upland (UPL): Plants occur within wetlands less than 1% of the time.

Those plant species that are not assigned an indicator status in the National Wetland Plant List are assumed to always be found in uplands and assigned an indicator status of UPL. Wetlands are indicated by a dominance and/or prevalence of hydrophytic plant species (i.e., those assigned an indicator status of OBL, FACW, or FAC).

Hydric soils are those that are poorly drained and are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil layer. The presence of hydric soils is indicative of the possible presence of wetlands (Environmental Laboratory, 1987). Hydric soil conditions were determined in the field through observation of soils composition, color, and morphology. Soils data were collected by using a Dutch auger and tiling spade to examine the soil profile. Soil colors were determined using Munsell Soil Charts (Munsell Color, 2009). Information concerning soil mapping units, color, texture, and matrix and concentration color was recorded at each sample location and used to determine whether the soils displayed hydric characteristics.

4.1.2 Identification of Streams

Streams were identified according to the Cowardin et al. (1979) classification system, and stream boundaries were determined based on the presence of OHWM characteristics, including a "clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris" (33 CFR 329.11). Stream boundaries were defined and mapped in the field using the same method as described above for wetlands. The OHWM, if present, was determined through evaluation of

hydrologic, geomorphic, and biological characteristics in accordance with the USACE *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams: Final Version* (David et al., 2025). Data regarding stream morphology, stream bank and channel width, water depth, stream bed substrate, in-stream cover, and biological indicators were collected and recorded on stream data forms (Appendix B). Photographs were taken of each stream delineated within the Study Area (Appendix C).

4.2 RESULTS

EDR identified one wetland within the Northern Study Area, no wetlands were identified within the Southern Study Area (Figure 7). There were not any streams identified. The data collected at the delineated wetland is summarized in Table 5. In accordance with the Cowardin et al. (1979) classification system, the feature delineated within the Northern Study Area consisted of a palustrine emergent wetland (PEM) community type.

A description of the delineated wetland within the Study Area is provided in Section 4.2.1 and Section 4.2.2 discusses upland verification points.

Table 5. Delineated Wetlands

Wetland Delineation ID ¹	Wetland Acreage Within Study Area by Type ²					Stream Present in Wetland ³	Latitude of Centroid	Longitude of Centroid	Anticipated Federal Jurisdiction ⁴	Rationale for Federal Jurisdiction ⁵	Anticipated State Jurisdiction	Figure 7 Sheet Number
	PEM	PSS	PFO	POW	Total							
33-W001	0.006	-	-	-	0.006	No	41.755132	-78.329636	No	Isolated	Yes	1

¹ Field ID assigned by EDR.

² Wetland community types are based upon the Cowardin et al. (1979) classification system: open water wetland (POW), palustrine emergent wetland (PEM), palustrine forested wetland (PFO), palustrine scrub-shrub wetland (PSS).

³ Field ID for stream features assigned by EDR.

⁴ Based on visual observation of hydrologic connectivity in the field and review of available spatial data. Final jurisdictional determination to be made by the USACE.

⁵ Based on the September 8, 2023, *Revised Definition of "Waters of the United States"; Conforming*. See Table 1 and Table 2 for additional information.

4.2.1 Wetlands

Within the Study Area, EDR identified one wetland totaling 0.006 acre. A description of this delineated wetland is presented herein.

Wetland 33-W001

Wetland 33-W001 was a linear swale or depression and was located south of a clear-cut forest directly adjacent to an abandoned natural gas well and pump, within the Northern Study Area. Wetland 33-W001 was not associated with any NWI mapped features, and no potential hydrological connection with a WOTUS was observed. The wetland boundary lies entirely within the Study Area and was approximately 0.006 acre in size.

This wetland was an emergent wetland with an herbaceous layer composed of deer-tongue rosette grass (*Dichanthelium clandestinum*), woolgrass (*Scirpus cyperinus*), and sensitive fern (*Onoclea sensibilis*).

Indicators of wetland hydrology included saturation (A3), oxidized rhizospheres on living roots (C3), and positive results of the FAC-neutral test (D5).

A soil sample taken within wetland 33-W001 indicated that soils were composed of two layers. From a depth of 0 to 8 inches, soils were a dark grayish brown (10YR 4/2) silty clay with 5% strong brown (7.5YR 5/8) redox concentrations in the matrix and pore linings. From a depth of 8 to 18 inches, soils were a dark grayish brown (2.5Y 4/2) silty clay with 2% strong brown (7.5YR 5/8) redox concentration in the matrix. Based on these observations, the soil satisfied the depleted matrix (F3) hydric soil indicator.

Photographs 1 through 5 in Appendix C include representative pictures of the wetland and illustrate characteristics used to determine the wetland boundary. The wetland-upland transition was defined by a transition in local topography to a convex surface and by the absence of hydrophytic vegetation. The adjacent upland was deciduous forest with an overstory dominated by black cherry (*Prunus serotina*) and red maple (*Acer rubrum*); a sapling layer dominated by striped maple (*Acer pensylvanicum*); and a ground layer of shining clubmoss (*Huperzia lucidula*), and princess pine (*Dendrolycopodium obscurum*). No indicators of hydric soils or wetland hydrology were observed in the upland. Photographs 6 through 8 in Appendix C illustrate conditions in this upland area.

4.2.2 Uplands

Four upland verification data points (33-UPL-001; 33-UPL-002; 33-UPL-003; and 33-UPL-004) were taken at the Southern Study Area, and one upland verification data point (33-UPL-005) was taken at the Northern Study Area. These data points were collected to verify upland conditions at proposed Met tower locations, continuity of forest cover type or because aerial imagery suggested there were potential water resources in these areas.

Upland data point 33-UPL-001 was collected in a deciduous forest, adjacent to the Southern Study Area. The vegetation community in this area was composed of black cherry, and sugar maple (*Acer saccharum*) trees, striped maple, and American beech (*Fagus grandifolia*) saplings, with an herbaceous layer of Allegheny blackberry (*Rubus allegheniensis*), princess pine, and woodfern (*Dryopteris* sp.). No indicators of wetland

hydrology or hydric soils were found. A datasheet for 33-UPL-001 is included in Appendix B and Photographs 9 through 12 in Appendix C illustrates conditions in this area.

Upland data point 33-UPL-003 was taken in a location in the Southern Study Area where aerial imagery suggested there was a transition from deciduous forest to a clearcut area. Tree species present along the edge of the forest were black cherries, with an herbaceous layer composed of Allegheny blackberry, princess pine, mountain strawberry (*Fragaria virginiana*), and woodfern. Soils were composed of two layers. From 0 to 6 inches, the soil matrix was dark yellowish brown (10YR 4/4) silt loam. From 6 to 18 inches, the soil matrix was brown (7.5YR 5/2) with 10% yellowish brown (10YR 5/8) redox concentrations in the soil matrix. Observations of the second soil layer satisfied the requirements for a depleted matrix (F3) hydric soil indicator. No indicators of wetland hydrology were observed. A data sheet for 33-UPL-003 is included in Appendix B, and photographs 13 through 17 in Appendix C illustrates conditions in this upland area.

Upland data point 33-UPL-005 was taken at the location for a proposed Met tower pad location in the Northern Study Area, within a deciduous forest. Tree species consisted of a black cherry and red maple overstory, with striped maple saplings, and an understory of woodfern, shining-fir moss, and princess pine. No indicators of wetland hydrology or hydric soils were found in this location. A data sheet for 33-UPL-005 is included in Appendix B, and photographs 18 through 20 in Appendix C illustrate conditions in this upland area.

5.0 CONCLUSIONS

Within the Study Area, EDR identified one wetland totaling 0.006 acre and no streams.

The Study Area does not include any TNWs; therefore, Section 10 of the Rivers and Harbor Act is not applicable to the proposed Project.

Delineated wetland 33-W001 is not anticipated to be considered jurisdictional by the USACE under Section 404 of the CWA because it is isolated (i.e., no continuous surface connection to a WOTUS). Rationale for the anticipated jurisdictional status of delineated wetland 33-W001 is presented in Table 5.

Delineated wetland 33-W001 in Table 5 is a water of the Commonwealth of Pennsylvania and subject to PADEP jurisdiction because it meets the definition of a wetland outlined in Section 2.2.

It should be noted that EDR has made a presumption of CWA jurisdiction for delineated wetlands and streams onsite based on the current understanding of the 2023 Rule, as amended, and Pennsylvania regulations. Final jurisdictional status of all waters delineated within the Study Area will be subject to determination by the USACE and PADEP.

REFERENCES

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. U.S. Fish and Wildlife Service. Washington, D.C.
- David, G.C.L., K.M. Fritz, T.-L. Nadeau, B.J. Topping, A.O. Allen, P.H. Trier, S.L. Kichefski, L.A. James, E. Wohl, and D. Hamill. 2025. *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams: Final Version*. US Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. ERDC/CRREL TR-25-1.
- Dewitz, J. 2023. *National Land Cover Database (NLCD) 2021 Products*. U.S. Geological Survey data release. Available at: <https://doi.org/10.5066/P9JZ7AQ3>.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers: Waterways Experiment Station. Vicksburg, MS.
- Munsell Color. 2009. *Munsell Soil Color Book*. X-Rite Incorporated. Grand Rapids, MI.
- National Oceanic and Atmospheric Administration (NOAA). 2025. *Monthly Total Precipitation Summary for Bradford Regional Airport, PA, 2000-2025*. NOAA Regional Climate Center. Available at: <http://agacis.rcc-acis.org/> (Accessed April 2025).
- Sevon, W.D. 2023. *Physiographic Provinces of Pennsylvania*. Department of Conservation and Natural Resources Bureau of Geological Survey, Pennsylvania. Available at: https://elibrary.dcnr.pa.gov/PDFProvider.ashx?action=PDFStream&docID=1752507&revision=0&docName=Map13_PhysProvs_Pa&nativeExt=pdf&PromptToSave=False&Size=810216&ViewerMode=2&overlay=0 (Accessed April 2025).
- Soil Survey Staff. 2025. *Web Soil Survey*. Natural Resources Conservation Service, U.S. Department of Agriculture Available at: <http://websoilsurvey.nrcs.usda.gov/> (Accessed April 2025).
- U.S. Army Corps of Engineers (USACE). 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. Version 2.0. ERDC/EL TR-12-1. Vicksburg, MS.
- USACE. 2020. *National Wetland Plant List*. Version 3.5. Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH. Available at: <http://wetland-plants.usace.army.mil> (Downloaded February 2022).
- USACE and U.S. Environmental Protection Agency (USEPA). 2023a. *Revised Definition of "Waters of the United States."* Federal Register, Volume 88, Number 11 (January 18, 2023). Available at: <https://www.federalregister.gov/documents/2023/01/18/2022-28595/revised-definition-of-waters-of-the-united-states> (Accessed April 2025).
- USACE and USEPA. 2023b. *Revised Definition of "Waters of the United States"; Conforming*. Federal Register, Volume 88, Number 173 (September 8, 2023). Available at: <https://www.federalregister.gov/documents/2023/09/08/2023-18929/revised-definition-of-waters-of-the-united-states-conforming> (Accessed April 2025).

USEPA. 2024. *Definition of "Waters of the United States": Rule Status and Litigation Update*. Available at: <https://www.epa.gov/wotus/definition-waters-united-states-rule-status-and-litigation-update> (Last updated October 21, 2024; Accessed April 2025).

U.S. Department of Agriculture (USDA). 1987. *Soil Survey of McKean County, Pennsylvania*. USDA Soil Conservation Service. Washington, D.C.

USDA Natural Resources Conservation Service (NRCS). 2025. *Pennsylvania Portion of the National Hydric Soil List*. Available at: https://efotg.sc.egov.usda.gov/references/Public/IL/State_List_NRCS_Hydric_Soils_Report_Dynamic_Data.html (Accessed April 2025).

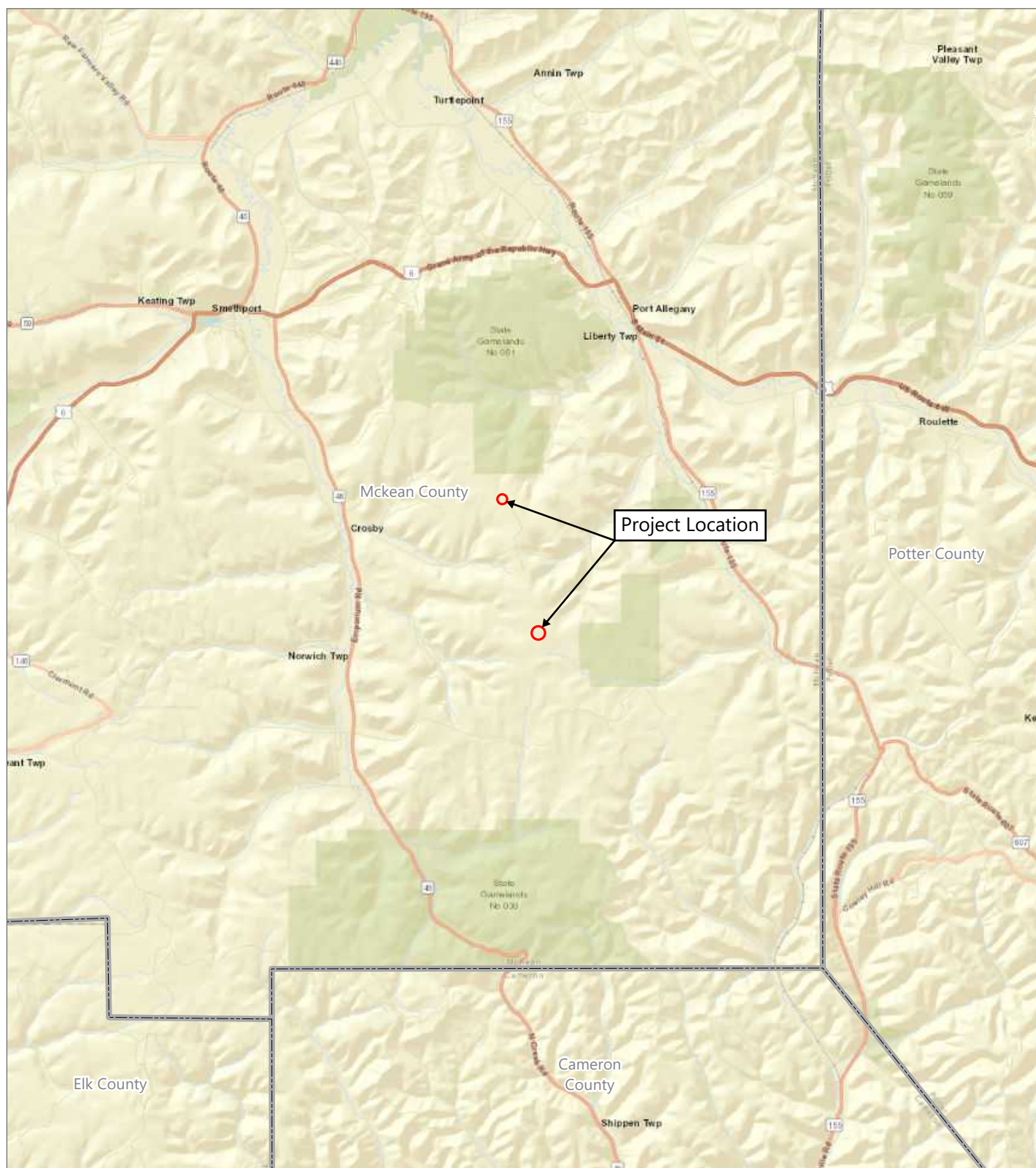
USDA NRCS. 2021. *The PLANTS Database*. Available at: <http://plants.usda.gov>. National Plant Data Team. Greensboro, NC.

U.S. Geological Survey (USGS). 2025. *StreamStats: Streamflow Statistics and Spatial Analysis Tools for Water-Resource Applications*. U.S. Department of the Interior. Washington, D.C. Available at: <https://streamstats.usgs.gov/ss/> (Accessed April 2025).

Appendix A

Figures

Figure 1. Regional Project Location

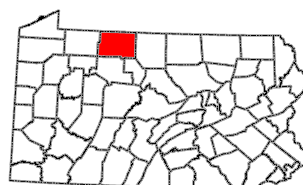


Black Cherry Wind Met Tower Project

Norwich Township,
McKeen County, Pennsylvania

Wetland Delineation Report

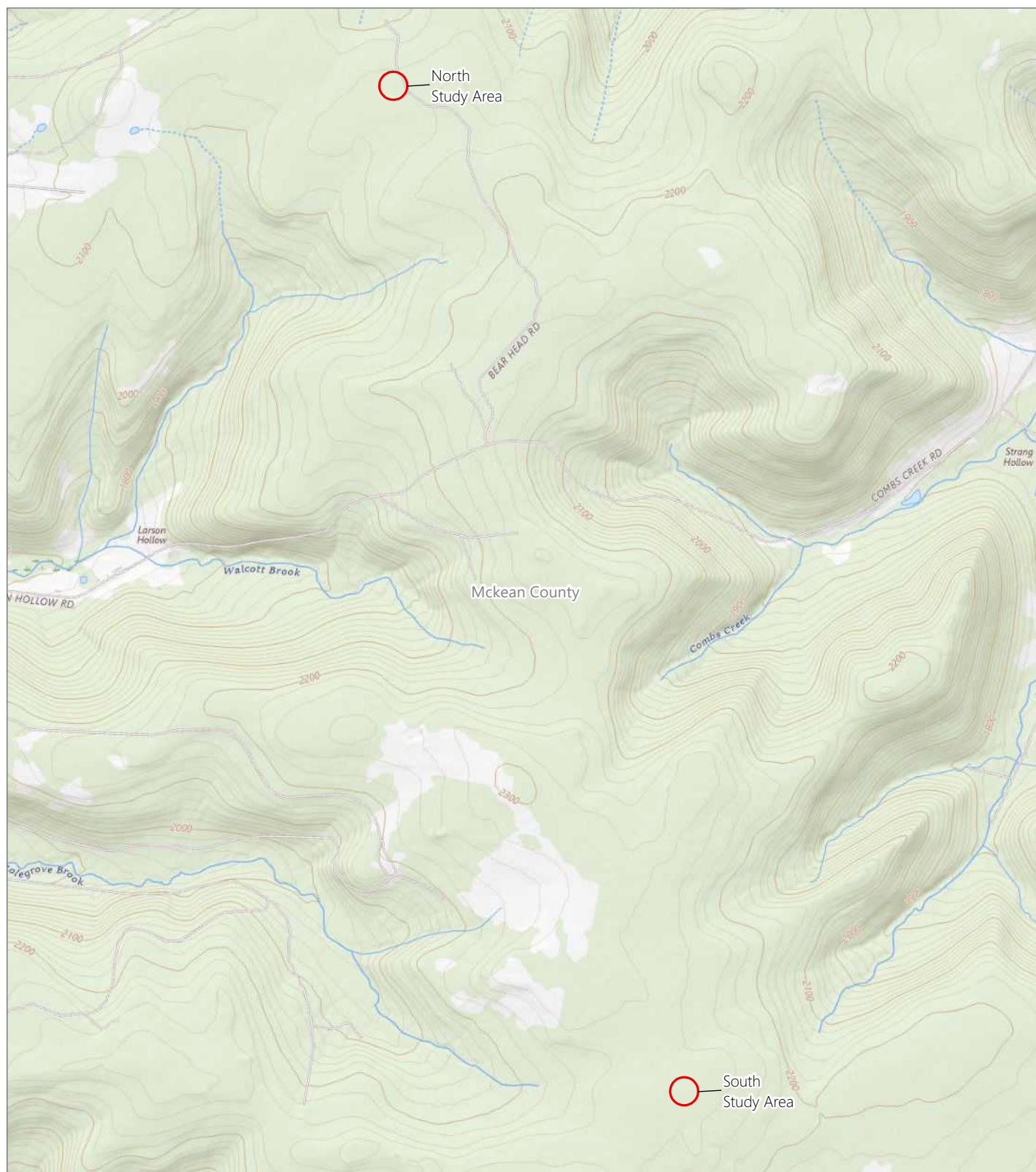
EDR



0 0.5 1 2
Miles

Prepared April 1, 2025
Basemap: Esri "World Street Map" map service

Figure 2. Topographic Mapping



Black Cherry Wind Met Tower Project

Norwich Township,
McKean County, Pennsylvania

Wetland Delineation Report

EDR

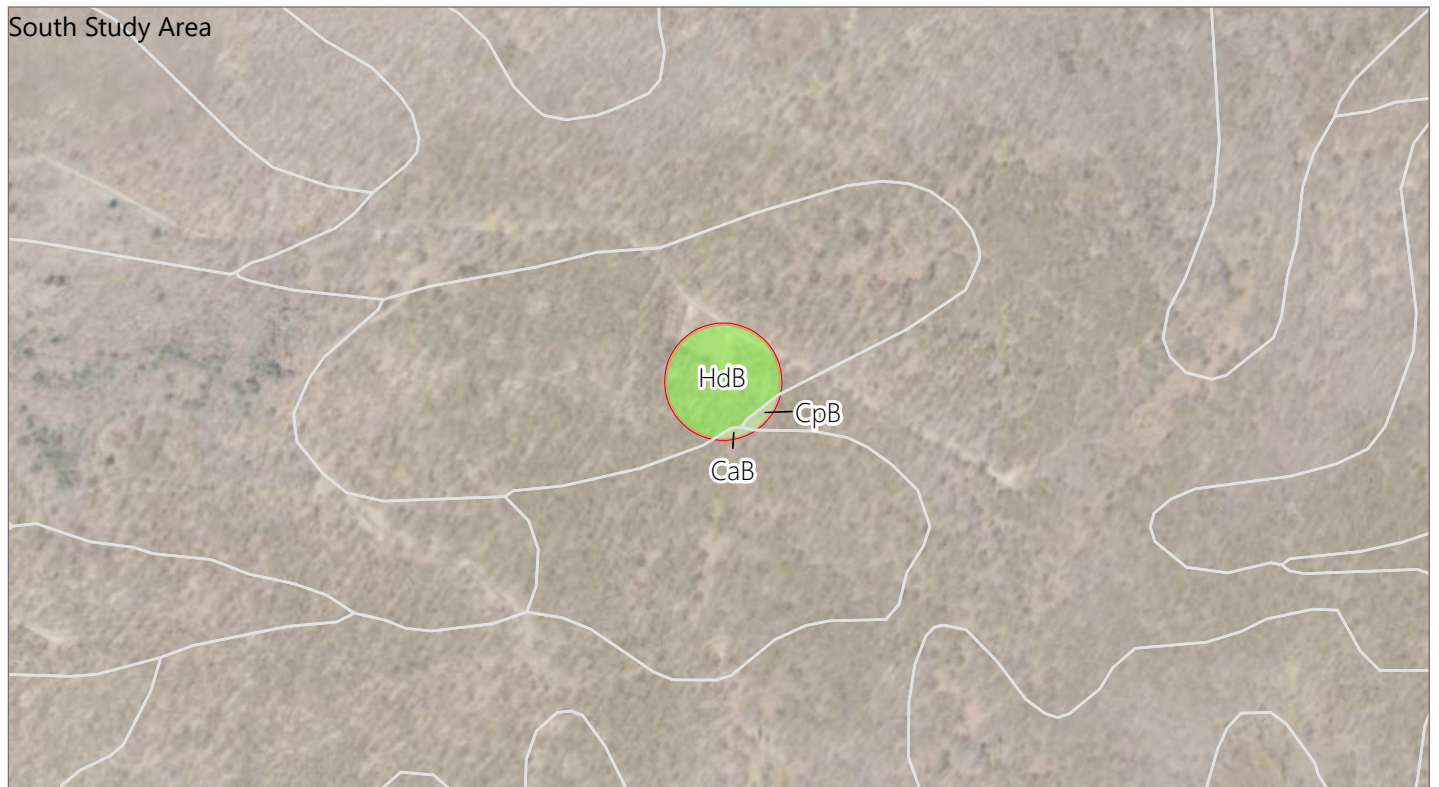
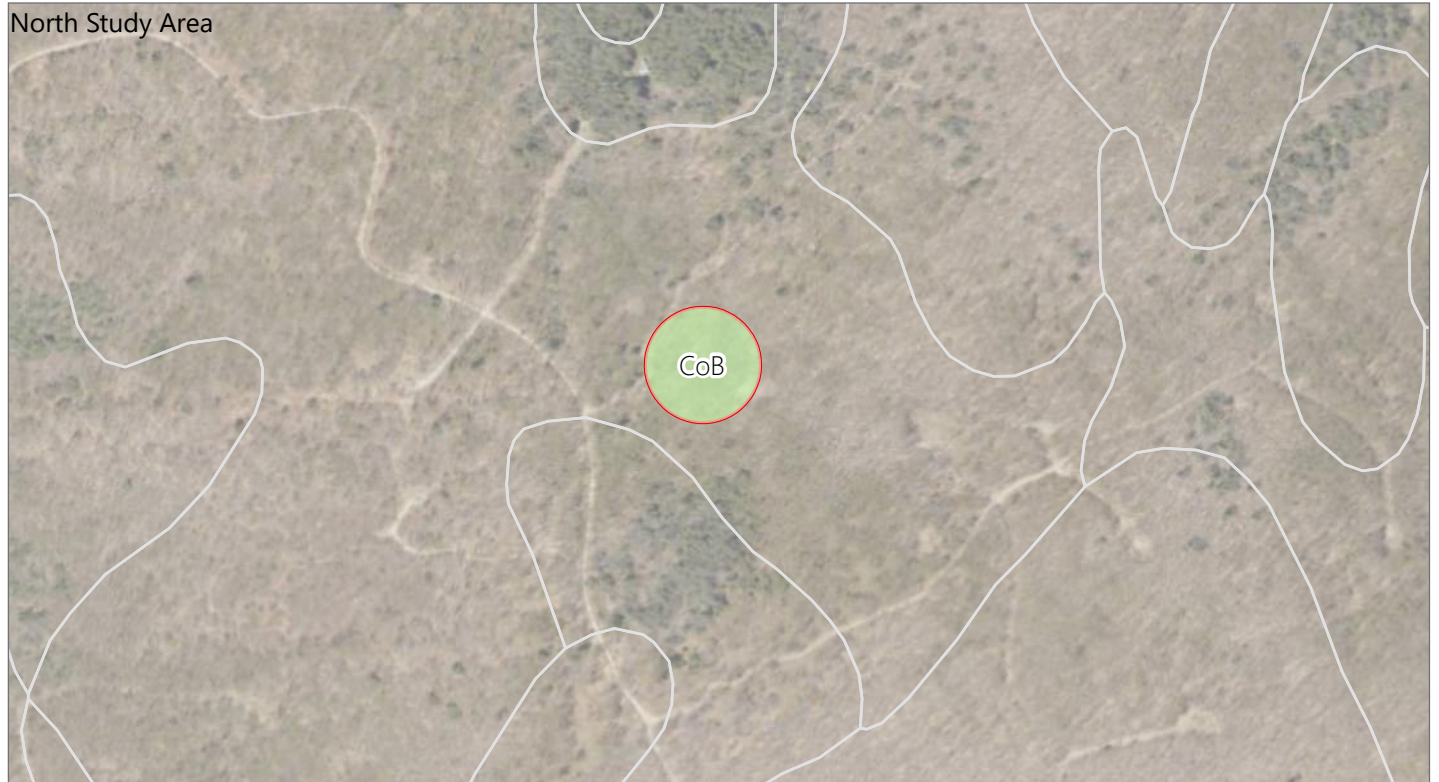
 Study Area



0 500 1,000 2,000
US Feet

Prepared April 18, 2025
Basemap: Esri "USGS Topo" map service

Figure 3. Study Area Soils



Black Cherry Wind Met Tower Project

Norwich Township,
McKean County, Pennsylvania

Wetland Delineation Report

EDR

Hydric Soil Rating

0%

1-32%

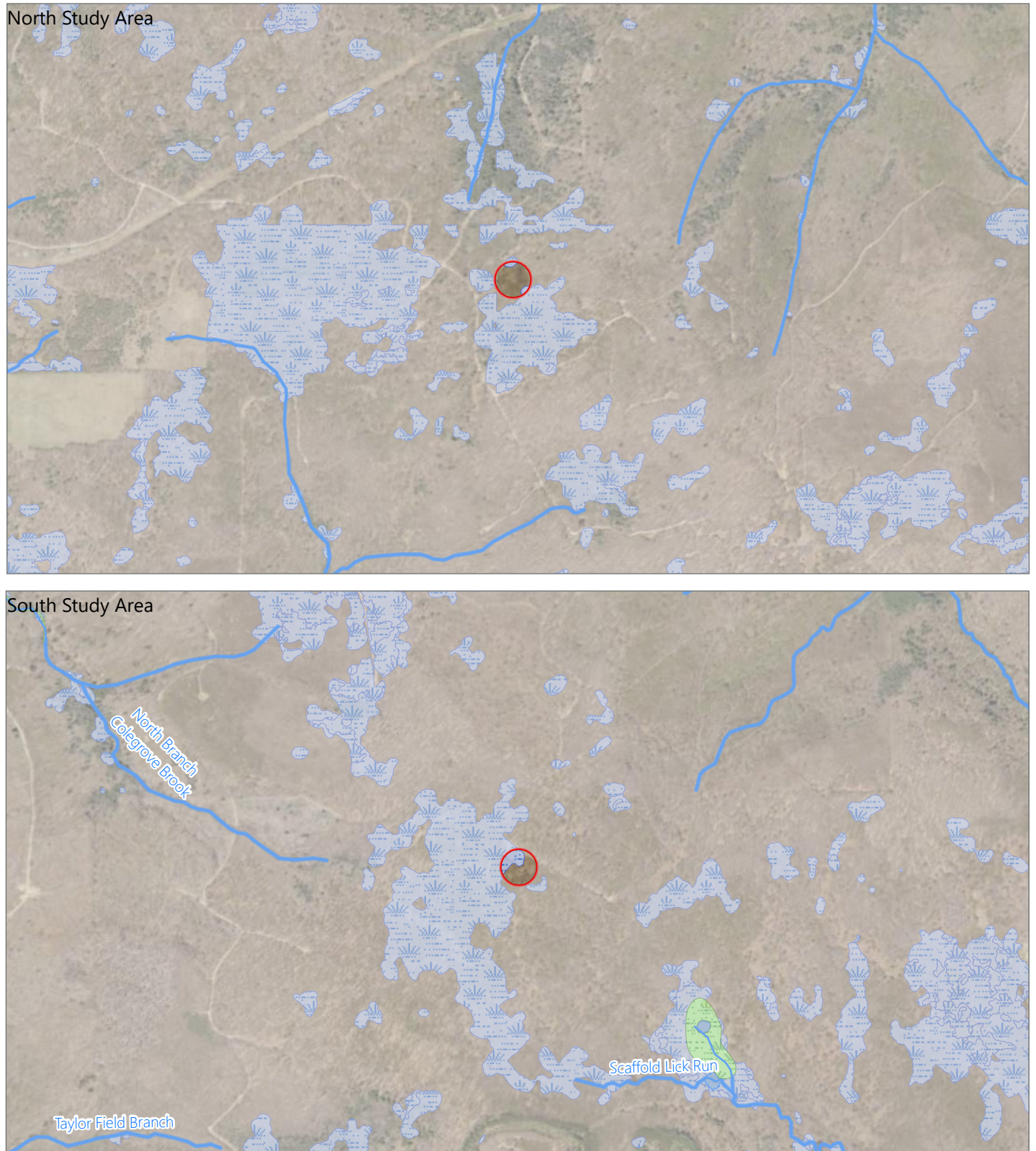
Study Area

0 250 500 1,000
US Feet



Prepared April 18, 2025
Basemap: USDA NAIP "2019 Pennsylvania 60cm" orthoimagery map service

Figure 4. Mapped Wetlands and Streams



Black Cherry Wind Met Tower Project

Norwich Township,
McKean County, Pennsylvania

Wetland Delineation Report



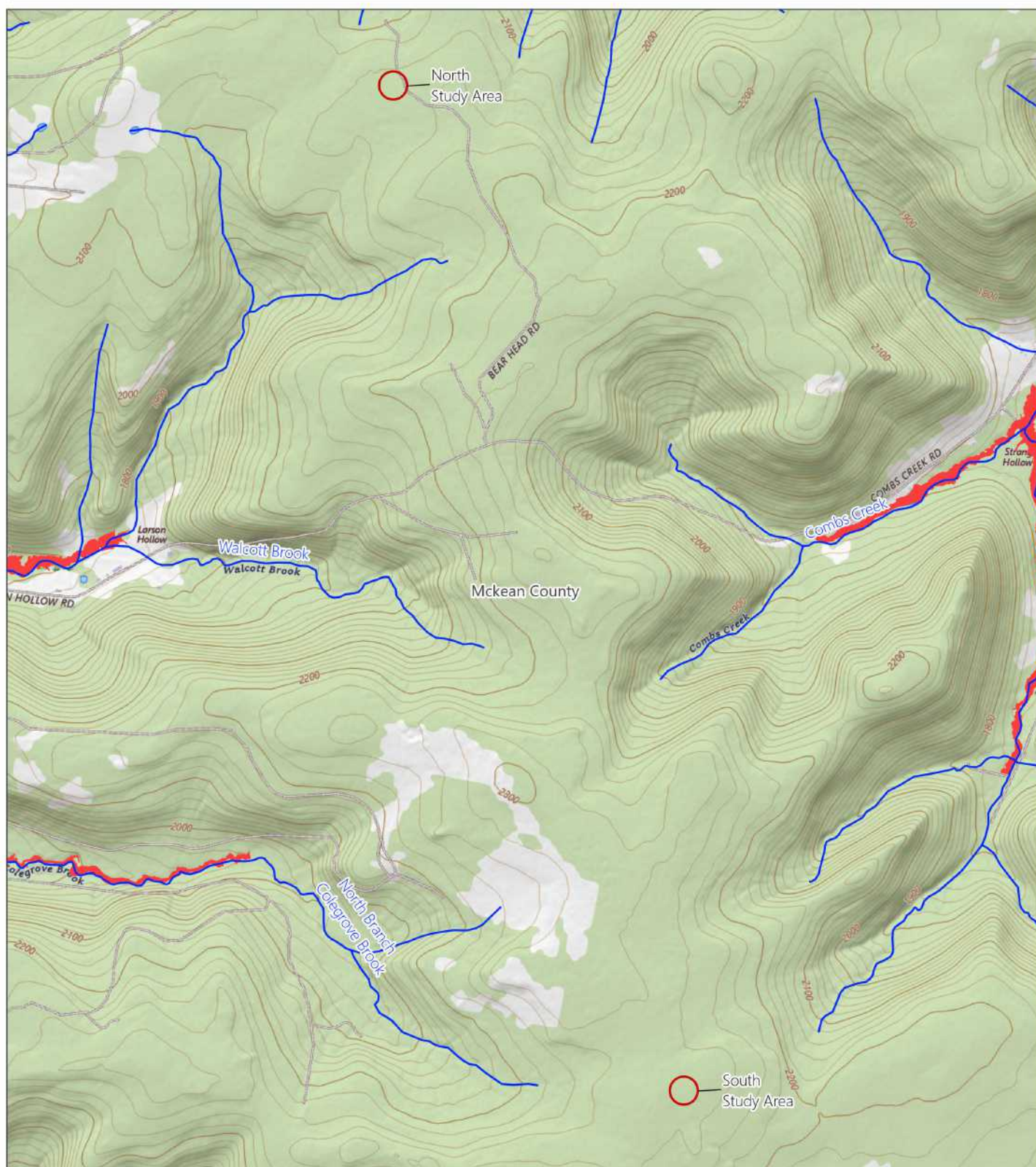
- Chapter 93 Designated Stream
- NWI Mapped Wetland
- NWI Mapped Pond/Riverine
- Pennsylvania Modeled Wetlands



0 500 1,000 2,000
US Feet

Prepared April 18, 2025
Basemap: USDA NAIP "2019 Pennsylvania 60cm" orthoimagery map service

Figure 5. Flood Hazard Zones






Black Cherry Wind Met Tower Project

Norwich Township,
McKeen County, Pennsylvania

Wetland Delineation Report

EDR

-  Chapter 93 Designated Stream
-  FEMA 100-Year Flood Hazard
-  Wetland Study Area

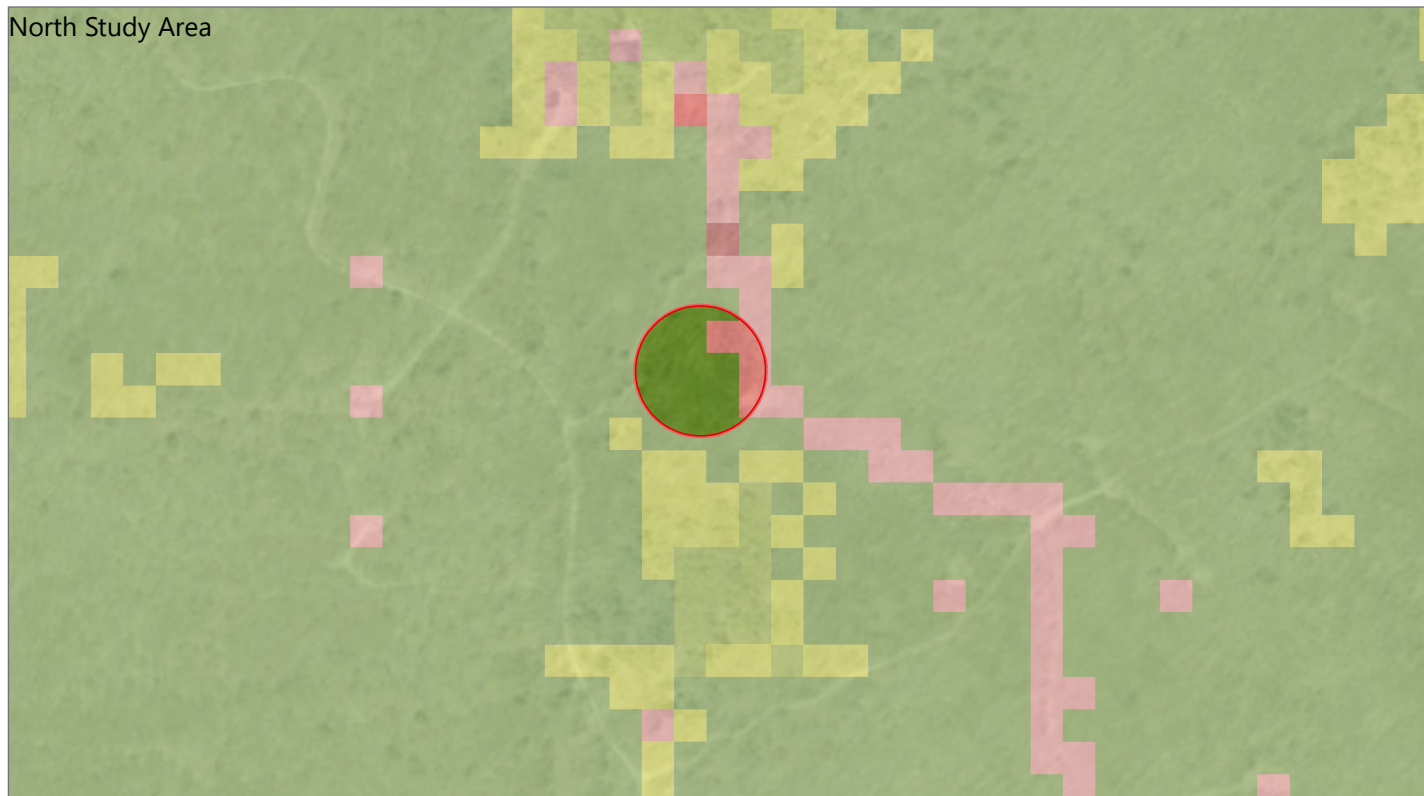


0 500 1,000 2,000
US Feet

Prepared April 21, 2025
Basemap: Esri "USGS Topo" map service

Figure 6. Study Area Land Cover

North Study Area



South Study Area



Black Cherry Wind Met Tower Project

Norwich Township,
McKean County, Pennsylvania

Wetland Delineation Report

EDR

2021 Land Cover

- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Deciduous Forest
- Evergreen Forest

■ Mixed Forest

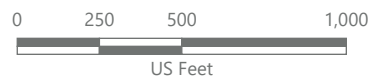
■ Shrub/Scrub

■ Grassland/Herbaceous

■ Woody Wetlands

■ Emergent Herbaceous Wetlands

Study Area



Prepared April 18, 2025
Basemap: USDA NAIP "2019 Pennsylvania 60cm" orthoimagery map service

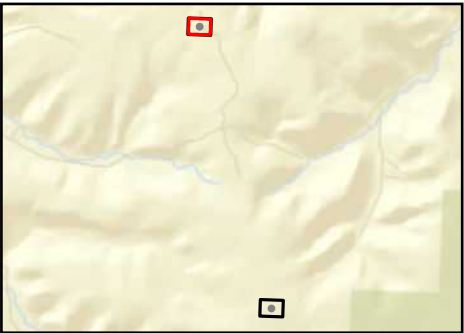
Black Cherry Wind
Met Tower Project

Norwich Township, McKean County,
Pennsylvania

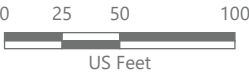
Wetland Delineation Report

- Datapoint Wetland
- Wetland Flag
- Non Wetland Verification Point
- Delineated Wetland Inside Study Area
- Delineated Wetland Outside Study Area
- Study Area

Wetland ID	Type	Acres
33-W001	PEM	0.002948



Sheet 1 of 2



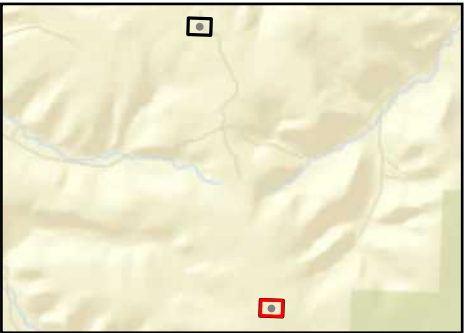
Prepared April 18, 2025
Basemap: USDA NAIP "2019 Pennsylvania 60cm" orthoimagery map service

**Black Cherry Wind
Met Tower Project**

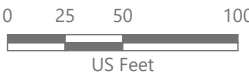
Norwich Township, McKean County,
Pennsylvania

Wetland Delineation Report

- ⛶ Non Wetland Verification Point
- ▭ Study Area



Sheet 2 of 2



Prepared April 18, 2025
Basemap: USDA NAIP "2019 Pennsylvania 60cm" orthoimagery map
service

Appendix B

Routine Wetland Determination Data Sheets and OHWM Data Forms

<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET - Eastern Mountains and Piedmont Region</div> <div>See ERDC/EL TR-12-9; the proponent agency is CECW-COR</div>	<div>OMB Control #: 0710-0024, Exp: 06/30/24</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
--	--

Project/Site:	24249 Black Cherry	City/County:	McKean County	Sampling Date:	03/27/2025
Applicant/Owner:	Swift Current	State:	Pennsylvania	Sampling Point:	33-UPL-001
Investigator(s):	BA RS	Section, Township, Range:	Crosby and Smethport		
Landform (hillslope, terrace, etc):	Undulating	Local relief (concave, convex, none):	concave	Slope (%):	0-1
Subregion (LRR or MLRA):	LRR N	Lat:	41.71577276350882	Long:	-78.31610321512419
Soil Map Unit Name:	Hazleton channery loam, 0 to 8 percent slopes, very stony	Datum:	WSG-84		
Soil NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> No, Soil <input type="checkbox"/> No, or Hydrology <input type="checkbox"/> No significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> No, Soil <input type="checkbox"/> No, or Hydrology <input type="checkbox"/> No naturally problematic? (If needed, explain any answers in Remarks.)					

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Slightly undulating upland forest dominated by black cherries. Some signs of past land use with stumps and old abandoned trails.			

HYDROLOGY

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

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

Sampling Point: 33-UPL-001

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Prunus serotina</i> / Black cherry	60	Yes	FACU	
2. <i>Acer saccharum</i> / Sugar maple	10	No	FACU	
3.				
4.				
5.				
6.				
7.				
	70	= Total Cover		
50% of total cover:	35	20% of total cover:	14	
Sapling/Shrub Stratum (Plot size: 15-ft)				
1. <i>Fagus grandifolia</i> / American beech	30	Yes	FACU	
2. <i>Acer pensylvanicum</i> / Striped maple	10	Yes	FACU	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
	40	= Total Cover		
50% of total cover:	20	20% of total cover:	8	
Herb Stratum (Plot size: 5-ft)				
1. <i>Dryopteris</i> sp. / Woodfern	30	Yes	NI	
2. <i>Dendrolycopodium obscurum</i> / Princess-pine	30	Yes	FACU	
3. <i>Rubus allegheniensis</i> / Allegheny blackberry	15	Yes	FACU	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
	75	= Total Cover		
50% of total cover:	37	20% of total cover:	15	
Woody Vine Stratum (Plot size: 30-ft)				
1.				
2.				
3.				
4.				
5.				
	0	= Total Cover		
50% of total cover:	0	20% of total cover:	0	

Remarks: (Include photo numbers here or on a separate sheet.)
 Woodfern sp dead, seasonally senesced.

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: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 155	x 4 = 620
UPL species 30	x 5 = 150
Column Totals: 185 (A)	770 (B)

Prevalence Index = B/A = 4.16

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	5YR 2.5/1	100					Silt Loam	
2-20	10YR 5/4	100					Silt Loam	

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

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10) **(LRR N)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 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 Mucky Mineral (F1) **(MLRA 136)**
☐ 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 122, 136)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
☐ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16)
☐ **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Red Parent Material (F21)
☐ **(outside MLRA 127,147,148)**
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET - Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-COR		OMB Control #: 0710-0024, Exp: 06/30/24 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: <u>24249 Black Cherry</u>		City/County: <u>McKean County</u>	
Applicant/Owner: <u>Swift Current</u>		State: <u>Pennsylvania</u>	
Investigator(s): <u>BA RS</u>		Section, Township, Range: <u>Crosby and Smethport</u>	
Landform (hillslope, terrace, etc): <u>Flat</u>		Local relief (concave, convex, none): <u>none</u>	
Subregion (LRR or MLRA): <u>LRR N</u>		Slope (%): <u>0-1</u>	
Lat: <u>41.71658044854846</u>		Datum: <u>WSG-84</u>	
Long: <u>-78.31492349642956</u>		Soil Map Unit Name: <u>Hazleton channery loam, 0 to 8 percent slopes, very stony</u>	
NW1 classification: _____		Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No _____ (If no, explain in Remarks.)	
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturbed?		Are "Normal Circumstances" present? Yes <u>X</u> No _____	
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problematic?		(If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>		Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>	
Remarks: <u>Clear cut area adjacent to gravel/shale pit.</u>			
HYDROLOGY			
Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply)			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	
		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

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

Sampling Point: 33-UPL-003

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Prunus serotina</i> / Black cherry	5	Yes	FACU	
2.				
3.				
4.				
5.				
6.				
7.				
	5	= Total Cover		
50% of total cover: 2	20% of total cover: 1			

Sapling/Shrub Stratum (Plot size: 15-ft)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
	0	= Total Cover		
50% of total cover: 0	20% of total cover: 0			

Herb Stratum (Plot size: 5-ft)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Dryopteris</i> sp. / Woodfern	30	Yes	NI	
2. <i>Rubus allegheniensis</i> / Allegheny blackberry	25	Yes	FACU	
3. <i>Fragaria virginiana</i> / Mountain strawberry	25	Yes	FACU	
4. <i>Dendrolycopodium obscurum</i> / Princess-pine	10	No	FACU	
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)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
5.				
	0	= Total Cover		
50% of total cover: 0	20% of total cover: 0			

Remarks: (Include photo numbers here or on a separate sheet.)
 Possible poverty oat grass at 20%, seasonally senesced at time of delineation.

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: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 65	x 4 = 260
UPL species 30	x 5 = 150
Column Totals: 95 (A)	410 (B)

Prevalence Index = B/A = 4.32

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

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

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

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

Hydrophytic Vegetation

Present? Yes _____ No X

SOIL

Sampling Point: 33-UPL-003

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) (**LRR N**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)

Indicators for Problematic Hydric Soils³:

- | | |
|---------|---|
| _____ | Polyvalue Below Surface (S8) (MLRA 147, 148) |
| _____ | Thin Dark Surface (S9) (MLRA 147, 148) |
| _____ | Loamy Mucky Mineral (F1) (MLRA 136) |
| _____ | Loamy Gleyed Matrix (F2) |
| X _____ | 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 122, 136) |
| _____ | Piedmont Floodplain Soils (F19) (MLRA 148) |
| _____ | Red Parent Material (F21) (MLRA 127, 147, 148) |

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16)
(MLRA 147, 148)
☐ Piedmont Floodplain Soils (F19)
(MLRA 136, 147)
☐ Red Parent Material (F21)
(outside MLRA 127,147,148)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

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

Sampling Point: 33-W001-1W

<div style="margin-bottom: 10px;"> Tree Stratum (Plot size: 30-ft) </div> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Absolute % Cover</th> <th style="width: 15%; text-align: center;">Dominant Species?</th> <th style="width: 30%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">0</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> <tr> <td>50% of total cover:</td> <td style="text-align: center;">0</td> <td>20% of total cover:</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> <div style="margin-bottom: 10px;"> Sapling/Shrub Stratum (Plot size: 15-ft) </div> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Absolute % Cover</th> <th style="width: 15%; text-align: center;">Dominant Species?</th> <th style="width: 30%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">0</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> <tr> <td>50% of total cover:</td> <td style="text-align: center;">0</td> <td>20% of total cover:</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> <div style="margin-bottom: 10px;"> Herb Stratum (Plot size: 5-ft) </div> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Absolute % Cover</th> <th style="width: 15%; text-align: center;">Dominant Species?</th> <th style="width: 30%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <i>Dichanthelium clandestinum</i> / Deer-tongue rosette grass</td> <td style="text-align: center;">60</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <i>Scirpus cyperinus</i> / Woolgrass</td> <td style="text-align: center;">30</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>3. <i>Onoclea sensibilis</i> / Sensitive fern</td> <td style="text-align: center;">5</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACW</td> </tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">95</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> <tr> <td>50% of total cover:</td> <td style="text-align: center;">47</td> <td>20% of total cover:</td> <td style="text-align: center;">19</td> </tr> </tbody> </table> <div style="margin-bottom: 10px;"> Woody Vine Stratum (Plot size: 30-ft) </div> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Absolute % Cover</th> <th style="width: 15%; text-align: center;">Dominant Species?</th> <th style="width: 30%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">0</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> <tr> <td>50% of total cover:</td> <td style="text-align: center;">0</td> <td>20% of total cover:</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>		Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				3. _____				4. _____				5. _____				6. _____				7. _____					0	= Total Cover		50% of total cover:	0	20% of total cover:	0		Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				3. _____				4. _____				5. _____				6. _____				7. _____				8. _____				9. _____					0	= Total Cover		50% of total cover:	0	20% of total cover:	0		Absolute % Cover	Dominant Species?	Indicator Status	1. <i>Dichanthelium clandestinum</i> / Deer-tongue rosette grass	60	Yes	FAC	2. <i>Scirpus cyperinus</i> / Woolgrass	30	Yes	FACW	3. <i>Onoclea sensibilis</i> / Sensitive fern	5	No	FACW	4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____					95	= Total Cover		50% of total cover:	47	20% of total cover:	19		Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				3. _____				4. _____				5. _____					0	= Total Cover		50% of total cover:	0	20% of total cover:	0	<div style="margin-bottom: 10px;"> 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: 100.0 (A/B) </div> <div style="margin-bottom: 10px;"> Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%; text-align: left;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Multiply by:</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">35</td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">70</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">60</td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">180</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">95</td> <td style="text-align: center;">(A)</td> <td style="text-align: center;">250 (B)</td> </tr> </tbody> </table> <p style="text-align: right;">Prevalence Index = B/A = 2.63</p> </div> <div style="margin-bottom: 10px;"> Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index ≤3.0¹ <input type="checkbox"/> 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain) </div> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>	Total % Cover of:		Multiply by:		OBL species	0	x 1 =	0	FACW species	35	x 2 =	70	FAC species	60	x 3 =	180	FACU species	0	x 4 =	0	UPL species	0	x 5 =	0	Column Totals:	95	(A)	250 (B)
	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																																																																										
1. _____																																																																																																																																																																																																													
2. _____																																																																																																																																																																																																													
3. _____																																																																																																																																																																																																													
4. _____																																																																																																																																																																																																													
5. _____																																																																																																																																																																																																													
6. _____																																																																																																																																																																																																													
7. _____																																																																																																																																																																																																													
	0	= Total Cover																																																																																																																																																																																																											
50% of total cover:	0	20% of total cover:	0																																																																																																																																																																																																										
	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																																																																										
1. _____																																																																																																																																																																																																													
2. _____																																																																																																																																																																																																													
3. _____																																																																																																																																																																																																													
4. _____																																																																																																																																																																																																													
5. _____																																																																																																																																																																																																													
6. _____																																																																																																																																																																																																													
7. _____																																																																																																																																																																																																													
8. _____																																																																																																																																																																																																													
9. _____																																																																																																																																																																																																													
	0	= Total Cover																																																																																																																																																																																																											
50% of total cover:	0	20% of total cover:	0																																																																																																																																																																																																										
	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																																																																										
1. <i>Dichanthelium clandestinum</i> / Deer-tongue rosette grass	60	Yes	FAC																																																																																																																																																																																																										
2. <i>Scirpus cyperinus</i> / Woolgrass	30	Yes	FACW																																																																																																																																																																																																										
3. <i>Onoclea sensibilis</i> / Sensitive fern	5	No	FACW																																																																																																																																																																																																										
4. _____																																																																																																																																																																																																													
5. _____																																																																																																																																																																																																													
6. _____																																																																																																																																																																																																													
7. _____																																																																																																																																																																																																													
8. _____																																																																																																																																																																																																													
9. _____																																																																																																																																																																																																													
10. _____																																																																																																																																																																																																													
11. _____																																																																																																																																																																																																													
	95	= Total Cover																																																																																																																																																																																																											
50% of total cover:	47	20% of total cover:	19																																																																																																																																																																																																										
	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																																																																										
1. _____																																																																																																																																																																																																													
2. _____																																																																																																																																																																																																													
3. _____																																																																																																																																																																																																													
4. _____																																																																																																																																																																																																													
5. _____																																																																																																																																																																																																													
	0	= Total Cover																																																																																																																																																																																																											
50% of total cover:	0	20% of total cover:	0																																																																																																																																																																																																										
Total % Cover of:		Multiply by:																																																																																																																																																																																																											
OBL species	0	x 1 =	0																																																																																																																																																																																																										
FACW species	35	x 2 =	70																																																																																																																																																																																																										
FAC species	60	x 3 =	180																																																																																																																																																																																																										
FACU species	0	x 4 =	0																																																																																																																																																																																																										
UPL species	0	x 5 =	0																																																																																																																																																																																																										
Column Totals:	95	(A)	250 (B)																																																																																																																																																																																																										
<div style="margin-bottom: 10px;"> 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 vines - All woody vines greater than 3.28 ft in height. </div> <div> Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> </div>																																																																																																																																																																																																													
Remarks: (Include photo numbers here or on a separate sheet.)																																																																																																																																																																																																													

SOIL

Sampling Point: 33-W001-1W

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

[illegible]

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) (**LRR N**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 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 Mucky Mineral (F1) (MLRA 136)
_____	Loamy Gleyed Matrix (F2)
X _____	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 122, 136)
_____	Piedmont Floodplain Soils (F19) (MLRA 148)
_____	Red Parent Material (F21) (MLRA 127, 147, 148)

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16)
(MLRA 147, 148)
☐ Piedmont Floodplain Soils (F19)
(MLRA 136, 147)
☐ Red Parent Material (F21)
(outside MLRA 127,147,148)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No

Remarks:

<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET - Eastern Mountains and Piedmont Region</div> <div>See ERDC/EL TR-12-9; the proponent agency is CECW-COR</div>				<div>OMB Control #: 0710-0024, Exp: 06/30/24</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>	
Project/Site: 24249 Black Cherry		City/County: McKean County		Sampling Date: 03/27/2025	
Applicant/Owner: Swift Current		State: Pennsylvania		Sampling Point: 33-W001-1U	
Investigator(s): RS, BA		Section, Township, Range: Crosby and Smethport			
Landform (hillslope, terrace, etc): Undulating		Local relief (concave, convex, none): convex		Slope (%): 0-5	
Subregion (LRR or MLRA): LRR N		Lat: 41.75509483333333		Long: -78.32954483333333	
Datum: WSG-84		Soil Map Unit Name: Cookport loam, 3 to 8 percent slopes		NW1 classification:	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X		Hydric Soil Present? Yes No X		Wetland Hydrology Present? Yes No X	
		Is the Sampled Area within a Wetland?		Yes No X	
Remarks: Undulating upland forest.					
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one required: check all that apply)			Secondary Indicators (minimum of two required)		
<div><div><div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift Deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div><div><input type="checkbox"/> Aquatic Fauna (B13)</div></div><div><div><input type="checkbox"/> True Aquatic Plants (B14)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div></div></div>			<div><div><div><div><input type="checkbox"/> Surface Soil Cracks (B6)</div><div><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</div><div><input type="checkbox"/> Drainage Patterns (B10)</div><div><input type="checkbox"/> Moss Trim Lines (B16)</div><div><input type="checkbox"/> Dry-Season Water Table (C2)</div><div><input type="checkbox"/> Crayfish Burrows (C8)</div><div><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</div><div><input type="checkbox"/> Stunted or Stressed Plants (D1)</div><div><input type="checkbox"/> Geomorphic Position (D2)</div><div><input type="checkbox"/> Shallow Aquitard (D3)</div><div><input type="checkbox"/> Microtopographic Relief (D4)</div><div><input type="checkbox"/> FAC-Neutral Test (D5)</div></div></div></div>		
Field Observations:			Wetland Hydrology Present?		
<div><div><div><div><div>Surface Water Present?</div><div>Yes No X</div></div><div><div>Water Table Present?</div><div>Yes No X</div></div><div><div>Saturation Present?</div><div>Yes No X</div></div></div><div><div>(includes capillary fringe)</div></div></div><div><div>Depth (inches):</div><div></div></div><div><div>Depth (inches):</div><div></div></div><div><div>Depth (inches):</div><div></div></div></div>			<div>Yes No X</div>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

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

Sampling Point: 33-W001-1U

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30-ft)				
1. <i>Prunus serotina</i> / Black cherry	50	Yes	FACU	
2. <i>Acer rubrum</i> / Red maple	10	No	FAC	
3.				
4.				
5.				
6.				
7.				
	60	= Total Cover		
50% of total cover:	30	20% of total cover:	12	
Sapling/Shrub Stratum (Plot size: 15-ft)				
1. <i>Acer pensylvanicum</i> / Striped maple	20	Yes	FACU	
2.				
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)				
1. <i>Dendrolycopodium obscurum</i> / Princess-pine	50	Yes	FACU	
2. <i>Huperzia lucidula</i> / Shining fir-moss	30	Yes	FACW	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
	80	= Total Cover		
50% of total cover:	40	20% of total cover:	16	
Woody Vine Stratum (Plot size: 30-ft)				
1.				
2.				
3.				
4.				
5.				
	0	= Total Cover		
50% of total cover:	0	20% of total cover:	0	

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

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: 25.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 30	x 2 = 60
FAC species 10	x 3 = 30
FACU species 120	x 4 = 480
UPL species 0	x 5 = 0
Column Totals: 160 (A)	570 (B)

Prevalence Index = B/A = 3.56

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/4	100					Silt Loam	

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

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10) (**LRR N**)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 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 Mucky Mineral (F1) (**MLRA 136**)
☐ 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 122, 136**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
☐ Red Parent Material (F21) (**MLRA 127, 147, 148**)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**MLRA 147**)
☐ Coast Prairie Redox (A16)
☐ (**MLRA 147, 148**)
☐ Piedmont Floodplain Soils (F19)
☐ (**MLRA 136, 147**)
☐ Red Parent Material (F21)
☐ (**outside MLRA 127,147,148**)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Gravel refusal at 12 inches.

<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET - Eastern Mountains and Piedmont Region</div> <div>See ERDC/EL TR-12-9; the proponent agency is CECW-COR</div>				<div>OMB Control #: 0710-0024, Exp: 06/30/24</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>	
Project/Site: 24249 Black Cherry		City/County: McKean County		Sampling Date: 03/27/2025	
Applicant/Owner: Swift Current		State: Pennsylvania		Sampling Point: 33-UPL-005	
Investigator(s): BA RS		Section, Township, Range: Crosby and Smethport			
Landform (hillslope, terrace, etc): Undulating		Local relief (concave, convex, none): convex		Slope (%): 0-5	
Subregion (LRR or MLRA): LRR N		Lat: 41.75538333333333		Long: -78.32999683333334	
Datum: WSG-84		Soil Map Unit Name: Cookport loam, 3 to 8 percent slopes		NW1 classification:	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> No, Soil <input type="checkbox"/> No, or Hydrology <input type="checkbox"/> No significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> No, Soil <input type="checkbox"/> No, or Hydrology <input type="checkbox"/> No naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Hydic Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Remarks: Undulating black cherry forest					
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one required: check all that apply)			Secondary Indicators (minimum of two required)		
<div><input type="checkbox"/> Surface Water (A1)</div> <div><input type="checkbox"/> High Water Table (A2)</div> <div><input type="checkbox"/> Saturation (A3)</div> <div><input type="checkbox"/> Water Marks (B1)</div> <div><input type="checkbox"/> Sediment Deposits (B2)</div> <div><input type="checkbox"/> Drift Deposits (B3)</div> <div><input type="checkbox"/> Algal Mat or Crust (B4)</div> <div><input type="checkbox"/> Iron Deposits (B5)</div> <div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div> <div><input type="checkbox"/> Water-Stained Leaves (B9)</div> <div><input type="checkbox"/> Aquatic Fauna (B13)</div>			<div><input type="checkbox"/> True Aquatic Plants (B14)</div> <div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div> <div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div> <div><input type="checkbox"/> Presence of Reduced Iron (C4)</div> <div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div> <div><input type="checkbox"/> Thin Muck Surface (C7)</div> <div><input type="checkbox"/> Other (Explain in Remarks)</div>		
<div><input type="checkbox"/> Surface Soil Cracks (B6)</div> <div><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</div> <div><input type="checkbox"/> Drainage Patterns (B10)</div> <div><input type="checkbox"/> Moss Trim Lines (B16)</div> <div><input type="checkbox"/> Dry-Season Water Table (C2)</div> <div><input type="checkbox"/> Crayfish Burrows (C8)</div> <div><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</div> <div><input type="checkbox"/> Stunted or Stressed Plants (D1)</div> <div><input type="checkbox"/> Geomorphic Position (D2)</div> <div><input type="checkbox"/> Shallow Aquitard (D3)</div> <div><input type="checkbox"/> Microtopographic Relief (D4)</div> <div><input type="checkbox"/> FAC-Neutral Test (D5)</div>					
Field Observations:			Wetland Hydrology Present?		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):					
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

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

Sampling Point: 33-UPL-005

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Prunus serotina</i> / Black cherry	45	Yes	FACU	
2.				
3.				
4.				
5.				
6.				
7.				
	45	= Total Cover		
50% of total cover:	22	20% of total cover:	9	
Sapling/Shrub Stratum (Plot size: 15-ft)				
1. <i>Acer pensylvanicum</i> / Striped maple	15	Yes	FACU	
2. <i>Acer rubrum</i> / Red maple	10	Yes	FAC	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
	25	= Total Cover		
50% of total cover:	12	20% of total cover:	5	
Herb Stratum (Plot size: 5-ft)				
1. <i>Dendrolycopodium obscurum</i> / Princess-pine	50	Yes	FACU	
2. <i>Huperzia lucidula</i> / Shining fir-moss	25	Yes	FACW	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
	75	= Total Cover		
50% of total cover:	37	20% of total cover:	15	
Woody Vine Stratum (Plot size: 30-ft)				
1.				
2.				
3.				
4.				
5.				
	0	= Total Cover		
50% of total cover:	0	20% of total cover:	0	

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: 40.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 25	x 2 = 50
FAC species 10	x 3 = 30
FACU species 110	x 4 = 440
UPL species 0	x 5 = 0
Column Totals: 145 (A)	520 (B)

Prevalence Index = B/A = 3.59

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No X

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

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	7.5YR 5/3	100					Sandy Loam	

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

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10) (**LRR N**)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 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 Mucky Mineral (F1) (**MLRA 136**)
☐ 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 122, 136**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
☐ Red Parent Material (F21) (**MLRA 127, 147, 148**)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**MLRA 147**)
☐ Coast Prairie Redox (A16)
☐ (**MLRA 147, 148**)
☐ Piedmont Floodplain Soils (F19)
☐ (**MLRA 136, 147**)
☐ Red Parent Material (F21)
☐ (**outside MLRA 127,147,148**)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Gravel refusal at 10"

Appendix C

Photo Documentation



Photo 1

Wetland-upland transition, with deciduous forested upland.



Photo 2

Wetland-upland transition, with clearcut area.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 3

Delineated wetland 33-W001.



Photo 4

Hydric soils within delineated wetland 33-W001.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 5

Abandoned pump directly adjacent to delineated wetland 33-W001.



Photo 6

Upland forest adjacent to delineated wetland 33-W001.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 7

Upland forest adjacent to delineated wetland 33-W001.



Photo 8

Upland soils adjacent to delineated wetland 33-W001.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 9

Deciduous forest where upland datapoint 33-UPL-001 was recorded.



Photo 10

Deciduous forest where upland datapoint 33-UPL-001 was recorded.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 11

Deciduous forest where upland datapoint 33-UPL-001 was recorded.



Photo 12

Upland soils located at upland datapoint 33-UPL-001.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 13

Clearcut area where upland datapoint 33-UPL-003 was recorded.



Photo 14

Clearcut area where upland datapoint 33-UPL-003 was recorded.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 15

Clearcut area where upland datapoint 33-UPL-003 was recorded.



Photo 16

Clearcut area where upland datapoint 33-UPL-003 was recorded.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 17

Hydric soils located at upland datapoint 33-UPL-003.



Photo 18

Deciduous forest where upland datapoint 33-UPL-005 was recorded.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report



Photo 19

Deciduous forest where upland datapoint 33-UPL-005 was recorded.



Photo 20

Upland soils located at upland datapoint 33-UPL-005.

Black Cherry Wind Project

Norwich Township, McKean County, Pennsylvania

Wetland and Stream Delineation Report

Attachment D

PNDI Results and Agency Consultation

1. PROJECT INFORMATION

Project Name: **Black Cherry Wind - Met Tower - Mast A**

Date of Review: **5/21/2025 12:44:42 PM**

Project Category: **Energy Storage, Production, and Transfer, Energy Production (generation), Wind power facility (wind farm, turbines) - new, expansion, modification**

Project Area: **2.88 acres**

County(s): **McKean**

Township/Municipality(s): **Norwich Township**

ZIP Code:

Quadrangle Name(s): **PORT ALLEGANY**

Watersheds HUC 8: **Upper Allegheny**

Watersheds HUC 12: **Potato Creek Outlet; Skinner Creek-Allegheny River**

Decimal Degrees: **41.755431, -78.330246**

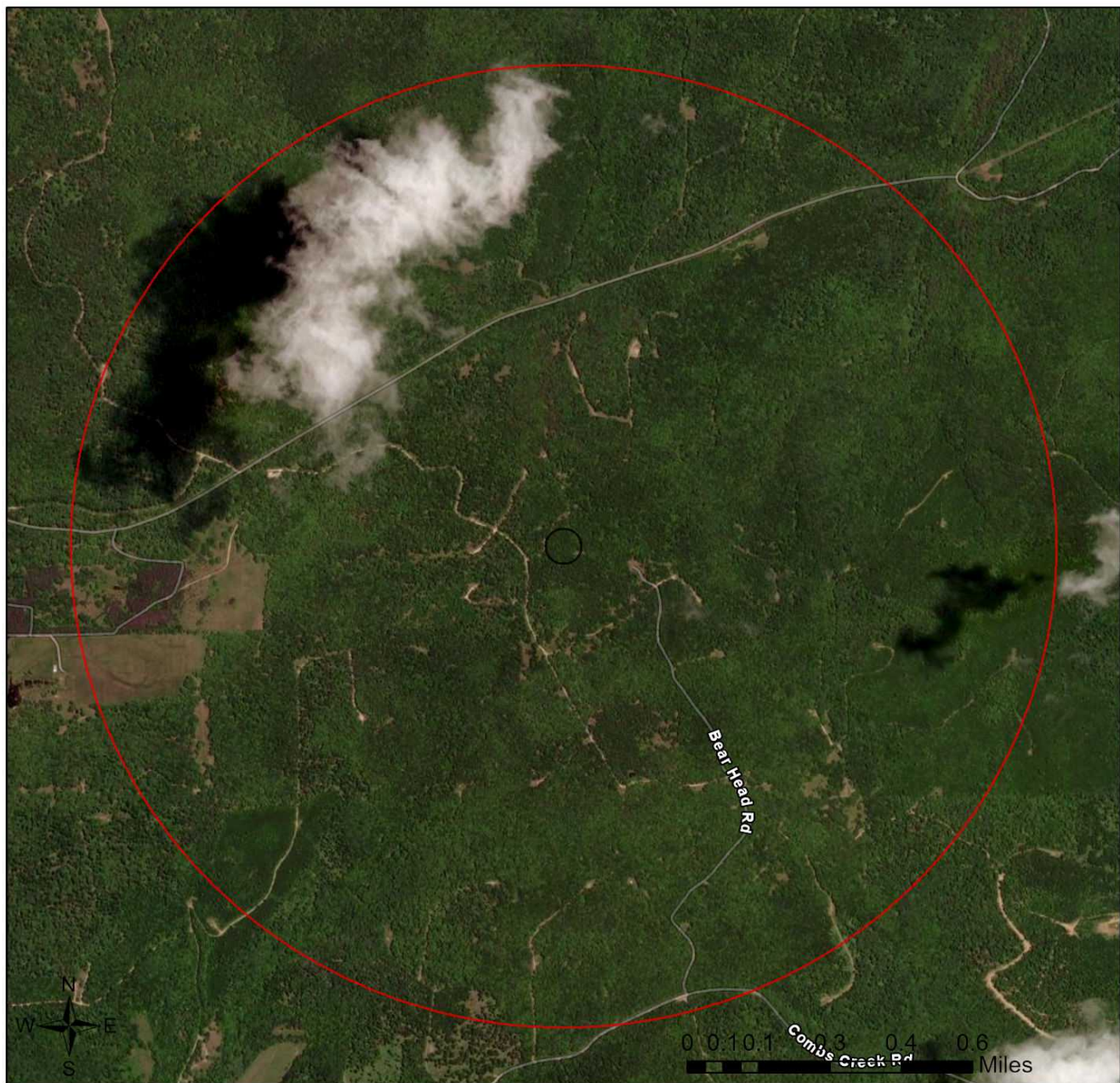
Degrees Minutes Seconds: **41° 45' 19.5499" N, 78° 19' 48.8856" W**



2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	Conservation Measure	No Further Review Required, See Agency Comments
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Black Cherry Wind - Met Tower - Mast A

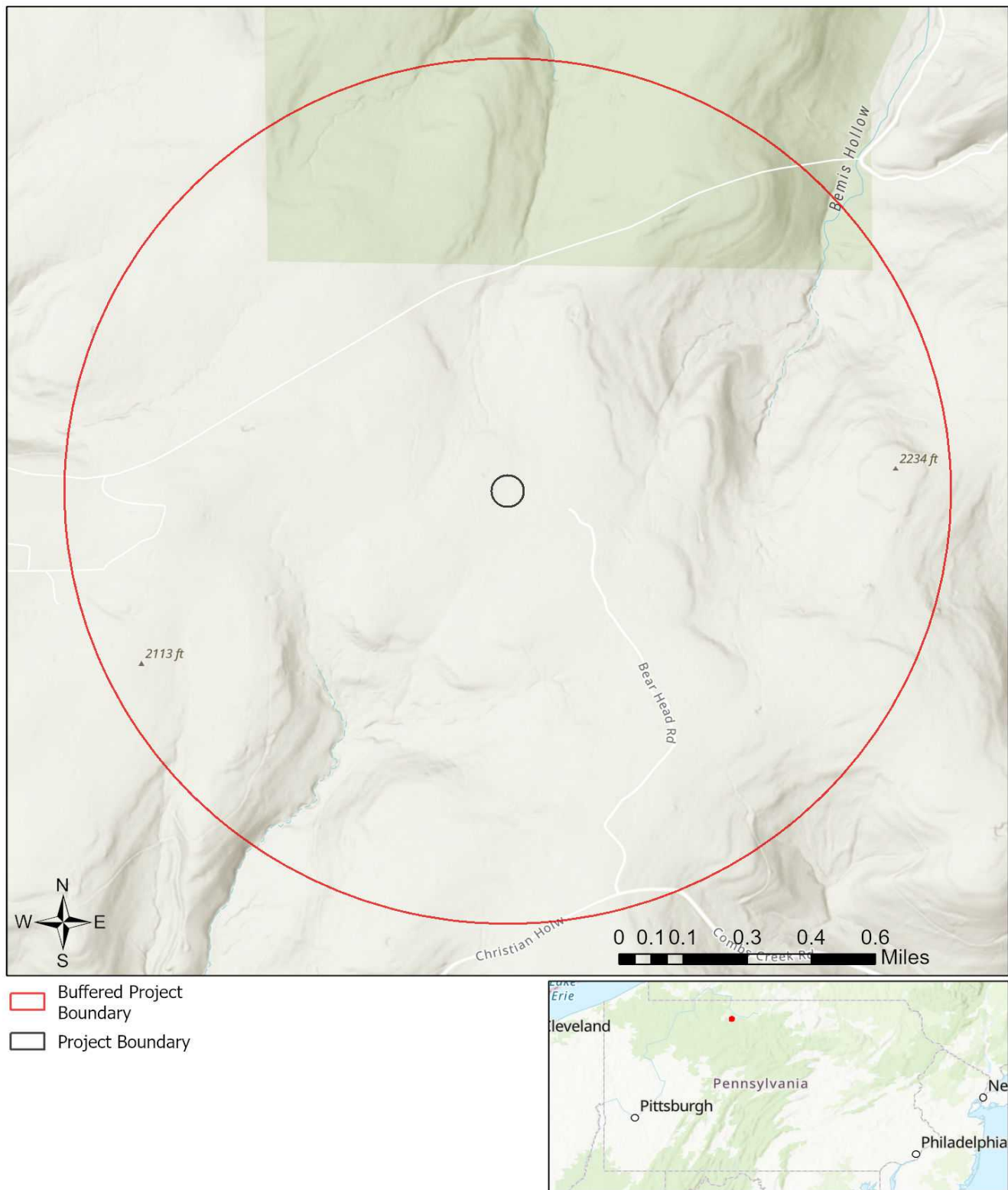


-  Buffered Project Boundary
-  Project Boundary



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Black Cherry Wind - Met Tower - Mast A



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 jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Conservation Measure: Potential impacts to state and federally listed species which are under the jurisdiction of both the Pennsylvania Game Commission (PGC) and the U.S. Fish and Wildlife Service may occur as a result of this project. As a result, the PGC defers comments on potential impacts to federally listed species to the U.S. Fish and Wildlife Service. No further coordination with the Pennsylvania Game Commission is required at this time.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

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).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Lota lota pop. 4	Burbot - Allegheny River population	Endangered

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

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

PA Fish and Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@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 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: Caroline Klein
Company/Business Name: EDR
Address: 34 Northeast Dr, Suite 1B
City, State, Zip: Hershey, PA 17033
Phone: (484) 515-0109 Fax: ()
Email: cklein@edrdpc.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.

Caroline Klein

applicant/project proponent signature

5/21/25

date



June 24, 2025

IN REPLY REFER TO

SIR# 61555

EDR

Caroline Klein

34 Northeast Drive

Hershey, Pennsylvania 17033

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No. 826796_1
Black Cherry Wind - Met Tower - Mast A
Norwich Township: MCKEAN County**

Dear Caroline Klein:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search “potential conflict” or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish and Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish and Boat Code (Chapter 75), or the Wildlife Code.

An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

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 Nevin Welte at 814-470-6151 or c-nwelte@pa.gov and refer to the SIR # 61555. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

A handwritten signature in black ink, reading "Christopher A. Urban". The signature is written in a cursive, flowing style.

Christopher A. Urban, Chief
Natural Diversity Section

CAU//NTW/dn

Attachment E

E&S Plan Approval

Joey Shannon
510 Bering Drive Suite 300
Houston, TX 77057

June 17, 2025

Re: Erosion and Sedimentation Control Plan
Black Cherry Wind – Met Tower A
Norwich Township, McKean County, PA

Dear Mr. Shannon,

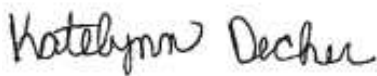
I have completed the review of the erosion and sedimentation control (E&S) plan for the above referenced project, dated June 10, 2025 received on June 10, 2025.

The plan adequately addresses erosion and sediment pollution control and meets the minimum requirements of the Department of Environmental Protection's (DEP) rules and regulations, Chapter 102, Erosion and Sediment Control and the Clean Streams Law, provided all Best Management Practices (BMPs) are properly implemented and maintained until the project has been permanently stabilized.

The District may, upon complaint or investigation, require additional BMPs or other measures on a case-by-case basis to correct or minimize the potential for accelerated erosion and sedimentation.

The plan must be fully implemented and available on-site at all times. If you have any comments or questions regarding this review, please feel free to contact me at 814-887-4008 or by email kadecker@mckeancountypa.gov

Sincerely,



Katelynn Decker
Conservation Technician

CC: Norwich Township
Caroline Klein, Environmental Design & Research, D.P.C



Attachment F

FAA Notice Criteria Tool



Notice Criteria Tool

[Notice Criteria Tool - Desk Reference Guide V_2018.2.0](#)

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference [CFR Title 14 Part 77.9](#).

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the [FAA Co-location Policy](#)
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the [Air Traffic Areas of Responsibility map](#) for Off Airport construction, or contact the [FAA Airports Region / District Office](#) for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

* Structure Type:	TOWER Met Tower ▼			
	Please select structure type and complete location point information.			
Latitude:	41	Deg	45	M 20.63 S N ▼
Longitude:	78	Deg	19	M 48.90 S W ▼
Horizontal Datum:	NAD83 ▼			
Site Elevation (SE):	2205	(nearest foot)		
Structure Height :	198	(nearest foot)		
Is structure on airport:	<input checked="" type="radio"/> No <input type="radio"/> Yes			

Results

You do not exceed Notice Criteria.

