PENNSYLVANIA UMBRELLA AGREEMENT
MITIGATION BANKING INSTRUMENT

FINAL MITIGATION PLAN
FETTER WETLAND BANK

WEST ST. CLAIR TOWNSHIP, BEDFORD COUNTY, PENNSYLVANIA

PREPARED FOR

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 9-0

PREPARED BY

SKELLY AND LOY
A Terracon COMPANY

JANUARY 2022

JN217474

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Executive Summary:

The Pennsylvania Department of Transportation (PennDOT) has prepared this Final Mitigation Plan for the Fetter Wetland Bank (Fetter Site) to enroll it into the Pennsylvania Umbrella Mitigation Banking Instrument (PUMBI), including the ability to utilize secondary service areas consistent with the PUMBI. The Fetter Wetland Bank contains a total of 3.759 acres of wetland mitigation credit located in the Upper Juniata River watershed. The mitigation type located at the Fetter Site includes a combination of wetland establishment (creation) and reestablishment, but does not include: wetland enhancement, stream mitigation, or other bank-type credits. To date, 1.628 acres have been used to offset impacts associated with S.R. 56 Sections 9, 10, 12 and SR56/4026. A total of 2.131 acres of credit are available.

General Site Information:

A checklist of required information to amend a mitigation site into an existing umbrella agreement is included in Appendix A.

Site Name:	Fetter	**Engineering District:**	9-0
Site Location:	West St. Clair Township, Bedford County		
Watershed:	Upper Juniata River		
Year Constructed:	2008	**Monitoring Started:**	2008
Date of Last Monitoring Visit:	10/13/21	**Date of Last Monitoring Report**	12/16/20
Has the site been released from monitoring?			No
Engineering District Contact:	Pennsylvania Department of Transportation Engineering District 9-0 1620 North Juniata Street Hollidaysburg, PA 16648 Attn: Mr. Thomas Yocum, Environmental Manager		
Was the site constructed under an existing banking/advanced wetland compensation agreement?			Yes
Date of Last Agency Field View:		**6/27/2019**	

Wetland Habitat Summary Ledger (acres)				
	Created	**Debited**	**Balance**	**Available Credits**
Creation	3.759	1.628	2.131	2.131
Habitat created based on 2021 delineation data				

Mitigation Objectives of the Proposed Amendment:

The mitigation objectives of enrolling the Fetter Wetland Bank in the PUMBI include modernizing the overall Fetter Site wetland banking instrument to be consistent with the 2008 Final Mitigation Rule and the PUMBI operating framework related to: debiting, updating credits, monitoring, service area (see Appendix B), and long-term management.

Site History:

The Fetter Wetland Bank is located on a 7.7 acres Conservation Easement within a 394 acres property owned by the Jerry Fetter Conservation Trust located in West St. Clair Township, Bedford County, Pennsylvania (see Appendix C). The site was originally constructed by the PennDOT District 9-0 in 2008 as advanced mitigation for several roadway projects in Bedford County associated with SR 0056 and developed into an Advance Wetland Compensation (AWC) Site for future projects. The roadway projects associated with SR 0056 required 1.628 acres of wetland mitigation. To address these mitigation needs, PennDOT selected the Fetter Site and received approval from the regulatory agencies after a field view on July 18, 2006.

The United States Army Corps of Engineers (USACE) Clean Water Section 404 and the Pennsylvania Department of Environmental Protection (PA DEP) Chapter 105 Permits for the SR 0056 roadway projects required 1.628 acres of wetland mitigation. Surplus wetland mitigation at the Fetter Site was intended as advanced wetland mitigation for other roadway projects and is now proposed for amendment to the PUMBI. The site was permitted in 2006 and construction was completed in 2008.

The site was originally owned in fee simple by Jerry Fetter; in 2016 the site was transferred to the Jerry Fetter Conservation Trust (Fetter Trust). The original Conservation Easement was executed in September 2008 and contained 16.4 acres (see Appendix D). The Conservation Easement was modified in 2012 to include only the constructed wetland area and currently totals 7.7 acres There are numerous other constructed impoundments and wetlands located on the Fetter Trust property that are protected by other preservation and conservation instruments. The Fetter Trust properties are currently used as a bird watching and wildlife photography destination open to the public with permission from the Fetter Trust. PennDOT allows any use of the Fetter Wetland Bank that is consistent with the terms and conditions of the Conservation Easement.

Site Selection Process:

The Fetter Site was one of six mitigation sites that were evaluated for SR 0056 roadway improvement projects. Other sites included the PA Fish and Boat Commission (PFBC) Site, the Don McCoy Site (A and B), the Don Lambert Site, and the Randy Felix Site. The Fetter Site was ultimately selected because of: the relatively flat terrain; drained hydric soils that afforded easy wetland reestablishment; the willingness by the landowner; and, enough acreage to offset the SR 0056 roadway improvement projects impacts. The complete Site Selection summary prepared by PennDOT District 9-0 is in Appendix E.

Site Ownership and Management:

The site is currently owned by the Jerry Fetter Conservation Trust. PennDOT holds a Conservation Easement for 7.7 acres including and surrounding the mitigation site. The site has been monitored annually by the EADS Group since it was constructed. The most recent monitoring report is included in Appendix H. PennDOT Engineering District 9-0 will maintain long-term management responsibility for the site in perpetuity. Copies of the original and modified Conservation Easements and the Long-Term Management Plan are in Appendix D.

There are other impoundments and wetlands located on the entire Fetter Trust property (see Appendix C), including a constructed US Fish and Wildlife Service (USFWS) wetland adjacent to the PennDOT wetland and contained within the PennDOT held Conservation Easement. A total of 313.25 acres of USDA Natural Resource Conservation Service (NRCS) Wetlands Reserve Program Easement are located directly adjacent to the PennDOT constructed wetland. PennDOT retains the management responsibility for their conservation easement containing the Fetter Wetland Bank mitigation area but is not responsible for the USFWS wetland within the PennDOT held Conservation Easement.

Pre-Wetland Construction Site Conditions:

The Fetter Site is located within the Dunning Creek watershed, and is located southeast of State Route 56. Prior to the construction of the wetlands, the site was an agricultural field in between two wetlands constructed by the USFWS and USDA NRCS (see Appendix C).

Field investigation of the site before construction confirmed that the site contained Monongahela and Birdsboro silt loams, with likely pockets of drained Holly silt loam. The IRT agencies concluded (July 18, 2006 and March 30, 2007) the site did not contain any regulated wetlands prior to construction. Photographs of the site before construction are located in Appendix E.

A PNDI and a historic resource investigation were both completed before site construction began (see Appendix F). The PNDI receipt indicated two potential impacts under the Pennsylvania Game Commission (PGC) and Pennsylvania Department of Conservation and Natural Resources (DCNR). Both the PGC and DCNR concluded that the project had no impacts. The Pennsylvania Historical and Museum Commission (PHMC) concluded there were no historic properties present or affected within the project site.

Hydrology and Water Quality:

The Fetter Site is located within the Dunning Creek drainage basin within the Upper Juniata River watershed. According to Pennsylvania Code Title 25, Chapter 93, Dunning Creek has a protected water use for Warm Water Fishes (WWF) and Migratory Fishes (MF).

The hydrology source for the wetlands originates from shallow groundwater that is retained by a shallow berm. The water surface elevation of the wetland is controlled by an inline water control structure. The discharge elevation of the water control structure has remained constant for over 10 years. Seasonal hydrology of the site has remained very constant and is subject to seasonal fluctuations in precipitation, similar to other wetlands in the region and on the Fetter Trust property. Hydrology of the Fetter Site wetland does not appear to be influenced by the operations or management of other impoundments or wetlands on the Fetter Trust property. Under normal circumstances, flow from the Fetter Site that discharges from the wetlands flows through an in-line water control structure and into a constructed drainage ditch, which flows directly into Dunning Creek.

No evidence of water quality stressor has been observed during the annual monitoring events.

Unique Features and Public Access:

The Fetter Site is located adjacent to Dunning Creek and is part of a large impoundment and wetland complex owned by the Fetter Trust. The Fetter Site wetland is buffered and augmented by numerous other constructed wetland complexes that were constructed in former agricultural fields. These other wetland complexes are primarily large open water ponds with diverse emergent and scrub shrub wetlands located along the fringe.

The site is located on private property owned by Jerry Fetter Conservation Trust; however, public access to the wetland complexes is allowed with permission. There are mowed grass trails along the berms of the Fetter Site and other adjacent wetlands, and bird watchers and wildlife photographers can be frequently found at the site.

Adjacent Land Use:

The Fetter Site is located in a mixed agricultural and rural residential area adjacent to Dunning Creek, southeast of State Route 56. The Fetter Site is located amongst a large complex of constructed impoundments and wetland, which is bound primarily by agricultural fields and wooded areas.

Wetland Bank Service Area:

The Fetter Site is located in PUMBI Service Area 11. The primary and secondary service area for the Fetter Site will be consistent with the 2020 revision to the PUMBI. A map of the service area is included in Appendix B.

Watershed Planning:

The wetland restoration done at the Fetter Site is consistent with many formal and informal initiatives in the Juniata and Susquehanna Rivers and Chesapeake Bay watershed. However, the Fetter Trust property is not mentioned by name in any Watershed Plan.

Mitigation Work Plan:

The Fetter Site wetland was constructed by PennDOT Engineering District 9-0 maintenance forces in 2008. The wetland was constructed in an agricultural field that contained pockets of drained hydric soils (Holly silt loam) and drainage ditches (see ASCS hand drawn "ditch map" in Appendix G). A shallow berm (elevation 1163) was constructed along the southern and eastern portion of the site to create a shallow wetland basin (see construction plans in Appendix G). The location of the berm was modified during construction to minimize excavation, minimize deep open water, and maximize the establishment of palustrine wetlands. The western portion of the basin was excavated to generate the borrow material to construct the berm and expanded the size of the wetland basin. Topsoil stripped from the borrow areas was placed in the western portion of the wetland basin. Surplus excavation material was placed in an agricultural field west of the site and regraded to be inconspicuous. The excavation disposal area is currently a goldenrod field and is largely located outside the Fetter Wetland Bank Conservation Easement.

The water surface elevation of the wetland is controlled by an inline water control structure that discharges to a R-4 rock apron. The rock apron diffuses discharge flow and has resulted in additional replacement wetland acreage being formed below the discharge pipe (see Appendix G and the Wetland Location Map in Figure 1).

The wetland portion of the site was planted with a wetland seed mix and has been augmented with supplemental woody plantings. Based on observations collected during the long term monitoring the site currently contains approximately 42 herbaceous species, 4 shrub species, and 6 tree species.

Summary of 2020 Monitoring and 2021 Re-delineation:

The Fetter Site was monitored in May, July, August, and October of 2020 to evaluate hydrology, vegetation, and overall site conditions by the EADS Group (see Appendix H). The 2020 wetland data sheets by the EADS Group and community boundaries were reevaluated on October 13, 2021 by Skelly and Loy, Inc. (see 2021 Map in Figure 1 and Data Sheets in Appendix I). The 2021 wetland delineation revealed that there was an increase in wetland acreage along a drainage ditch on the northwest corner of the site, and a new and well-established pocket of PEM wetland originating from the outfall of the inline water control structure, located between the berm and the gravel road. This resulted in 0.300 acres of new wetland acreage, split evenly in 0.150 acres of PEM and 0.150 acres of PSS communities. The wetland acreage and vegetative classification delineated in 2021 is used in the Debit-Credit summary below and as the basis of this amendment request. Aerial oblique images of the site in October 2021 are located in Appendix J.

Summary of Debits and Remaining Credits:

To date, PennDOT has used the Fetter Site to mitigate unavoidable impacts for 4 projects. The table below summarizes the projects and the acreage by wetland type debited for each project.

Based on the 2021 monitoring acreage, the Fetter Site contains 3.759 acres of wetland mitigation credit, including:

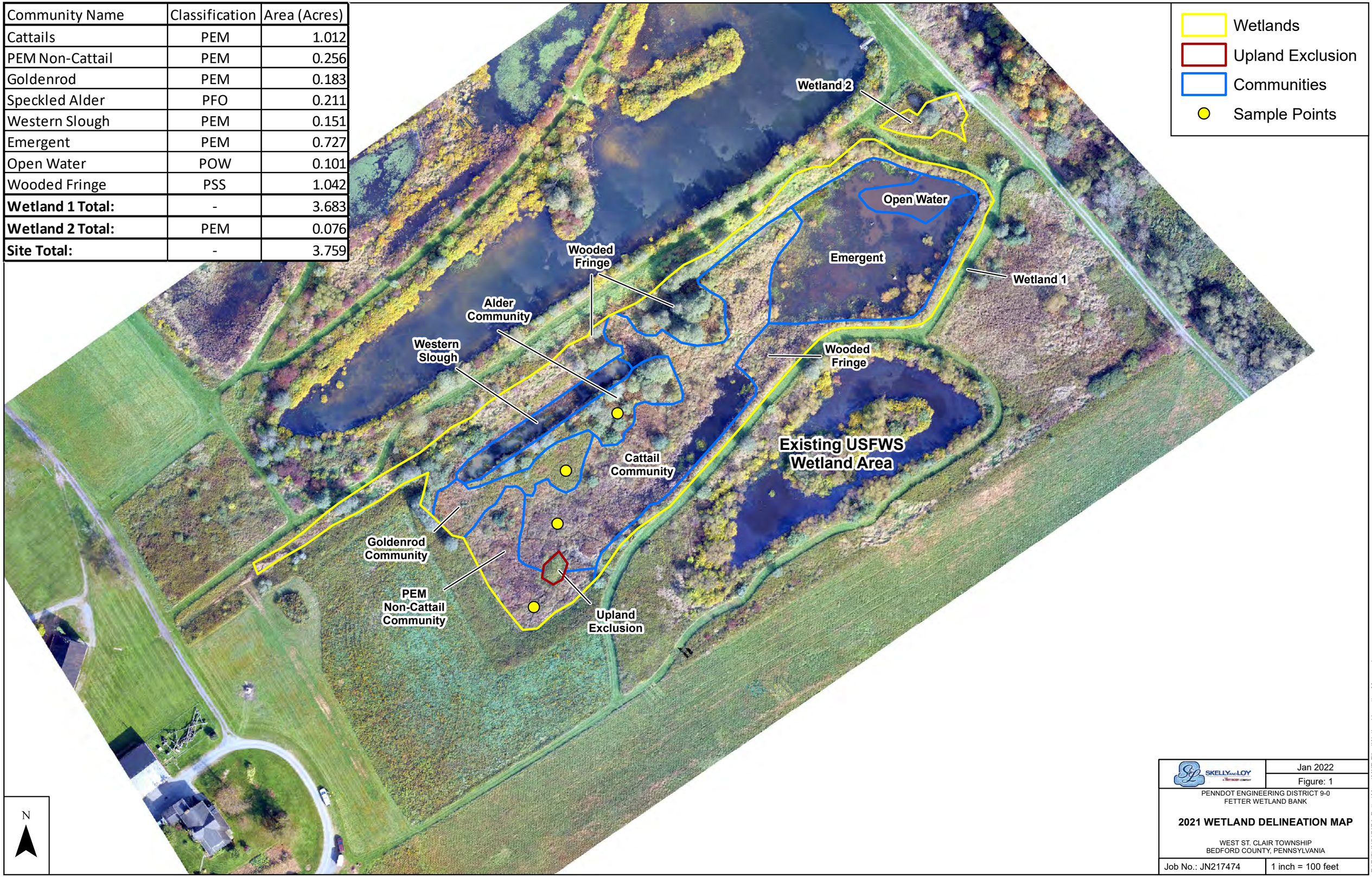
Advance Wetland Mitigation Site - Fetter Debited Acreage					
Accounting Information Last Updated December 2020					
Project Name and County	**POW**	**PEM**	**PSS**	**PFO**	**TOTAL**
S.R. 56 Section 10, Bedford	0.000	0.730	0.000	0.000	0.730
S.R. 56 Section 12, Bedford	0.000	0.560	0.000	0.000	0.560
S.R. 56 Section 9, Bedford	0.000	0.050	0.000	0.000	0.050
S.R. 56/4028	0.000	0.288	0.000	0.000	0.288
Total Debited (Acreage)	**0.000**	**1.628**	**0.000**	**0.000**	**1.628**
Available Credits based on 2021 Monitoring	**0.101**	**2.405**	**1.042**	**0.211**	**3.759**
Remaining Credits (Acreage)	**0.101**	**0.777**	**1.042**	**0.211**	**2.131**

Based on the 2021 delineation acreage, the Fetter Wetland Bank contains 2.131 acres of wetland mitigation credit, including:

- 0.101 acres of POW Credit
- 0.777 acres of PEM Credit
- 1.042 acres of PSS Credit
- 0.211 acres of PFO Credit

At this time, PennDOT is requesting this available credit be enrolled under its PUMBI.

Community Name	Classification	Area (Acres)
Cattails	PEM	1.012
PEM Non-Cattail	PEM	0.256
Goldenrod	PEM	0.183
Speckled Alder	PFO	0.211
Western Slough	PEM	0.151
Emergent	PEM	0.727
Open Water	POW	0.101
Wooded Fringe	PSS	1.042
Wetland 1 Total:	-	3.683
Wetland 2 Total:	PEM	0.076
Site Total:	-	3.759



SKELLY and LOY

Jan 2022

Figure: 1

PENNDOT ENGINEERING DISTRICT 9-0
FETTER WETLAND BANK

2021 WETLAND DELINEATION MAP

WEST ST. CLAIR TOWNSHIP
BEDFORD COUNTY, PENNSYLVANIA

Job No.: JN217474

1 inch = 100 feet

E:\GIS\JN217474_FetterMaps\MXD Files\Wetland Location Map.mxd

APPENDICES

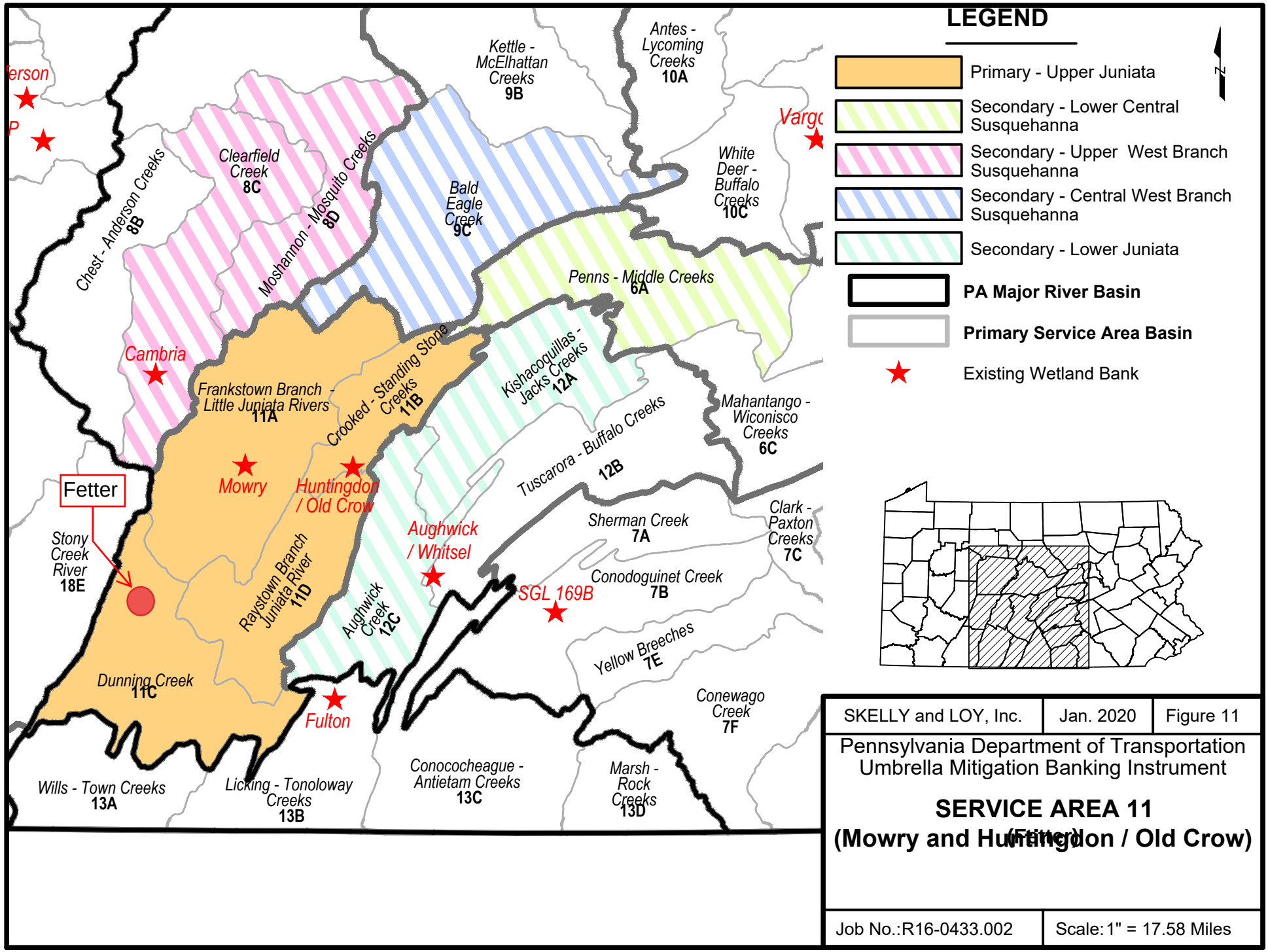
APPENDIX A –

AMENDMENT CHECKLISTS (33 CFR PART 332.8(d)(2) AND IRT INFORMATION REQUIREMENTS *DRAFT* 11-19-2013

Fetter Wetland Bank Site – Final Mitigation Plan IRT Information Requirements *Draft* November 19, 2013 CHECKLIST	
Item	**Document Page/Appendix**
Location Map	Appendix C
Photos	Appendix J
PNDI Receipt	Appendix F
PHMC Correspondence	Appendix F
Aquatic Resources Delineation	Page 6
Lat/Long Bank	Appendix E
Site Ownership	Page 3
Site Selection Process	Page 3 and Appendix E
Goals and Objectives	Page 2
Work Description	Page 5
Conceptual Plan	Appendix G
Potential Acreages	Page 6
Drainage Areas	Page 4
Water Use Upstream & Downstream	Page 5
Adjacent Land Use	Page 5
Soil Types	Page 3
Identification Reference Sites	N/A – Existing Bank
Existing Land Use & Conditions	Page 5
Chapter 93 Designation	Page 4
Functional/Conditional Assessment (Level 2)	Appendix I
Water Budget	N/A – Existing Bank
Site Stressors	Appendix I
Site Degraders	Appendix I
Potential Crediting	Page 6 and Appendix I
Owner Disclosure Statement	N/A – Existing Bank
Bank Sponsor Written Disclosure	N/A – Existing Bank
Proposed Service Area	Page 5 and Appendix B
Owner Monetary Statement	N/A – Existing Bank
Authority to Convey Land	N/A – Existing Bank
Sponsor Intent to Purchase Statement	N/A – Existing Bank

Fetter Wetland Bank Site – Final Mitigation Plan 33 CFR Part 332.8 (d) (2) Prospectus CHECKLIST		
Item		**Document Page/Appendix**
(i)	Objectives of Bank	Page 2
(ii)	How Bank will be Established and Operated	N/A – Existing Bank
(iii)	Proposed Service Area	Page 5 and Appendix B
(iv)	Need and Technical Feasibility	N/A – Existing Bank
(v)	Ownership and Management	Page 3 & Appendix D
(vi)	Qualifications of the Sponsor	See PUMBI
(vii)	(A) Ecological Suitability	Appendix I
(viii)	(B) Water Rights and Long-term Sustainability	Page 6 and Appendix D

APPENDIX B –
PROPOSED SERVICE AREA MAP



SKELLY and LOY, Inc.	Jan. 2020	Figure 11

Pennsylvania Department of Transportation
Umbrella Mitigation Banking Instrument

SERVICE AREA 11
(Mowry and Huntingdon / Old Crow)

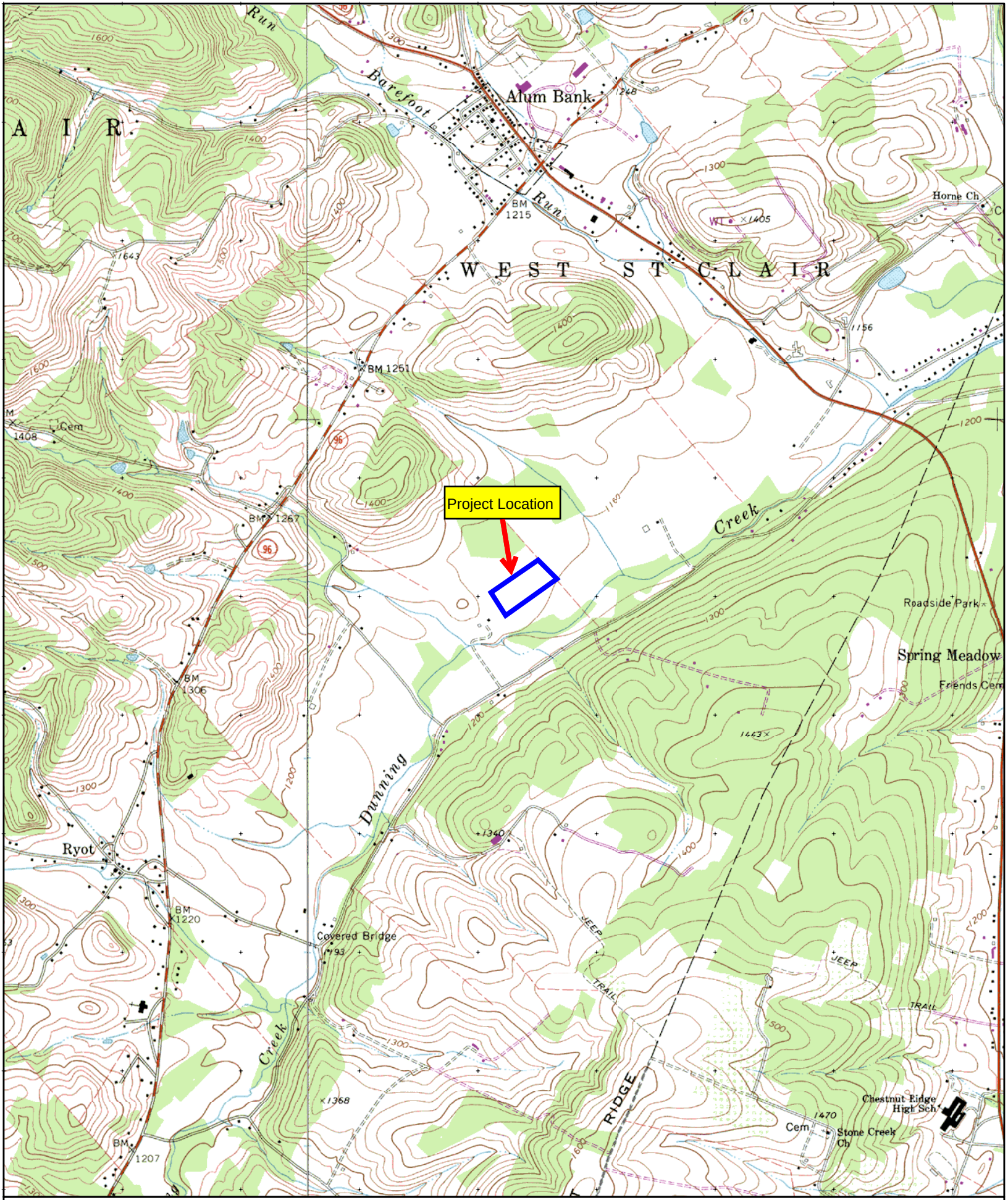
Job No.:R16-0433.002	Scale: 1" = 17.58 Miles

Plotted on: 2020-01-03

Dwg: D:\Watershed Maps\Figure SA11.dwg

By: DJohnston

APPENDIX C –
LOCATION MAPS



Name: ALUM BANK
Date: 7/10/2006
Scale: 1 inch equals 2000 feet

Location: 040° 09' 29.57" N 078° 36' 47.21" W NAD 27
Caption: Bedford County
Fetter Site
Wetland Mitigation

Copyright (C) 1997, Maptech, Inc.

SKELLY and LOY

Jan 2022

Figure: B

PENNDOT ENGINEERING DISTRICT 9-0
FETTER WETLAND BANK

PROJECT LOCATION MAP

WEST ST. CLAIR TOWNSHIP
BEDFORD COUNTY, PENNSYLVANIA

Job No.: JN217474 | 1 inch = 500 feet

E:\GIS\JN217474_FetterMaps\MXD Files\Project Location Map.mxd

APPENDIX D –

CONSERVATION EASEMENT & LONG-TERM MANAGEMENT PLAN

PLAN PREPARATION
PROJECT MANAGER SARAH MCCLELLA

	DISTRICT	COUNTY	TOWNSHIP	CITY	ROUTE	SECTION	TOTAL SHEETS
	9-0	BEDFORD	WEST ST. CLAIR				3

STATE PROJECT NUMBER

SYS	L.R. or W.O.				SPUR	PHA	SECTION			DIST.		CO.
-	-	-	-	-	-	-	-	-	-	0	9	-

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

DRAWINGS AUTHORIZING ACQUISITION
OF
CONSERVATION EASEMENT
IN BEDFORD COUNTY

THIS PLAN PREPARED PURSUANT TO SECTION 2003(e) OF THE ADMINISTRATIVE CODE, AS AMENDED, 71 P.S. SECTION 513(e) AND SECTION 302(b)(3) OF THE EMINENT DOMAIN CODE, 26 Pa.C.S. SECTION 302(b)(3) AND SECTION 412 OF THE ACT OF JUNE 1, 1945, P.L. 1242, AS AMENDED, 36 P.S. 670-412

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
MARK H. HARRIS, Notary Public
City of Harrisburg, Dauphin County
My Commission Expires Jan. 5, 2011

RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC. IN

IN BEDFORD COUNTY, PA
Plat BOOK 7 PAGE 195
ON THIS DATE September 26 20 08
WITNESS MY HAND AND SEAL OF OFFICE

Faith A. Zembower RECORDER

OFFICIAL SEAL
FAITH A. ZEMBOWER
REGISTER - RECORDER

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF DAUPHIN SS
BEFORE ME, A NOTARY PUBLIC, PERSONALLY CAME Allen D. Biehler SECRETARY OF TRANSPORTATION, WHO ACKNOWLEDGED THE WITHIN PLAN, COMPRISING -3- SEPARATE SHEETS, TO BE AN OFFICIAL PLAN OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND DESIRED THAT THE SAME BE RECORDED AS SUCH.
WITNESS MY HAND AND NOTARIAL SEAL 9/15/08

THE EADS GROUP
1126 EIGHTH AVENUE
ALTOONA, PA 16602

CHARLES F. WELKER
PRINCIPAL
DATE: 3/29/07

ROBERT IVAN KUNSELMAN
DIRECTOR OF TRANSPORTATION SERVICES
DATE: 3/29/07

RECOMMENDED DATE: Sept 8, 2008
DISTRICT EXECUTIVE

RECOMMENDED DATE: 9/12/08
DEPUTY SECRETARY

APPROVED DATE: 9/12/08
SECRETARY OF TRANSPORTATION
(ON BEHALF OF THE GOVERNOR AS WELL AS HIMSELF)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
9-0	BEDFORD	0056		2 OF 3
WEST ST. CLAIR TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

CONSERVATION EASEMENT NOTES

IT IS THE PURPOSE OF THIS CONSERVATION EASEMENT TO ASSURE THE MITIGATION AREA IN QUESTION WILL BE RETAINED FOREVER IN ITS NATURAL CHARACTER AND TO PREVENT USE OF THE MITIGATION AREA THAT WILL IMPAIR OR INTERFERE WITH THE CONSERVATION VALUES OF THE MITIGATION AREA. THIS EASEMENT IS TO PROTECT AND PRESERVE THE MITIGATION AREA IN ACCORDANCE WITH SECTION G. OF THE APPROVED INTERAGENCY AGREEMENT FOR ADVANCE WETLAND COMPENSATION.

ANY ACTIVITY OR USE WITHIN, OR ON THE MITIGATION AREA THAT IS INCONSISTENT WITH THE PURPOSE OF THIS EASEMENT IS PROHIBITED.

THE FOLLOWING BUILDING ACTIVITIES ARE EXPRESSLY PROHIBITED:

THE DRIVING OF PILINGS.

THE PLACEMENT OF WATER OBSTRUCTIONS OR ENCROACHMENTS.

THE CONSTRUCTION, PLACEMENT, PRESERVATION, MAINTENANCE, ALTERATION, DECORATION, OR REMOVAL OF ANY BUILDINGS, ROADS, SIGNS, PARKING AREAS, BILLBOARDS OR OTHER ADVERTISING, OR STRUCTURES ON OR ABOVE THE GROUND EXCEPT SUCH STRUCTURES AS DEER STANDS, WILDLIFE OBSERVATION PLATFORMS, AND DUCK BLINDS.

THE FOLLOWING USES ARE EXPRESSLY PROHIBITED:

THE REMOVAL, EXCAVATION, DISTURBANCE OR DREDGING OF SOIL, SAND, GRAVEL OR AGGREGATE MATERIAL OF ANY KIND.

THE DRAINAGE OR DISTURBANCE OF THE WATER LEVEL OR THE WATER TABLE WITHOUT PRIOR APPROVAL.

THE DIRECT DUMPING, DISCHARGE, OR FILLING WITH ANY MATERIAL.

THE PLACEMENT OF WATER OBSTRUCTIONS OR ENCROACHMENTS.

ACTIVITIES WHICH WOULD RESULT IN PERMANENT FLOODING IN THE AREA OF EASEMENT.

THE SPRAYING OF INSECTICIDES, PESTICIDES OR HERBICIDES WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT.

THE REMOVAL, DISTURBANCE, OR DESTRUCTION OF ANY TREES, SHRUBS, OR OTHER VEGETATION INCLUDING MOWING (EXCEPT FOR THE BERM AREA) WITHOUT PRIOR APPROVAL.

THE PLANTING OF ANY VEGETATION WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT.

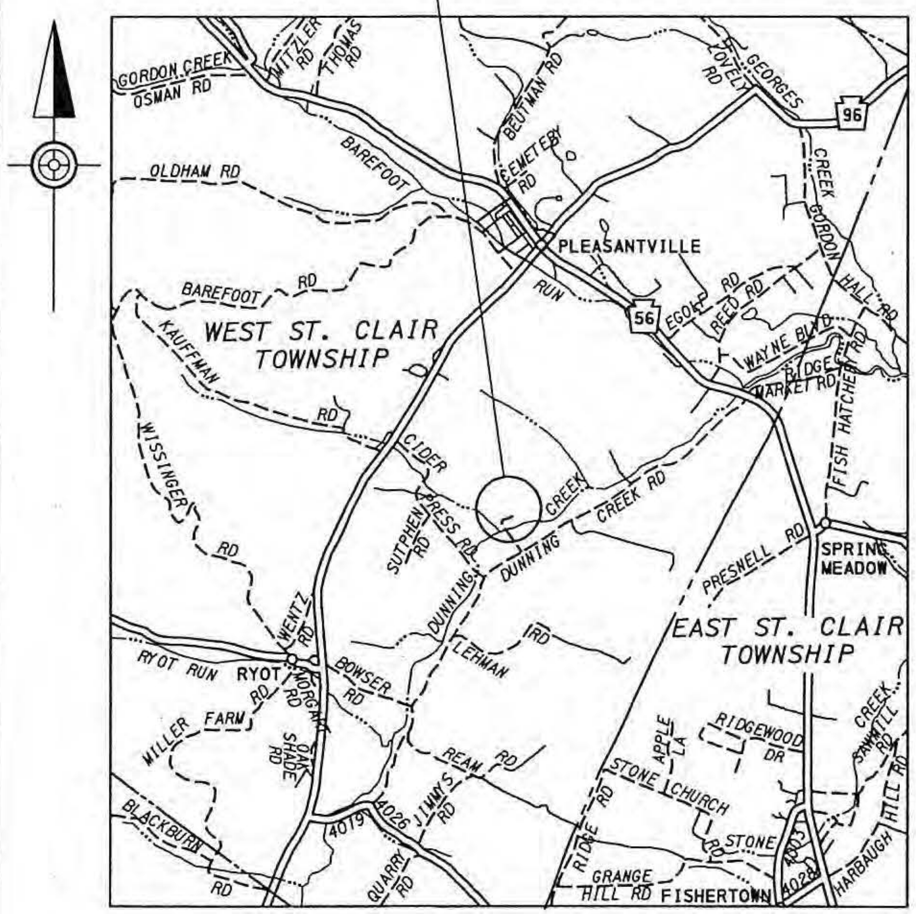
THE OPERATION OF OFF-ROAD VEHICLES (BOTH MOTORIZED AND NON-MOTORIZED) IN A MANNER THAT WOULD DAMAGE THE WETLAND AREAS.

THIS EASEMENT WILL ALLOW THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) OR IT'S AGENTS AND ASSIGNS TO ENTER THE MITIGATION AREA AND PERFORM CONSTRUCTION, MAINTENANCE AND MONITORING. IT WILL ALLOW PENNDOT OR IT'S AGENTS AND ASSIGNS TO ENTER THE MITIGATION AREA VIA MENONITE ROAD AND PRIVATE FARM LANE AT FUTURE REASONABLE TIMES TO MONITOR THE MITIGATION AREA AND/OR MAKE MODIFICATIONS FOR THE PROPER DOCUMENTATION AND FUNCTION OF THE MITIGATION AREA. SUCH ENTRY SHALL BE UPON PRIOR REASONABLE NOTICE TO THE PROPERTY OWNER. PENNDOT WILL REQUIRE THE RESTORATION OF SUCH AREAS OR FEATURES OF THE MITIGATION AREA THAT MAY BE DAMAGED BY ANY INCONSISTENT ACTIVITY OR USE BY THE PROPERTY OWNER AS DESCRIBED IN THE PREVIOUS PARAGRAPHS.

THE CONSERVATION EASEMENT WILL NOT PREVENT THE PROPERTY OWNER AND THEIR PERSONAL REPRESENTATIVES, HEIRS, SUCCESSORS, AND ASSIGNS FROM MAKING USE OF THE AREA THAT ARE NOT EXPRESSLY PROHIBITED HEREIN AND ARE NOT INCONSISTENT WITH THE PURPOSE OF THE EASEMENT.

HUNTING AND FISHING WITHIN THE AREA WILL BE PERMITTED ONLY WITH PRIOR PERMISSION FROM THE PROPERTY OWNER.

FETTER WETLAND AREA
PLEASANTVILLE, BEDFORD COUNTY



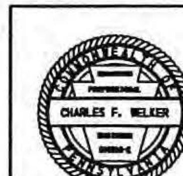
LEGEND

STATE ROUTE	56 SR 0056
TOWNSHIP ROAD	T-733
STREAM	
CITY/TOWNSHIP LINE	

LOCATION MAP

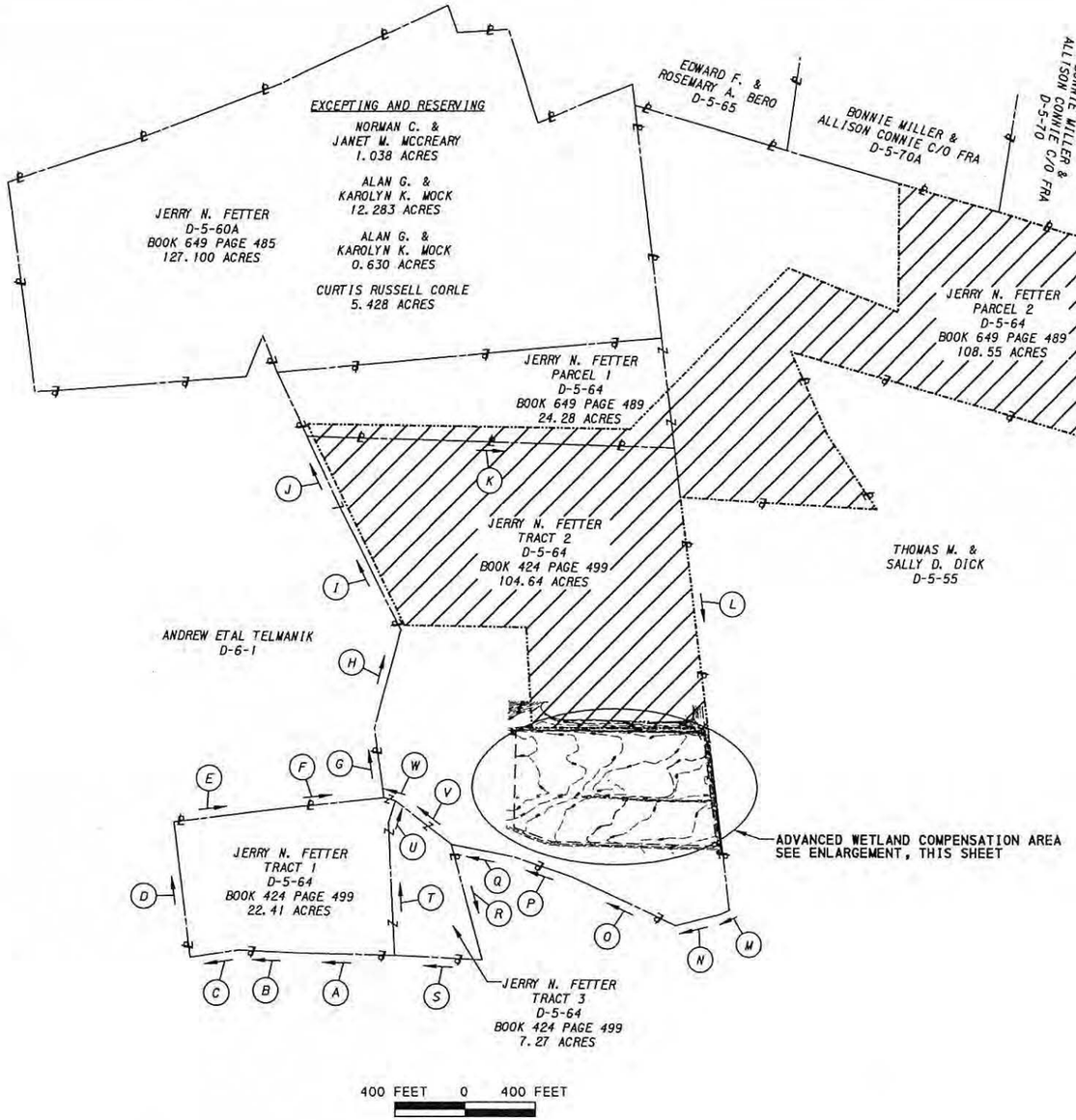
0.5 0 0.5 1

SCALE 1" - 0.5 MILES



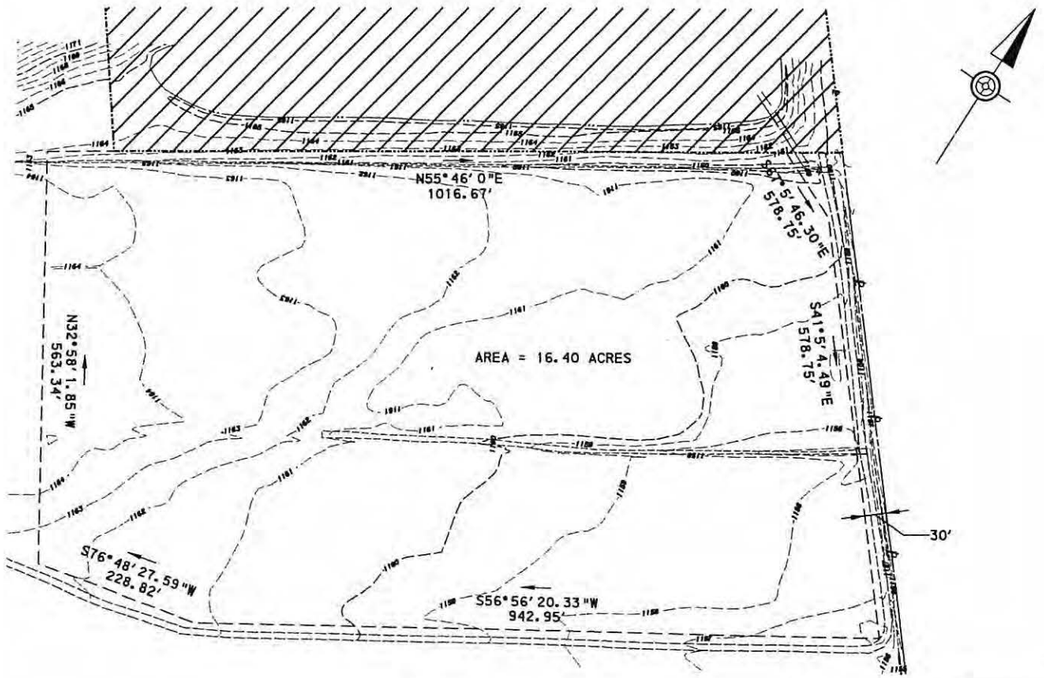
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
9-0	BEDFORD	0056		3 OF 3
WEST ST. CLAIR TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



DEED BEARING AND DISTANCES

A	S65°55'00"W, 563.00'	J	N50°24'00"W, 454.57'	S	S67°28'00"W, 499.57'
B	S67°30'00"W, 323.15'	K	N66°14'00"E, 2094.03'	T	N28°05'00"W, 753.56'
C	S55°57'00"W, 274.20'	L	S32°24'00"E, 2632.18'	U	N7°36'00"W, 127.17'
D	N32°24'00"W, 772.60'	M	S40°27'00"W, 63.04'	V	N77°41'00"W, 401.33'
E	N57°49'00"E, 455.68'	N	S50°36'00"W, 258.97'	W	S81°06'00"W, 67.52'
F	N58°08'00"E, 746.99'	O	S89°21'00"W, 652.00'		
G	N33°44'00"W, 396.00'	P	S83°21'00"W, 355.00'		
H	N10°24'00"W, 569.25'	Q	S75°21'00"W, 358.00'		
I	N51°54'00"W, 768.91'	R	S40°38'00"E, 677.00'		



DEED OF EASEMENT SHOWING LAND OF JERRY N. FETTER PROPERTY

AREAS	ACRES
FETTER TOTAL AREA	394.25
ADVERSES	19.38
#PA-NRCS 00902	138.90
ADVANCED WETLAND COMPENSATION	16.40

WEST ST. CLAIR TOWNSHIP, BEDFORD COUNTY PA

LEGEND:

WETLAND RESERVE PROGRAM, TRACT #PA-NRCS 00902

PROPOSED CONSERVATION EASEMENT

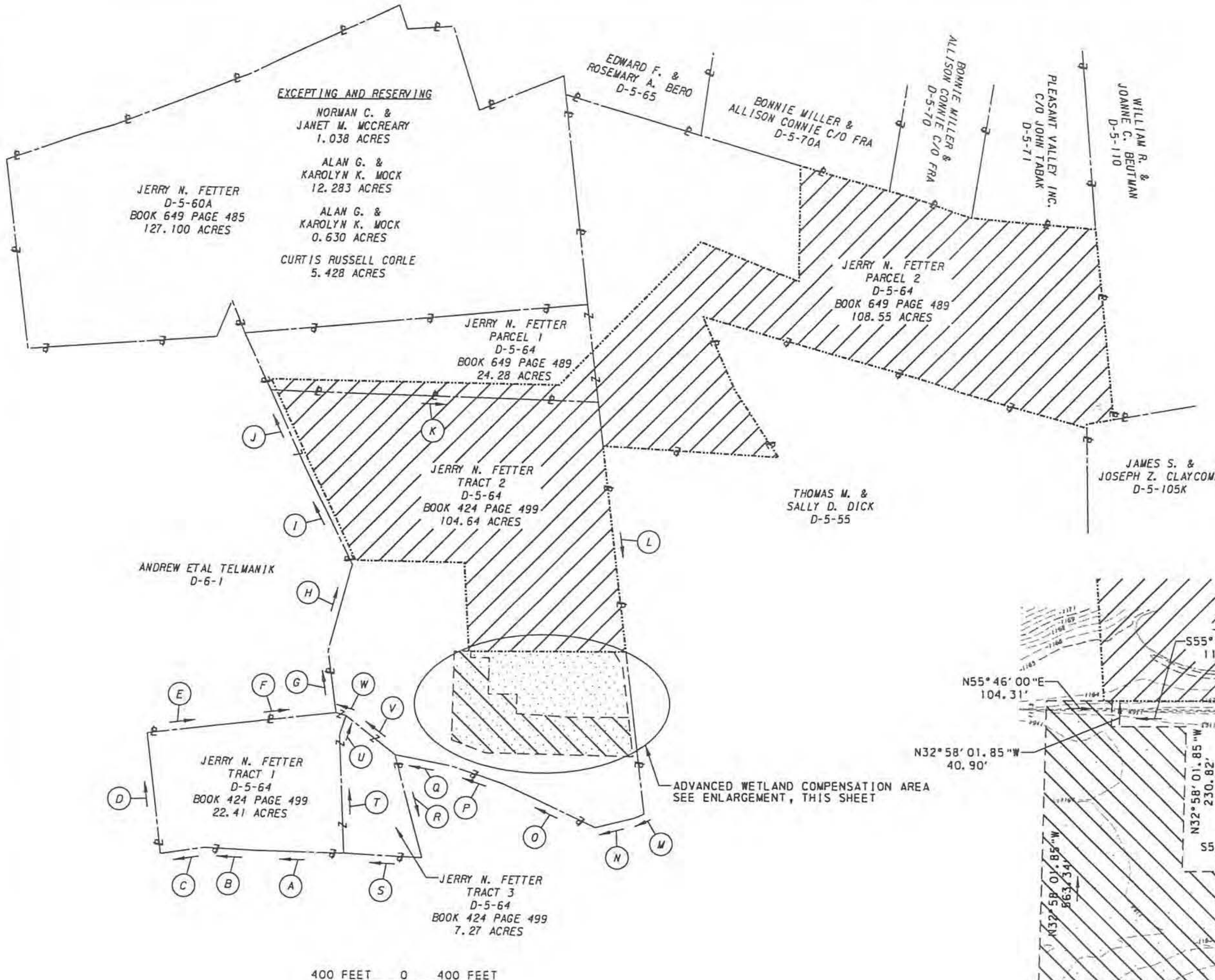
CHARLES F. WELSER — PROFESSIONAL

ROBERT IVAN KUNSELMAN — PROFESSIONAL

3/28/2007 11:59:08 AM P:\Work\2006\1003 Fetter ARC\Fetters Wetland mapping\Fetter_RR_Plat\03_Easement_Plat.dgn

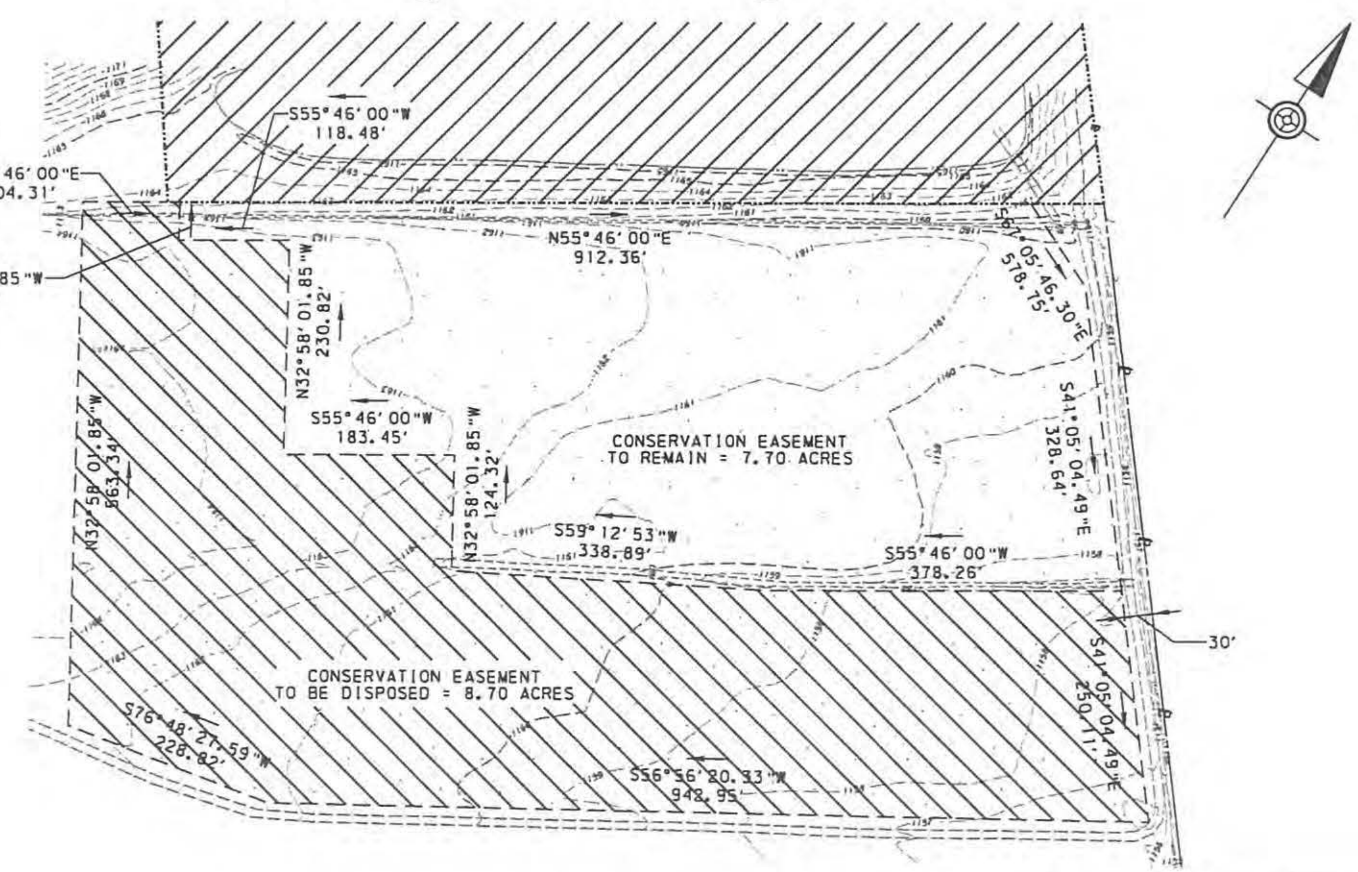
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
9-0	BEDFORD	0056		3 OF 3
WEST ST. CLAIR TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



DEED BEARING AND DISTANCES

A	S65°55'00"W, 563.00'	J	N50°24'00"W, 454.57'	S	S67°28'00"W, 499.57'
B	S67°30'00"W, 323.15'	K	N66°14'00"E, 2094.03'	T	N28°05'00"W, 753.56'
C	S55°57'00"W, 274.20'	L	S32°24'00"E, 2632.18'	U	N7°36'00"W, 127.17'
D	N32°24'00"W, 772.60'	M	S40°27'00"W, 63.04'	V	N77°41'00"W, 401.33'
E	N57°49'00"E, 455.68'	N	S50°36'00"W, 258.97'	W	S81°06'00"W, 67.52'
F	N58°08'00"E, 746.99'	O	S89°21'00"W, 652.00'		
G	N33°44'00"W, 396.00'	P	S83°21'00"W, 355.00'		
H	N10°24'00"W, 569.25'	Q	S75°21'00"W, 358.00'		
I	N51°54'00"W, 768.91'	R	S40°38'00"E, 677.00'		



DEED OF EASEMENT SHOWING LAND OF JERRY N. FETTER PROPERTY

AREAS	ACRES
FETTER TOTAL AREA	394.25
ADVERSES	19.38
#PA-NRCS 00902	138.90
EXISTING CONSERVATION EASEMENT	16.40
CONSERVATION EASEMENT TO BE DISPOSED	8.70
EFFECTIVE CONSERVATION EASEMENT	7.70

WEST ST. CLAIR TOWNSHIP, BEDFORD COUNTY PA

LEGEND:

- WETLAND RESERVE PROGRAM, TRACT #PA-NRCS 00902
- CONSERVATION EASEMENT TO REMAIN
- CONSERVATION EASEMENT TO BE DISPOSED

Fetter Wetland Bank Site

Long Term Management Plan

1. The Fetter Wetlands Bank Site will remain part of the property owned in Fee Title by the Jerry Fetter Conservation Trust (Fetter).

2. The Pennsylvania Department of Transportation Engineering District 9-0 (PennDOT) will inspect the water control structure annually in perpetuity. The water control structure in Wetland #1 is an Agridrain In-line Water Control Structure.

3. PennDOT will inspect and clean the water control structures annually, as needed, to maintain their functionality.

4. Fetter can, at their discretion, mow the berm tops and outslopes to retard the growth of woody vegetation.

5. PennDOT and Fetter will manage the wetland area in accordance with the 2008 Conservation Easement. The purpose of the conservation easement is to assure the mitigation area will be retained forever in its natural character and to prevent use of the mitigation area that will impair the conservation values of the mitigation area. Any activity or use of the mitigation area that is inconsistent with the purpose of the easement is prohibited.

    a. The following building activities are expressly prohibited: driving of pilings; placement of water obstructions or encroachments; construction, placement, preservation, maintenance, alteration, decoration, or removal of any buildings, signs, parking areas, billboards, or other advertising, or structures on or above the ground, except such structures as deer stands, wildlife observation platforms, and duck blinds.
    b. The following uses are expressly prohibited: removal, excavation, disturbance, or dredging of soil, and, gravel, or aggregate material of any kinds; drainage or disturbance of the water level or the water table without prior approval; direct dumping, discharge, or filling with any material; activities that would result in permanent flooding of the easement; spraying of insecticides, pesticides, or herbicides without prior approval; removal, disturbance, or destruction of any trees, shrubs, or other vegetation including mowing (except for the berm area) without prior approval; planting of any vegetation without prior approval; operation of off-road vehicles (both motorized and non-motorized) in a manner that would damage the wetland areas.
    c. The conservation easement will not prevent the property owner, and their personal representatives, heirs, successors, and assigns from making use

of the area that are not expressly prohibited herein and are not inconsistent with the purpose of the easement.

d. Hunting and fishing within the area will be permitted only with prior permission from the property owner.

6. PennDOT and Fetter recognize that wetland habitats are protected by both state and Federal regulations.

7. Fetter will manage and regulate public access and usage of the wetland area in accordance with the terms and conditions of the 2008 Conservation Easement.

8. Neither PennDOT nor Fetter will be obligated to repair any damage to the wetland area or water control structures resulting from Acts of Nature or age/deterioration of the site.

APPENDIX E –
SITE SELECTION SUMMARY

Bedford County

SR 00056, Sections 009, 010, and 012

Proposed Wetland Mitigation Site

Denny Brown, formerly employed by the USFWS and currently working as a sub consultant to the The EADS Group, Inc. was hired by PENNDOT District 9-0 to locate potential wetland mitigation sites for three roadway improvement projects located along State Route 56 (Sections 9, 10, and 12). Based upon an April 5, 2006 JD/Pre-app meeting with the U.S. Army Corps of Engineers and the PA Department of Environmental Protection, permanent unavoidable wetland impacts of 1.319 acres will require mitigation within the general project area. The following is a brief summary of the potential wetland mitigation sites that were located:

SITE 1

PA FISH AND BOAT COMMISSION PROPERTY AT REYNOLDSDALE.

The PFBC Reynoldsdale Site is currently being farmed and is either in corn or grass. Soils on the site are Pope, Basher or Atkins. The Basher which is a moderately well drained soil is found along Dunning Creek, along with a narrow band of Pope, also moderately well drained. Atkins, which is poorly drained, comprises the majority of the site. The best opportunities to create wetlands would be in the Atkins soils. Since the site is currently in crops, it's likely some type of drainage system exists in addition to the obvious open ditches. Archaeology sites are likely and the wetland design will require avoidance of any sites identified. There is a considerable amount of area suitable for creating wetlands depending on the willingness of the landowner. PENNDOT notified the PFBC that they are interested in using this site for wetland mitigation and an official response from the PFBC has not yet been received. Recent informal discussions have indicated that they will not be interested in pursuing this site at the present time.

SITE 2

JERRY FETTER SITE

The Fetter Site is currently being used to produce hay. It is drained by two open ditches and a tile drain system. The soils are mostly Monongahela with some Birdsboro and Purdy. The landowner has several existing wetlands on his property which were constructed by the NRCS or USFWS and two of the sites are located between/adjacent to the proposed mitigation site. Based on the actual soil types encountered during previous wetland construction, it is apparent the soils in the proposed mitigation area are suitable. Several of the existing constructed wetlands on the Fetter property are in existing easements or agreements; however the proposed site is located outside of any easements.

A permanent conservation easement would need to be obtained by PENNDOT to protect the site in perpetuity. The proposed design of the site would consist of intercepting the existing drainage ditches/tile and constructing two low level earthen berms. The site is approximately 10 acres in size. This landowner is very willing to proceed with the project.

SITES 3 AND 4

DON MCCOY - SITE A AND SITE B

Mr. McCoy has two potential sites located in the project area. Site A is located adjacent to Adams Run and has recently been cleared of trees and shrubs. The landowner intends to plant it in a cover crop or corn. The site is about 5 acres and the soils are mapped as Atkins. There are currently some small areas with hydrophytes, but the majority of the site consists of upland plants.

Site B is located along Dunning Creek and is currently planted in corn. There are two possible areas on either side of an old rail road grade. On the east side of the RR the soils are mapped as Basher, and on the west side they are mapped as Purdy. The Purdy soils offer the best chance for wetland establishment. This landowner is unsure if he would offer his property for wetland mitigation but showed some interest. Both sites are about 5 acres.

SITE 5

DON LAMBERT SITE

The Lambert Site is located along Ryot Run and is currently an abandoned pasture which is reverting to shrubs and grasses. There is a wet swale bisecting the site and the slope of the site is 0-8%. The soils are mapped as a Basher-Birdsboro complex. This site would need to be constructed as a series of small, narrow wetlands because of the slope. There are probably 2 - 5 acres available. This site would rank low because of the existing habitat and slope.

SITE 6

RANDY FELIX SITE

The Felix Site is located along Stone Creek and consists of a large area of existing wetlands dominated by reed canary grass and some adjacent uplands. The upland areas are narrow and somewhat steep (0-5%) and brushy. Dominant plants are hawthorn, grey stemmed dogwood and goldenrod with some arrow wood interspersed. Soils are mapped as Atkins or Ernest (moderately well drained). Constructed wetlands would be long and narrow and located in the uplands adjacent to the reed canary grass. This is a low priority site and would be about 2 acres.

SUMMARY

Bill Savage and Sarah McClellan (PENNDOT 9-0 Environmental) met with Dain Davis and Denny Brown (EADS) on June 8, 2006 to field view the potential sites and to rank them in order of preference. Various factors were used to rate the sites and included size, soil types, public access, ease of construction, and willingness of property owners. Based on the field view, the following rankings were established:

1. Fetter Site
2. PFBC Site
3. McCoy Site B
4. McCoy Site A
5. Lambert Site
6. Felix Site

The Fetter site was ranked number one and consists of an area that is relatively flat with drained soils which would allow for easy construction. The property owner is clearly interested in the project; however, he is opposed to unrestricted public access. The site is large enough that it may also be an option for the SR 56, Section 013 wetland mitigation package.

The PFBC property was ranked number two and offers the best potential for a large mitigation site that would be available to the public and offer a wide variety of outdoor recreation/education opportunities. The site is also large enough that it could possibly be used as an Advance Wetland Compensation site for future projects in Bedford County. The willingness on the part of the PFBC to agree to the concept within a timely manner and a potential for archaeology sites are negative aspects.

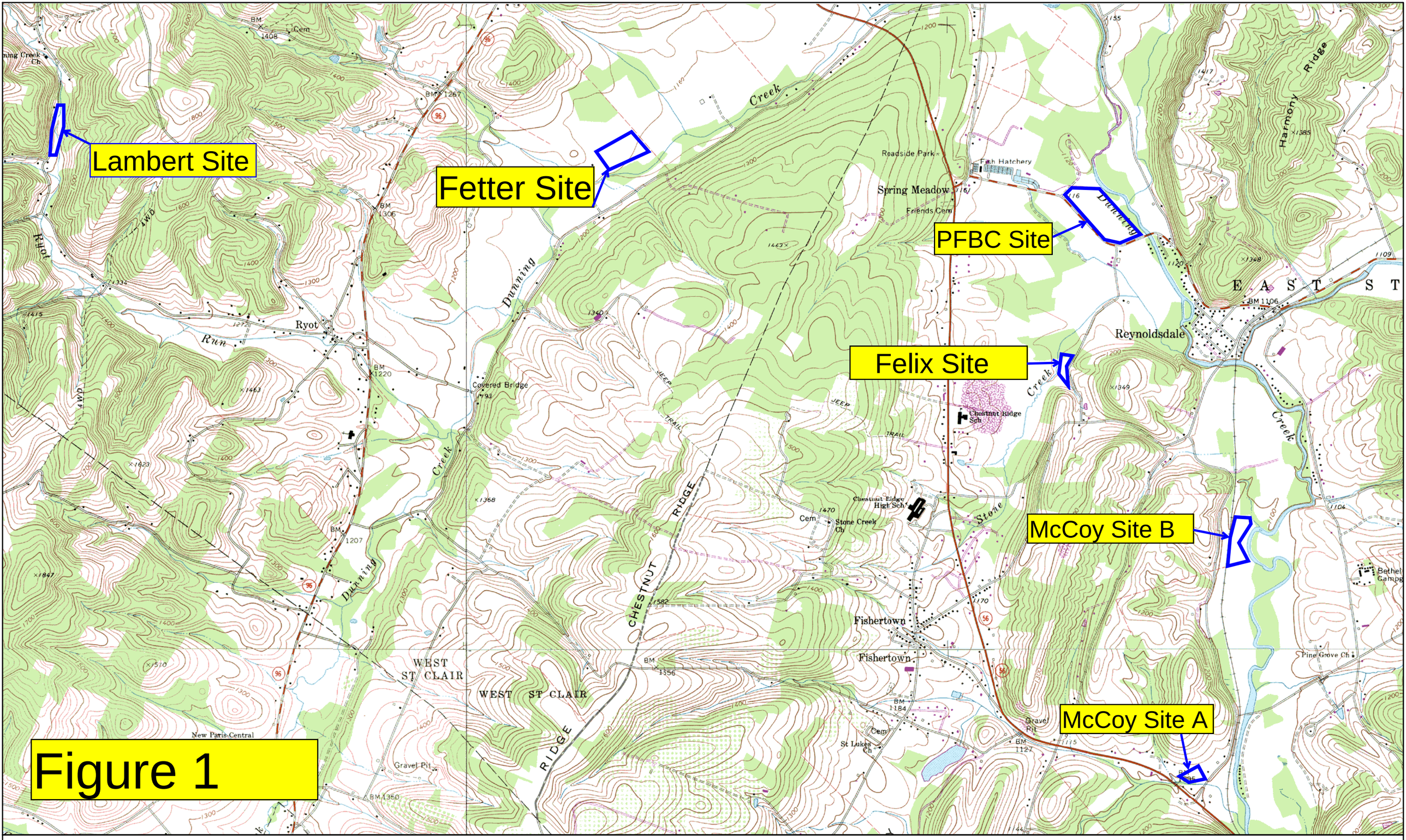
The McCoy sites were ranked three and four primarily due to the uncertainty of the landowner in his willingness to offer the sites for mitigation purposes. From discussions with Mr. McCoy, it appeared that he would be agreeable only if we could not find any other suitable sites and his were the last and only options. Of the two sites, he appeared to favor Site A over Site B; however, Site B was ranked higher because of the site characteristics.

The Lambert and Felix sites were ranked lowest because of their slope and/or small size but could be established into wetland mitigation sites and meet the acreage requirements if needed.

Conclusion

PENNDOT District 9-0 is proposing to use the Fetter site to mitigate for permanent unavoidable wetland impacts of 1.319 acres associated with the SR 56, Sections 9, 10, and 12 roadway improvement projects. If enough area is available, PENNDOT would also like to consider this site as part of the overall mitigation package for the proposed SR 56, Section 13 project pending agency approval.

As stated previously, the Fetter Site is currently being used to produce hay and is drained by two open ditches and a tile drain system. The proposed design of the site would consist of intercepting the existing drainage ditches/tile and constructing two low level earthen berms. A permanent conservation easement would need to be obtained by PENNDOT to protect the site in perpetuity. The site is approximately 10 acres in size, of which, approximately 5 acres of wetlands can be created. An initial review of the PHMC Cultural Resources GIS internet site indicates that no archaeological or historical resources are located within the project area. Further coordination with the District Cultural Resource Professionals will be conducted during a site visit of the project area. A PNDI HGIS internet search was performed and indicated the potential for 2 potential impacts to species of special concern (PGC and DCNR). The PENNDOT District 9-0 Environmental Unit will provide the necessary documentation to DCNR and the PGC. Based on the fact that the area consists of a mowed hayfield, no further coordination is anticipated. The landowner is very willing to proceed with the project and has offered his assistance in moving the project forward.



Name: ALUM BANK
Date: 6/21/2006
Scale: 1 inch equals 2000 feet

Location: 040° 08' 25.30" N 078° 36' 16.09" W NAD 27
Caption: Potential Wetland Mitigation Sites 2

Copyright (C) 1997, Maptech, Inc.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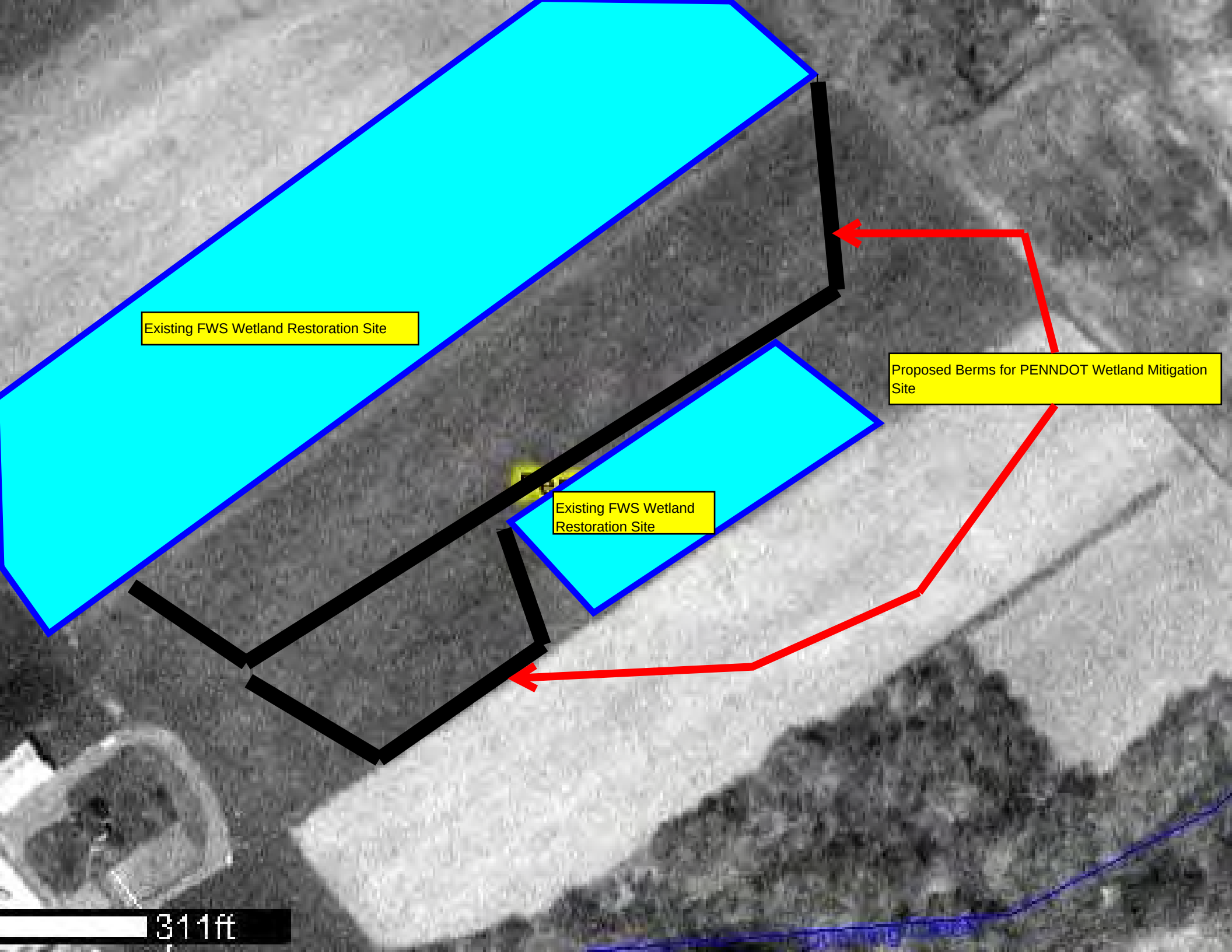
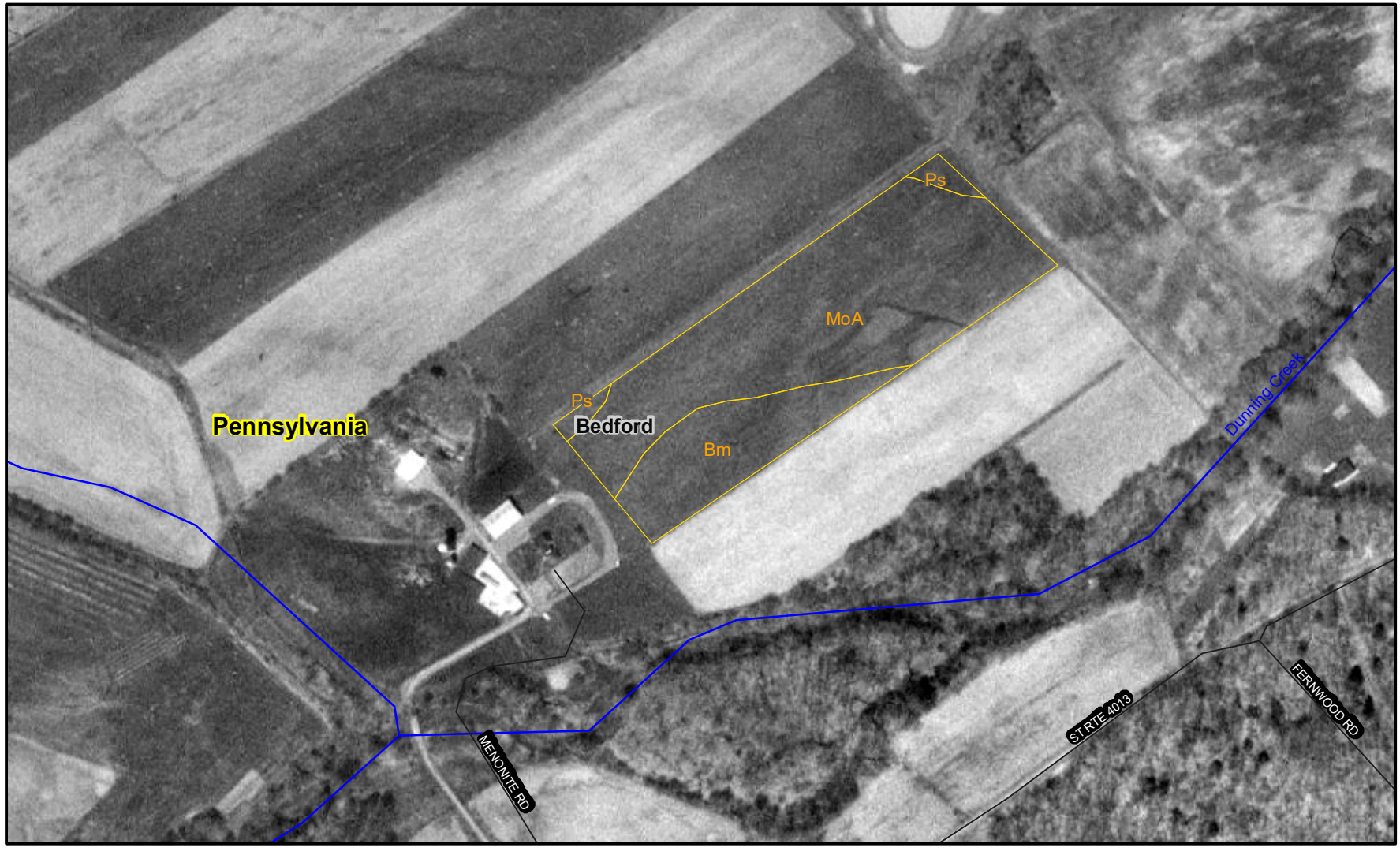

Existing FWS Wetland Restoration Site
Existing FWS Wetland Restoration Site
Proposed Berms for PENNDOT Wetland Mitigation Site
311ft

Fetter Site



Meters
0 45 90 180

Feet
0 100 200 400 600 800

Fetter Site

MAP LEGEND

- Soil Map Units
- Cities
- Detailed Counties
- Detailed States
- Interstate Highways
- Roads
- Rails
- Water
- Hydrography
- Oceans
- Escarpment, bedrock
- Escarpment, non-bedrock
- Gulley
- Levee
- Slope
- Blowout
- Borrow Pit
- Clay Spot
- Depression, closed
- Eroded Spot
- Gravel Pit
- Gravelly Spot
- Gulley
- Lava Flow
- Landfill
- Marsh or Swamp
- Miscellaneous Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Slide or Slip
- Sinkhole
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Perennial Water
- Wet Spot

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov

Coordinate System: UTM Zone 17

Soil Survey Area: Bedford County, Pennsylvania
Spatial Version of Data: 1
Soil Map Compilation Scale: 1:24000

Map comprised of aerial images photographed on these dates:
4/8/1993; 4/27/1993

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

Map Unit Legend Summary

Bedford County, Pennsylvania

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bm	Birdsboro silt loam, rarely flooded	2.1	23.5
MoA	Monongahela silt loam, 0 to 3 percent slopes	6.6	73.2
Ps	Purdy silty clay loam, 0 to 3 percent slopes	0.3	3.3

APPENDIX F –

PNDI AND PHMC COORDINATION

PNDI Project Environmental Review Receipt
Project Search ID: 20060630042887
Project Name: Fetter Site
Date: 6/30/2006 7:33:20 AM

Project Location

Location Accuracy

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Receipt is solely responsible for the project location and thus the correctness of the project location and thus the correctness of the Project Review Receipt content.

2 Potential Impacts

Under the Following Agencies' Jurisdiction: Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources

Project Name: Fetter Site
On Behalf Of: State Agency
Project Search ID: 20060630042887
Date: 6/30/2006 7:33:12 AM
# of Potential Impacts: 2
Jurisdictional Agency:
Pennsylvania Game Commission,
Pennsylvania Department of Conservation and Natural Resources
Project Category: Habitat Conservation and Restoration,Wetland Restoration, Wetland Creation, or Wetland Enhancement
Project Location
Decimal Degrees: 40.15665 N, -78.61314 W
Degrees Minutes Seconds: 40° 9' 23.9" N, 78° 36' 47.4" W
Lambert: -171197.29526357, 422207.53122154 ft
ZIP Code: 15554
County: Bedford
Township/Municipality: WEST ST CLAIR
USGS 7.5 Minute Quadrangle ID: 271
Quadrangle Name: ALUM BANK
Project Area: 3.2 acres

 APPLICANT INITIALS: WVS

PNDI Project Environmental Review Receipt

Project Search ID: 20060630042887
Project Name: Fetter Site
Date: 6/30/2006 7:33:20 AM

Pennsylvania Natural Diversity Inventory (PNDI) records indicate there are potential impacts on special concern species and resources within the project area. If the project is pursued, the jurisdictional agency/agencies indicated require that the instructions below regarding potential impacts and/or avoidance measures be followed in their entirety.

These determinations were based on the project-specific information you 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 information you provided does not accurately reflect this project, or if project plans change, DEP and the jurisdictional agencies require that another PNDI review be conducted.

This response represents the most up-to-date summary of the PNDI data files and is good for one(1) year from the date of this PNDI Project Environmental Review Receipt.

1 potential impact
The Applicant should MAIL/FAX a copy of this Project Environmental Review Receipt, a cover letter with project narrative, acreage to be impacted, how construction/maintenance activity is to be accomplished, township/municipality and county where project is located, and a USGS 7.5 minute quadrangle with project boundary and quad name marked on the map.

Bureau of Land Management
Pennslyvania Game Commission
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue
Harrisburg, PA 17110-9797
FAX Number: (717) 787-6957

Please mail or fax only one (1) copy of the project review request. Do not email the project information. The search results provided by this review are specific to species of special concern. The Pennsylvania Game Commission reserves the right to comment on additional aspects of this project (Ex. wetland or stream impacts).

1 potential impact
The Applicant should MAIL/FAX a copy of this Project Environmental Review Receipt, a cover letter with project narrative, acreage to be impacted, how construction/maintenance activity is to be accomplished, township/municipality and county where project is located, and a USGS 7.5 minute quadrangle with project boundary and quad name marked on the map.

Ecological Services Section
Pennsylvania Department of Conservation and Natural Resources
Bureau of Forestry
P.O. Box 8552
Harrisburg, PA 17105-8552
FAX Number: (717) 772-0271

Based on the project-specific information you provided, no impacts to federally listed, proposed, or candidate species are anticipated. Therefore, no further consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.* is required with the U.S. Fish and Wildlife Service. Because no take of federally listed species is anticipated, none is authorized. For a list of species that could occur in your project area (but have not been documented in PNDI), please see the county lists of threatened, endangered, and candidate species. A field visit or survey may reveal previously undocumented populations of one or more threatened or endangered species with a project area. If it is determined that any federally listed species occur in your project area, the U.S. Fish and Wildlife Service requires that you initiate consultation to identify and resolve any conflicts. This response does not reflect potential Fish and Wildlife Service concerns under

 APPLICANT INITIALS: WVS

the Fish and Wildlife Coordination Act or other authorities.

DISCLAIMER

The PNDI environmental review website is a preliminary environmental screening tool. It is not a substitute for information obtained from a field survey of the project area conducted by a biologist. Such surveys may reveal previously undocumented populations of species of special concern. In addition, the PNDI only contains information about species occurrences that have actually been reported to the Pennsylvania Natural Heritage Program.

Pennsylvania State Programmatic General Permit (PASPGP)

Please note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 in certain counties (Adams, Berks, Bucks, Chester, Cumberland, Delaware, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) are required by DEP to comply with the bog turtle habitat screening requirements of the PASPGP.

TERMS OF USE

Upon signing into the PNDI environmental review website, and as a condition of using it, you agreed to certain terms of use. These are as follows:

The web site is intended solely for the purpose of screening projects for potential impacts on resources of special concern in accordance with the instructions provided on the web site. Use of the web site for any other purpose or in any other way is prohibited and subject to criminal prosecution under federal and state law, including but not limited to the following: Computer Fraud and Abuse Act of 1986, as amended, 18 U.S.C. § 1030; Pennsylvania Crimes Code, § 4911 (tampering with public records or information), § 7611 (unlawful use of computer and other computer crimes), § 7612 (disruption of service), § 7613 (computer theft), § 7614 (unlawful duplication), and § 7615 (computer trespass).

The PNHP reserves the right at any time and without notice to modify or suspend the web site and to terminate or restrict access to it.

The terms of use may be revised from time to time. By continuing to use the web site after changes to the terms have been posted, the user has agreed to accept such changes.

This review is based on the project information that was entered. The jurisdictional agencies and DEP require that the review be redone if the project area, location, or the type of project changes. If additional information on species of special concern becomes available, this review may be reconsidered by the jurisdictional agency.

PRIVACY and SECURITY

This web site operates on a Commonwealth of Pennsylvania computer system. It maintains a record of each environmental review search result as well as contact information for the project applicant. These records are maintained for internal tracking purposes. Information collected in this application will be made available only to the jurisdictional agencies and to the Department of Environmental Protection, except if required for law enforcement purposes—see paragraph below.

This system is monitored to ensure proper operation, to verify the functioning of applicable security features, and for other like purposes. Anyone using this system consents to such monitoring and is advised that if such monitoring reveals evidence of possible criminal activity, system personnel may provide the evidence to law enforcement officials. See Terms of Use.

In order for this project to be considered for subsequent review, a signed and initialed copy of this receipt is required by the agency or agencies indicated. DEP requires that a

 APPLICANT INITIALS: WVS

PNDI Project Environmental Review Receipt
Project Search ID: 20060630042887
Project Name: Fetter Site
Date: 6/30/2006 7:33:20 AM

signed and initialed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted in applications for permits requiring PNDI review. See DEP PNDI policy at www.naturalheritage.state.pa.us or visit the following websites for further information.

Regional Offices
Http://www.dep.state.pa.us/dep/deputate/fieldops/map.pdf

District Mining Operations
Http://www.dep.state.pa.us/dep/deputate/minres/Districts/homepage/Default.htm

Oil and Gas Management
Http://www.dep.state.pa.us/dep/deputate/minres/OILGAS/CustomerNeeds.htm

Print this Project Review Receipt using your Internet browser's print function and keep it as a record of your search.

Signature: Will V. Sye

Date: 7/10/06

Project applicant on whose behalf this search was conducted:

APPLICANT PENNDOT 9-0

Contact Name: BILL SAVAGE

Address: 1620 N. JUNIATA STREET

City, State, Zip: HOLLIDAYSBURG, PA 16648

Phone: 814-696-7227

Email: WISAVAGE @ STATE.PA.US

PERSON CONDUCTING SEARCH (if not applicant)

Contact Name: SAME

Address:

City, State, Zip:

Phone:

Email:

The following contact information is for the agencies involved in this Pennsylvania Natural Diversity Inventory environmental review process. Please read this entire receipt carefully as it contains instructions for how to contact these agencies for further review of this particular project.

Bureau of Land Management
Pennsylvania Game Commission
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue
Harrisburg, PA 17110-9797
FAX Number: (717) 787-6957

Ecological Services Section

 APPLICANT INITIALS: WVS

PNDI Project Environmental Review Receipt

Project Search ID: 20060630042887
Project Name: Fetter Site
Date: 6/30/2006 7:33:20 AM

Pennsylvania Department of Conservation and Natural Resources
Bureau of Forestry
P.O. Box 8552
Harrisburg, PA 17105-8552
FAX Number: (717) 772-0271

 APPLICANT INITIALS: WJS

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION
2001 ELMERTON AVENUE, HARRISBURG, PA 17110-9797

July 19, 2006

Mr. William Savage
PennDOT District 9-0
1620 N. Juniata Street
Hollidaysburg, PA 16648

In re: S.R. 0056, Sections 009, 010, 012
Fetter Wetland Mitigation Site
Bedford County, PA
PNDI#20060630042887

Dear Mr. Savage:

This is in response to your email dated July 10, 2006 requesting a detailed review of potential impacts indicated on the PNDI Project Environmental Review Receipt for state listed species of special concern and/or state game lands as related to the project referenced above.

The Pennsylvania Game Commission (PGC) field viewed the site on July 18, 2006 for potential impacts to the sedge wren, a Pennsylvania endangered species. The PGC does not anticipate any impacts to the sedge wren and will work diligently with the project team to design the created wetlands to enhance the habitat potential for the species. In addition, it is likely that creating additional wetlands on the site may benefit other listed birds known to occur in the general area.

Should project plans extend beyond the present study area, or if additional information on endangered or threatened species of birds or mammals becomes available, this review may be reconsidered. This reply relates only to species of special concern and state game lands and does not address other potential concerns of the Pennsylvania Game Commission (PGC).

Please contact me directly at (717) 783-5957 if you have any questions.

Very truly yours,

Kevin L. Mixon
Division of Environmental
Planning and Habitat Protection
Bureau of Land Management

SEDGE WREN
(Cistothorus platensis)

DRAFT

WETLAND CREATION
AND
ENHANCEMENT RECOMENDATIONS

Sedge wren nesting habitat consists of damp sedge meadows surrounding wetlands or low damp swales or poorly drained depressions in otherwise drier fields. Following are the recommendations for creating/enhancing habitat for the sedge wren:

* Create depressional temporary wetlands and low areas that retain water for a few weeks or months in some years during the spring and early summer. The low depressional areas should have very gradual slopes of 20:1 or greater in order to maximize the damp/moist soil area.

* Plant or maintain sedges, tall grasses, or other mid-height (1 1/2 - 4 feet high) vegetation.

* Warm Season Grasses such as switchgrass, Indiangrass, or big bluestem will provide potential nesting habitat. The planting should include alfalfa/forbs/wildflowers.

* Noxious weeds should be sprayed on a spot by spot basis. Dense cattails are poor habitat and should be minimized.

* A few dispersed shrubs are acceptable.

* Mowing will be necessary in order to maintain the area in a grassland/forbs condition and to reduce the number of shrubs and tree saplings. Mowing should occur from August 20 - April 15. The mowing height should be as high as the equipment allows. The area should be broken into 3 compartments with 1 compartment being mowed in each year for a 3-year rotational mowing schedule.

Developed by Kevin Mixon (7/12/06)

Pennsylvania Department of Conservation and Natural Resources

Bureau of Forestry July 13, 2006

Bill Savage
PennDOT
FAX: 814-696-7109 (hard copy will NOT follow)

***Pennsylvania Natural Diversity Inventory Review, PNDI* Number**	**20060630342887**
Fetter Site West St. Clair Township, Bedford County	

Dear Mr. Savage,

This responds to your request about a Pennsylvania Natural Diversity Inventory (PNDI) ER Tool "Potential Impact" or a species of special concern impact review. **We screened this project for potential impacts to species and resources of special concern under the Department of Conservation and Natural Resources' responsibility, which includes plants, natural communities, terrestrial invertebrates and geologic features only.**

☒ ***NO PROJECT IMPACT ANTICIPATED***

☐ PNDI records indicate that no known occurrences of species or resources of special concern under DCNR's jurisdiction occur in the vicinity of the project. Therefore, we do not anticipate the project referenced above will impact plants, natural communities, terrestrial invertebrates and geologic features of special concern. No further coordination with DCNR is needed for this project.

☒ PNDI records indicate special concern species or resources are located in the vicinity of the project. However, based on the information submitted to us concerning the nature of the project, the immediate location, and our detailed resource information, we determined that no impact is likely. No further coordination with DCNR is needed for this project.

☐ ***POTENTIAL PROJECT IMPACT - UNDER FURTHER REVIEW***

Based on our PNDI map review we determined potential impacts to species and/or resources of special concern. This project has been passed on to our review committee. The committee will contact the applicant/consultant directly if more information is needed to assess the project's potential impacts. Response time is typically less than a month after the date on this notification.

COMMENTS:

This response represents the most up-to-date summary of the PNDI data files and is good for one (1) year from the date of this letter. An absence of recorded information does not necessarily imply actual conditions on-site. A field survey of any site may reveal previously unreported populations. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered.

This finding applies to impacts to plants, natural communities, terrestrial invertebrates and geologic features only. To complete your review of state and federally-listed species of special concern, please be sure the U.S. Fish and Wildlife Service, the PA Game Commission and the Fish and Boat Commission has been contacted regarding this project either directly or by performing a search with the online PNDI ER Tool found at www.naturalheritage.state.pa.us.

Ellen Shultzabarger, Environmental Review Specialist FOR Chris Firestone, Plant Program Mgr
DCNR/BOF/PNDI, PO Box 8552, Harrisburg, PA 17105 ~ Ph: 717-772-0238 ~ F: 717-772-0271 ~ c-eshultza@state.pa.us

Programmatic Agreement for Minor Transportation Projects
Submittal under Stipulation D.2
NO HISTORIC PROPERTIES OR NO EFFECT

Date: 10/24/06 ER # 07-6003-009-A MPMS #: TBA
County: Bedford Municipality: West St. Clair Township
S.R.: 9900 Section: FET Name: Fetter Wetland Site
Funding Source or Lead Agency: TBD

To: Jean H. Cutler, Director
Bureau for Historic Preservation
Pennsylvania Historical and Museum Commission

From: R. Scott Christie, Director
Bureau of Design
Pennsylvania Department of Transportation

As per terms of the Programmatic Agreement for Minor Transportation Projects, executed December 17, 1996, the Department finds that the above-referenced project has **No Historic Properties Present or Affected.**

The following documentation is included:
X a copy of the Cultural Resource Field Assessment Form
X Historic Resource Survey Data Sheet
X a description of the project
X the location of the project mapped on a USGS 7.5 Minute Topographic Map
X Phase IA archaeological and geomorphological survey letter report

Historic Structures Qualified Professional

Archaeological Qualified Professional

If the Department does not receive an objection within 15 days of your receipt of a notification of *No Historic Properties Present or Affected*, the Department will proceed with this project without further review. If you have any questions please contact Christine Kula at 783-9700.

cc: BOD Group Leader, KB 7N, BOD: Daryl Kearns, P.E.
FHWA Lead Professional: Karyn Vandervoort
EQAD Lead Professional: Chris Kula
District 9-0 Environmental Manager: Tom Yocum
Qualified Professional Submitters: Jonathan E. Daily, District 9-0; Bob Eiswert, McCormick Taylor
District 9-0 Environmental Planner: Bill Savage
District 9-0 Project Manager: Jim Pruss

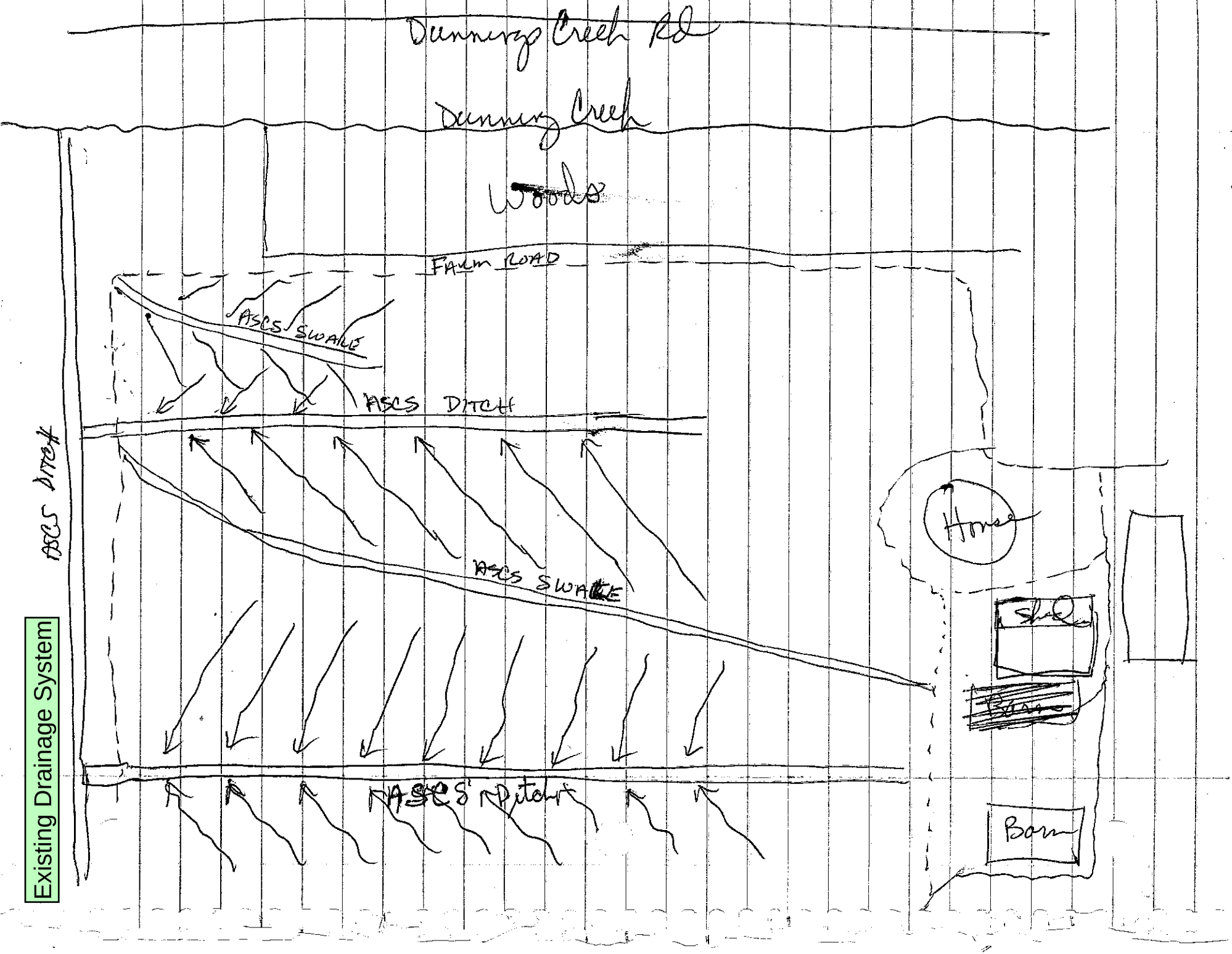
To be completed by EQAD:
☑ No objection received from SHPO. Proceed with Project.
☐ Objection received from SHPO. Do not proceed until contacted by EQAD.

Date 12-5-06
By: Bob Eiswert

SHPO rec'd date: 10/27/06
Date of 15 days: 11-11-06

RECEIVED
OCT 27 2006
HISTORIC PRESERVATION

APPENDIX G –
CONSTRUCTION PLANS



Existing Drainage System


MENONITE RD
ST RTE 4013
626ft

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
9-0	BEDFORD	0056		1 OF 1
JERRY FETTER A.W.C.				

REVISION NUMBER	REVISIONS	DATE	BY

ADVANCED WETLAND COMPENSATION AREA

JERRY N. FETTER
--.- ACRES
BEING A PORTION OF LAND DESCRIBED IN BEDFORD COUNTY COURT HOUSE DEED BOOK VOL. 424 PAGE 499

NOTES:

PROPOSED USE, BEDFORD COUNTY ADVANCED WETLAND COMPENSATION SITE AND BUFFER ZONE

PERPETUAL CONSERVATION EASEMENT

OWNER: JERRY N. FETTER

WETLANDS CONSTRUCTED
8.49 ACRES

WETLANDS PRESERVED
----- ACRES

WEST ST. CLAIR TWP
TAX MAP PAGE D-5
PARCEL #57

LEGEND

- BERM
- WATER
- RF — ROCK FILTER
- SF — SILT BARRIER FENCE

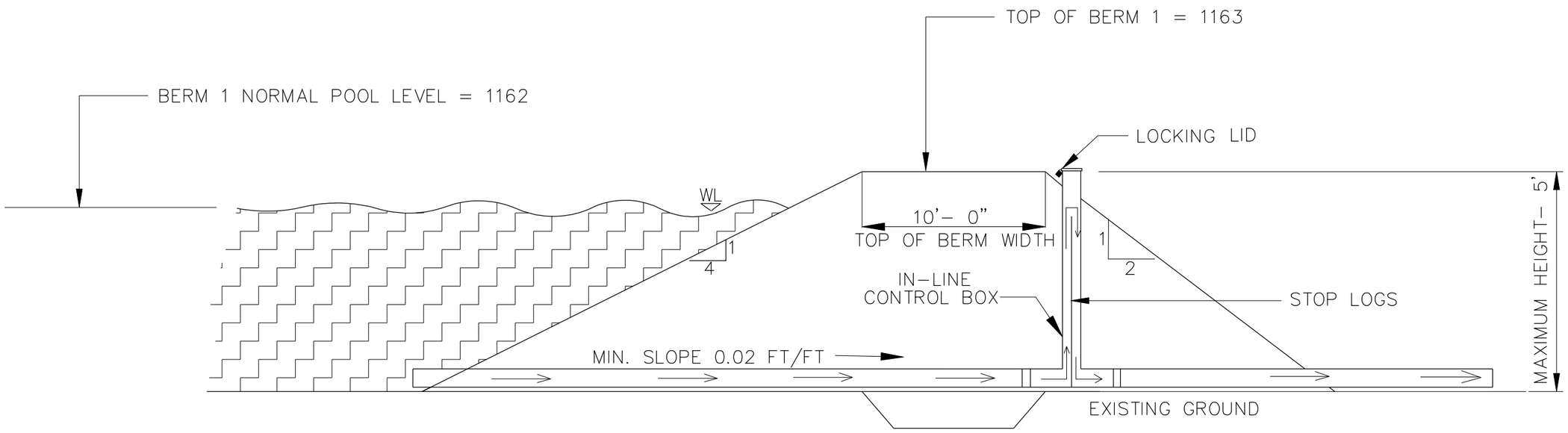
R-4 ROCK APRON
12' L x 15' W

INLINE WATER CONTROL STRUCTURE

ELEV. 1163

50 FEET 0 50 FEET

3/26/2007 9:35:48 AM P:\serv\2006\608\Fetter AWC\Fetters Wetland maps\ng\01.AWC_PLAN.dgn



FETTER ADVANCE WETLAND COMPENSATION SITE
TYPICAL BERM SECTION

FILE–P:\env\2006\6083 Fetter AWC\Fetters Wetland mapping\Fetter berm typical.dgn

APPENDIX H –
2020 MONITORING REPORT

pennsylvania
DEPARTMENT OF TRANSPORTATION

WETLAND MITIGATION REPORT

SITE NAME	**Fetter Wetland Site**	DISTRICT	**9.0**	DATE	**12/16/20**

WETLAND MITIGATION REPORT

pennsylvania DEPARTMENT OF TRANSPORTATION

RESET PAGE

WETLAND BANK OR WETLAND MITIGATION SITE NAME	REPORTING YEAR	REPORT PURPOSE
Fetter Wetland Site	2020	Annual Monitoring Bank Site

IF "OTHER", BRIEFLY DESCRIBE REPORT PURPOSE

N/A

USACE PERMIT NUMBER	PADEP PERMIT NUMBER
N/A	N/A

WETLAND BANK CONTACT

Environmental Manager District 9-0

INDIVIDUAL(S) CONDUCTING REPORTING FIELD INVESTIGATIONS	CONTACT E-MAIL
Ken Smith, The EADS Group Trevor Young, The EADS Group	tyocum@pa.gov

SITE STATUS (CHECK ALL THAT APPLY)

☐ Design/ Pre-Construction ☐ As-Built-One Year Post-Construction As-Built Plans Sent to Agencies: ☑ Constructed prior to December 21, 2008 >10 Years

CONSTRUCTION COMPLETION DATE	DATE OF LAST AGENCY FIELD VIEW	MONITORING DATE CURRENT YEAR	ADDITIONAL MONITORING VISIT DATE (OPTIONAL)
10/10/2008	06/27/2019	05/20/2020	07/15/2020

ADDITIONAL MONITORING VISIT DATE (OPTIONAL)	ADDITIONAL MONITORING VISIT DATE (OPTIONAL)
08/06/2020	10/01/2020

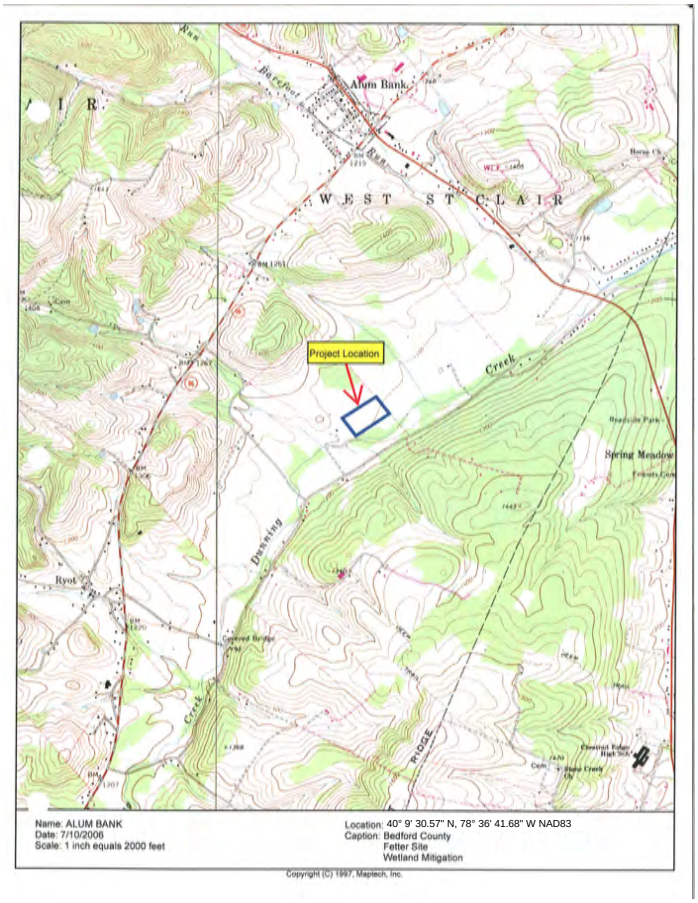
Refer to "Site History and Current Monitoring Year Conditions" Matrix (attached) for a Site Summary.

RESET PAGE

DIRECTIONS TO MITIGATION SITE

From I-99 North or South near Cessna in Bedford County, take Exit 3, Route 56. Take Route 56 West towards Johnstown and travel approximately 6.5 miles. Turn Left onto Dunning Creek Road and travel approximately 1.5 miles. Turn Right onto Menonite Road (T-506) and follow gravel road over the bridge to the house/farm and park. The wetland is located approximately 400 feet to the northeast of the house.

PROJECT LOCATION MAP (OPTIONAL)



LATITUDE	40°9'30.57" N
LONGITUDE	78°36'41.68" W

Identify any permit conditions requiring monitoring (e.g. acreage by community type, performance standards, or other mitigation performance relevant conditions).

There are no permit related performance assessment conditions associated with the Fetter wetland site. Monitoring for the site is being conducted in accordance with the PennDOT District 9-0 Interagency Agreement for Advance Wetland Compensation.

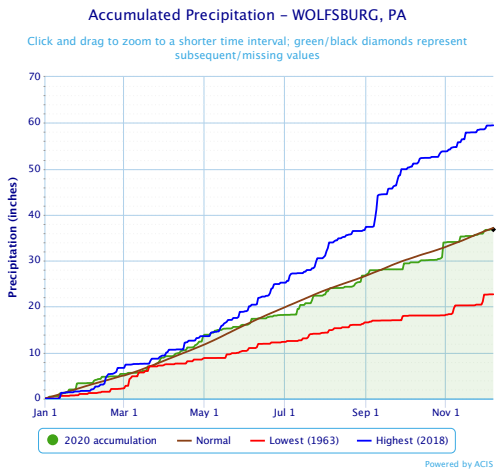
RESET PAGE

GENERAL SITE CONDITIONS (Enter a description of current site conditions. Include project description information, background, history and baseline as necessary to provide a complete picture.)

The Fetter wetland site is located in West St. Clair Township, Bedford County, Pennsylvania. The site is situated within the Dunning Creek watershed, a sub-basin to the Raystown Branch of the Juniata River. Terrain surrounding the wetland generally slopes from west to east. The site is bordered by agricultural areas and other constructed wetlands. The Fetter site consists of a combination of emergent wetland, scrub-shrub wetland, open water, preserved wetland and upland buffers. The water level within the wetland is controlled by a permanent outlet structure, which is intact and functioning properly. Dense vegetation is present throughout the wetland and upland buffer. The rough and uneven topography throughout the wetland creates different moisture regimes, which support a variety of wetland plant species. Soils examined within the wetland are poorly drained and exhibit hydric conditions.

ADDITIONAL COMMENTS OR OBSERVATIONS

ACCUMULATED PRECIPITATION GRAPH (See instructions.)



FUNCTIONAL ASSESSMENT & WILDLIFE USAGE (Enter a description of current functions and wildlife usage.)

The Fetter Site provides the following functions and values:
- Floodflow Alteration; The wetland is situated in a depressional setting with a constricted outlet providing the opportunity for storing and detaining storm water for prolonged periods.
- Sediment Toxicant Retention; The wetland functions to slow and detain storm water from upslope sources providing the opportunity for sediment trapping.
- Production Export; Dense wetland vegetation within the wetland provides a variety of wildlife food sources. The wetland has a constricted outlet where nutrients are exported and the flushing of organic material occurs.
- Sediment/Shoreline Stabilization; Dense vegetation aids in trapping sediment and preventing erosion when standing water is present early in the growing season.
- Nutrient Removal; Dense vegetation throughout the wetlands have the ability to trap nutrients from surrounding upland areas and transform them into other forms or trophic levels.
- Wildlife Habitat; Stumps, boulders, rock piles and nesting boxes placed during construction provide cover and resting areas for a variety of wildlife. Numerous wildlife species have been observed utilizing the wetlands. Wood Ducks, Tree Swallows and Bluebirds continue to use the nest boxes.

RESET PAGE

WILDLIFE SPECIES

(Provide a list of wildlife species directly observed or deduced from indirect evidence [nests, scat, tracks, etc.].)

Species of wildlife utilizing the wetland include the following: American Bullfrog, Eastern Cottontail Rabbit, Muskrat, Barn Swallow, Gray Catbird, Racoon, Belted Kingfisher, Great-Blue Heron, Red-Winged Blackbird, Blue Jay, Green Frog, Sora Rail, Canada Goose, Green Heron, Tree Swallow, Eastern American Toad, Hooded Merganser, Whitetail Deer, Eastern Bluebird, Mallard Duck, and Wood Duck.

The preceding list gives an indication of the diversity of wildlife that frequents the wetlands during mid day periods when monitoring is typically conducted. Additional unlisted species are likely to frequent the site at other times of the day and night without leaving evidence. In addition to the wildlife observed during monitoring events, birdwatchers have documented a total of 189 bird species using the site. Pennsylvania Endangered bird species include American Bittern, Great Egret, Yellow-Bellied Flycatcher, Blackpoll Warbler, and Pennsylvania Threatened species include Northern Harrier. This information was obtained from the ebird hotspot website (http://ebird.org/ebird/pa/hotspot/L675137) on 12/7/2020.

For Wetland Monitoring Reports see attached **Comprehensive Vegetation List.**

ATTACH VEGETATION LIST

Has additional planting or other remediation measure been undertaken within any of the wetland communities present on site? If yes, provide descriptions and dates below. Describe routine maintenance activites including any water level manipulation.

No additional plantings or other remediation measures have been undertaken within the wetland communities on site.

Note: The year of additional planting should be considered the initial year for these communities/habitats when monitoring performance even when the overall age of the wetland site may be older.

PERFORMANCE ASSESSMENT

RESET PAGE

COMMUNITY VEGETATION DESCRIPTION OF METHODS
(Refer to Statewide Wetland Banking Instrument for required methodology.)

The statewide banking instrument performance standards for sites established prior to 12-21-2008 are being utilized for the Fetter wetland site. To determine whether wetland conditions at the site are developing as anticipated vegetation, hydrology, and soils are evaluated in accordance with the procedures described in the 2012, Regional Supplement to the U.S. Army Corps of Engineers Wetlands Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0.

A visual assessment of the wetland communities was conducted and the Fetter wetland site includes 3.04 acres of emergent wetland and 0.30 acres of scrub/shrub wetland habitat. To meet performance standards for these acreages the emergent community needs to contain a minimum of 65% aerial coverage of herbaceous vegetation not including aquatic species. The scrub/shrub community needs to have 60 woody crowns or stems between 24 inches and 120 inches in height, or 65% shrub canopy closure.

Approved permits currently have debited 1.628 acres of emergent wetland from the available credits.

Monitoring activities were conducted in May, July, August, and October. Vegetation is dominated by wetland plant species which meet the rapid test for hydrophytic vegetation indicator and passes the hydrophytic vegetation criteria in accordance with the Regional Supplement. Emergent vegetation within the wetland has exceeded 65% aerial coverage and is dominated by hydrophytic species. The stem count conducted on 8/6/2020 for the scrub/shrub wetland community identified 60+ woody crowns or stems between 24 inches and 120 inches in height.

The results of this year's monitoring activities have determined that the wetland communities at the Fetter wetland site are developing as anticipated and meeting performance standards.

Complete ONLY for Existing Sites - Sites Established Prior to December 21, 2008.

SELECT COMMUNITY TYPES (CHECK ALL THAT APPLY)

- ☐ PFO must be an area of at least 0.10 acres containing at least 100 woody stems per acre, 120 inches in height or more, or having at least 65% canopy closure by woody tree species.
- ☑ PSS must be an area of at least 0.10 acres containing 200 or more woody crowns or stems per acre between 24 inches and 120 inches in height, or 65% shrub canopy closure.
- ☑ PEM must contain herbaceous vegetation with at least 65% aerial coverage not including aquatic species.
- ☑ POW areas ponded or inundated more that 14 consecutive days of the growing season, whether permanently inundated or ponded or affected to such as to preclude the development of perennial wetland plant species.

Complete the following sections ONLY for New Sites - Sites Established Since December 21, 2008 or sites with communities that have undergone additional planting.

SELECT THE YEAR THAT BEST REPRESENTS THE AGE OF THE SITE OR REMEDIATED COMMUNITY

Is this portion of the assessment being completed for a site or a remediated community?

☐	Entire Site	Please select a year	Habitat Type	Please select a habitat type
☐	Remediated Community #1	Please select a year	Habitat Type	Please select a habitat type
☐	Remediated Community #2	Please select a year	Habitat Type	Please select a habitat type

RESET PAGE

IS THERE A PFO COMPONENT?
Any PFO areas must be 0.10 acre or greater in size.

○ Yes (complete the next section) ○ No

PFO DEVELOPMENT

Select the choice that best describes the PFO component

IS THERE A PSS COMPONENT?
Any PSS areas must be 0.10 acre or greater in size.

○ Yes (complete the next section) ○ No

PSS DEVELOPMENT

Select the choice that best describes the PSS component

IS THERE A PEM COMPONENT?
Any PEM areas must be 0.10 acre or greater in size.

○ Yes (complete the next section) ○ No

PEM DEVELOPMENT

Select the choice that best describes the PEM component

IS THERE A POW COMPONENT? Any POW areas must be 0.10 acres or greater in size and be ponded or inundated greater than 14 consecutive days of the growing season; whether permanently inundated or ponded or affected to such a degree as to preclude the development of perennial wetland plant species.

○ Yes ○ No

HYDROLOGY SUMMARY (Provide an overall hydrology description, compare the current growing season precipitation to the average for the general location.)

Hydrology for the Fetter wetland site is provided by both groundwater and overland flow sources. Saturation and standing water were at expected levels during monitoring activities. Hydrology indicators observed during monitoring activities include surface water, a high water table, saturation, oxidized rhizospheres on living roots, the presence of reduced iron, saturation and inundation visible on aerial imagery, and the FAC-neutral test. These indicators pass the wetland hydrology criteria in accordance with the Regional Supplement.

Climatological data from the National Weather Service and National Oceanic and Atmospheric Administration's online weather data was obtained from the Wolfsburg, PA monitoring station. According to this information the wetland area received 20.38 inches of accumulated rainfall through the monitoring event conducted on July 15, 2020, which is 1.17 inches below the long term average.

RESET PAGE

SOILS SUMMARY
(Provide a description of hydric soil development on site.)

The Fetter wetland site is underlain by poorly drained mineral soils. Soil development has been influenced by an anaerobic environment resulting from prolonged periods of saturation and inundation. These conditions have lead to the development of hydric soils throughout the site. These soils meet the depleted matrix and redox dark surface hydric soil indicators and pass the hydric soil criteria in accordance with the Regional Supplement.

ADAPTIVE MANAGEMENT RECOMMENDATIONS
(Complete, if based on the monitoring data, the site is not performing as planned.)

None at this time.

RESET PAGE

LONG TERM MAINTENANCE RECOMMENDATIONS

(Complete if any modifications or concerns regarding the site ownership, restrictive covenants, or deed restrictions that were established for the site have occurred; or if any significant structural repairs are necessary to assure that a loss of credits does not occur.)

None at this time.

REMEDIAL ACTION RECOMMENDATIONS

(Complete if invasive species or wildlife controls, a need for additional planting, or other similar remedial actions are recommended.)

None at this time.

Refer to one or more of the following attachments: **design plan**, **as-built plan** or **monitoring map**. If the reporting purpose is annual wetland monitoring then a monitoring map is attached.

ATTACH FILE

CONCLUSION

RESET PAGE

OVERALL PERFORMANCE ASSESSMENT

(If permit conditions requiring monitoring assessment were identified, provide an assessment of this performance within this discussion; if none, provide a general assessment of overall performance.)

The Fetter wetland site consists of a combination of emergent wetland, scrub-shrub wetland, open water, preserved wetland and upland buffers. The wetlands also provide habitat for a variety of terrestrial and aquatic wildlife species including birds, mammals, reptiles, and amphibians. Emergent wetland areas exceed 65% aerial vegetative coverage and the scrub/shrub wetland areas meet the stem count requirements for both total and debited credits to date. Based on the results of the monitoring investigations for the 2020 growing season, the Fetter wetland is developing as anticipated and meeting required performance standards.

SITE HISTORY AND CURRENT MONITORING YEAR CONDITIONS
(FOR USE IN MONITORING BANK SITES)

	YEAR	PEM	PSS	PFO	POW	TOTAL
Design Plan (New Sites ONLY)	9999					0.00
As-Built Plan	2009	1.72	1.72	0.00	0.00	3.44
Monitoring Delineation (If Applicable)	2019	3.04	0.30	0.00	0.10	3.44
Monitoring Delineation (If Applicable)	9999					0.00
Current Monitoring Event	2020	3.04	0.30	0.00	0.10	3.44
Total Debits (From Debit Summary excel sheet)		1.63				1.63
Current Balance		1.41	0.30	0.00	0.10	1.81

RESET CALCULATOR

CURRENT MONITORING YEAR PERMIT CONDITION COMPLIANCE
(FOR PROJECT SPECIFIC MITIGATION SITES)

	YEAR	PEM	PSS	PFO	POW	TOTAL
Permit Condition Requirements	9999					0.00
As-Built Plan	9999					0.00
Monitoring Delineation (If Applicable)	9999					0.00
Monitoring Delineation (If Applicable)	9999					0.00
Current Monitoring Event	9999					0.00
Deficits or Excess in Permit Required Acreage		0.00	0.00	0.00	0.00	0.00

RESET CALCULATOR

ATTACH DEBIT SUMMARY SPREADSHEET

COMMUNITY SUMMARY SHEET

HABITAT ZONE

Saturated Marsh

☐ This is a remediated community within an older site

OTHER HABITAT ZONES

VEGETATIVE CLASSIFICATION
(check all that apply)

- ☑ POW
- ☑ PEM
- ☑ PSS
- ☐ PFO

DOMINANT VEGETATION AND WETLAND STATUS (list)

Vegetation at the Fetter wetland site is dominated by European Alder (FACW), Black Willow (OBL), Cottongrass Bulrush (FACW), Lamp Rush (FACW), and Shallow Sedge (OBL). The dominant vegetation meets the rapid test for hydrophytic vegetation indicator and passes the hydrophytic vegetation criteria in accordance with the Regional Supplement. See attached Wetland Determination Data Form for additional details. The sample point location is shown on the attached monitoring plan.

SOIL DESCRIPTION AND HYDRIC SOIL INDICATOR

The Fetter wetland site is underlain by poorly drained mineral soils. Soil development within the site has been influenced by an anaerobic environment resulting from prolonged periods of saturation and inundation. These conditions have lead to the development of hydric soils throughout the site. The following is a representative soil profile from the site: 0"- 6" 10YR 3/2 (95%) with 7.5YR 4/6 (5%) mottles and silty loam texture, 6"- 18" 10YR 4/2 (90%) with 7.5YR 4/6 mottles (10%) and clay texture. These soils meet the depleted matrix and redox dark surface hydric soil indicators and pass the hydric soil criteria in accordance with the Regional Supplement.

WETLAND HYDROLOGY DESCRIPTION AND INDICATOR(S)

Hydrology for the Fetter wetland site is provided by both groundwater and overland flow sources. Saturation and standing water were at expected levels during monitoring activities. Hydrology indicators observed during monitoring activities include surface water, a high water table, saturation, oxidized rhizospheres on living roots, the presence of reduced iron, saturation and inundation visible on aerial imagery, and the FAC-neutral test. These indicators pass the wetland hydrology criteria in accordance with the Regional Supplement.

ATTACH PHOTOGRAPHS

	A	B	C	G	H	I	J	K
1		Wetland Site Name						
2	Comprehensive Vegetation List	**Fetter AWC Site**						
3	Region: Eastern Mountain & Piedmont							
4	Common Name	Scientific Name	Status	2016	2017	2018	2019	2020
5	Silver Maple	*Acer saccharinum*	FACW	P	P	P	P	P
6	American Water-Plantain	*Alisma subcordatum*	OBL	D	D	D	D	D
7	European Alder	*Alnus glutinosa*	FACW	P	P	P	P	P
8	Brookside Alder	*Alnus serrulata*	OBL	P	P	P	P	P
9	Swamp Milkweed	*Asclepias incarnata*	OBL	P	P	P	P	P
10	Nodding Burr-Marigold	*Bidens cernua*	OBL	P	P	P	P	P
11	Devil's-Pitchfork	*Bidens frondosa*	FACW	P	P	P	P	P
12	Fringed Sedge	*Carex crinita*	OBL	D	D	D	D	D
13	Shallow Sedge	*Carex lurida*	OBL	D	D	D	D	D
14	Pointed Broom Sedge	*Carex scoparia*	FACW	D	D	D	D	D
15	Common Fox Sedge	*Carex vulpinoidea*	OBL	D	D	D	D	D
16	Common Buttonbush	*Cephalanthus occidentalis*	OBL	P	P	P	P	P
17	Silky Dogwood	*Cornus amomum*	FACW	P	P	P	P	P
18	Chufa	*Cyperus esculentus*	FACW	P	P	P	P	P
19	Common Spike-Rush	*Eleocharis palustris*	OBL	D	D	D	D	D
20	Purple-Leaf Willowherb	*Epilobium coloratum*	FACW	P	P	P	P	P
21	Common Boneset	*Eupatorium perfoliatum*	FACW	P	P	P	P	P
22	Flat-Top Goldentop	*Euthamia graminifolia*	FAC	P	P	P	P	P
23	Spotted Trumpetweed	*Eutrochium maculatum*	FACW	P	P	P	P	P
24	Green Ash	*Fraxinus pennsylvanica*	FACW	P	P	P	P	P
25	Spotted Touch-Me-Not	*Impatiens capensis*	FACW	P	P	P	P	P
26	Canadian Rush	*Juncus canadensis*	OBL	D	D	D	D	D
27	Lamp Rush	*Juncus effusus*	FACW	D	D	D	D	D
28	Rice Cut Grass	*Leersia oryzoides*	OBL	P	P	P	P	P
29	Seedbox	*Ludwigia alternifolia*	FACW	P	P	P	P	P
30	Marsh Primrose-Willow	*Ludwigia palustris*	OBL	P	P	P	P	P
31	Northern Water-Horehound	*Lycopus uniflorus*	OBL	P	P	P	P	P
32	Purple Loosestrife	*Lythrum salicaria*	FACW	P	P	P	P	P
33	Spearmint	*Mentha spicata*	FACW	P	P	P	P	P
34	Allegheny Monkey-Flower	*Mimulus ringens*	OBL	D	D	D	D	D
35	Sensitive Fern	*Onoclea sensibilis*	FACW	P	P	P	P	P
36	Ditch-Stonecrop	*Penthorum sedoides*	OBL	P	P	P	P	P
37	Spotted Lady's-Thumb	*Persicaria maculosa*	FACW	P	P	P	P	P
38	Pinkweed	*Persicaria pensylvanica*	FACW	P	P	P	P	P
39	Arrow-Leaf Tearthumb	*Persicaria sagittata*	OBL	P	P	P	P	P
40	Reed Canary Grass	*Phalaris arundinacea*	FACW	P	P	P	P	P
41	American Sycamore	*Platanus occidentalis*	FACW	P	P	P	P	P
42	Black Willow	*Salix nigra*	OBL	P	P	P	P	P

	A	B	C	G	H	I	J	K
4	Common Name	Scientific Name	Status	2016	2017	2018	2019	2020
43	Black Elder	*Sambucus nigra*	FAC	P	P	P	P	P
44	Soft-Stem Club-Rush	*Schoenoplectus tabernaemontani*	OBL	P	P	P	P	P
45	Dark-Green Bulrush	*Scirpus atrovirens*	OBL	D	D	D	D	D
46	Cottongrass Bulrush	*Scirpus cyperinus*	FACW	D	D	D	D	D
47	Broad-Fruit Burr-Reed	*Sparganium eurycarpum*	OBL	D	D	D	D	D
48	Sago False Pondweed	*Stuckenia pectinata*	OBL	P	P	P	P	P
49	New England American-Aster	*Symphyotrichum novae-angliae*	FACW	P	P	P	P	P
50	Broad-Leaf Cat-Tail	*Typha latifolia*	OBL	D	D	D	D	D
51	Simpler's-Joy	*Verbena hastata*	FACW	D	D	D	D	D
52	Smooth Arrow-Wood	*Viburnum recognitum*	FAC	P	P	P	P	P
53	New York Ironweed	*Vernonia noveboracensis*	FACW	P	P	P	P	P
54	Rough Bedstraw	*Galium asprellum*	OBL	P	P	P	P	P
55	Common Duckweed	*Lemna minor*	OBL	P	P	P	P	P
1049	Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X							
1050	D = Dominant P = Present							

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
9-O	BEDFORD	---	---	1 OF 1

BEDFORD A.W.C.

REVISION NUMBER	REVISIONS	DATE	BY	APPROVED

LEGEND

- WATER CONTROL STRUCTURE
- EMERGENT / SCRUB-SHRUB WETLAND
- (1) → PHOTOGRAPH LOCATION
- ● SP1 SAMPLE POINT

SCALE IN FEET
0 50 100

TOTAL WETLAND AREA 3.44 ACRES

9/19/2019 11:00:39 AM R:\6400 PDT 9\14513 WO1 E0324 Monitoring\05 Reports\SO Environ\AMC sites\AMCMaps\2019 Updated AMC MAPS\Bedford_2019_updated.dgn

Fetter

						UNAVOIDABLE WETLAND IMPACTS				
PROJECT NAME	**S.R.**	**SECTION**	**COUNTY**	**PERMIT ISSUANCE DATE**	**PERMIT NO.**	**POW 0.000**	**PEM 1.720**	**PSS 1.720**	**PFO 0.000**	**TOTAL 3.440**
SR 56	56	10	Bedford	12/12/2006	E05-340		-0.730			-0.730
	56	12	Bedford	11/16/2006	E05-341		-0.560			-0.560
	56	9	Bedford	9/11/2007	GP-11-05-07-104		-0.050			-0.050
SR 56/4028	56	24S	Bedford	10/7/2019	E05-398		-0.288			-0.288
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
				REMAINING ACREAGE		**0.000**	**0.092**	**1.720**	**0.000**	**1.812**

NOTE:

1. The PADEP Permit No. and Date will be entered upon issuance from PADEP
2. The Fetter site was built on the property of Mr. Jerry Fetter and contains 1.22 acres of existing wetlands that are preserved as part of the perpetual conservation
3. **Wetland Acreage is to be entered to the 1/100th decimal. (As per DEP September 2008)**

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Fetter AWC City/County: Bedford Sampling Date: 7/15/2020

Applicant/Owner: PennDOT District 9-0 State: PA Sampling Point: SP1

Investigator(s): KRS, TWY Section, Township, Range: West Saint Clair

Landform (hillslope, terrace, etc.): terrace Local Relief (concave, convex, none): concave Slope (%): 0-3

Subregion (LRR or MLRA): MLRA 147 Lat: Long: Datum:

Soil Map Unit Name: Monongehela silt loam NWI Classification: None Listed

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

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

Are Vegetation , Soil or Hydrology naturally problematic? No (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 x No	Is the Sample Area	
Hydric Soil Present?	Yes x No	within a wetland?	Yes x No
Wetland Hydrology Present?	Yes x No		

Remarks:

Wetland Sample Point 1
Cowardin Classification - PEM/PSS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- x High Water Table (A2)
- x Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- x Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on living roots (C3)
- x Presence of Reduced Iron (C4)
- Recent Iron Reduction on Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry Season Water Table (C2)
- Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- x FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	x	No	Depth (inches):	2
Water Table Present?	Yes	x	No	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes	x	No	Depth (inches):	0

Wetland Hydrology Present? Yes x No

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

N/A

Remarks:

Hydrology is provided by groundwater and overland flow.
Hydrology indicators in the sample area pass the wetland hydrology criteria.

VEGETATION - Use scientific names of plants. Sampling Point: SP1

Tree stratum (Plot Size: 30' Radius)		Absolute % Cover	Dominant Species?	Indicator Status
1 European Alder	Alnus glutinosa	15	Yes	FACW
2 Black Willow	Salix nigra	10	No	OBL
3				
4				
5				
6				
7				
8				
		25	= Total Cover	

Sapling/Shrub Stratum (Plot Size: 15' Radius)				
1 Black Willow	Salix nigra	30	Yes	OBL
2				
3				
4				
5				
6				
7				
8				
9				
10				
		30	= Total Cover	

Herb Stratum (Plot Size: 5' Radius)				
1 Cottongrass Bulrush	Scirpus cyperinus	45	Yes	FACW
2 Lamp Rush	Juncus effusus	20	Yes	FACW
3 Simpler's-Joy	Verbena hastata	5	No	FACW
4 Shallow Sedge	Carex lurida	20	Yes	OBL
5 Broad-Leaf Cat-Tail	Typha latifolia	5	No	OBL
6 Pointed Broom Sedge	Carex scoparia	10	No	FACW
7 Rough Bedstraw	Galium asprellum	5	No	OBL
8 Sensitive Fern	Onoclea sensibilis	10	No	FACW
9				
10				
11				
12				
		120	= Total Cover	

Woody Vine Stratum (Plot Size: 30' Radius)				
1				
2				
3				
4				
5				
6				
			= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, OR FAC: _____ (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is > 50%
- ___ 3 - Prevalence Index is ≤ 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of 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 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Yes x No ___

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

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

The plant community in the sample area passes the hydrophytic vegetation criteria.

SOIL Sampling Point: SP1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	95	7.5YR 4/6	5	C	M, PL	Silty loam	
6-18	10YR 4/2	90	7.5YR 4/6	10	C	M, PL	Clay	

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

Hydric Soil Indicators

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Clay

Depth (inches): 6

Hydric Soil Present? Yes x No ___

Remarks:

Soils within the sample area pass the hydric soil criteria.

pennsylvania DEPARTMENT OF TRANSPORTATION WETLAND MITIGATION REPORT

RESET PAGES

WETLAND BANK PHOTOGRAPHS

INSPECTION DATE	WETLAND BANK OR WETLAND MITIGATION SITE NAME	INSPECTION TYPE
7/15/20	Fetter Mitigation Site	Annual Monitoring Bank Site
INSPECTED BY	Ken Smith, Trevor Young	

GENERAL NOTES

○ PHOTO INDEX SHEET ◉ OVERVIEW PHOTO VIEW ORIENTATION (IF OVERVIEW PHOTO) Northeast

PHOTOGRAPH NOTES

CLICK TO ADD MORE PHOTOGRAPHS

INSPECTION DATE	WETLAND BANK OR WETLAND MITIGATION SITE NAME
07/15/2020	Fetter Mitigation Site

PHOTO TITLE: Photograph 1

VIEW ORIENTATION: Northwest

POINT/LOCATION WITHIN THE WETLAND

See Monitoring Plan for photograph location.

PHOTOGRAPH NOTES

Vegetation in the southeastern area of the wetland includes Cottongrass Bulrush, Lamp Rush, Common Fox Sedge, Broad-Leaf Cat-Tail, and Black Willow.

PHOTO TITLE: Photograph 2

VIEW ORIENTATION: North

POINT/LOCATION WITHIN THE WETLAND

See Monitoring Plan for photograph location.

PHOTOGRAPH NOTES

Vegetation in the southeastern area of the wetland includes Black Willow and Broad-Leaf Cat-Tail

CLICK TO ADD MORE PHOTOGRAPHS

INSPECTION DATE	WETLAND BANK OR WETLAND MITIGATION SITE NAME
07/15/2020	Fetter Mitigation Site

PHOTO TITLE	Photograph 3

VIEW ORIENTATION Northeast

POINT/LOCATION WITHIN THE WETLAND

See Monitoring Plan for photograph location.

PHOTOGRAPH NOTES

View of Cottongrass Bulrush, Alders, and Broad-Leaf Cat-Tail.

PHOTO TITLE	Photograph 4

VIEW ORIENTATION Northeast

POINT/LOCATION WITHIN THE WETLAND

See Monitoring Plan for photograph location.

PHOTOGRAPH NOTES

View of Cottongrass Bulrush, Alders, and Broad-Leaf Cat-Tail.

CLICK TO ADD MORE PHOTOGRAPHS

INSPECTION DATE	WETLAND BANK OR WETLAND MITIGATION SITE NAME
07/15/2020	Fetter Mitigation Site

PHOTO TITLE	Photograph 5

VIEW ORIENTATION East

POINT/LOCATION WITHIN THE WETLAND

See Monitoring Plan for photograph location.

PHOTOGRAPH NOTES

Vegetation in the western area of the wetland includes Cottongrass Bulrush, Alders, Black Willow, and Broad-Leaf Cat-Tail.

PHOTO TITLE	Photograph 6

VIEW ORIENTATION North

POINT/LOCATION WITHIN THE WETLAND

See Monitoring Plan for photograph location.

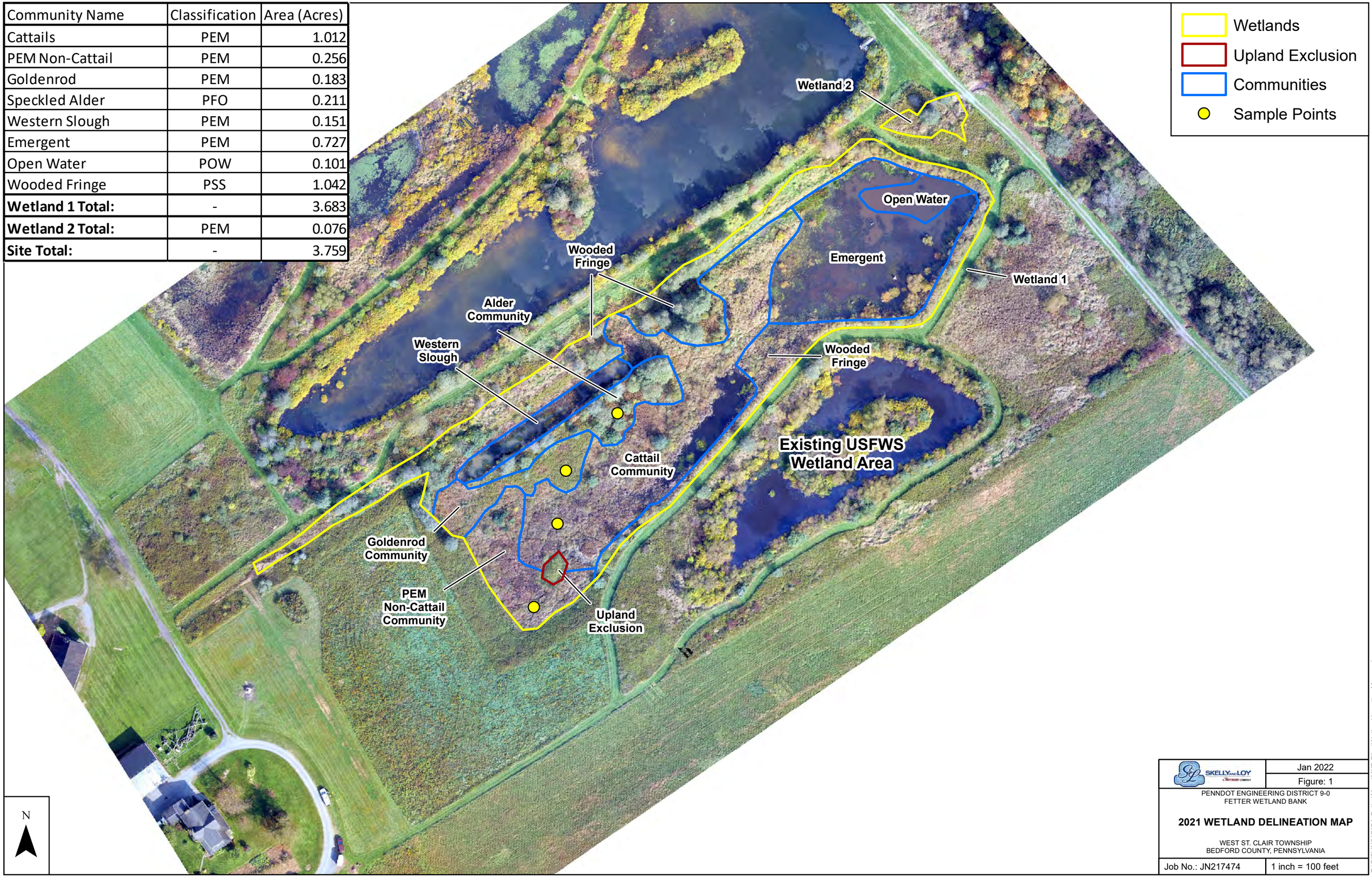
PHOTOGRAPH NOTES

View of Cottongrass Bulrush, Alders, and Broad-Leaf Cat-Tail.

CLICK TO ADD MORE PHOTOGRAPHS

APPENDIX I –
2021 DELINEATION DATA SHEETS AND WETLAND LOCATION MAP

Community Name	Classification	Area (Acres)
Cattails	PEM	1.012
PEM Non-Cattail	PEM	0.256
Goldenrod	PEM	0.183
Speckled Alder	PFO	0.211
Western Slough	PEM	0.151
Emergent	PEM	0.727
Open Water	POW	0.101
Wooded Fringe	PSS	1.042
Wetland 1 Total:	-	3.683
Wetland 2 Total:	PEM	0.076
Site Total:	-	3.759



SKELLY and LOY

Jan 2022

Figure: 1

PENNDOT ENGINEERING DISTRICT 9-0
FETTER WETLAND BANK

2021 WETLAND DELINEATION MAP

WEST ST. CLAIR TOWNSHIP
BEDFORD COUNTY, PENNSYLVANIA

Job No.: JN217474

1 inch = 100 feet

E:\GIS\JN217474_FetterMaps\MXD Files\Wetland Location Map.mxd

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: SP01
Investigator(s): TRJ, MDO Section, Township, Range:
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): Lat: Long: Datum:
Soil Map Unit Name: MoA (Monongahela Series) NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✔] No [ ]
Hydric Soil Present?	Yes [✔]	No [ ]	
Wetland Hydrology Present?	Yes [✔]	No [ ]	

Remarks:
PEM Non-Cattail Community located in a constructed wetland mitigation site.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [✔] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [✔] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [✔]	No [ ]	Depth (inches): 0

Wetland Hydrology Present? Yes [✔] No [ ]

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

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: SP01

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: 20% of total cover:

Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: 20% of total cover:

Shrub Stratum (Plot size:)			
1. Salix nigra	5	Y	OBL
2. Cephalanthus occidentalis	1	N	OBL
3.			
4.			
5.			
6.			
	6 = Total Cover		

50% of total cover: 3 20% of total cover: 2

Herb Stratum (Plot size:)			
1. Phalaris arundinacea	40	Y	FACW
2. Scirpus cyperinus	30	Y	FACW
3. Juncus effusus	20	Y	FACW
4. Juncus sp.	10	N	-
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50% of total cover: 20% of total cover:

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☑ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL Sampling Point: SP01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 6/2	95	10YR 6/6	5	C	M	Silt/Loam	
5-12	10YR 5/1	70	10YR 4/6	10	C	M	Silt/Loam	Channery
			10YR 5/3	20	C	M		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: SP02
Investigator(s): TRJ, MDO Section, Township, Range:
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): Lat: Long: Datum:
Soil Map Unit Name: MoA (Monongahela Series) NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✔] No [ ]
Hydric Soil Present?	Yes [✔]	No [ ]	
Wetland Hydrology Present?	Yes [✔]	No [ ]	

Remarks:
PEM Cattail Community in a constructed wetland mitigation site.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [✔] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [✔]	No [ ]	Depth (inches): 0

Wetland Hydrology Present? Yes [✔] No [ ]

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

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: SP02

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size:)			
1. Salix nigra	5	Y	OBL
2. Cephalanthus occidentalis	5	Y	OBL
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size:)			
1. Typha angustifolia	40	Y	OBL
2. Juncus effusus	20	Y	FACW
3. Phalaris arundinacea	20	Y	FACW
4. Scirpus cyperinus	20	Y	FACW
5. Galium sp.	5	N	-
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL Sampling Point: SP02

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	90	7.5YR 5/8	10	C	M	Silt/Loam	High Organics
3-10	10YR 5/2	60	10YR 5/6	30	C	M	Clay	Channery
			7.5YR 5/8	10	C	M		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: SP03
Investigator(s): TRJ, MDO Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: MoA (Monongahela Series) NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✔] No [ ]
Hydric Soil Present?	Yes [✔]	No [ ]	
Wetland Hydrology Present?	Yes [✔]	No [ ]	

Remarks:
PEM Goldenrod Community located in a constructed wetland mitigation site.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [✔] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [✔] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [✔] Depth (inches): _____
Water Table Present? Yes [ ] No [✔] Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes [ ] No [✔] Depth (inches): _____

Wetland Hydrology Present? Yes [✔] No [ ]

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

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: SP03

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
	_____ = Total Cover		
50% of total cover: _____	20% of total cover: _____		
Sapling Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
	_____ = Total Cover		
50% of total cover: _____	20% of total cover: _____		
Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
	_____ = Total Cover		
50% of total cover: _____	20% of total cover: _____		
Herb Stratum (Plot size: _____)			
1. Solidago gigantea	80	Y	FACW
2. Grass sp.	80	Y	-
3. Scirpus cyperinus	20	N	FACW
4. Dipsacus fullonum	5	N	FACU
5. Verbena hastata	1	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	186 = Total Cover		
50% of total cover: 93	20% of total cover: 37.2		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
50% of total cover: _____	20% of total cover: _____		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL Sampling Point: SP03

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 5/2	60	10YR 4/4	40	C	M	Silt/Loam	
2-10	7.5YR 5/2	70	7.5YR 3/4	25	C	M	Silt/Loam	
			10YR 5/1	5	C	M	Silt/Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: SP04
Investigator(s): TRJ, MDO Section, Township, Range:
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): Lat: Long: Datum:
Soil Map Unit Name: MoA (Monongahela Series) NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✔] No [ ]
Hydric Soil Present?	Yes [✔]	No [ ]	
Wetland Hydrology Present?	Yes [✔]	No [ ]	

Remarks:
Alder Community in a constructed wetland mitigation site.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [✔] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [✔] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [✔] Depth (inches):
Water Table Present? Yes [ ] No [✔] Depth (inches):
Saturation Present? (includes capillary fringe) Yes [ ] No [✔] Depth (inches):

Wetland Hydrology Present? Yes [✔] No [ ]

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

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: SP04

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus incana	40	Y	FACW*
2.			
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size:)			
1. Scirpus cyperinus	40	Y	FACW
2. Onoclea sensibilis	10	N	FACW
3. Solidago gigantea	10	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

*Incorrectly listed in NWPL

SOIL Sampling Point: SP04

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/1	60	10YR 3/2	30	C	M	Silt	Organics
			10YR 3/2	10	C	M		
2-10	10YR 5/2	80	10YR 5/4	15	C	M	Clay	Blocky
			10YR 7/8	5	C	M		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: SP05
Investigator(s): TRJ, MDO Section, Township, Range:
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): Lat: Long: Datum:
Soil Map Unit Name: MoA (Monongahela Series) NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✔] No [ ]
Hydric Soil Present?	Yes [✔]	No [ ]	
Wetland Hydrology Present?	Yes [✔]	No [ ]	

Remarks:
Western slough in a constructed wetland mitigation site

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [✔] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [✔] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [✔]	No [ ]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [✔]	No [ ]	Depth (inches): 0

Wetland Hydrology Present? Yes [✔] No [ ]

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

Remarks:
Water filled slough

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: SP05

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size:)			
1. Sparganium americanum	70	Y	OBL
2. Typha angustifolia	10	N	OBL
3. Typha latifolia	10	N	OBL
4. Open water	10	N	-
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

SOIL Sampling Point: SP05

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/1	80	7.5YR 5/8	20	C	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: SP06
Investigator(s): TRJ, MDO Section, Township, Range:
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): Lat: Long: Datum:
Soil Map Unit Name: MoA (Monongahela Series) NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✔] No [ ]
Hydric Soil Present?	Yes [✔]	No [ ]	
Wetland Hydrology Present?	Yes [✔]	No [ ]	

Remarks:
Open water pocket in a constructed wetland mitigation site

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [✔] Surface Water (A1)
- [ ] High Water Table (A2)
- [✔] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [✔] No [ ] Depth (inches):
Water Table Present? Yes [ ] No [✔] Depth (inches):
Saturation Present? (includes capillary fringe) Yes [ ] No [✔] Depth (inches):

Wetland Hydrology Present? Yes [✔] No [ ]

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

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: SP06

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size:)			
1. Ludwigia palustris			OBL
2. Najas marina			OBL
3. Emergent Vegetation			-
4. Salix nigra			OBL
5. Typha sp.			OBL
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [ ] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

Prostrate at surface, percentages not calculated due to depth of water

SOIL Sampling Point: SP06

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Open water pocket surrounded by PEM/PSS wetland.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: WL 02 SP01
Investigator(s): TRJ, MDO Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: MoA (Monongahela Series) NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✔] No [ ]
Hydric Soil Present?	Yes [✔]	No [ ]	
Wetland Hydrology Present?	Yes [✔]	No [ ]	

Remarks:
Incidental PEM pocket near outfall of WL01.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [✔] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [✔] Depth (inches): _____
Water Table Present? Yes [ ] No [✔] Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes [✔] No [ ] Depth (inches): _____

Wetland Hydrology Present? Yes [✔] No [ ]

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

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: SP01

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus incana	5	Y	FACW*
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size:)			
1. Cornus Amomum	5	Y	FACW
2. Viburnum Dentatum	5	Y	FAC
3. Rosa multiflora	5	Y	FACU
4.			
5.			
6.			
	15 = Total Cover		

50% of total cover: 7.5 20% of total cover: 3

Herb Stratum (Plot size:)			
1. Typha sp.	20	Y	OBL
2. Solidago gigantea	20	Y	FACW
3. Solidago rugosa	20	Y	FAC
4. Dipsacus fullonum	20	Y	FACU
5. Leersia oryzoides	10	N	OBL
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		

50% of total cover: 40 20% of total cover: 18

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

*Incorrectly listed in NWPL

SOIL Sampling Point: SP01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					Silt/Loam	
2-8	10YR 4/2	80	10YR 6/8	20	C	M	Silt/Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Fetter Wetland Site City/County: West St. Clair Township, Bedford County Sampling Date: 10/13/21
Applicant/Owner: PennDOT Engineering District 9-0 State: PA Sampling Point: UPL01
Investigator(s): TRJ, MDO Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Depressional Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: MoA (Monongahela Series) NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✔] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✔] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✔]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [ ]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:
Residual topsoil pile located within WL01.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches): _____
Water Table Present?	Yes [ ]	No [✔]	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches): _____

Wetland Hydrology Present? Yes [ ] No [✔]

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

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: UPL01

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size:)			
1. Solidago gigantea	60	Y	FACW
2. Grass sp.	40	Y	-
3. Rubus sp.	30	Y	-
4. Pycnanthemum virginianum	10	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	140 = Total Cover		

50% of total cover: 70 20% of total cover: 28

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

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

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL Sampling Point: UPL01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/4	100					Loam	Friable, Rock Fragments

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks: Residual top soil pile within wetland

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 2 Rapid Assessment (Document No. 310-2137-002)

Pennsylvania Department of Environmental Protection

For use in all wetland classifications found within Pennsylvania except those found within the banks of a watercourse.

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
JN217474	**Fetter Wetland Site**	**11/15/21**			3.74	

Name(s) of Evaluator(s)	Lat (dd)	Long (dd)	Notes:
MDO			

General Comments: Fetter Wetland Site is an Advance Wetland Compensation (AWC) for PennDOT District 9-0. It is a constructed wetland mitigation area under a permanent conservation easement.

1. Wetland Zone of Influence Condition Index

	Condition Category																			CI = Total Score/20
	Optimal					**Suboptimal**					**Marginal**					**Poor**				
Wetland Zone of Influence (300 foot area around AA perimeter)	ZOI area vegetation consists of a tree stratum present (diameter at breast height (dbh) > 3 inches) with greater than or equal to 60% tree canopy cover. Areas comprised of stream channels, wetlands (regardless of classification or condition) and lacustrine resources ≥ 10 acres are scored as optimal.					**High Suboptimal:** ZOI area vegetation consists of a tree stratum (dbh > 3 inches) present, with greater than or equal to 30% and less than 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.			**Low Suboptimal:** ZOI area vegetation consists of a tree stratum (dbh > 3 inches) present, with greater than or equal to 30% and less than 60% tree canopy cover with a maintained understory.		**High Marginal:** ZOI area vegetation consists of non-maintained, dense herbaceous vegetation with either a shrub layer or a tree stratum (dbh > 3 inches) present, with less than 30% tree canopy cover.			**Low Marginal:** ZOI area vegetation consists of non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, areas of hay production, and ponds or open water areas (< 10 acres). If trees are present, tree stratum (dbh > 3 inches) present, with less than 30% tree canopy cover with maintained understory.		**High Poor:** ZOI area vegetation consists of lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, pervious trails, recently seeded and stabilized, or other comparable condition.			**Low Poor:** ZOI area vegetation consists of impervious surfaces; mine spoil lands, denuded surfaces, row crops, active feed lots, impervious trails, or other comparable conditions.		
SCORE	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**

1. Identify all applicable Condition Category areas within the wetland zone of influence using the descriptors above.
2. Estimate the % area within each condition category. Calculators are provided for you below.
3. Enter the % ZOI Area in decimal form (0.00) and Score for each category in the blocks below.

Total Score = SUM(%Areas*Scores)

	Condition Category:								
Scoring:	% ZOI Area:	60%	20%	10%	**10%**	**0%**	**0%**	**Total Score:**	**0.72**
	Score:	18	12	7	**5**	**0**	**0**		
	Total Sub-score:	10.80	2.40	0.70	0.50	0.00	0.00	**14.40**	

Comments: The Fetter Wetland Mitigation Site managed by PennDOT is surrounded by other wetland areas built under conservation easements from the USDA Natural Resource Conservation Service's (NRCS) Wetland Reserve Program and US Fish and Wildlife Service (US FWS). Wooded areas and 1 x residential yard is also present.

2. Roadbed Presence Index

	Condition Categories																			
	Optimal					**Suboptimal**					**Marginal**					**Poor**				
a. Roadbed Presence (within 0 - 100 foot Wetland ZOI distance)	**High Optimal:** No roadbeds present within 100 feet of the AA boundary			**Low Optimal:** Roadbed presence score within 0-100 feet of the AA boundary equal to or less than 2.		**High Suboptimal:** Roadbed presence score within 0-100 foot distance of the AA boundary is greater than to 2 but equal to or less than 4.			**Low Suboptimal:** Roadbed presence score within 0-100 foot distance of the AA boundary is greater than to 4 but less than or equal to 6.		**High Marginal:** Roadbed presence score within 0-100 foot distance of the AA boundary is greater than to 6 but less than or equal to 8.			**Low Marginal:** Roadbed presence score within 0-100 foot distance of the AA boundary is greater than to 8 but less than or equal to 10.		**High Poor:** Roadbed presence score within 0-100 foot distance of the AA boundary is greater than 10 but less than or equal to 12.			**Low Poor:** Roadbed presence score within 0-100 foot distance of the AA boundary is greater than 12.		
SCORE	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**

Comments: 1 x Gravel Road (Access road to the other wetland areas on the property)

	Condition Categories																			CI = Total Score/20
	Optimal					**Suboptimal**					**Marginal**					**Poor**				
b. Roadbed Presence (within 100 - 300 foot Wetland ZOI distance)	**High Optimal:** No roadbeds present within 100 - 300 feet of the AA boundary			**Low Optimal:** Roadbed presence score within 100 - 300 feet of the AA boundary equal to or less than 2.		**High Suboptimal:** Roadbed presence score within 100 - 300 feet of the AA boundary is greater than to 2 but equal to or less than 4.			**Low Suboptimal:** Roadbed presence score within 100 - 300 feet AA boundary is greater than to 4 but less than or equal to 6.		**High Marginal:** Roadbed presence score within 100 - 300 feet of the AA boundary is greater than to 6 but less than or equal to 8.			**Low Marginal:** Roadbed presence score within 100 - 300 feet of the AA boundary is greater than to 8 but less than or equal to 10.		**High Poor:** Roadbed presence score within 100 - 300 feet of the AA boundary is greater than to 10 but less than or equal to 12.			**Low Poor:** Roadbed presence score within 100 - 300 feet of the AA boundary is greater than 12.		
SCORE	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**

	Condition Score	Weighting	Sub-Scores	
a. Roadbed 0-100:	18	* (0.67)	12	
b. Roadbed 100-300:	16	* (0.33)	5	**0.87**
		Total Score:	**17**	

Comments: 2 x Gravel Road (Driveway to the house and Access road to the other wetland areas on the property)

Wetland Condition Assessment Form

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3. Vegetation Condition Index

	Condition Category																			
	Optimal					Suboptimal					Marginal					Poor				
a. Invasive Species Presence	**High Optimal:** No invasives present.			**Low Optimal:** <5% of the total AA contains invasive species.		**High Suboptimal:** >5% but less than 10% of the total AA contains invasive species.			**Low Suboptimal:** >10% but less than 20% of the total AA contains invasive species.		**High Marginal:** >20% but less than 30% of the total AA contains invasive species.			**Low Marginal:** >30% but less than 50% of the total AA contains invasive species.		> 50% of the total AA contains invasive species.				
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

Comments: Narrow-leaf Cattails, Reed Canary Grass, and Autumn Olive present

	Condition Category																				CI = Total Score/40
	Optimal					Suboptimal					Marginal					Poor					
b. Vegetation Stressor Presence	**High Optimal:** No vegetation stressors present within the AA boundary.			**Low Optimal:** One vegetation stressor present within the AA boundary.		**High Suboptimal:** Two vegetation stressors present within the AA boundary.			**Low Suboptimal:** Three vegetation stressors present within the AA boundary.		**High Marginal:** Four vegetation stressors present within the AA boundary.			**Low Marginal:** Five vegetation stressors present within the AA boundary.		Greater than five vegetation stressors present within the AA boundary.					
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Comments: None

a. Invasive Sub-Score:	8	**Total Score**	**0.70**
b. Vegetation Sub-Score:	20	**28**	

4. Hydrologic Modification Index

	Condition Category																				CI = Total Score/20
	Optimal					Suboptimal					Marginal					Poor					
Hydrologic Modification Stressor Presence	**High Optimal:** No hydrologic stressors present within the AA boundary.			**Low Optimal:** One hydrologic stressor present within the AA boundary.		**High Suboptimal:** Two hydrologic stressors present within the AA boundary.			**Low Suboptimal:** Three hydrologic stressors present within the AA boundary.		**High Marginal:** Four hydrologic stressors present within the AA boundary.			**Low Marginal:** Five hydrologic stressors present within the AA boundary.		Greater than five hydrologic stressors present within the AA boundary.					
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Comments: 1 x in-line water control structure is located at the outlet of the wetland

Score:	**17**	**0.85**

5. Sediment Stressor Index

	Condition Category																				CI = Total Score/20
	Optimal					Suboptimal					Marginal					Poor					
Sediment Stressor Presence	**High Optimal:** No sediment stressors present within the AA boundary.			**Low Optimal:** One sediment stressor present within the AA boundary.		**High Suboptimal:** Two sediment stressors present within the AA boundary.			**Low Suboptimal:** Three sediment stressors present within the AA boundary.		**High Marginal:** Four sediment stressors present within the AA boundary.			**Low Marginal:** Five sediment stressors present within the AA boundary.		Greater than five sediment stressors present within the AA boundary.					
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Comments: None

Score:	**20**	**1.00**

6. Water Quality Stressor Index

	Condition Category																				
	Optimal					Suboptimal					Marginal					Poor					
a. Eutro-phication Stressor Presence	No eutrophication stressors present within the AA boundary.					One eutrophication stressors present within the AA boundary.					Two eutrophication stressors present within the AA boundary.					Three eutrophication stressors present within the AA boundary.					
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Comments: None

	Condition Category																				CI = Total Score/40
	Optimal					Suboptimal					Marginal					Poor					
b. Contaminant / Toxicity Stressor Presence	No contaminant / toxicity stressors present within the AA boundary.					One contaminant / toxicitystressors present within the AA boundary.					Two contaminant / toxicity stressors present within the AA boundary.					Three contaminant / toxicity stressors present within the AA boundary.					
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Comments: None

a. Eutrophication Score	20	**Total Score:**	**1.00**
b. Contaminant Score	20	**40**	

Overall Wetland Level 2 Condition Score: Sum all six of the Condition Indexes and divide by 6 to calculate the overall condition score.	**Overall Condition Index:**	**0.86**

Pennsylvania Wetland Condition Level 2 Rapid Assessment

(Document No. 310-2137-002)

Pennsylvania Department of Environmental Protection

Roadbed Worksheet

Project Name / Identifier			Date	Name(s) of Evaluator(s)
Fetter Wetland Site			11/15/21	MDO
Resource Identifier	**AA #**	**Lat (dd)**	**Long (dd)**	**Notes:**

Roadbeds: Record the number of occurrences by roadbed type and distance category. Multiply the number of occurrences by the weighting factors for each roadbed type and distance category then sum the total score for each distance category. The total scores for each distance category are then compared to the condition category descriptions.

Roadbed Type	Distance	Occurrences	Weighting Factor	Score	Distance	Occurrences	Weighting Factor	Score
≥ 4 Lane Paved	0-100 ft.	0	4	0	100-300 ft.	0	4	0
2 Lane Paved	0-100 ft.	0	2	0	100-300 ft.	0	2	0
1 Lane Paved	0-100 ft.	0	1	0	100-300 ft.	0	1	0
Gravel Road	0-100 ft.	1	1	1	100-300 ft.	2	1	2
Dirt Road	0-100 ft.	0	2	0	100-300 ft.	0	2	0
Railroad	0-100 ft.	0	2	0	100-300 ft.	0	2	0
Other Roadbeds	0-100 ft.	0	1, 2 or 4	0	100-300 ft.	0	1, 2 or 4	0
Total Scores:	0-100 ft.	1			100-300 ft.	2		

Road Comments:

Pennsylvania Wetland Condition Level 2 Rapid Assessment

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Pennsylvania Department of Environmental Protection

STRESSOR WORKSHEET

2/4/2017

	Occurrence in AA		
	Y	#'s	N
Vegetation Alteration			
Mowing			X
Moderate livestock grazing (within one year)			X
Crops (annual row crops, within one year)			X
Selective tree harvesting/cutting (>50% removal, within 5 years)			X
Right-of-way clearing (mechanical or chemical)			X
Clear cutting or Brush cutting (mechanized removal of shrubs and saplings)			X
Removal of woody debris			X
Aquatic weed control (mechanical or herbicide)			X
Excessive herbivory (deer, muskrat, nutria, carp, insects, etc.)			X
Plantation (conversion from typical natural tree species, including orchards)			X
Other:			X
Total Number:	**0**		
Hydrologic Modification			
Ditching, tile draining, or other dewatering methods			X
Dike/weir/dam	X		
Filling/grading			X
Dredging/excavation			X
Stormwater inputs (culvert or similar concentrated urban runoff)			X
Microtopographic alterations (e.g., plowing, forestry bedding, skidder/ATV tracks)			X
Dead or dying trees (trunks still standing) *			X
Stream alteration (channelization or incision)			X
Other:			X
Total Number:	**1**		
Sedimentation			
Sediment deposits/plumes			X
Eroding banks/slopes			X
Active construction (earth disturbance for development)			X
Active plowing (plowing for crop planting in past year)			X
Intensive livestock grazing (in one year, ground is >50% bare)			X
Active selective forestry harvesting (within one year)			X
Active forest harvesting (within two years, includes roads, borrow areas, pads, etc.)			X
Turbidity (moderate concentration of suspended solids in the water column, obvious sediment discharges)			X
Other:			X
Total Number:	**0**		
Eutrophication			
Direct discharges from agricultural feedlots, manure pits, etc.			X
Direct discharges from septic or sewage treatment plants, fish hatcheries, etc.			X
Heavy or moderately heavy formation of algal mats			X
Other:			X
Total Number:	**0**		
Contaminant/Toxicity			
Severe vegetation stress (source unknown or suspected)			X
Obvious spills, discharges, plumes, odors, etc.			X
Acidic drainages (mined sites, quarries, road cuts)			X
Point discharges from adjacent industrial facilities, landfills, railroad yards, or comparable sites			X
Chemical defoliation (majority of herbaceous and woody plants affected, within one year)			X
Fish or wildlife kills or obvious disease or abnormalities observed			X
Excessive garbage/dumping			X
Other:			X
Total Number:	**0**		

**** Dead or dying trees attributed to beaver activity or emerald ash borer (or other identifiable insect infestation) should not be recorded as a stressor present. The assessor is responsible for recording observations in the comment section concerning presence of these conditions.***

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(Document No. 310-2137-002)
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Invasive Species Presence Worksheet

Are invasive species (from list) present at the site in any layer? YES NO

If listed species present, enter the percent areal coverage for each species below:

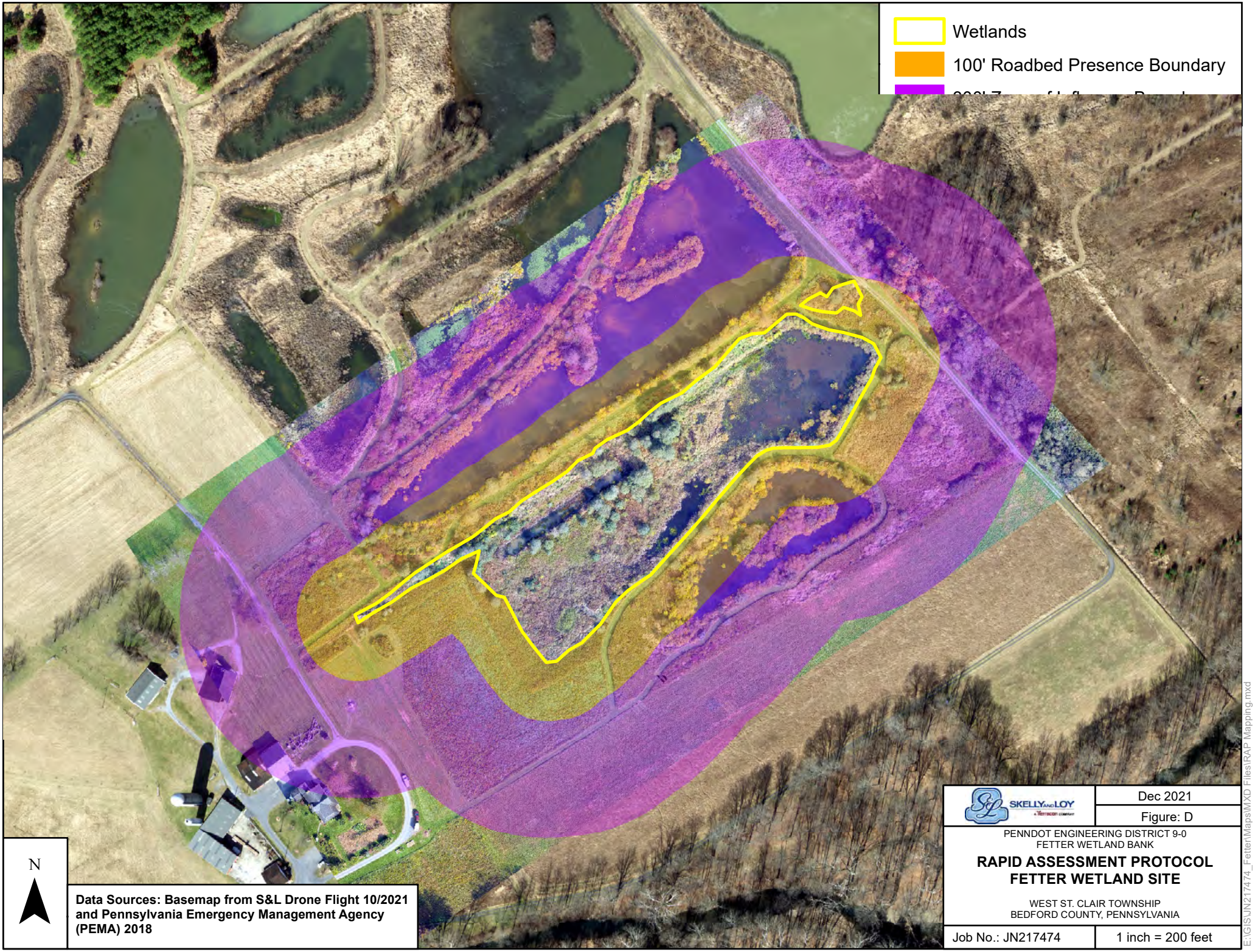
Species Code	<5%	≥ 5-20%	≥ 20 - 50%	≥ 50%	*Species Code*	<5%	≥ 5-20%	≥ 20 - 50%	≥ 50%
elum	5								
tyan		20							
phar		10							

Total % relative cover of all invasives, collectively on site: 35 %

Comments:

Common Invasives/Aggressives List

Code	Common Name	Scientific	Status	Code	Common Name	Scientific	Status
aggi2	Redtop	Agrostis gigantea	FACW	luhe	Water primrose	Ludwigia hexapetala	OBLW
algl2	European Alder	Alnus glutinosa	FACW	lyvu	Garden loosestrife	Lysimachia vulgaris	OBLW
arhi3	Carpetgrass	Arthraxon hispidus	FAC-	lysa2	Purple loosestrife	Lythrum salicaria	FACW
beth	Japanese barberry	Berberis thunbergii	FACW	maqu	European waterclover	Marsilea quadrifolia	OBLW
bevu	European barberry	Berberis vulgaris	FACW	mivi	Japanese stiltgrass	Microstegium vimineum	FAC
butom	Flowering Rush	Butomus umbellatus	OBLW	nami2	Water cress	Nasturtium officinale	OBLW
calli6	Pond water-starwort	Callitriche stagnalis	OBLW	pelo	Low smartweed	Persicaria longiseta	FACW
egde	Brazilian waterweed	Egeria densa	OBLW	phar	Reed canary grass	Phalaris arundinacea	FACW
elan	Russian olive	Elaeagnus angustifolia	FACU	phau7	Common Reed	Phragmites australis	OBLW
elum	Autumn olive	Elaeagnus umbellata	FACU	potr	Rough bluegrass	Poa trivialis	FACW
ephi	Hairy willow-herb	Epilobium hirsutum	FACW	pocu6	Japanese knotweed	Polygonum (Faloia) cuspidatum	FAC-
eppa5	Willow-herb	Epilobium parviflorum	FACW	pgpf	Mile-a-minute	Polygonum perfoliatum	FAC-
fasa	Giant knotweed	Fallopia sachalinensis	OBLW	puera	Kudzu-vine	Pueraria lobata	FAC-
gldi	Mudmats	Glossostigma diandrum	OBLW	pysp1	Apple/crabapple/pear	Pyrus sp.	FAC?
hola	Velvetgrass	Holcus lanatus	FAC	rhfr	Glossy Buckthorn	Rhamnus frangula	FAC-
huja	Japanese Hops	Humulus japonicus	FACU	romu	Multiflora rose	Rosa multiflora	FACU
loja	Japanese honeysuckle	Lonicera japonica	FAC-	tyan	Cattail (hybrid)	Typha angustifolia	OBLW
lomo	Morrow's honeysuckle	Lonicera morrowii	NI	tygl	Hybrid cattail	Typha x glauca	OBLW
lota	Tartarian honeysuckle	Lonicera tatarica					

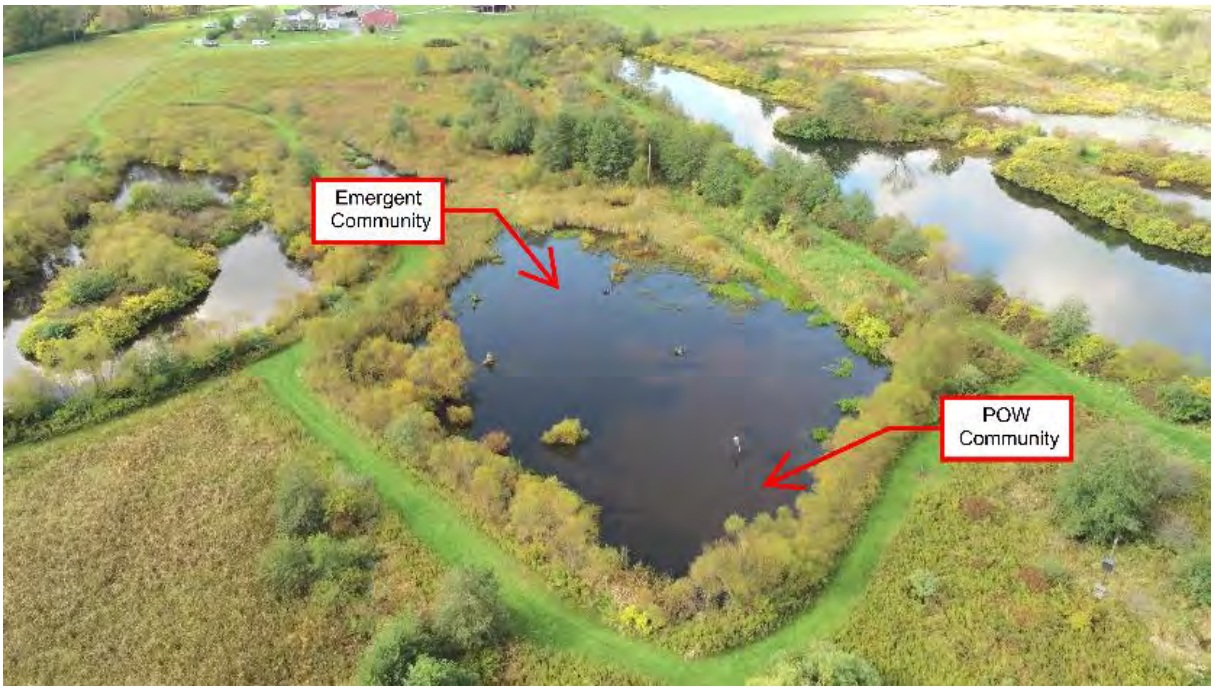

Wetlands
100' Roadbed Presence Boundary
N
Data Sources: Basemap from S&L Drone Flight 10/2021 and Pennsylvania Emergency Management Agency (PEMA) 2018
SKELLY and LOY
Dec 2021
Figure: D
PENNDOT ENGINEERING DISTRICT 9-0
FETTER WETLAND BANK
RAPID ASSESSMENT PROTOCOL
FETTER WETLAND SITE
WEST ST. CLAIR TOWNSHIP
BEDFORD COUNTY, PENNSYLVANIA
Job No.: JN217474
1 inch = 200 feet
E:\GIS\JN217474_FetterMaps\MXD Files\RAP Mapping.mxd

APPENDIX J –
SITE PHOTOGRAPHS

FETTER WETLAND SITE, BEDFORD COUNTY – PHOTOGRAPH LOG

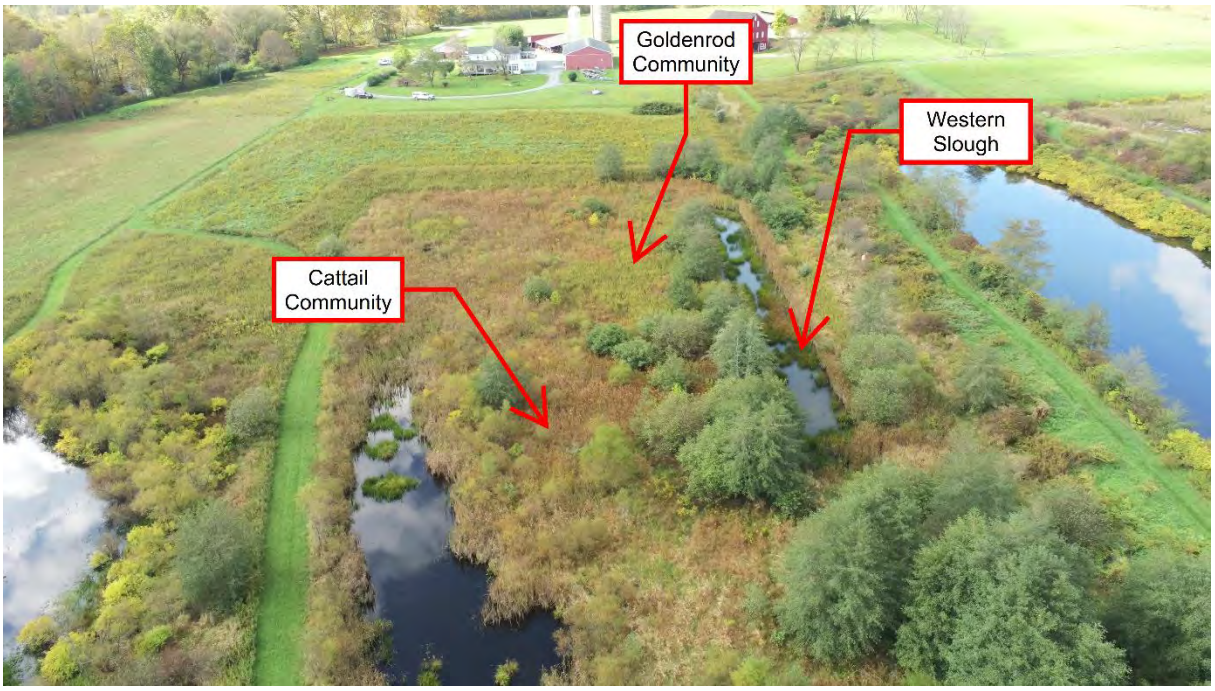
Photograph 1: Overview of the Fetter Site facing northeast.

Photograph 2: Overview of the Fetter site facing southwest.

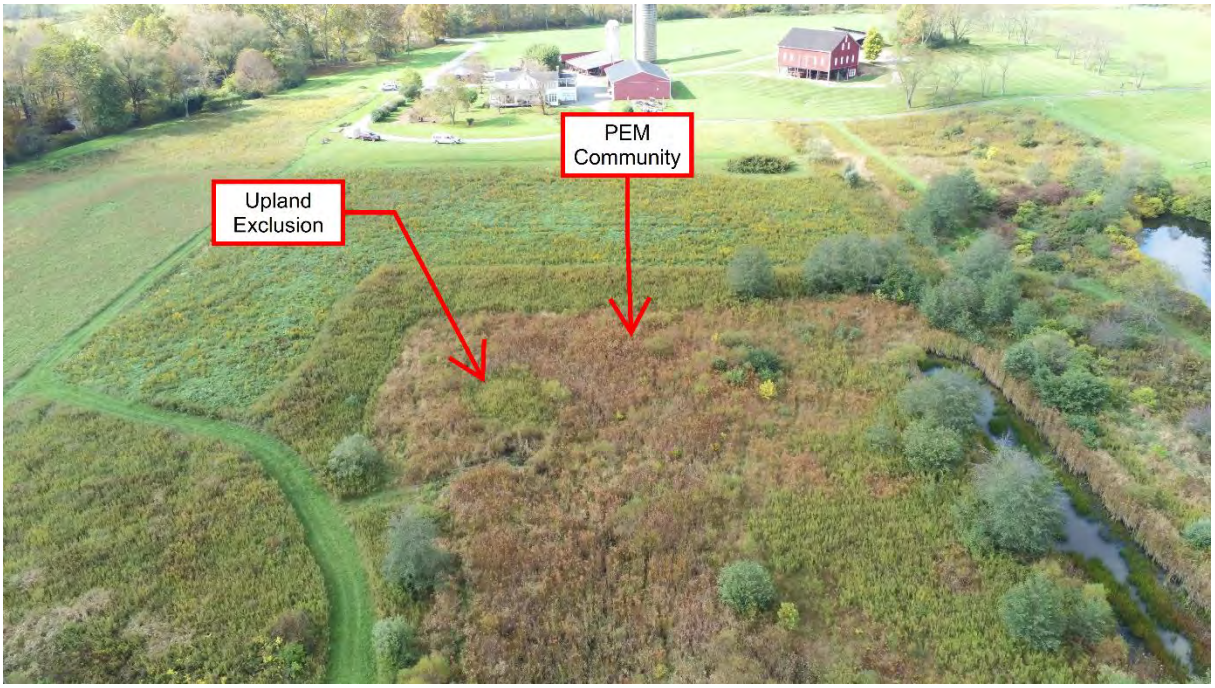


Photograph 3: POW and Emergent Communities facing southwest. Wetland 2 can be seen in the bottom left corner.

Photograph 4: Alder Community facing southwest.



Photograph 5: Cattail, Goldenrod, and Western Slough Communities facing southwest.



Photograph 6: PEM Community and Upland Exclusion facing southwest.