Interstate 80, Section 17M

Water Resources Delineation Report

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I. Introduction

The proposed SR 0080 Section 17M Reconstruction project, a 3.5 mile roadway reconstruction traversing parts of three (3) municipalities (Stroud Township, Stroudsburg Borough and East Stroudsburg Borough) in Monroe County, Pennsylvania (***Figure 1***), is currently in the preliminary engineering and environmental clearance phase. Environmental studies are being conducted as part of the project's preliminary design efforts to fully assess the impacts the proposed project would have on environmental resources within the project area.

The following needs have been established for the project:

- Roadway geometry within the project area does not meet current design criteria and contributes to safety concerns.
- High traffic volumes cause congestion. Current volumes on S.R. 0080 average 70,500 vehicles per day (2013) with 10% (7050) heavy vehicles (trucks). In addition, design year projections (2045) increase these volumes to approximately 132,800 vehicles per day with 10% (13,280) heavy vehicles (trucks). The additional future traffic will increase congestion and the potential for conflicts at the interchange acceleration and deceleration ramps.
- Deteriorated roadway and bridge components cause hazardous conditions and traffic restrictions for required maintenance.
- System continuity is lacking. AASHTO design requirements for interstate systems call for all traffic movements to be available at each interchange. Exits 303, 304, and 306 provide only some of the connections available, which contributes to congestion in the region.

The project area can be found on the Stroudsburg, PA USGS Quadrangle and is centered at approximately 40° 59' 0.6" N and 75° 12' 54.4" W ***(Figures 1 & 2).*** The project area is primarily suburban and urban landscape across a rolling topography, generally paralleling McMichael Creek and Pocono Creek, east to west. Higher density residential and commercial development is found east of the US 209 interchange (Exit 304) and continues east to Brodhead Creek. Suburban and commercial development extends from the same interchange to the west. Local topography consists of narrow, moderately deep stream valleys and rolling upland terrain.

This Water Resources Delineation Report documents the presence and extent of regulated wetlands and waterways within the project area. A description of each wetland area and waterway is provided along with an evaluation of the wetland's functions and values. Wetland Delineation Forms for the identified resources are located in ***Appendix A***. Photographs of the project area watercourses and wetlands are located in ***Appendix B***. Function Value Evaluation Forms are located in ***Appendix C***. Descriptions of project area soil types are located in ***Appendix D***.

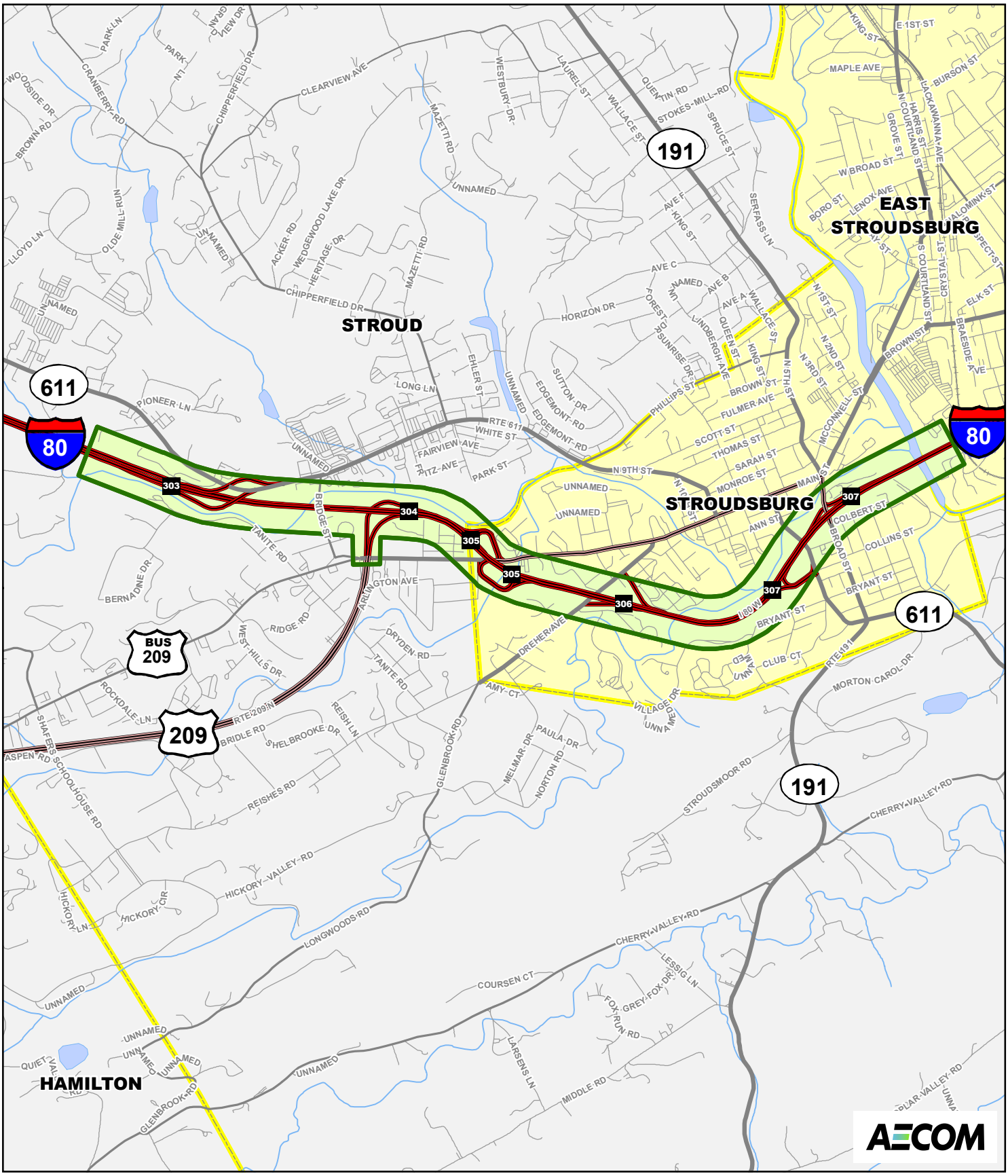

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FIGURE 1:
PROJECT LOCATION MAP

Project Location

N

0 0.25 0.5

Miles

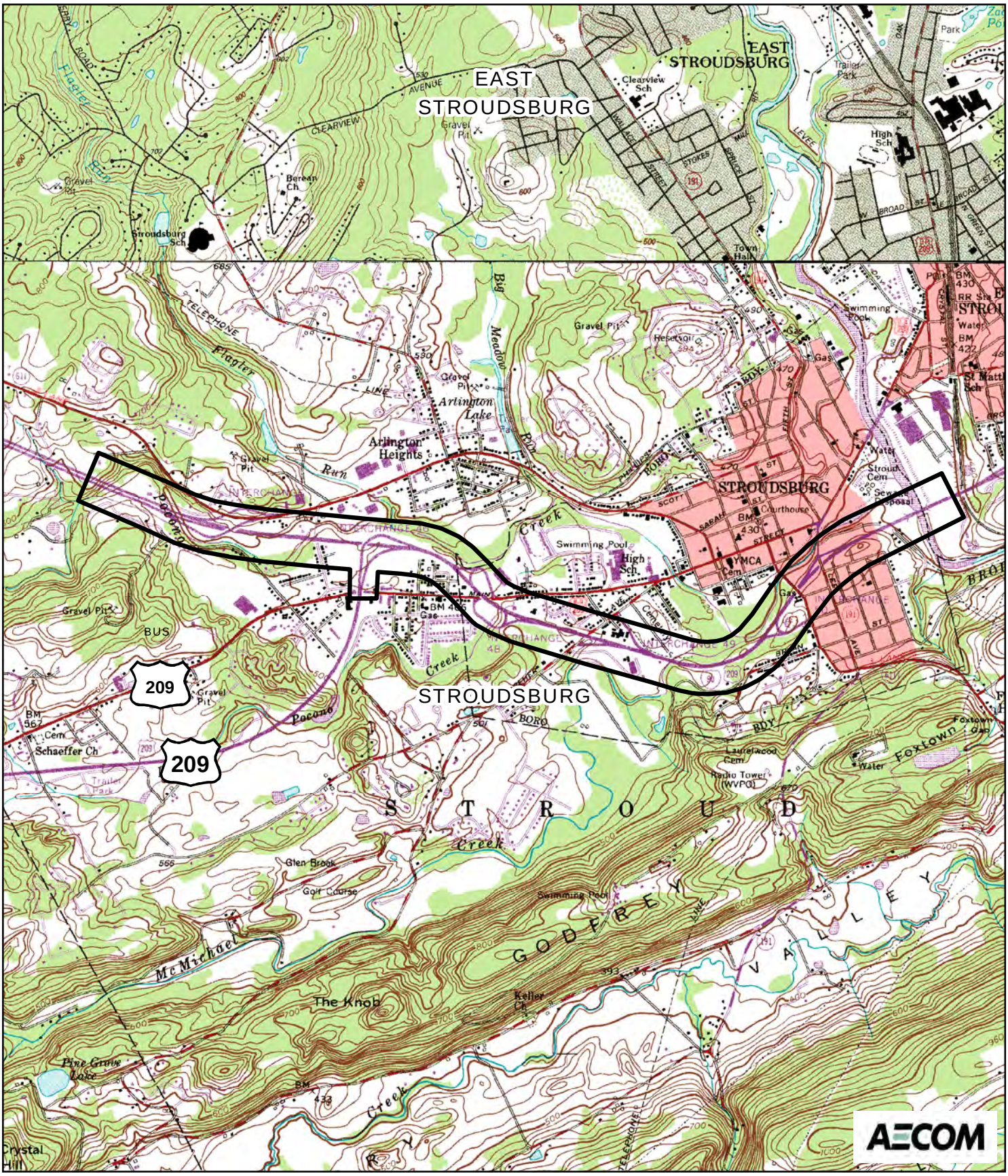

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FIGURE 2:

USGS QUADRANGLE MAP

II. Regulations & Methodology

The purpose of this study is to satisfy the requirements of the state and federal regulating agencies having jurisdictional authority over wetlands. The U.S. Army Corps of Engineers (USACE) has jurisdictional authority over Waters of the U.S., including wetlands, as mandated by Section 404 of the Clean Water Act. The Pennsylvania Department of Environmental Protection (PADEP) has jurisdictional authority under Title 25 of the Pa Code, Chapter 105, Dam Safety and Encroachments Act.

Background data and information on identified watercourses, soils, topography and vegetation was gathered to preliminarily determine possible wetland locations within the project area. Sources of information included the, U.S.G.S. 7.5-Minute Quadrangle Mapping (***Figure 2***), the *Soil Survey of Monroe County* (***Figure 3***) and the U.S. Fish and Wildlife Service's (USFWS's) *National Wetland Inventory* (NWI) (***Figure 4***).

A. Watercourses

Project area watercourses were preliminarily identified using available mapping. Field investigations were conducted between September and October, 2013 to confirm the presence/absence of project area watercourses. The jurisdictional limits of the field identified watercourses were delineated based on their observed Ordinary High Water Mark (OHWM). Stream order and classifications under Title 25, Chapter 93 and the Pennsylvania Fish and Boat Commission's (PAFBC's) regulation and the USACE Clean Water Act Jurisdiction Guidance (June 2007) were also identified.

B. Wetlands

Following the preliminary review, field investigations were conducted to review the entire project area and determine if wetlands were present. In order for an area to be classified as a wetland, it must possess wetland hydrology, hydrophytic vegetation and hydric soils. The preliminary boundaries of the wetland areas possessing all three criteria were determined in accordance with the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2).* January, 2012. These boundaries were determined during field investigations conducted between September and October, 2013 and have been flagged and surveyed.

Field evaluations of the wetlands included a series of soil test pits to identify the presence and extent of hydric soil conditions and wetland hydrology. The test pits consisted of borings dug using a 3-inch soil auger. Soil colors were determined using the *Munsell Soil Color Charts*.

The dominant vegetation and plant community composition was determined by conducting a vegetation inventory at representative sample locations within and near each wetland area. Dominant species were identified for each vegetative stratum and wetland indicator status was noted. Plant wetland indicator status was determined using the USACE *National Wetland Plant List, Northcentral and Northeast Region*, 2013. Identified wetlands were classified according to *A Classification of Wetland and Deepwater Habitats of the United States* (Cowardin et. al., 1979).

The wetlands were also assessed for their functional values b techniques of the New England District, United States Army Corps of Engineers in *The Highway Methodology Workbook – Wetland Functions and Values, A Descriptive Approach*. NAEEP-360-1-30a, September 1999. A field verification was conducted with USACE in October, 2015.

III. Site Description

The project area lies within the Brodhead Creek (WW-1-00) Navigable Water (TNW), which is part of the Delaware River drainage. The eastern half of the project area drains to McMichael Creek (WW-2-00) and its tributaries. The western project area drains to Pocono Creek (WW-3-00) and its tributaries, including Li Creek (WW-3-01). Pocono Creek is a tributary to McMichael Creek, which to Brodhead Creek. ***Table 1*** presents the Chapter 93 identified Designated Use Classifications and PA Fish and Boat Commission (PFBC) identifications:

Table 1: Determination of Exceptional Value Resources

Stream	Zone	Chapter 93 Designated Use	Chapter 93 Existing Use	Reach	PA Fish and Boat Commission Identification
Brodhead Creek (WW-1-00)	SR 2022 Bridge to Mouth	TSF, MF	CWF, MF	Stroudsburg Water Co property to I-80 Bridge – Exit 309	Wild Trout, Stocked
McMichael Creek (WW-2-00)	T434 to Pocono Creek Pocono Creek to Mouth	HQ-CWF, MF TSF, MF	N/A	SR 2004 Bridge to mouth	Wild Trout, Stocked
Pocono Creek (WW-3-00)	Confluence of Dry Sawmill Run and Wolf Swamp Run to Mouth	HQ-CWF, MF	N/A	headwaters to Flagler Run Flagler Run to mouth	Class A - Wild Brown Trout Wild Trout, Stocked
Little Pocono Creek (WW-3-01)	source to mouth	HQ-CWF, MF	N/A	headwaters to mouth	Wild Trout
UNT to Pocono Creek (WW-3-06)	source to mouth	HQ-CWF, MF	N/A	headwaters to mouth	Wild Trout

Sources: 23 Pa. Code § 93.9c.; PFBC Class A Trout Waters; PFBC Pennsylvania Wild Trout Waters (Natural Reproduction); PFBC Regulated Trout Waters

Due to the listed PFBC wild trout identifications for the project area streams, wetlands within the Brodhead Creek drainage and all tributaries within the project area are considered Exceptional Value (EV) if located in the floodplains of the streams.

A. Background Information

A review of secondary resources was completed in order to assess the potential for the existence of wetlands in the project area. This inventory included review of topographic mapping, the Soil Survey of Monroe County, and NWI mapping.

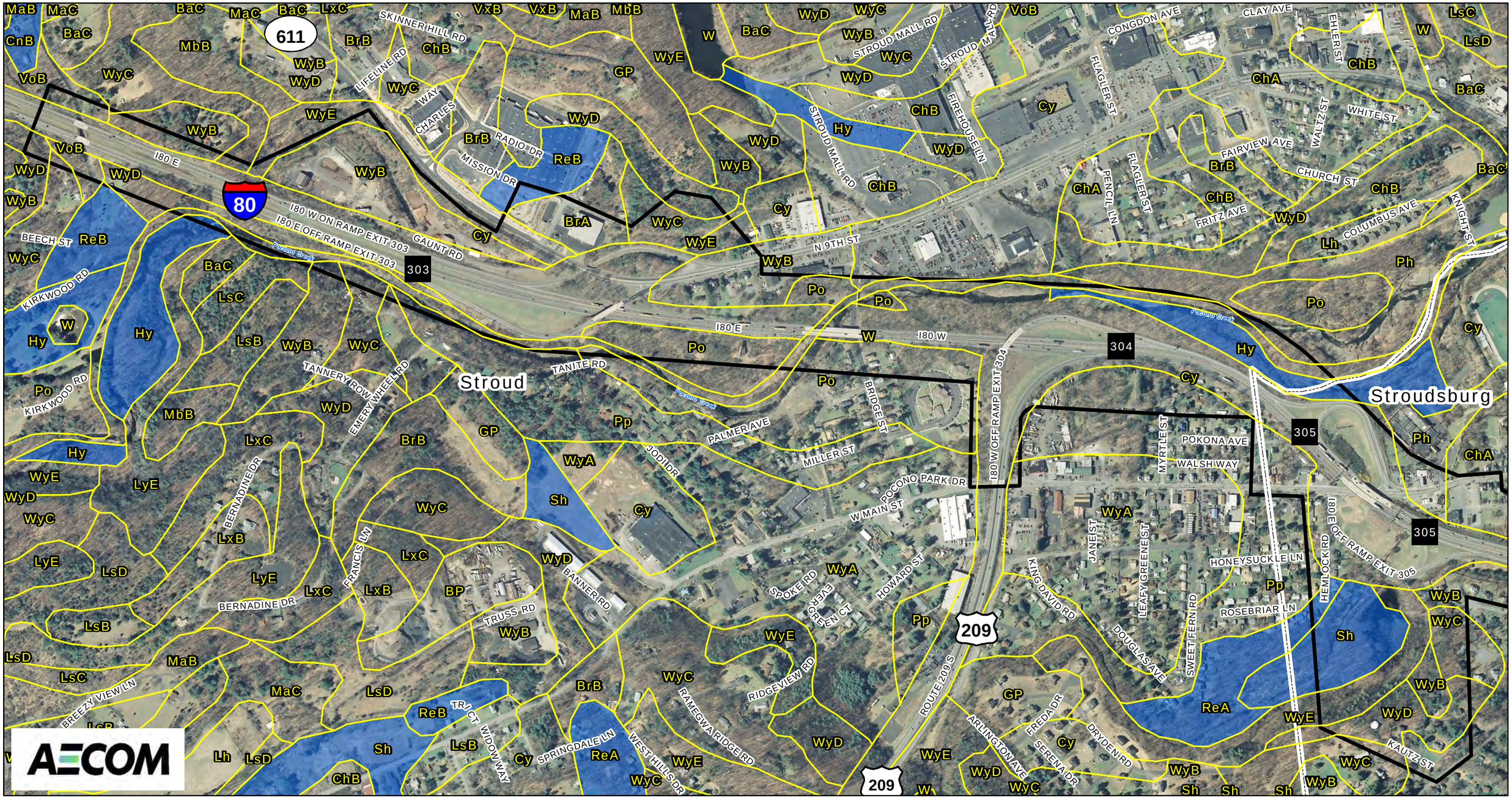
A review of the Stroudsburg, PA, U.S.G.S. 7.5-Minute Quadrangle (***Figure 2***) indicated the presence of Brodhead Creek, McMichael Creek, Pocono Creek, Little Pocono Creek and Flagler Run within or adjacent to the project area. The Soil Survey identifies the existence of five (5) soil types that are considered hydric or are known to contain hydric soil components within the project area (***Figure 3***). ***Table 2*** provides a brief overview of the hydric soils. A description of all the project area soils is contained in ***Appendix D***.

Table 2: Hydric Soils Properties

Soil Name	Slope	Composition	Depth to Restrictive Layer (in)	Depth to Water Table (in)	Drainage Class
Chippewa and Norwich extremely stony soils (CnB)	0-8%	Chippewa and similar soils: 47%; Norwich & similar soils: 47%	10 to 24 inches to fragipan	Seasonally at 0 inches	Poorly drained
Holly silt loam (Hy)	0-3%	Holly and similar soils: 100%	More than 80 inches	Seasonally at 3 inches	Poorly drained
Rexford gravelly silt loam (ReA)	0-3%	Rexford (somewhat poorly drained): 40%; Rexford (poorly drained): 35%	15 to 24 inches to fragipan	Seasonally at 4-6 inches	Somewhat poorly drained - poorly drained
Rexford gravelly silt loam (ReB)	3-8%	Rexford (somewhat poorly drained): 50%; Rexford (poorly drained): 35%	15 to 24 inches to fragipan	Seasonally at 4-6 inches	Somewhat poorly drained - poorly drained
Sheffield silt loam (Sh)	0-3%	Sheffield and similar soils: 100%	15 to 26 inches to fragipan	Seasonally at 0 inches	Poorly drained

Source: Natural Resources Conservation Service, Web Soil Survey, 2014.

Review of the NWI mapping identified 2 wetland systems located within the project area ***(Figure 4).*** The NWI wetlands are classified as Freshwater Forested/Shrub Wetland (PFO/SS1). Additional riverine and open water systems included a Freshwater Pond (PUBHx) and upper and lower perennial and unknown perennial streams.



N

0 300 600

Feet

Soil Type | Hydric Soils | Project Study Area

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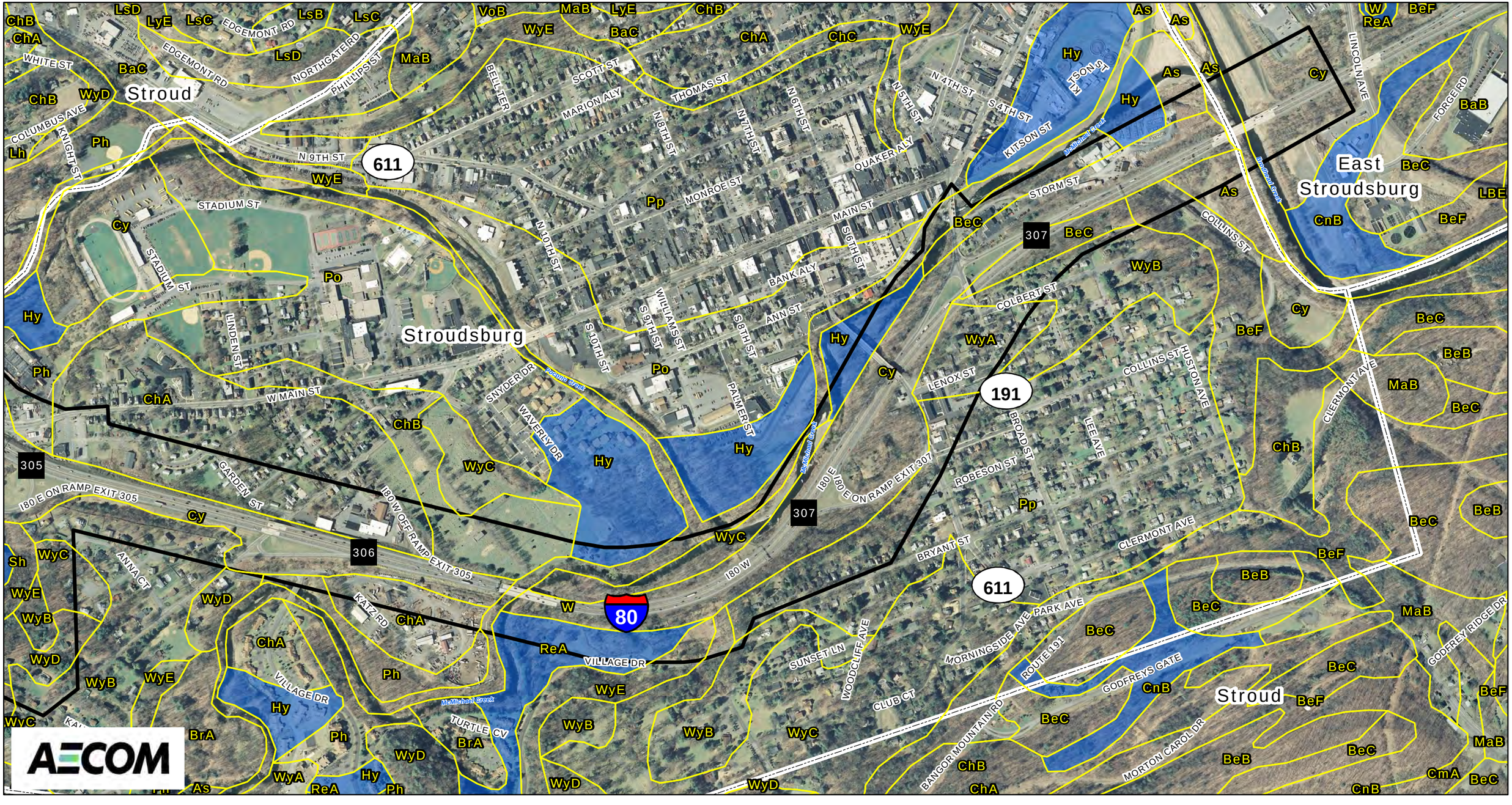
FIGURE 3:

PROJECT AREA SOILS MAP

Sheet 1 of 2

Source: PAMAP, 2008, USDA NRCS.



N

0 300 600

Feet

Soil Type

Hydric Soils

Project Study Area

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FIGURE 3:

PROJECT AREA SOILS MAP

Sheet 2 of 2

Source: PAMAP, 2008, USDA NRCS.

AECOM

N

0 300 600

Feet

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine

Project Study Area

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FIGURE 4: PROJECT AREA NWI WETLANDS MAP

Sheet 1 of 2

Source: PAMAP, 2008, NWI.

N

0 300 600

Feet

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine

Project Study Area

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FIGURE 4: PROJECT AREA NWI WETLANDS MAP

Sheet 2 of 2

Source: PAMAP, 2008, NWI.

B. Watercourses

Field investigations of the project area conducted between August and December, 2013 and May 2014 revealed the presence of 39 watercourses (***Plan Sheets),*** all tributaries to Brodhead Creek. ***Appendix B*** contains color photographs of the watercourses.

Watercourse WW-1-00 (Brodhead Creek) (*Sheets 19-20*) – is a perennial tributary to the Delaware River and a Traditional Navigable Water (TNW). Flowing north to south beneath the I-80 bridge crossing just downstream of its confluence with McMichael Creek, Brodhead Creek is the lowest stream in the project area. Within the project area it primarily receives flows from upstream systems and ephemeral tributaries associated with its floodplain. The stream beneath the I-80 bridge has an average width of approximately 100 feet and a rocky cobble substrate.

Watercourse WW-1-01 (*Sheets 19-20*) – is an intermittent tributary (Relatively Permanent Water - RPW) to Brodhead Creek (Watercourse WW-1-00). It flows parallel to I-80's southern edge and appears to primarily receive and carry flows from upslope hydrologic sources. The channel was dry at the time of field investigations. The stream has an average width of approximately eight feet and a silty, gravel substrate.

Watercourse WW-1-02 (*Sheets 19-20*) – is an intermittent tributary (RPW) to Brodhead Creek (Watercourse WW-1-00). It flows through an elevated floodplain adjacent to Brodhead Creek and appears to primarily receive and carry high flows from McMichael Creek. The channel was dry at the time of field investigations. The stream has an average width of approximately ten feet and a sandy, cobble substrate.

Watercourse WW-1-03 (*Sheets 19-20*) – is an ephemeral channel (Non-RPW) to Brodhead Creek (Watercourse WW-1-00). It carries flow through an elevated floodplain adjacent to Brodhead Creek and appears to primarily receive and carry high flows from McMichael Creek. The channel was dry at the time of field investigations. The stream has an average width of approximately two feet and a sandy, cobble substrate.

Watercourse WW-2-00 (McMichael Creek) (*Sheets 15-20*) – is a perennial tributary and RPW to Brodhead Creek (WW-1-00) a Traditional Navigable Water (TNW). Within the eastern third of the project area, WW-2-00 flows parallel to the northern side of I-80 eventually flowing into Brodhead Creek near the eastern end of the project area. Along much of this length, the existing fill slopes of the highway are the floodplain limits of McMichael Creek. The stream beneath the I-80 bridge has an average width of approximately 55 feet, with downstream widths increasing to 80 feet. The streambed is relatively consistent in substrate composed of gravel and cobble.

Watercourse WW-2-00a (*Sheet 18*) – is an intermittent tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It is a back-channel that connects Wetland W-2-0` with McMichael Creek. The stream has an average width of approximately eight feet.

Watercourse WW-2-02 (*Sheet 17*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows through Wetland W-2-02 located in the gore area of Exit 307. The stream has an average width of approximately seven feet and a sandy, cobble substrate.

Watercourse WW-2-03 (*Sheets 16-17*) – is an ephemeral channel (Non-RPW) to McMichael Creek (Watercourse WW-2-00). This resource captures surface runoff from a steep slope along its southern edge and drains to McMichael Creek through culverts including one discharging to WW-2-02. Portions of the channel were dry at the time of field investigations, other portions had standing water. The stream has an average width of approximately thirty two feet and a sandy, gravel, cobble substrate.

Watercourse WW-2-04 (*Sheet 16*) – is a perennial (RPW) side channel of Pocono Creek (Watercourse WW-3-00). It branches off from the main channel approximately 450 feet upstream of the mouth of Pocono Creek at its confluence with McMichael Creek (WW-2-00). The stream has an average width of approximately twenty feet and a silty and sandy substrate.

Watercourse WW-2-05 (*Sheet 16*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows through Wetland W-2-05 located south of I-80 and north of Village Drive. The stream has an average width of approximately two feet and a silt and gravel substrate.

Watercourse WW-2-06 (*Sheet 16*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows through Wetland W-2-05 to WW-2-07 located south of I-80 and north of Village Drive. The stream has an average width of approximately two feet and sand, silt and a gravel substrate.

Watercourse WW-2-07 (*Sheet 16*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows from Wetland W-2-02 carrying flows received from WW-2-06. The stream has an average width of approximately five feet and a gravel, cobble substrate.

Watercourse WW-2-08 (*Sheet 16*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows from Wetland W-2-05 and flows into Wetland W-2-06 before emptying to Watercourse WW-2-11 and then to McMichael Creek. The stream has an average width of approximately two feet and a sand, silt and gravel substrate.

Watercourse WW-2-09 (*Sheet 16*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows into Wetland W-2-05 located south of I-80 and north of Village Drive. The stream has an average width of approximately six feet and a silt, gravel substrate.

Watercourse WW-2-11 (*Sheets 15-16*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows from Wetland W-2-06 located south of I-80 in a backwater floodplain. The stream has an average width of approximately seven feet and a silty, cobble substrate.

Watercourse WW-2-12 (*Sheets 15-16*) – is a perennial tributary (RPW) to McMichael Creek (Watercourse WW-2-00). It flows from a 36" corrugated plastic, roadway culvert discharging

from the northern slope of I-80 west of exit 307. The stream has an average width of approximately five feet with a silty, cobble substrate.

Watercourse WW-2-13 (*Sheet 16-17*) – is an ephemeral tributary (Non-RPW) to McMichael Creek (Watercourse WW-2-00). It flows from Wetland 2-03 located on a northern plateau of I-80 across from exit 307. The channel was dry at the time of field investigations. The stream has an average width of approximately three feet with a silty, cobble substrate.

Watercourse WW-2-14 (*Sheet 16*) – is an ephemeral tributary (Non-RPW) to McMichael Creek (Watercourse WW-2-00). It flows from an 18" roadway culvert discharging from the northern slope of I-80 east of exit 307. The channel was dry at the time of field investigations. The stream has an average width of approximately one foot with a silty, gravel substrate.

Watercourse WW-3-00 (Pocono Creek) (*Sheets 2, 4, 6-10, 16*) – is a perennial tributary (RPW) flowing to McMichael Creek (WW-2-00) a RPW and tributary to a TNW. Within the western quarter of the project area, WW-3-00 flows parallel to the southern side of I-80. Near the I-80 Bridge Street crossing it passes under the interstate and continues along the fillslope of the highway. As Pocono Creek approaches Exit 305 it diverges to the north and then back to the south, near Exit 307, before finally flowing into McMichael Creek. Along much of the length within the project area, the existing fill slopes of the highway are the floodplain limits of Pocono Creek. The stream beneath the I-80 bridge has an average width of approximately 70 feet, with downstream widths increasing to 90 feet. The streambed is relatively consistent in substrate composed of cobble sized rock, boulders and bedrock.

Watercourse WW-3-01 (Little Pocono Creek) (*Sheets 11-13*) – is a perennial tributary (RPW) to Pocono Creek (Watercourse WW-3-00). It flows from south to the north passing under I-80 and through the Exit 305 eastbound ramps and gore area. The stream has an average width of approximately 18 feet as it passes under I-80 and a silt, gravel and cobble substrate.

Watercourse WW-3-02 (*Sheet 12*) – is a perennial tributary (RPW) to Little Pocono Creek (Watercourse WW-3-01). It flows from Wetland W-3-02 located south of the Exit 305 eastbound ramps. The stream has an average width of approximately five feet and a silt, gravel, cobble and boulder substrate.

Watercourse WW-3-03 (*Sheets 9-11*) – is a perennial tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This channel originates from a flood channel of Pocono Creek and parallels the main channel along the southern bank. This resource is possibly a previous location of the main channel. Initial upstream segments have subsurface flows, but as the channel nears the Exit 305 westbound ramp area surface flow becomes prevalent. The stream has an average width of approximately 25 feet and a sandy, cobble substrate.

Watercourse WW-3-05 (*Sheet 3*) – is a perennial tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This is a very short segment flowing into the project area from a culvert carrying it beneath a portion of the Stroud Township Yard Waste Compost Facility. This stream has a width of approximately six feet, and silt, gravel and cobble substrate, empties into WW-3-06 then flows to Pocono Creek.

Watercourse WW-3-06 (*Sheet 3*) – is a perennial tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream originates from several groundwater seeps and associated streams (WW-3-07 through WW-3-12) and flows through Wetland W-3-09. This channel passes through the project area from west to east then through a culvert originating in the yard waste recycling center and carrying it beneath I-80 before draining to Pocono Creek. This stream has a width of approximately eight feet, and silt, gravel substrate.

Watercourse WW-3-07 (*Sheets 2-3*) – is a perennial tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream originates from a groundwater seep and flows through the project area from west to east to its confluence with Wetland WW-3-06. This stream has a width of approximately four feet, and silt, gravel substrate.

Watercourse WW-3-09 (*Sheet 3*) – is an intermittent tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream flows from an adjacent groundwater seep to WW-3-07. The channel was flowing at the time of field investigations. The stream has an average width of approximately one foot with a silt, gravel, and cobble substrate.

Watercourse WW-3-10 (*Sheet 3*) – is an intermittent tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream flows from an adjacent groundwater seep to WW-3-07. The channel was flowing at the time of field investigations. The stream has an average width of approximately one foot with a silt, gravel, and cobble substrate.

Watercourse WW-3-11 (*Sheet 3*) – is an intermittent tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream flows from an adjacent groundwater seep to WW-3-07. The channel was dry at the time of field investigations. The stream has an average width of approximately three feet with a silt, gravel, and cobble substrate.

Watercourse WW-3-12 (*Sheet 3*) – is an intermittent tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream flows from an adjacent groundwater seep to WW-3-07. The channel was dry at the time of field investigations. The stream has an aver - age width of approximately one foot with a silt, gravel, and cobble substrate.

Watercourse WW-3-13 (*Sheet 1*) – is an intermittent tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream flows northwest to southeast into Pocono Creek south of the project area. The channel was dry at the time of field investigations. The stream has anaverage width of approximately 12 feet as it passes under I-80 with a gravel, cobble and boulder substrate.

Watercourse WW-3-14 (*Sheet 1*) – is an intermittent tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream flows northwest to southeast into Pocono Creek south of I-80. The channel was flowing at the time of field investigations. The stream has an average width of approximately six feet with a silty and gravel substrate.

Watercourse WW-3-16 (*Sheet 1*) – is an intermittent tributary (RPW) to Pocono Creek (Watercourse WW-3-00). This stream flows north to south under I-80 to Pocono Creek south of the project area. The channel was dry at the time of field investigations. The stream has an average width of approximately five feet as it passes under I-80 with a silt, gravel and cobble substrate.

Watercourse WW-3-17 (*Sheet 1*) – is an ephemeral channel (Non-RPW) to Pocono Creek (Watercourse WW-3-00). It carries precipitation flow adjacent to I-80's northern fill slope to WW-3-16. The channel was dry at the time of field investigations. The stream has an average width of approximately nine feet and a silt and gravel substrate.

Watercourse WW-3-18 (*Sheet 12*) – is a perennial tributary (RPW) to Little Pocono Creek (Watercourse WW-3-01). This is a stream originating from a culvert at the intersection of Rosebriar Lane and Hemlock Road. The stream flows through the project area from west to east to its confluence with WW-3-1. This stream has a width of approximately twelve feet, and a sand and cobble substrate.

Table 3: Watercourse Summary

Watercourse ID	Length (linear feet)	Watercourse Type	Cowardin Class.	Avg. Width	Long/Lat
WW-1-00 (Brodhead Creek)	627	TNW	perennial	100'	75° 11' 1.063" W/40° 59' 13.825" N
WW-1-01	657	RPW	intermittent	8'	75° 10' 55.137" W/40° 59' 13.466" N
WW-1-02	375	RPW	intermittent	10'	75° 11' 5.646" W/40° 59' 14.870" N
WW-1-03	159	Non-RPW	ephemeral	2'	75° 11' 5.547" W/40° 59' 14.249" N
WW-2-00 (McMichael Creek)	4,265	RPW	perennial	55'	multiple reaches
WW-2-00a	133	RPW	intermittent	4'	75° 11' 33.178"W/40° 58' 59.581" N
WW-2-02	85	RPW	perennial	7'	75° 11' 34.438" W/40° 58' 52.401" N
WW-2-03	704	Non-RPW	PUB	32'	75° 11' 36.289" W/40° 58' 48.298" N
WW-2-04	77	RPW	perennial	20'	75° 11' 48.536" W/40° 58' 48.395" N
WW-2-05	243	RPW	perennial	2'	75° 11' 46.274" W/40° 58' 42.582" N
WW-2-06	79	RPW	perennial	2'	75° 11' 50.545" W/40° 58' 42.533" N
WW-2-07	401	RPW	perennial	5'	75° 11' 50.965" W/40° 58' 42.179" N
WW-2-08	325	RPW	perennial	2'	75° 11' 52.557" W/40° 58' 41.843" N
WW-2-09	104	RPW	perennial	6'	75° 11' 49.774" W/40° 58' 40.483" N
WW-2-11	591	RPW	perennial	7'	75° 12' 0.521" W/40° 58' 43.421" N
WW-2-12	49	Non-RPW	perennial	5'	75°11'53.471"W 40°58'44.474"N
WW-2-13	76	Non-RPW	ephemeral	3'	75°11'44.777"W 40°58'47.184"N
WW-2-14	26	Non-RPW	ephemeral	1'	75°11'39.646"W /40°58'50.066"N
WW-3-00 (Pocono Creek)	6,547	RPW	perennial	70'	multiple reaches
WW-3-01 (Little Pocono Creek)	1,330	RPW	perennial	18'	75° 12' 45.259" W/40° 58' 53.750" N
WW-3-02	115	RPW	perennial	5'	75° 12' 47.713" W/40° 58' 50.750" N
WW-3-03	1,105	RPW	intermittent	25'	75° 12' 55.141" W/40° 59' 4.679" N
WW-3-05	8	RPW	perennial	6'	75° 14' 8.094" W/40° 59' 14.853" N
WW-3-06	564	RPW	perennial	8'	75° 14' 12.212" W/40° 59' 20.151" N
WW-3-07	607	RPW	perennial	4'	75° 14' 17.670" W/40° 59' 20.208" N
WW-3-09	20	RPW	intermittent	1'	75° 14' 17.345" W/40° 59' 21.104" N
WW-3-10	33	RPW	intermittent	1'	75° 14' 16.576" W/40° 59' 21.025" N
WW-3-11	15	RPW	intermittent	3'	75° 14' 15.930" W/40° 59' 21.262" N
WW-3-12	22	RPW	intermittent	1'	75° 14' 15.127" W/40° 59' 21.719" N
WW-3-13	535	RPW	intermittent	12'	75° 14' 40.039" W/40° 59' 22.297" N
WW-3-14	81	RPW	intermittent	6'	75° 14' 37.813" W/40° 59' 20.427" N

Watercourse ID	Length (linear feet)	Watercourse Type	Cowardin Class.	Avg. Width	Long/Lat
WW-3-16	483	RPW	intermittent	5'	75° 14' 37.056" W/40° 59' 22.317" N
WW-3-17	84	Non-RPW	ephemeral	9'	75° 14' 35.850" W/40° 59' 22.708" N
WW-3-18	97	RPW	perennial	12'	75°12'50.907"W 40°58'49.424"N

C. Ditches

Field investigations of the project area conducted between August and December, 2013 revealed the presence of 6 ditches (***Plan Sheets),*** which are identified as conveyances constructed in and draining only uplands, without relatively permanent flow. Ditches are assumed to be regulated by PADEP, but not USACE.

Ditch 2 (*Sheet 1)* - consists of a swale along the southern toe of slope for I-80, west of White Stone Corner Rd. The channel carries only upland flow from the roadway stormwater system.

Ditch 4 (*Sheet 1)* - consists of a swale from White Stone Corner Rd draining south toward I-80, west of White Stone Corner Rd. The channel carries only upland flow from the roadway stormwater system.

Ditch 5 (*Sheet 15)* - consists of a swale along the southern toe of slope for I-80, west of McMichael Creek. The channel carries only upland flow from the roadway stormwater system.

Ditch 6 (*Sheets 19-20)* - consists of a swale along the northern toe of slope for I-80, west of Brodhead Creek. The channel carries only upland flow from the roadway stormwater system.

Table 4: Ditch Summary

Ditch ID	Ditch Length (linear feet)*	Long / Lat
Ditch 2	11	75° 14' 41.186" W/40° 59' 22.035" N
Ditch 5	376	75° 12' 7.275" W/40° 58' 44.843" N
Ditch 6	394	75° 11' 8.674" W/40° 59' 11.374" N
*As delineated open channel		

D. Wetlands

The project area wetlands fall within three general categories: groundwater-driven systems, often with seep flow evident; floodplains with additional groundwater contribution; and systems initially constructed as stormwater conveyance which have evolved into enduring wetland systems. Many of the project area wetlands are heavily influenced by the construction of I-80 and the surrounding area. For each wetland identified in the project area, a brief description of the characteristics found is provided in the paragraphs below, along with the basis for jurisdiction. For wetlands contained entirely within the project area, a total size is provided. For wetlands extending beyond the project limits, an estimate of the overall size is given.

Field investigations of the project area conducted between September and December, 2013 and May 2014 revealed the presence of 24 wetland systems (***Plan Sheets***). Several of these include multiple components of an overall hydrologically connected system. ***Appendices A & B*** contain field data sheets from the investigations and color photographs of the wetlands. ***Appendix C*** contains the function value evaluation data sheets for the wetlands identified.

Wetland W-1-01 (*Sheets 19-20)* - is located on a bench along the eastern bank of water-course WW-1-00 (Brodhead Creek) and north of I-80. The wetland boundary is primarily de-fined by a depression and retention of groundwater. The delineated and overall area of the wet-land is 0.04 acre. The Cowardin Classification is palustrine emergent (PEM).

At the time of the investigation the dominant vegetation within the wetland consisted of white panicled American-aster (*Symphyotrichum lanceolatum*, FACW) and purple loosestrife (*Lythrum salicaria*, OBL). Additional species included late goldenrod (*Solidago gigantea*, FACW), and arrowleaf tearthumb (*Persicaria sagittata*, OBL*).* The soil within the wetland was sampled to a depth of 12 inches before refusal. The soil type present, Cut fill land (Cy), is not listed as a hydric soil in Monroe County. The soil profile did not exhibit hydric characteristics.

Soil Profile	Matrix	Redox	Texture
0-2 inches	10 YR4/3		sand w/organics
2-12 inches	10 YR3/3		sand w/organics

Indicators of wetland hydrology include saturation and geomorphic position. Overflow from Brodhead Creek is assumed to be the primary hydrologic source, with groundwater support. This wetland has principal functions/values of floodflow alteration and sediment/shoreline stabilization.

Wetland W-2-01 (*Sheets 17-18)* - is located within the floodplain of WW-2-00 (McMichael Creek) directly beneath the Seventh Street bridge along the southern bank of the creek. Thiswetland has recently been re-established following the reconstruction of the bridge. The
delineated and overall area of the wetland is 0.55 acre. The Cowardin Classification is palustrine emergent/forested (PEM/FO).
At the time of the investigation the dominant vegetation within the wetland consisted of rice cut grass (*Leersia oryzoides*, OBL), devil's-pitchfork (*Bidens frondosa*, FACW), chufa (*Cyperus esculentus*, FACW), Virginia wild rye (*Elymus virginicus*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), American sycamore (*Platanus occidentalis*, FACW) and river birch (*Betula nigra*, FACW).

The soil within the wetland was sampled to a depth of 18 inches. The soil types present include Holly silt loam (Hy) 0 to 3% and Cut fill land (Cy). Holly silt loam (Hy) is listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-18 inches	5Y 2.5/2		mucky gravel

Indicators of wetland hydrology include surface water, saturation and shallow groundwater. Groundwater and flood contributions appear to be the primary hydrologic contributors. This wetland has a principal function/value of floodflow alteration.

Wetland W-2-02 (*Sheet 17)* - is located within the gore area of Exit 307. This wetland has is significantly affected by upslope drainage and sediment deposition. The delineated and overall area of the wetland is 0.56 acre. The Cowardin Classification is palustrine emergent/ scrub-
shrub (PEM/SS).
At the time of the investigation the dominant vegetation within the wetland consisted of rice cut grass (*Leersia oryzoides,* OBL), swamp smartweed (*Polygonum hydropiperoides,* OBL), true forget-me-not (*Myosotis scorpioides,* OBL), speckled alder (*Alnus incana,* FACW), and red osier dogwood (*Cornus sericea,* FACW).

The soil within the wetland was sampled to a depth of 14 inches. The soil type present, Cut fill land (Cy), is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-3 inches	G2 3/5PB		mucky gravel
3-14 inches	G2 5/PB	10YR 5/6	mucky gravel

Indicators of wetland hydrology include saturation, shallow groundwater, hydrogen sulfide odor and oxidized rhizospheres on living roots. Groundwater and surface flow appear to be the primary hydrologic contributors. This wetland has a principal function/value of groundwater recharge/discharge.

Wetland W-2-03 (*Sheet 16)* - is located within a small slope-side depression along the north fill slope of I-80, just west of Exit 307. The delineated and overall area of the wetland is 0.01 acre. The Cowardin Classification is palustrine emergent/scrub-shrub/forested (PEM/SS/FO).

At the time of the investigation the dominant vegetation within the wetland consisted of purple loosestrife (*Lythrum salicaria,* OBL), Japanese barberry (*Berberis thumbergii,* FACU), Japanese-knotweed (*Fallopia japonica,* FACU), American sycamore (*Platanus occidentalis,* FACW), and black willow (*Salix nigra,* FACW).

The soil within the wetland was sampled to a depth of 18 inches. The soil type present, Cut fill land (Cy), is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-10 inches	10YR 2/1		sandy gravel
10-18 inches	10YR 6/1	10YR 4/1	silt

Indicators of wetland hydrology include surface water, saturation, shallow groundwater and oxidized rhizospheres on living roots. Groundwater and surface flooding appear to be the primary hydrologic contributors. This wetland has a principal function/value of groundwater recharge/discharge.

Wetland W-2-04 (*Sheet 16)* - is located within a floodplain terrace of McMichael Creek along the north fill slope of I-80 and west of Exit 307. The delineated and overall area of the wetland is 0.38 acre. The Cowardin Classification is palustrine forested (PFO).

At the time of the investigation the dominant vegetation within the wetland consisted of Japanese stilt-grass (*Microstegium vimineum*, FAC), rice cut grass (*Leersia oryzoides*, OBL), ostrich fern (*Matteuccia struthiopteris*, FACW), clearweed (*Pilea pumila*, FACW), stinging nettle (*Urtica dioica*, FAC), Morrow's honeysuckle (*Lonicera morrowii*, FACU), nanny-berry (*Viburnum lentago*, FAC), green ash (*Fraxinus pennsylvanica*, FACW), red maple (*Acer rubrum*, FAC) and slippery elm (*Ulmus rubra*, FAC).

The soil within the wetland was sampled to a depth of 18 inches. The soil type present, Wyoming gravelly sandy loam (WyC) and Cut fill land (Cy), is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-18 inches	10YR 4/1	N2.5 5YR 3/4	sandy silt

Indicators of wetland hydrology include surface water, saturation, shallow groundwater, oxidized rhizospheres on living roots, water stained leaves and sparsely vegetated concave surface. Groundwater and surface flooding appear to be the primary hydrologic contributors. This wetland has principal functions/values of floodflow alteration and groundwater recharge/discharge.

Wetland W-2-05 (*Sheet 16)* - is located within a large depression south of the I-80 fill slope and north of Village Drive. The delineated and overall area of the wetland is 2.62 acres. The Cowardin Classification is palustrine forested with emergent/scrub-shrub components (PFO/EM/SS).

At the time of the investigation the dominant vegetation within the wetland consisted of narrow-leaf cat-tail (*Typha angustifolia*, OBL), golden-fruit sedge (*Carex aurea*, FACW), European barberry (*Berberis vulgaris*, FACU), wild hydrangea (*Hydrangea arborescens*, FACU), black willow (*Salix nigra*, OBL), paper birch (*Betula papyrifera*, FACU), silver maple (*Acer saccharinum*, FACW) and riverbank grape (*Vitis riparia*, FACW).

The soil within the wetland was sampled to a depth of 8 inches. Of the soil types present, Wyoming gravelly sandy loam (WyC, WyE) is not listed as a hydric soil and Rexford gravely silt loam (ReA), is listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-8 inches	2.5YR 2.5/1	2.5YR 4/8	silty clay

Indicators of wetland hydrology include surface water, saturation, shallow groundwater, and iron deposits. Groundwater and surface flooding appear to be the primary hydrologic contributors. This wetland has a principal function/value of floodflow alteration.

Wetland W-2-04a *(Sheet 16*)- is located within a floodplain terrace of McMichael Creek, below the delineated OHWM. This wetland was added during the field verification visit with USACE in October 2015. It is located along the north fill slope of I-80 and west of Exit 307. The delineated and overall area of the wetland is 0.11 acre.

At the time of the investigation, dominant vegetation within the wetland consisted of Japanese stilt grass (*Microstegium vimineum*, FAC). Soil profile is consistent with and the data point is shared with that of Wetland W-2-04.

Indicators of wetland hydrology include surface water, saturation, shallow groundwater, drainage patterns, water-stained leaves and sparsely vegetated concave surface. This wetland has principal functions/values of floodflow alteration and groundwater recharge/discharge.

Wetland W-2-06 (*Sheets 15-16)* - is located within a large depression south of the I-80 fill slope and north of Village Drive. The delineated and overall area of the wetland is 0.81 acre. The Cowardin Classification is palustrine emergent/scrub-shrub/forested (PEM/SS/FO).

At the time of the investigation the dominant vegetation within the wetland consisted of narrow-leaf cat-tail (*Typha angustifolia*, OBL), Japanese stilt-grass (*Microstegium vimineum*, FAC), European privet (*Ligustrum vulgare*, FACU), river birch (*Betula nigra*, FACW) and riverbank grape (*Vitis riparia*, FACW).

The soil within the wetland was sampled to a depth of 10 inches. Of the soil types present, Cut and fill land (Cy) is not listed as a hydric soil and Rexford gravely silt loam (ReA), is listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-10 inches	2.5YR 3/1	2.5YR 4/8	silty clay
10-16	Water		

Indicators of wetland hydrology include surface water, saturation, shallow groundwater and oxidized rhizospheres on living roots. Groundwater and surface flooding appear to be the primary hydrologic contributors. This wetland has principal functions/values of floodflow alteration and groundwater recharge/discharge.

Wetland W-2-08 (*Sheet 15)* - is within the floodplain next to McMichael Creek (WW-2-00) and abuts WW-2-11 beneath the I-80 bridge crossing. The delineated and overall area of the wetland is 0.02 acre. The Cowardin Classification is palustrine emergent (PEM).

At the time of the investigation the dominant vegetation within the wetland consisted of Japanese-knotweed (*Fallopia japonica,* FACU) and lesser clearweed (*Pilea fontana,* FACW).

The soil within the wetland was sampled to a depth of 16 inches. The soil type present, Cut and fill land (Cy) is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-5 inches	10YR 4/2		sandy clay loam
5-12	10YR 3/2	10YR 5/8	sandy clay loam
12-16	10YR 4/1		sandy clay

Indicators of wetland hydrology include shallow groundwater and saturation. Groundwater and surface flooding appear to be the primary hydrologic contributors. This wetland has a principal function/value of floodflow alteration.

Wetland W-3-01 (*Sheet 11)* - is a mowed, maintained grass area located along Little Pocono Creek (WW-3-01). It is located between two businesses (Perkins and a gas station). The delineated and overall area of the wetland is 0.003 acre. The Cowardin Classification is palustrine emergent (PEM).

At the time of the investigation the dominant vegetation within the wetland consisted of grass species.

The soil within the wetland was sampled to a depth of 16 inches. The soil types present, Philo silt loam (Ph) and Cut and fill land (Cy) are not listed as a hydric soils in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-16 inches	2.5 YR 2.5/1	5YR 5/8	silt loam

The only indicator of wetland hydrology was shallow groundwater. Groundwater and periodic surface flooding appear to be the primary hydrologic contributors. This wetland has principal functions/values of floodflow aalteration and groundwater recharge/discharge.

Wetland W-3-02 (*Sheets 12-13)* – within the project area, is a large open water body with a wet fringe, located south of the Exit 305 eastbound ramps. This wetland does extend beyond the project limits to the south. The delineated area of the wetland is 5.55 acres, of which 0.93 acres is PUB and 4.62 acres is vegetated wetland. The Cowardin Classification is palustrine unconsolidated bottom, emergent, scrub-shrub, forested (PUB/EM/SS/FO) complex.

At the time of the investigation the dominant vegetation within the wetland consisted of pin oak (*Quercus palustris*, FACW), silky dogwood (*Cornus amomum*, FACW), red-osier dogwood (*Cornus sericea*, FACW), skunk cabbage (*Sympocarpus foetidus*, OBL), Japanese stilt-grass (*Microstegium vimineum*, FAC) and a sphagnum species.

The soil within the wetland was sampled to a depth of 10 inches. Of the soil types present, Wyoming gravelly sandy loam (WyE) is not listed as a hydric soil and Sheffield silt loam (Sh) is listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-10 inches	10YR 2/1		silt loam

The indicator of wetland hydrology was surface water. Surface ponding appears to be the primary hydrologic contributor. This wetland has principal functions/values of floodflow alteration, fish/shellfish habitat and wildlife habitat.

Wetland W-3-04 (*Sheet 7)* – is a toe of slope depression located within the northern floodplain of Pocono Creek (WW-3-00) north of Exit 304. The delineated and overall area of the wetland is 0.006 acre. The Cowardin Classification is palustrine emergent (PEM).

At the time of the investigation the dominant vegetation within the wetland consisted of jewelweed (*Impatiens capensis*, FACW), Japanese stilt-grass (*Microstegium vimineum*, FAC) and yellow birch (*Betula alleghaniensis*, FAC).

The soil within the wetland was sampled to a depth of 13 inches. The soil type present, Cut and fill land (Cy) is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-4 inches	10YR 2/1		silty clay
4-10 inches	10YR 2/1	10YR 3/1	silty clay (muck)
10-13 inches	10YR 3/1 & 4/2		sandy silt

Indicators of wetland hydrology included presence of surface water, saturation, water stained leaves and hydrogen sulfide odor. Groundwater appears to be the primary hydrologic contributor. This wetland has a principal function/value of groundwater recharge/discharge.

Wetland W-3-06 (*Sheet 7)* – is a depression located within the northern floodplain of Pocono Creek (WW-3-00) north of I-80 and west of Bridge Street. The delineated and overall area of the wetland is 0.1 acre. The Cowardin Classification is palustrine scrub-shrub/forested (PSS/FO).

At the time of the investigation the dominant vegetation within the wetland consisted of awned flat sedge (Cyperus squarrosus, OBL), New Belgium American-aster (Symphyotrichum novi-belgii, FACW), Virginia three-seed-mercury (Acalypha virginica, FACU), Japanese flowering crabapple (Malus floribunda, UPL), spice bush (Lindera benzoin, FACW) and red maple (Acer rubrum, FAC).

The soil within the wetland was sampled to a depth of 13 inches. The soil type present, Pope silt loam (Po) is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-4 inches	10YR 3/1	7.5YR 5/6 10YR 5/2	silt loam
4-7 inches	10YR 3/1	10YR 4/2	silt loam
7-13 inches	Gley 1 3N		sand & gravel

Indicators of wetland hydrology included presence of shallow groundwater, saturation, an algal mat and water stained leaves. Groundwater appears to be the primary hydrologic contributor. This wetland has a principal function/value of groundwater recharge/discharge.

Wetland W-3-07 (*Sheet 7)* – is a stream fringe wetland located within the northern floodplain of Pocono Creek (WW-3-00) north of I-80 and west of Bridge Street. The delineated and overall area of the wetland is 0.01 acre. The Cowardin Classification is palustrine emergent (PEM).

At the time of the investigation the dominant vegetation within the wetland consisted of rice cut grass (*Leersia oryzoides*, OBL), Japanese-knotweed (*Fallopia japonica*, FACU), spicebush (*Lindera benzoin*, FACW) and fox grape (*Vitis lambrusca*, FACU).

The soil within the wetland was sampled to a depth of 14 inches. The soil type present, Cut fill land (Cy) is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-2 inches	7.5YR 2.5/1		loam
2-8 inches	7.5YR 4/1		sand
8-14 inches	7.5YR 3/1	Gley 13N	sand

Indicators of wetland hydrology included presence of surface water, shallow groundwater, saturation, and oxidized rhizospheres on living roots. Surface water appears to be the primary hydrologic contributor. This wetland has principal functions/values of floodflow alteration and sediment/shoreline stabilization.

Wetland W-3-09 (*Sheets 2-4)* – is a large depressional wetland located north of I-80 adjacent to the Stroud Township yard waste recycling center. This wetland is associated with several unnamed tributaries to Pocono Creek (WW's 3-05 through 3-12). The delineated and overall area of the wetland is 1.17 acres. The Cowardin Classification is palustrine emergent/scrub-shrub (PEM/SS).

At the time of the investigation the dominant vegetation within the wetland consisted of jewel weed (*Impatiens capensis*, FACW), spicebush (*Lindera benzoin*, FACW), multiflora rose (*Rosa multiflora*, FACU) and red maple (*Acer rubrum*, FAC).

The soil within the wetland was sampled to a depth of 16 inches. The soil types present, Wyoming gravelly sandy loam (WyB, WyC, WyE) are not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-6 inches	10YR 3/3		sand
6-16 inches	10YR 4/2	10YR 5/3	sand

Indicators of wetland hydrology included presence of saturation and oxidized rhizospheres on living roots. Surface water and groundwater appear to be hydrologic contributors. This wetland has principal functions/values of groundwater recharge/discharge and wildlife habitat.

Wetland W-3-10 (*Sheet 1)* – is located within a maintained residential area identified as a slope side depression north of I-80 and east of White Stone Corner Rd. The delineated and overall area of the wetland is 0.09 acre. The Cowardin Classification is palustrine forested/emergent (PFO/EM).

At the time of the investigation the dominant vegetation within the wetland consisted of fowl blue grass (*Poa palustris*, FACW), bay forget-me-not (*Myosotis laxa*, OBL), quaker bittercress (*Cardamine pensylvanica*, FACW), Japanese stilt-grass (*Microstegium vimineum*, FAC), fox grape (*Vitis labrusca*, FACU), Morrow's honeysuckle (*Lonicera morrowii*, FACU), Japanese barberry (*Berberis thunbergii*, FACU), sweet-bay magnolia (*Magnolia virginiana*, FACW) and eastern hemlock (*Tsuga canadensis*, FACU).

The soil within the wetland was sampled to a depth of 16 inches. The soil type present, Volusia gravelly silt loam (VoB) is not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-2 inches	7.5YR 3/1		silt loam
2-7 inches	7.5YR 6/1	7.5YR 4/4 7.5YR 3/1	silt loam
7-13 inches	7.5YR 4/1	7.5YR 4/4	silt loam

Indicators of wetland hydrology included presence of surface water, saturation, water stained leaves and oxidized rhizospheres on living roots. Surface water and groundwater appear to be hydrologic contributors. This wetland has a principal function/value of groundwater recharge/discharge.

Wetland W-3-11 (*Sheet 1)* – is a stream fringe wetland associated with streams WW-3-13 and WW-3-16, located south of I-80 and west of White Stone Corner Rd. The delineated and overall area of the wetland is 0.07 acre. The Cowardin Classification is palustrine emergent (PEM).
At the time of the investigation the dominant vegetation within the wetland consisted of tufted hair grass (*Deschampsia caespitosa*, FACW) and jewelweed (*Impatiens capensis*, FACW).

The soil within the wetland was sampled to a depth of 7 inches. The soil types present, Volusia gravelly silt loam (VoB) and Wyoming gravelly sandy loam (WyC) are not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-4 inches	10YR 3/2	10YR 4/6	silt loam
4-7 inches	7.5YR 3/2	10YR 4/6 10YR 5/1	silt loam
7 inches			rock

Indicators of wetland hydrology included presence of shallow groundwater, saturation and water stained leaves. Surface water and groundwater appear to be hydrologic contributors. This wetland has principal functions/values of groundwater recharge/discharge and floodflow alteration.

Wetland W-3-12 (*Sheet 1)* – is a groundwater seep located south of I-80 and west of White Stone Corner Rd. The delineated and overall area of the wetland is 0.04 acre. The Cowardin Classification is palustrine emergent/forested (PEM/FO).

At the time of the investigation the dominant vegetation within the wetland consisted of Japanese stilt-grass (*Microstegium vimineum*, FAC), European privet (*Ligustrum vulgarei*, FACU) and sugar maple (*Acer saccharum*, FACU).

The soil within the wetland was sampled to a depth of 9 inches. The soil types present, Volusia gravelly silt loam (VoB) and Wyoming gravelly sandy loam (WyC) are not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-1 inch	7.5YR 2.5/1 7.5YR 4/6		silt loam
1-3 inches	7.5YR 2.5/1	7.5YR 5/1	silt loam
3-9 inches	7.5YR 5/1	Gley 1 4N 7.5YR 2.5/1	silty clay loam
9 inches			rock

Indicators of wetland hydrology included presence of saturation, water stained leaves and hydrogen sulfide odor. Groundwater appears to be the primary hydrologic contributor. This wetland has principal functions/values of groundwater recharge/discharge and floodflow alteration.

Wetland W-3-13 (*Sheet 1)* – is a groundwater seep located south of I-80 and west of White Stone Corner Rd. The delineated and overall area of the wetland is 0.02 acre. The Cowardin Classification is palustrine emergent (PEM).

At the time of the investigation the dominant vegetation within the wetland consisted of rice cut-grass (*Leersia oryzoides*, OBL), New England aster (*Symphyotrichum novae-angliae*, FACW), arrow-leaf tearthumb (*Persicaria sagittata*, OBL), purple-leaf willowherb (*Epilobium coloratum*, OBL) and Japanese barberry (*Berberis thunbergii*, FACU).

The soil within the wetland was sampled to a depth of 8 inches. The soil types present, Volusia gravelly silt loam (VoB), Wyoming gravelly sandy loam (WyC) are not listed as a hydric soil in Monroe County.

Soil Profile	Matrix	Redox	Texture
0-4 inch	10YR 2/1		silt loam, organics
4-8 inches	10YR 4/1		silt loam

Indicators of wetland hydrology included presence of saturation, shallow groundwater and water stained leaves. Groundwater appears to be the primary hydrologic contributor. This wetland has a principal function/value of groundwater recharge/discharge.

Table 5: Wetland Summary

Wetland ID	Wetland Size (acres)*	Wetland Type	Longitude	Latitude	Primary Function/ Value**
W-1-01	0.04	PEM	75° 11' 1.182" W	40° 59' 15.653" N	2, 5
W-2-01	0.55	PEM/FO	75° 11' 33.178" W	40° 58' 59.581" N	2
W-2-02	0.56	PEM/SS	75° 11' 32.308" W	40° 58' 52.499" N	1
W-2-03	0.01	PEM/SS/FO	75° 11' 44.393" W	40° 58' 46.679" N	1
W-2-04	0.38	PFO	75° 11' 48.420" W	40° 58' 45.590" N	1, 2
W-2-05	2.62	PFO/EM/SS	75° 11' 48.888" W	40° 58' 41.932" N	1, 2
W-2-06	0.81	PEM/SS/FO	75° 11' 54.580" W	40° 58' 41.519" N	1, 2
W-2-04a	0.11	PEM	75° 11' 55.497" W	40° 58' 44.947" N	1,2
W-2-08	0.02	PEM	75° 12' 1.496" W	40° 58' 44.512" N	2
W-3-01	0.003	PEM	75° 12' 43.734" W	40° 58' 54.917" N	1, 2
W-3-02	5.55	PUB/EM/SS/FO	75° 12' 47.072" W	40° 58' 49.515" N	2, 3, 4
W-3-04	0.06	PEM	75° 13' 17.954" W	40° 59' 10.773" N	1
W-3-06	0.1	PSS/FO	75° 13' 33.907" W	40° 59' 10.613" N	1
W-3-07	0.01	PEM	75° 13' 33.483" W	40° 59' 8.657" N	2, 5
W-3-09	1.17	PEM/SS	75° 14' 13.935" W	40° 59' 19.222" N	1, 4
W-3-10	0.09	PFO/EM	75° 14' 35.915" W	40° 59' 23.714" N	1
W-3-11	0.07	PEM	75° 14' 36.917" W	40° 59' 19.404" N	1, 2
W-3-12	0.04	PEM/FO	75° 14' 38.484" W	40° 59' 20.601" N	1, 2
W-3-13	0.02	PEM	75° 14' 38.062" W	40° 59' 20.840" N	1

*As delineated.

**Functional Class Key:

1 - Groundwater Recharge/Discharge
2 - Floodflow Alteration
3 - Fish/Shellfish Habitat
4 - Wildlife Habitat
5 - Sediment/Shoreline Stabilization
6- Sediment/Toxicant Retention

For wetlands comprised of multiple components, one Functions and Values assessment was made for the overall system.

IV. List of Preparers

AECOM

Deborah K. Poppel, CWB	Sr. Ecologist
Education:	M.S. Applied Ecology/Conservation Biology Frostburg State University
Professional Experience:	18 years
Responsibility:	JD Field View and Report Editing
Christopher C. Salvatico, GISP:	Sr. Environmental Planner
Education:	M.A. Geography Temple University
Professional Experience:	20 years
Responsibility:	GIS and Report Preparation
Chris Howsare	Sr. Environmental Scientist
Education	M.A. Environmental Policy University of Pennsylvania
Professional Experience	15 years
Responsibility	Field Investigations and Report Preparation
Michael Landis	Sr. Environmental Scientist
Education	B.S. Biology Lebanon Valley College
Professional Experience	19 years
Responsibility	Field Investigations and Report Preparation
Autumn Thomas	Environmental Scientist
Education	B.S. Environmental Science/Biology, Central Michigan University
Professional Experience	13 years
Responsibility	Field Investigations

McCormick Taylor

Laren M. Myers	Natural Resource Group Coordinator
Education:	B.S. Environmental Resource Management The Pennsylvania State University
Professional Experience:	26 years
Responsibility:	Data Collection
Emily E. Choudhry	Environmental Scientist
Education	B.S. Biology Lock Haven University Master of Environmental Studies University of Pennsylvania
Professional Experience	6 years
Responsibility	Data Collection
Kelly L. Lockman	Environmental Scientist
Education	B.S. Landscape Architecture Rutgers University
Professional Experience	4 years
Responsibility	Data Collection

V. Technical References and Material

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Appendix A

Wetland Delineation Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 24, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-1-01 DP1

Investigator(s): Mike Landis, David Jacobs Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Terrace /depression Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 15.653" N Long: 75° 11' 1.182" W Datum: NAD 83

Soil Map Unit Name: Cut and fill land, 0-25% slopes (Cy) NWI Classification:

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

Are Vegetation x, Soil x, or Hydrology x significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Floodplain – Sandy soil pocket developed on a flood protection rock slope.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks: Groundwater supported

VEGETATION - Use scientific names of plants.

Sampling Point: W-1-01 DP1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Symphyotrichum lanceolatum	40	Y	FACW
2. Lythrum salicaria	20	Y	OBL
3. Solidago gigantea	10	N	FACW
4. Persicaria sagittata	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 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	30	x 1 =	30
FACW species	50	X 2 =	100
FAC species	0	X 3 =	0
FACU species	0	X 4 =	0
UPL species	0	X 5 =	0
Column Totals:	80 (A)		130 (B)

Prevalence Index = B/A = 1.63

Hydrophytic Vegetation Indicators:

Y Rapid Test for Hydrophytic Vegetation

Y Dominance Test is > 50%

Y Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: W-1-01 DP1

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
0-2	10YR 4/3	100					SAND	Mixed organic
2-12	10YR 3/3	100					SAND	Mixed organic

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:

Floodplain – Sandy soil pocket developed on a flood protection rock slope.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 24, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-1-01 DP2

Investigator(s): Mike Landis, David Jacobs Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 15.653" N Long: 75° 11' 1.182" W Datum: NAD 83

Soil Map Unit Name: Cut and fill land, 0-25% slopes (Cy) NWI Classification:

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

Are Vegetation x, Soil x, or Hydrology x significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?**	Yes ____	No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:	UPL	
Wetland Hydrology Present?	Yes ____	No X			

Remarks: High flood plain terrace

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Groundwater supported

VEGETATION - Use scientific names of plants.

Sampling Point: W-1-01 DP2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Pocea sp	80	Y	
2. Coronilla varia	15	N	FACU
3. Cirsium arvense	5	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-1-01 DP2

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
0-12	10YR 6/3	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: PennDOT State: PA Sampling Point: W-2-01 DP1

Investigator(s): Autumn Thomas, Rich Ozimok Section, Township, Range:

Landform (hillslope, terrace, etc.) Floodplain Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 40° 58' 59.581" N Long: 75° 11' 33.178" W Datum: NAD 83

Soil Map Unit Name: Holly silt loam (Hy) 0 to 3% and Cut fill land (Cy) NWI Classification: none

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

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

Are Vegetation ____, Soil X, 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Field Wetland Classification: PEM

Reconstructed wetland, has been replanted/seeded within past year. Flags 1 to 18

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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	1-4
Water Table Present?	Yes X	No ___	Depth (inches):	0 @ surface
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	0 @ surface

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-01 DP1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	10	Y	FACW
2. *Fraxinus pennsylvanica*	5	Y	FACW
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Betula nigra*	5	Y	FACW
2. *Platanus occidentalis*	5	Y	FACW
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	

Herb Stratum (Plot size: 5)			
1. *Leersia oryzoides*	25	Y	OBL
2. *Bidens frondosa*	15	Y	FACW
3. *Cyperus esculentus*	15	Y	FACW
4. *Elymus virginicus*	15	Y	FACW
5. *Eleocharis acicularis*	10	N	OBL
6. *Polygonum hydropiper*	10	N	OBL
7. *Bidens cernua*	5	N	OBL
8. *Carex comosa*	5	N	OBL
9. *Echinochloa crusgalli*	5	N	FACU
10. *Polygonum pensylvanicum*	5	N	FACW
11.			
12.			
	110	= Total Cover	

Woody Vine Stratum (Plot size:)			
1. NONE			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	75	X 2 =	150
FAC species	0	X 3 =	0
FACU species	5	X 4 =	20
UPL species	0	X 5 =	0
Column Totals:	135 (A)		225 (B)

Prevalence Index = B/A = 1.67

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is > 50%
- X Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-2-01 DP1

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
0-18	5Y2.5/2	100	N/A		N/A	N/A	Mucky-gravel	Fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- X Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- X 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** **X** **No** _____

Remarks:
Piedmont Floodplain Soils (F19)
Also, fill from recent bridge reconstruction and newly created wetland.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: PennDOT State: PA Sampling Point: W-2-01 DP2

Investigator(s): Autumn Thomas, Rich Ozimok Section, Township, Range:

Landform (hillslope, terrace, etc.) Floodplain Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 40° 58' 59.581" N Long: 75° 11' 33.178" W Datum: NAD 83

Soil Map Unit Name: Holly silt loam (Hy) 0 to 3% and Cut fill land (Cy) NWI Classification: none

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

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

Are Vegetation ____, Soil X, 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:	
Wetland Hydrology Present?	Yes ____	No X		

Remarks: Field Wetland Classification: UPL

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-01 DP2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharum*	15	Y	FACU
2. *Platanus occidentalis*	5	Y	FACW
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5)			
1. *Poa annua*	100	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: 30)			
1. NONE			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	X 2 =	10
FAC species	0	X 3 =	0
FACU species	115	X 4 =	460
UPL species	0	X 5 =	0
Column Totals:	120 (A)		460 (B)

Prevalence Index = B/A = 3.83

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-2-01 DP2

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
N/A		100					FILL	REFUSAL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 24, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-02 DP1

Investigator(s): Mike Landis, David Jacobs Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) depression Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 40° 58' 52.499" N Long: 75° 11' 32.308" W Datum: NAD 83

Soil Map Unit Name: Cut and fill land, 0 to 25% slopes (Cy) NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- X Hydrogen Sulfide Odor (C1)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ____
Water Table Present?	Yes X	No ___	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-02 DP1

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

Sapling/Shrub Stratum (Plot size: 30 ft)			
1. Alnus incana	5	Y	FACW
2. Cornus sericea	5	Y	FACW
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Leersia oryzoides	20	Y	OBL
2. Polygonum hydropiperoides	20	Y	OBL
3. Myosotis scorpioides	40	Y	OBL
4. Polygonum sagittatum	10	N	OBL
5. Phalaris arundinacea	10	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1000 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	90	x 1 =	90
FACW species	20	X 2 =	40
FAC species	0	X 3 =	0
FACU species	0	X 4 =	0
UPL species	0	X 5 =	0
Column Totals:	110	(A)	10 (B)

Prevalence Index = B/A = 1.2

Hydrophytic Vegetation Indicators:

- x Rapid Test for Hydrophytic Vegetation
- x Dominance Test is > 50%
- x Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes X** **No** ___

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

SOIL

Sampling Point: W-2-02 DP1

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
0-3	G2 3/5PB	100					Slit	
3-14	G2 5/PB	95	10YR 5/6	5	C	PL	Slit	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 26, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-02 DP2

Investigator(s): Mike Landis, David Jacobs Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none): none

Slope (%): 0 Lat: 40° 58' 52.499" N Long: 75° 11' 32.308" W Datum: NAD 83

Soil Map Unit Name: Cut and fill land, 0 to 25% slopes (Cy) NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: UPL
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-02 DP2

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

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Solidago altissima	30	Y	FACU
2. Microstegium vimineum	50	Y	FAC
3. Eupatorium rugosum	10	N	FACU
4. Boehmeria cylindrica	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	0	X 2 =	0
FAC species	50	X 3 =	150
FACU species	40	X 4 =	160
UPL species	0	X 5 =	0
Column Totals:	100 (A)		320 (B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-2-02 DP2

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 4/3	100					loam	gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6”

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 26, 2013

Applicant/Owner: PennDOT State: PA Sampling Point: W-2-03 DP1

Investigator(s): A.Thomas, R. Ozimok Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 40° 58' 46.679" N Long: 75° 11' 44.393" W Datum: NAD 83

Soil Map Unit Name: Cut and fill land, 0-25% slopes (Cy) NWI Classification: None

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

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

Within I-80 ROW. Hydrologically connected to McMichael Creek via WW-2-00. Flags 1 thru 5.
Field Wetland Classification: PEM/SS/FO

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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X 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)
- X 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)
- 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 @ surface
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0 @ surface

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Hydrologically connected to McMichael Creek

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-03 DP1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	10	Y	FACW
2. *Salix nigra*	10	Y	FACW
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 5)			
1. *Berberis thunbergii*	5	Y	FACU
2. *Fallopia japonica*	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	

Herb Stratum (Plot size: 5)			
1. *Lythrum salicaria*	70	Y	OBL
2. *Symphyotrichum puniceum*	15	N	OBL
3. *Typha latifolia*	5	N	OBL
4. *Cyperus esculentus*	5	N	FACW
5. *Scirpus cyperinus*	5	N	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	95	x 1 =	95
FACW species	25	X 2 =	50
FAC species	0	X 3 =	0
FACU species	10	X 4 =	40
UPL species	0	X 5 =	0
Column Totals:	130 (A)		285 (B)

Prevalence Index = B/A = 2.19

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is > 50%
- X Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-2-03 DP1

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
1-10	10YR2/1	100					Sandy	gravel
10-18	10YR6/1	60	10YR4/1	40	D	M	Silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 26, 2013

Applicant/Owner: PennDOT State: PA Sampling Point: W-2-03 DP2

Investigator(s): Autumn Thomas, Rich Ozimok Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Floodplain Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 40° 58' 46.679" N Long: 75° 11' 44.393" W Datum: NAD 83

Soil Map Unit Name: Cut and fill land, 0-25% slopes (Cy) NWI Classification: none

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

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:	
Wetland Hydrology Present?	Yes ____	No X		

Remarks: Field Wetland Classification: UPL

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-03 DP2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Malus* sp.	5	Y	--
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	

Herb Stratum (Plot size: 5)			
1. *Solidago altissima*	85	Y	FACU
2. *Monarda didyma*	5	N	FACU
3. *Ageratina altissima*	5	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	

Woody Vine Stratum (Plot size: 30)			
1. NONE			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	X 2 =	10
FAC species	0	X 3 =	0
FACU species	95	X 4 =	380
UPL species	0	X 5 =	0
Column Totals:	100 (A)		390 (B)

Prevalence Index = B/A = 3.90

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-2-03 DP2

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
0-12	10YR4/3	100					Silty gravel	FILL
	refusal @12"							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 26, 2013

Applicant/Owner: PennDOT State: PA Sampling Point: W-2-04/204a DP1

Investigator(s): A.Thomas, R. Ozimok Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Floodplain terrace Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 40° 58' 45.590" N Long: 75° 11' 48.420" W Datum: NAD 83

Soil Map Unit Name: Cut and fill land (Cy), Wyoming gravelly sandy loam (WyC) NWI Classification: N/A

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

Adjacent to McMichael Creek. Flags 1 thru 15. Same upland plot as W-2-03 (D2). Field Wetland Classification: PFO

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)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	1
Water Table Present?	Yes X	No ___	Depth (inches):	2
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	0 @ surface

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-04 DP1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	20	Y	FACW
2. *Acer rubrum*	10	Y	FAC
3. *Ulmus rubra*	10	Y	FAC
4. *Betula alleghaniensis*	5	N	FAC
5. *Quercus rubra*	5	N	FACU
6.			
7.			
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: 20)			
1. *Lonicera morrowii*	10	Y	FACU
2. *Viburnum lentago*	10	Y	FAC
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	20	Y	FAC
2. *Leersia oryzoides*	10	Y	OBL
3. *Matteuccia struthiopteris*	10	Y	FACW
4. *Pilea pumila*	10	Y	FACW
5. *Urtica dioica*	10	Y	FAC
6. *Impatiens capensis*	5	N	FACW
7. *Persicaria hydropiper*	5	N	FAC
8.			
9.			
10.			
11.			
12.			
	70	= Total Cover	

Woody Vine Stratum (Plot size: 30)			
1. none			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 90 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	35	X 2 =	70
FAC species	70	X 3 =	210
FACU species	15	X 4 =	60
UPL species	0	X 5 =	0
Column Totals:	130 (A)		350 (B)

Prevalence Index = B/A = 2.69

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is > 50%
- X Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes X** **No** ___

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

SOIL

Sampling Point: W-2-04 DP1

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
0-18	10YR4/1	85	N2.5	5	C	M	Sandy-silt	
			5YR3/4	10	RM	PL/M	Sandy-silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 23, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-05 DP1

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 58' 41.932" N Long: 75° 11' 48.888" W Datum: NAD83

Soil Map Unit Name: WyE, WyC, ReA - WYOMING GRAV SL, REXFORD GRAV StL NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PFO/EM/SS
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Wetland sits inside a bowl and along the toe of slope of I-80.

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)
- X Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- X 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 X	No ___	Depth (inches): ____
Water Table Present?	Yes X	No ___	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-05 DP1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	15	Y	OBL
2. Betula papyrifera	10	Y	FACU
3. Acer saccharinum	20	Y	FACW
4.			
5.			
6.			
7.			
	45	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1. Berberis vulgaris	15	Y	FACU
2. Hydrangea arborescens	10	Y	FACU
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	

Herb Stratum (Plot size:)			
1. Carex aurea	30	Y	FACW
2. Alliaria petiolata	10		FACU
3. Pilea Fontana	20		FACW
4. Persicaria sagittata	20		OBL
5. Typha angustifolia	30	Y	OBL
6. Duel Weed	10		
7. Trillium erectum	5		FACU
8.			
9.			
10.			
11.			
12.			
	125	= Total Cover	

Woody Vine Stratum (Plot size:)			
1. Vitis riparia	10	Y	FACW
2.			
3.			
4.			
	10	= 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: 63 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	65	x 1 =	65
FACW species	80	X 2 =	160
FAC species		X 3 =	
FACU species	50	X 4 =	200
UPL species		X 5 =	
Column Totals:	195 (A)		425 (B)

Prevalence Index = B/A = 2.18

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

X Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes X** **No** ___

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

SOIL

Sampling Point: W-2-05 DP1

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
0-8	2.5YR 2.5/1	90	2.5YR 4/8	10			Silty clay	
8-10	Water							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 23, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-05 DP2

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 58' 41.932" N Long: 75° 11' 48.888" W Datum: NAD83

Soil Map Unit Name: WyE, WyC, ReA - WYOMING GRAV SL, REXFORD GRAV StL NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:	
Wetland Hydrology Present?	Yes ____	No X		

Remarks: Wetland sits inside a bowl and along the toe of slope of I-80.

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-05 DP2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	= Total Cover		

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

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

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

SOIL

Sampling Point: W-2-05 DP2

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	100	None				SILT	Silt Clay
6-Up	Rock							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 24, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-06 DP1

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 58' 41.519" N Long: 75° 11' 54.580" W Datum: NAD83

Soil Map Unit Name: ReA, Cy - REXFORD GRAVELLY SILT LOAM, CUT AND FILL LAND NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID: PEM, PSS, PFO
Wetland Hydrology Present?	Yes X	No	

Remarks: The wetland sits along a tributary of Pocono Creek and along the toe of slope of I-80

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)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- X 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)
- X 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 X	No	Depth (inches): 1	**Wetland Hydrology Present?**	**Yes X No**
Water Table Present?	Yes X	No	Depth (inches): 12		
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 8		

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

Remarks: Spring seeps observed. Mock poked 6" to 8".

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-06 DP1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula nigra (River Birch)	20	Y	FACW
2. Acer spicatum (Mountain Maple)	3		FACU
3.			
4.			
5.			
6.			
7.			
	23	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1. Ligustrum vulgare (European Privet)	10	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	

Herb Stratum (Plot size:)			
1. Typha angustifolia (Narrow-Leaf-Cat-Tail)	40	Y	OBL
2. Pilea Fontana (Lesser Clearweed)	5		FACW
3. Persicaria hydropiper (Mild Water Pepper)	5		OBL
4. Microstegium vimineum (Japanese Stilt Grass)	30	Y	FAC
5. Leersia oryzoides (Rice Cut Grass)	15		OBL
6. Persicaria sagittata (Arrow-Leaf Tearthumb)	15		OBL
7.			
8.			
9.			
10.			
11.			
12.			
	110	= Total Cover	

Woody Vine Stratum (Plot size:)			
1. Vitis riparia (River-Bank Grape)	3	Y	FACW
2.			
3.			
4.			
	3	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (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:

- ___ Rapid Test for Hydrophytic Vegetation
- x Dominance Test is > 50%
- ___ Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes X** **No** ___

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

SOIL

Sampling Point: W-2-06 DP1

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
0-10	2.5YR 3/1	95	2.5YR 4/8	5	C	PL	Silty clay	
10-16	water							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 24, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-06 DP2

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 58' 41.519" N Long: 75° 11' 54.580" W Datum: NAD83

Soil Map Unit Name: ReA, Cy - REXFORD GRAVELLY SILT LOAM, CUT AND FILL LAND NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

Remarks: The area sits along a tributary of Pocono Creek and along the toe of slope of I-80

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-06 DP2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 30)			
1. Ligustrum vulgare	15	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		

Herb Stratum (Plot size: 5)			
1. Carex aurea	20	Y	FACW
2. Alliaria petiolata	15	N	FACU
3. Solidago Canadensis	20	Y	FACU
4. Microstegium vimineum	25	Y	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		

Woody Vine Stratum (Plot size: 15)			
1. Toxicodendron radicans	30	Y	FAC
2.			
3.			
4.			
	30 = Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-2-06 DP2

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
0-8	10YR 4/2	100	None					
8-Up	Rock							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: October 2, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-08 DP1

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40° 58' 44.512" N Long: 75° 12' 1.496" W Datum: NAD83

Soil Map Unit Name: Cy - CUT AND FILL LAND NWI Classification:

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

Are Vegetation X, Soil ____, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No ____	

Remarks: The wetland sits along a tributary (WW-2-11) to McMichael Creek under I-80.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- X 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 X	Depth (inches): ____
Water Table Present?	Yes X	No ___	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-08 DP1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size:)			
1. Fallopia japonica	20	Y	FACU
2. Persicaria hydropiper	10		OBL
3. Pilea fontana	25	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55 = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	25	X 2 =	50
FAC species		X 3 =	
FACU species	20	X 4 =	80
UPL species		X 5 =	
Column Totals:	55 (A)		140 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

x Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes X** **No** ___

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

SOIL

Sampling Point: W-2-08 DP1

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
0-5	10YR 4/2	100	None				SAND	Sand Clay Loam
5-12	10YR 3/2	85	10YR 5/8	15			SAND	Sand Clay Loam
12-16	10YR 4/1	100	None				SAND	Clay Sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- x Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: October 2, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-2-08 DP2

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40° 58' 44.512" N Long: 75° 12' 1.496" W Datum: NAD83

Soil Map Unit Name: Cy - CUT AND FILL LAND NWI Classification:

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

Are Vegetation X, Soil ____, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

Remarks: The area sits along a tributary of Pocono Creek under I-80

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-2-08 DP2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size:)			
1. Fallopia japonica	20	Y	FACU
2. Persicaria hydropiper	10	Y	OBL
3. Pilea fontana	25	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55 = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	25	X 2 =	50
FAC species		X 3 =	
FACU species	20	X 4 =	80
UPL species		X 5 =	
Column Totals:	55 (A)		140 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

X Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes X** **No** ___

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

SOIL

Sampling Point: W-2-08 DP2

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
0-16	10YR 4/2	100	None				SAND	Sand Clay Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 17, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-01 DP1

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Flat Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40° 58' 54.917" N Long: 75° 12' 43.734" W Datum: NAD83

Soil Map Unit Name: Ph - PHILO SILT LOAM , Cy - CUT AND FILL LAND NWI Classification:

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

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

Are Vegetation , Soil X, 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 X	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No	

Remarks: The area is mowed, maintained, level and grassy along a stream bank (Little Pocono Creek – WW-3-01). It is located between two businesses (Perkins and a gas station). There is also abundant white clover in the upland area, but none in the wetland.

HYDROLOGY

Wetland Hydrology Indicators:

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

- 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)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- 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)
- X 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 X	Depth (inches):
Water Table Present?	Yes X	No	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? Yes X No

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

Remarks: Numerous areas along the stream bank that are slumping and undercut were included as part of the OHW.

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-01 DP1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size:)			
1. Grass species	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

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

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

X Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

The area is mowed, maintained, level and grassy along a stream bank (Little Pocono Creek – WW-3-01).

SOIL

Sampling Point: W-3-01 DP1

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
0-16	2.5/YR 2.5/1	85	5YR 5/8	15			SANDY	Silt Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- x Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 17, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-01 DP2

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Flat Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40° 58' 54.917" N Long: 75° 12' 43.734" W Datum: NAD83

Soil Map Unit Name: Ph - PHILO SILT LOAM , Cy - CUT AND FILL LAND NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?**	Yes ____	No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:		
Wetland Hydrology Present?	Yes ____	No X			

Remarks: The area is mowed, maintained, level and grassy along a stream bank. It is located between two businesses (Perkins and a gas station). There is also abundant white clover in the upland area, but none in the wetland.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Numerous areas along the stream bank that are slumping and undercut were included as part of the OHW.

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-01 DP2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size:)			
1. Grass species	25	Y	FAC
2. Trifolium repens	45	Y	FACU
3. Securigera varia	30	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-3-01 DP2

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
0-12	10YR 3/3	100	None				SANDY	Silt Loam
12-Up	Rock & Fill							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** ____ **No** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 17, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-02 DP1

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 58' 49.515" N Long: 75° 12' 47.072" W Datum: NAD83

Soil Map Unit Name: Sh - SHEFFIELD SILT LM & WyE - WYOMING GRAVELLY SY LM NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID: POW, PEM, PSS, PFO
Wetland Hydrology Present?	Yes X	No	

Remarks: Wetland consists of a large open water body with a wet fringe.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X 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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- X 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 X	No ___	Depth (inches):	
Water Table Present?	Yes X	No ___	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-02 DP1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	10	y	FACW
2. Quercus velutina	10	y	--
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30)			
1. Cornus amomum	15	y	FACW
2. Cornus sericea	10	y	FACW
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	

Herb Stratum (Plot size: 5)			
1. Sphagnum	20	y	NI
2. Dennstaedtia punctilobula	15	n	FACU
3. Symplocarpus foetidus	30	y	OBL
4. Rosa multiflora	5	n	FACU
5. Microstegium vimineum	20	y	FAC
6. Cyperaceae sp	15	n	--
7.			
8.			
9.			
10.			
11.			
12.			
	105	= Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71 (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:

- ___ Rapid Test for Hydrophytic Vegetation
- x Dominance Test is > 50%
- ___ Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-3-02 DP1

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
0-10	10YR 2/1	100					Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 17, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-02 DP2

Investigator(s): Chris Howsare, Chris Salvatico Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 58' 49.515" N Long: 75° 12' 47.072" W Datum: NAD83

Soil Map Unit Name: Sh - SHEFFIELD SILT LM & WyE - WYOMING GRAVELLY SY LM, NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- X 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 X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-02 DP2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cedrus sp	20	y	UPL
2. Platanus occidentalis	50	y	FACW
3.			
4.			
5.			
6.			
7.			
	70	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	50	X 2 =	100
FAC species		X 3 =	0
FACU species		X 4 =	0
UPL species	20	X 5 =	100
Column Totals:	70 (A)		200 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- ___ Dominance Test is > 50%
- x Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** x **No** ___

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

SOIL

Sampling Point: W-3-02 DP2

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
0-10	10YR 3/3						Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-04 DP1

Investigator(s): LMM, KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 59' 10.773" N Long: 75° 13' 17.954" W Datum: NAD83

Soil Map Unit Name: Cy - CUT AND FILL LAND NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- High Water Table (A2)
- X 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)
- Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches):
Water Table Present?	Yes X	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 4

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-04 DP1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula alleghaniensis	8	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	8	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5')			
1. Impatiens capensis	15	Y	FACW
2. Persicaria hydropiper	8		OBL
3. Microstegium vimineum	40	Y	FAC
4. Fallopia japonica	8		FACU
5. Pilea pumila	2		FACW
6. Toxicodendron radicans	4		FAC
7. Symplocarpus foetidus	1		OBL
8.			
9.			
10.			
11.			
12.			
	78	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	9	x 1 =	9
FACW species	17	X 2 =	34
FAC species	52	X 3 =	156
FACU species	8	X 4 =	32
UPL species		X 5 =	
Column Totals:	76 (A)		231 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is > 50%
- X Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-3-04 DP1

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
0-4	10YR 2/1	100					Silty clay	
4-10	10YR 2/1	65					Silty clay	Saturated muck
	10YR 3/1	30						
10-13	10YR 3/1	50					Sandy silt	
	10YR 4/2	50						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- X Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- X Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-06 DP1

Investigator(s): LMM, KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 59' 10.613" N Long: 75° 13' 33.907" W Datum: NAD83

Soil Map Unit Name: Po – Pope silt loam NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID: PSS/FO
Wetland Hydrology Present?	Yes X	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	
Water Table Present?	Yes X	No ___	Depth (inches):	7"
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	0"

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-06 DP1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	25	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1. Malus floribunda	25	Y	UPL
2. Lindera benzoin	15	Y	FACW
3. Acer rubrum	10		FAC
4. Acer platanoides	5		UPL
5. Rosa multiflora	2		FACU
6.			
7.			
	57	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Cyperus squarrosus	22	Y	OBL
2. Symphyotrichum novi-belgii	20	Y	FACW
3. Acalypha virginica	15	Y	FACU
4. Pilea pumila	12		FACW
5. Leersia oryzoides	9		OBL
6. Impatiens capensis	5		FACW
7. Juncus effusus	5		OBL
8. Symphotrichum novae-angliae	2		FACW
9. Persicaria hydropiper	2		OBL
10. Ageratina altissima	1		FACU
11. Solidago canadensis	1		FACU
12. Acer rubrum	1		FACW
	95	= Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	38	x 1 =	38
FACW species	55	X 2 =	110
FAC species	35	X 3 =	105
FACU species	19	X 4 =	76
UPL species	30	X 5 =	150
Column Totals:	177 (A)		479 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is > 50%
- X Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-3-06 DP1

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
0-4	10YR 3/1	90	7.5YR 5/6	5			Silt loam	Saturated
			10YR 5/2	5				
4-7	10YR 3/1	60	10YR 4/2	40			Silt loam	Saturated
7-13	Gley 1 3N	100					Stony sand	Saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-06 DP2

Investigator(s): LMM, KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 59' 10.613" N Long: 75° 13' 33.907" W Datum: NAD83

Soil Map Unit Name: Po – Pope silt loam NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes	No X	

Remarks:

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)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- 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)
- 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 X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? Yes No X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-06 DP2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer platanoides	40	Y	UPL
2. Carya cordiformis	40	Y	FAC
3.			
4.			
5.			
6.			
7.			
	80	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Acer platanoides	50	Y	UPL
2. Malus floribunda	45	Y	UPL
3. Taxus baxxata	30		UPL
4. Rosa multiflora	12		FACU
5. Carya cordiformis	10		FAC
6.			
7.			
	147	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Geum aleppicum	5	Y	FAC
2. Ageratina altissima	3	Y	FACU
3. Rubus species	1		FACU
4. Allium canadense	1		FACU
5. Rosa multiflora	1		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	11	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		X 2 =	
FAC species	55	X 3 =	165
FACU species	18	X 4 =	72
UPL species	165	X 5 =	825
Column Totals:	238	(A)	1062 (B)

Prevalence Index = B/A = 4.46

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-3-06 DP2

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
0-3	10YR 3/2	70	10YR 4/3	30			Silt loam	Moist
3-7	7.5YR 4/3	90					Silt loam	Moist
7-10	7.5YR 3/2	100					Si cl loam	Moist
10-13	7.5YR 4/1+	80	7.5YR 5/3	10			Si cl loam	Moist
			7.5YR 5/6	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-07 DP1

Investigator(s): LMM, KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none): Concave

Slope (%): Lat: 40° 59' 8.657" N Long: 75° 13' 33.483" W Datum: NAD83

Soil Map Unit Name: Cy - CUT AND FILL LAND NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No	

Remarks:

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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X 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)
- ___ 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 X	No X	Depth (inches):	½"
Water Table Present?	Yes X	No ___	Depth (inches):	8"
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	0"

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Spring seep

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-07 DP1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1. Lindera benzoin	3	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	3 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Leersia oryzoides	50	Y	OBL
2. Fallopia japonica	40	Y	FACU
3. Impatiens capensis	20		FACW
4. Symphotrichum novae-angliae	15		FACW
5. Panicum virgatum	15		FAC
6. Myosotis scorpiodes	5		OBL
7. Ageratina altissima	2		FACU
8.			
9.			
10.			
11.			
12.			
	147 = Total Cover		

Woody Vine Stratum (Plot size: 5')			
1. Vitis labrusca	22	Y	FACU
2.			
3.			
4.			
	22 = Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	38	X 2 =	76
FAC species	15	X 3 =	45
FACU species	64	X 4 =	256
UPL species		X 5 =	
Column Totals:	172 (A)		432 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- ___ Dominance Test is > 50%
- X Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-3-07 DP1

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
0-2	7.5YR 2.5/1	95					Loam	Saturated
2-8	7.5YR 4/1	90					Sand	Saturated
8-14	7.5YR 3/1	80	Gley 1 3N	20			Sandy	Saturated, sulfidic odor

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- X Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-09 DP1

Investigator(s): Mike Landis, David Jacobs Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 19.222" N Long: 75° 14' 13.935" W Datum: NAD 83

Soil Map Unit Name: Wyoming gravelly sandy loam (WyB, WyC, WyE) NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____	If yes, optional Wetland Site ID:	PEM/SS
Wetland Hydrology Present?	Yes X No ____		

Remarks: Sample area wetland; PEM/SS

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X 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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-09 DP1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30 ft)			
1. Lindera benzoin	10	Y	FACW
2. Carpinus caroliniana	2	N	FAC
3. Rosa multiflora	10	Y	FACU
4.			
5.			
6.			
7.			
	22	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Impatiens capensis	60	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	X 2 =	140
FAC species	7	X 3 =	21
FACU species	10	X 4 =	40
UPL species	0	X 5 =	0
Column Totals:	87 (A)		201 (B)

Prevalence Index = B/A = 2.31

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- x Dominance Test is > 50%
- x Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes X** **No** ___

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

SOIL

Sampling Point: W-3-09 DP1

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 3/3	100					SAND	
6-16	10YR 4/2	85	10YR 5/3	15	CS	M	SAND	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 25, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-09 DP2

Investigator(s): Mike Landis, David Jacobs Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) slope Local relief (concave, convex, none): none

Slope (%): 3 Lat: 40° 59' 19.222" N Long: 75° 14' 13.935" W Datum: NAD 83

Soil Map Unit Name: Wyoming gravelly sandy loam (WyB, WyC, WyE) NWI Classification:

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? Are "Normal Circumstances" present? Yes x 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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: UPL
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-09 DP2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carya ovata	10	Y	FACU
2. Acer saccharum	10	Y	FACU
3. Quercus rubra	5	Y	FACU
4.			
5.			
6.			
7.			
	25	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30 ft)			
1. Carpinus caroliniana	5	Y	FAC
2. Lindera benzoin	10	Y	FACW
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Urtica dioica	15	Y	FAC
2. Parthenocissus quinquefolia	10	Y	FACU
3. Toxicodendron radicans	10	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	= Total Cover	

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 38 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	X 2 =	20
FAC species	30	X 3 =	90
FACU species	35	X 4 =	140
UPL species	0	X 5 =	0
Column Totals:	75 (A)		250 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-3-09 DP2

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
0-4	10YR 2/2	100					Sa Lo	
4-14	10YR 3/4	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ 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** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 17, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-10 DP1

Investigator(s): EEC/KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) hillslope Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 23.714" N Long: 75° 14' 35.915" W Datum: NAD 83

Soil Map Unit Name: Volusia gravelly silt loam (VoB) NWI Classification:

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 X significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PFO/EM
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Maintained residential property. Two frogs observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ____ High Water Table (A2)
- X 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)
- ____ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	1"
Water Table Present?	Yes ____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Spring seep/spring box. Water channelized by rock walls – through center of wetland and along edge closest to roadway.

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-10 DP1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Magnolia virginiana	30	Y	FACW
2. Tsuga canadensis	25	Y	FACU
3.			
4.			
5.			
6.			
7.			
	55	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30 ft)			
1. Lonicera morrowii	10	Y	FACU
2. Berberis thunbergii	10	Y	FACU
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Poa palustris	40	Y	FACW
2. Myosotis laxa	30	Y	OBL
3. Cardamine pensylvanica	30	Y	FACW
4. Microstegium vimineum	30	Y	FAC
5. Cyperus strigosus	22		FACW
6. Eleocharis obtuse	20		OBL
7. Prunella vulgaris	7		FAC
8. Lemna minor	5		OBL
9. Cyperus diandrus	5		OBL
10. Cyperus bipartitus	5		FACW
11.			
12.			
	194	= Total Cover	

Woody Vine Stratum (Plot size: 5')			
1. Vitis labrusca	15	Y	FACU
2.			
3.			
4.			
	15	= 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: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 56 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	127	X 2 =	254
FAC species	37	X 3 =	111
FACU species	60	X 4 =	240
UPL species	0	X 5 =	0
Column Totals:	284	(A)	665 (B)

Prevalence Index = B/A = 2.34

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- x Dominance Test is > 50%
- x Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-3-10 DP1

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
0-2	7.5YR 3/1	90					Silt loam	Organics, oxidized root channels
2-7	7.5YR 6/1	60	7.5YR 4/4	10			Silt loam	Saturated, some gravel
			7.5YR 3/1	25				
7-13	7.5YR 4/1	85	7.5YR 4/4	15			Silt loam	Saturated, gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- X Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Sep 17, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-10 DP2

Investigator(s): EEC/KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) hillslope Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 23.714" N Long: 75° 14' 35.915" W Datum: NAD 83

Soil Map Unit Name: Volusia gravelly silt loam (VoB) NWI Classification:

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 X significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Area is mowed.

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)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ 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 X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-10 DP2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Misc grass species	50		
2. Plantago lanceoata	40	Y	FACU
3. Trifolium purpureum	30	Y	FACU
4. Glechoma hederacea	25	Y	FACU
5. Taraxacum officinale	7		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	152	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

___ Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

Remarks: (Include photo numbers here or on a separate sheet.)
Area is mowed. Moss – 55%

SOIL

Sampling Point: W-3-10 DP2

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
0-8	7.5YR 3/2	90					Silt loam	Stony, dry
8+							Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** ____ **No** **X**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Oct 2, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-11 DP1

Investigator(s): LMM/KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) hillslope Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 19.404" N Long: 75° 14' 36.917" W Datum: NAD 83

Soil Map Unit Name: Volusia gravelly silt loam (VoB), Wyoming gravelly sandy loam (WyC) NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ____
Water Table Present?	Yes X	No ___	Depth (inches): 7"
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 5"

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-11 DP1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Deschampsia caespitosa	60	Y	FACW
2. Impatiens capensis	30	Y	FACW
3. Symphyotrichum novae_angliae	20		FACW
4. Leersia oryzoides	20		OBL
5. Agrostis species	20		
6. Glechoma hederacea	8		FACU
7. Pilea pumila	8		FACW
8. Onoclea sinsibilis	5		FACW
9. Oxalis stricta	3		FACU
10.			
11.			
12.			
	174 = Total Cover		

Woody Vine Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
	= 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	20	x 1 =	20
FACW species	123	X 2 =	246
FAC species		X 3 =	
FACU species	11	X 4 =	44
UPL species		X 5 =	
Column Totals:	154 (A)		310 (B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- x Dominance Test is > 50%
- x Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-3-11 DP1

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
0-4	10YR 3/2	70	10YR 4/6	5			Silt loam	Moist, organics
4-7	7.5YR 3/2	55	10YR 4/6	20	C	M	Silt loam	Saturated
			10YR 5/1	25	D	M		
7+							Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 7”

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Oct 2, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-12 DP1

Investigator(s): LMM/KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) hillslope Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 20.601" N Long: 75° 14' 38.484" W Datum: NAD 83

Soil Map Unit Name: Volusia gravelly silt loam (VoB), Wyoming gravelly sandy loam (WyC) NWI Classification:

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? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation X, 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PEM/FO
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X 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)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ____
Water Table Present?	Yes ___	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0"

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-12 DP1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	20	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30 ft)			
1. Ligustrum vulgare	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Microstegium vimineum	80	Y	FAC
2. Persicaria sagittata	15		OBL
3. Impatiens capensis	12		FACW
4. Solidago rugosa	10		FAC
5. Pilea pumila	8		FACW
6. Sedge species	8		
7. Symphyotrichum novae-angliae	6		FACW
8. Persicaria virginiana	5		FAC
9.			
10.			
11.			
12.			
	144	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 15	x 1 = 15	
FACW species 14	X 2 = 28	
FAC species 15	X 3 = 45	
FACU species 25	X 4 =100	
UPL species 0	X 5 = 0	
Column Totals: 69(A)	188(B)	

Prevalence Index = B/A = 2.72

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is > 50%

x Prevalence Test is ≤ 3.0[1]

___ 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.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

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

SOIL

Sampling Point: W-3-12 DP1

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
0-1	7.5YR 2.5/1	50					Silt loam	50% organic, saturated, organic staining
	7.5YR 4/6	50						
1-3	7.5YR 2.5/1	80	7.5YR 5/1	20	D	M	Silt loam	Saturated
3-9	7.5YR 5/1	50	Gley 1 4N	25	D	M	Si cl loam	Saturated, slight sulfidic odor
			7.5YR 2.5/1	25	D	M		
9							Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 9”

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: I-80 Reconstruction City/County: Monroe Sampling Date: Oct 2, 2013

Applicant/Owner: Pennsylvania Department of Transportation State: Pennsylvania Sampling Point: W-3-13 DP1

Investigator(s): LMM/KLL Section, Township, Range: Stroud Twp & E Stroudsburg Borough

Landform (hillslope, terrace, etc.) hillslope Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40° 59' 20.840" N Long: 75° 14' 38.062" W Datum: NAD 83

Soil Map Unit Name: Volusia gravelly silt loam (VoB), Wyoming gravelly sandy loam (WyC) NWI Classification:

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? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PEM
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ 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)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ____
Water Table Present?	Yes X	No ___	Depth (inches): 2"
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0"

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W-3-13 DP1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 30 ft)			
1. Berberis thunbergii	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5 = Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Leersia oryzoides	30	Y	OBL
2. Agrostis species	25		
3. Symphyotrichum novae-angliae	22	Y	FACW
4. Persicaria sagittata	18	Y	OBL
5. Epilobium coloratum	18	Y	OBL
6. Scirpus species	12		
7. Solanum dulcamara	10		FAC
8. Solidago rugosa	8		FAC
9. Pilea pumila	5		FACW
10. Impatiens capensis	3		FACW
11.			
12.			
	151 = Total Cover		

Woody Vine Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	66	x 1 =	66
FACW species	30	X 2 =	60
FAC species	18	X 3 =	54
FACU species	5	X 4 =	20
UPL species		X 5 =	
Column Totals:	119 (A)		200 (B)

Prevalence Index = B/A = 1.68

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is > 50%
- X Prevalence Test is ≤ 3.0[1]
- ___ 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.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: W-3-13 DP1

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
0-4	10YR 2/1	50					Silt loam	50% organics, saturated
4-8	10YR 4/1	90					Silt loam	Saturated, stony

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- X Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Mangenese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ 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** X **No** _____

Remarks:

Appendix B

Resource Photographs

Photo – 1

Subject of Photo:
Wetland W-1-01

Direction of Photo:
Northwest

Date:
September 24, 2013.

Photo – 2

Subject of Photo:
Wetland W-2-01

Direction of Photo:
West

Date:
September 25, 2013.

Photo – 3

Subject of Photo:
Wetland W-2-01

Direction of Photo:
West

Date:
September 25, 2013.

Photo – 4

Subject of Photo:
Wetland W-2-02

Direction of Photo:
Northwest

Date:
September 24, 2013.

Photo – 5

Subject of Photo:
Wetland W-2-03

Direction of Photo:
Southeast

Date:
September 26, 2013.

Photo – 6

Subject of Photo:
Wetland W-2-04

Direction of Photo:
Southeast

Date:
September 26, 2013.

Photo – 7

Subject of Photo:
Wetland W-2-05

Direction of Photo:
West

Date:
September 23, 2013.

Photo – 8

Subject of Photo:
Wetland W-2-05

Direction of Photo:
East

Date:
September 23, 2013.

Photo – 9

Subject of Photo:
Wetland W-2-05

Direction of Photo:
Northeast

Date:
September 23, 2013.

Photo – 10

Subject of Photo:
Wetland W-2-06

Direction of Photo:
Southeast

Date:
September 24, 2013.

Photo – 11

Subject of Photo:
Wetland W-2-06

Direction of Photo:
Southeast

Date:
September 24, 2013.

Photo – 12

Subject of Photo:
REMOVED

Photo – 13

Subject of Photo:
Wetland W-2-08

Direction of Photo:
Southeast

Date:
October 2, 2013.

Photo – 14

Subject of Photo:
REMOVED

Photo – 15

Subject of Photo:
Wetland W-3-01

Direction of Photo:
Southwest

Date:
September 17, 2013.

Photo – 16

Subject of Photo:
Wetland W-3-02

Direction of Photo:
South

Date:
September 17, 2013.

Photo – 17

Subject of Photo:
REMOVED

Photo – 18

Subject of Photo:
Wetland W-3-04

Direction of Photo:
West

Date:
January 13, 2013.

Photo – 19

Subject of Photo:
REMOVED

Photo – 20

Subject of Photo:
Wetland W-3-06

Direction of Photo:
West

Date:
January 13, 2013.

Photo – 21

Subject of Photo:
Wetland W-3-07

Direction of Photo:
East

Date:
January 13, 2013.

Photo – 22

Subject of Photo:
REMOVED

Photo – 23

Subject of Photo:
Wetland W-3-09

Direction of Photo:
Southeast

Date:
September 25, 2013.

Photo – 24

Subject of Photo:
Wetland W-3-09

Direction of Photo:
West

Date:
September 25, 2013.

Photo – 25

Subject of Photo:
Wetland W-3-10

Direction of Photo:
South

Date:
September 17, 2013.

Photo – 26

Subject of Photo:
Wetland W-3-11

Direction of Photo:
Southeast

Date:
October 22, 2013.

Photo – 27

Subject of Photo:
Wetland W-3-12

Direction of Photo:
Northwest

Date:
October 22, 2013.

Photo – 28

Subject of Photo:
Wetland W-3-13

Direction of Photo:
Southeast

Date:
October 22, 2013.

Photo – 29

Subject of Photo:
REMOVED

Photo – 30

Subject of Photo:
Brodhead Creek
Waterway
WW-1-00

Direction of Photo:
Southeast
(downstream)

Date:
September 25,
2013.

Photo – 31

Subject of Photo:
Brodhead Creek
Waterway
WW-1-00

Direction of Photo:
Northwest
(upstream)

Date:
September 25,
2013.

Photo – 32

Subject of Photo:
Waterway
WW-1-01

Direction of Photo:
Northeast
(upstream)

Date:
September 25,
2013.

Photo – 33

Subject of Photo:
Waterway
WW-1-01

Direction of Photo:
Southwest
(downstream)

Date:
September 25,
2013.

Photo – 34
Waterway
WW-1-02

Direction of Photo:
Northwest
(upstream)

Date:
September 25,
2013.

Photo – 35

Waterway
WW-1-02

Direction of Photo:
Southeast
(downstream)

Date:
September 25,
2013.

Photo – 36

Subject of Photo:
Waterway
WW-1-03

Direction of Photo:
Southwest
(Upstream)

Date:
May 21, 2014

Photo – 37

Subject of Photo:
Waterway
WW-1-03

Direction of Photo:
Northeast
(downstream)

Date:
May 21, 2014.

Photo – 38

Subject of Photo:
McMichael Creek
Waterway
WW-2-00

Direction of Photo:
Northeast
(downstream)

Date:
September 17,
2013.

Photo – 39

Subject of Photo:
McMichael Creek
Waterway
WW-2-00

Direction of Photo:
Southwest
(upstream)

Date:
September 17,
2013.

Photo – 40

Subject of Photo:
REMOVED

Photo – 41

Subject of Photo:
REMOVED

Photo – 42

Subject of Photo:
Waterway
WW-2-02

Direction of Photo:
Southeast
(upstream)

Date:
September 25,
2013.

Photo – 43

Subject of Photo:
Waterway
WW-2-02

Direction of Photo:
Northwest
(downstream)

Date:
September 25,
2013.

Photo – 44

Subject of Photo:
Waterway
WW-2-03

Direction of Photo:
Southwest
(upstream)

Date:
May 21, 2014.

Photo – 45

Subject of Photo:
Waterway
WW-2-03

Direction of Photo:
Northeast
(downstream)

Date:
May 21, 2014.

Photo – 46

Subject of Photo:
Waterway
WW-2-04

Direction of Photo:
Northwest
(upstream)

Date:
May 21, 2014.

Photo – 47

Subject of Photo:
Waterway
WW-2-04

Direction of Photo:
Southeast
(downstream)

Date:
May 21, 2014.

Photo – 48

Subject of Photo:
Waterway
WW-2-05

Direction of Photo:
South (upstream)

Date:
May 21, 2014.

Photo – 49

Subject of Photo:
Waterway
WW-2-05

Direction of Photo:
North
(downstream)

Date:
May 21, 2014.

Photo – 50

Subject of Photo:
Waterway
WW-2-06

Direction of Photo:
South
(upstream)

Date:
May 21, 2014.

Photo – 51

Subject of Photo:
Waterway
WW-2-06

Direction of Photo:
North
(downstream)

Date:
May 21, 2014.

Photo – 52

Subject of Photo:
Waterway
WW-2-07

Direction of Photo:
Southeast
(upstream)

Date:
May 21, 2014.

Photo – 53

Subject of Photo:
Waterway
WW-2-07

Direction of Photo:
North
(downstream)

Date:
May 21, 2014.

Photo – 54

Subject of Photo:
Waterway
WW-2-08

Direction of Photo:
Southeast
(upstream)

Date:
May 21, 2014.

Photo – 55

Subject of Photo:
Waterway
WW-2-08

Direction of Photo:
Northwest
(downstream)

Date:
May 21, 2014.

Photo – 56

Subject of Photo:
Waterway
WW-2-09

Direction of Photo:
Southeast
(upstream)

Date:
May 21, 2014.

Photo – 57

Subject of Photo:
Waterway
WW-2-09

Direction of Photo:
North
(downstream)

Date:
May 21, 2014.

Photo – 58

Subject of Photo:
REMOVED

Photo – 59

Subject of Photo:
REMOVED

Photo – 60

Subject of Photo:
Waterway
WW-2-11

Direction of Photo:
Southeast
(upstream)

Date:
September 25,
2013.

Photo – 61

Subject of Photo:
Waterway
WW-2-11

Direction of Photo:
Northwest
(downstream)

Date:
September 25,
2013.

Photo – 62

Subject of Photo:
Waterway
WW-2-12

Direction of Photo:
North
(downstream)

Date:
September 26, 2013.

Photo – 63

Subject of Photo:
Waterway
WW-2-13

Direction of Photo:
North (downstream)

Date:
September 26, 2013.

Photo – 64

Subject of Photo:
Waterway
WW-2-14

Direction of Photo:
Northwest
(downstream)

Date:
May 21, 2014.

Photo – 65

Subject of Photo:
Pocono Creek
Waterway
WW-3-00

Direction of Photo:
Southwest
(upstream)

Date:
September 18,
2013.

Photo – 66

Subject of Photo:
Pocono Creek
Waterway
WW-3-00

Direction of Photo:
Northeast
(downstream)

Date:
September 18,
2013.

Photo – 67

Subject of Photo:
Little Pocono Creek
Waterway
WW-3-01

Direction of Photo:
Southwest
(upstream)

Date:
September 17,
2013.

Photo – 68

Subject of Photo:
Little Pocono Creek
Waterway
WW-3-01

Direction of Photo:
Northeast
(downstream)

Date:
September 17,
2013.

Photo – 69

Subject of Photo:
Little Pocono Creek
Waterway
WW-3-01

Direction of Photo:
South
(upstream)

Date:
September 17,
2013.

Photo – 70

Subject of Photo:
Little Pocono Creek
Waterway
WW-3-01

Direction of Photo:
East (downstream)

Date:
September 17, 2013.

Photo – 71

Subject of Photo:
REMOVED

Photo – 72

Subject of Photo:
Waterway
WW-3-03

Direction of Photo:
West (upstream)

Date:
May 21, 2014.

Photo – 73

Subject of Photo:
Waterway
WW-3-03

Direction of Photo:
East
(downstream)

Date:
May 21, 2014.

Photo – 74

Subject of Photo:
REMOVED

Photo – 75

Subject of Photo:
Waterway
WW-3-05

Direction of Photo:
East
(upstream)

Date:
May 21, 2014.

Photo – 76

Subject of Photo:
Waterway
WW-3-06

Direction of Photo:
Northwest
(upstream)

Date:
September 25,
2013.

Photo – 77

Subject of Photo:
Waterway
WW-3-06

Direction of Photo:
Southeast
(downstream)

Date:
September 25,
2013.

Photo – 78

Subject of Photo:
Waterway
WW-3-07

Direction of Photo:
North (upstream)

Date:
September 25, 2013.

Photo – 79

Subject of Photo:
Waterway
WW-3-07

Direction of Photo:
Southeast (downstream)

Date:
September 25, 2013.

Photo – 80

Subject of Photo:
REMOVED

Photo – 81

Subject of Photo:
Waterway
WW-3-09

Direction of Photo:
North
(upstream)

Date:
September 25, 2013.

Photo – 82

Subject of Photo:
Waterway
WW-3-09

Direction of Photo:
South
(downstream)

Date:
September 25, 2013.

Photo – 83

Subject of Photo:
Waterway
WW-3-10

Direction of Photo:
North
(upstream)

Date:
September 25, 2013.

Photo – 84

Subject of Photo:
Waterway
WW-3-10

Direction of Photo:
South
(downstream)

Date:
September 25, 2013.

Photo – 85

Subject of Photo:
Waterway
WW-3-11

Direction of Photo:
Northwest
(upstream)

Date:
September 25, 2013.

Photo – 86

Subject of Photo:
Waterway
WW-3-11

Direction of Photo:
Southeast
(downstream)

Date:
September 25,
2013.

Photo – 87

Subject of Photo:
Waterway
WW-3-12

Direction of Photo:
Northwest
(upstream)

Date:
September 25,
2013.

Photo – 88

Subject of Photo:
Waterway
WW-3-12

Direction of Photo:
Southeast
(downstream)

Date:
September 25,
2013.

Photo – 89

Subject of Photo:
Waterway
WW-3-13

Direction of Photo:
Northwest
(upstream)

Date:
September 25,
2013.

Photo – 90

Subject of Photo:
Waterway
WW-3-13

Direction of Photo:
Southeast
(downstream)

Date:
September 25, 2013.

Photo – 91

Subject of Photo:
Waterway
WW-3-14

Direction of Photo:
North
(upstream)

Date:
May 21, 2014.

Photo – 92

Subject of Photo:
Waterway
WW-3-14

Direction of Photo:
South
(downstream)

Date:
May 21, 2014.

Photo – 93

Subject of Photo:
REMOVED

Photo – 94

Subject of Photo:
Waterway
WW-3-16

Direction of Photo:
North (upstream)

Date:
September 25, 2013.

Photo – 95

Subject of Photo:
Waterway
WW-3-17

Direction of Photo:
North (downstream)

Date:
September 25, 2013.

Photo – 96

Subject of Photo:
Waterway
WW-3-18

Direction of Photo:
East (downstream)

Date:
May 21, 2014.

Photo – 97

Subject of Photo:
Waterway
WW-3-18

Direction of Photo:
East
(downstream)

Date:
May 21, 2014.

Photo – 98

Subject of Photo:
REMOVED

Photo – 99

Subject of Photo:
REMOVED

Appendix C

Function Value Evaluation Forms

Wetland Function-Value Evaluation Form

Total area of Wetland 0.04 Human made? Yes Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Levee Distance to nearest roadway or other development 100 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-1-01

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☐	☑			
Floodflow Alteration	☑	☐	8, 9, 10, 11, 12, 13, 17	Yes	Wetland is part of a levee system.
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☐	☑			
Nutrient Removal	☑	☐	3, 8, 9, 10		
Production Export	☑	☐	1, 7, 12		
Sediment/Shoreline Stabilization	☑	☐	2, 4, 6	Yes	Wetland is part of a levee system.
Wildlife Habitat	☑	☐	7, 8, 17, 19, 20, 21		
Recreation	☑	☐	1, 8, 9, 10, 11, 12		The levee system is used as a park.
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located at the toe of slope of a levee on the Brodhead Creek.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.56 Human made? Yes Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Parkland Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PEM/FO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-2-01

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☐	☑			
Floodflow Alteration	☑	☐	5, 6, 7, 8, 9, 10, 11, 13, 18	Yes	
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	1, 2, 3, 4, 5, 10, 12, 14, 16		
Nutrient Removal	☑	☐	3, 4, 5, 8, 9, 10, 11, 12, 13		
Production Export	☑	☐	1, 2, 4, 6, 7, 8, 10, 12		
Sediment/Shoreline Stabilization	☑	☐	1, 7, 8, 12, 14, 15		New trees were planted as part of the Rt 611 (Park Ave) bridge replacement.
Wildlife Habitat	☑	☐	6, 8, 9, 10, 13, 14, 15, 19, 20		
Recreation	☑	☐	1, 2, 5, 10, 11, 12		Rotary Park abuts this area.
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located under the recently constructed Rt 611 (Park Ave) Bridge. *Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.56 Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? Yes

Adjacent land use Roadway Distance to nearest roadway or other development 50 ft.

Dominant wetland systems present PEM/SS Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? _____

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-2-02

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area _____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	7, 13, 15	Yes	
Floodflow Alteration	☐	☑			
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☐	☑			
Nutrient Removal	☑	☐	3, 8, 9, 10, 11, 12		
Production Export	☑	☐	1, 2, 4, 7, 8, 12		
Sediment/Shoreline Stabilization	☐	☑			
Wildlife Habitat	☑	☐	8, 10, 13, 15, 17, 19, 20, 21		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located in the gore area of Exit 307.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.006 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Floodplain Distance to nearest roadway or other development 20 ft.

Dominant wetland systems present pem/ss/fo Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-2-03

Prepared by: CCS Date 1/13/14

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	8, 13	Yes	
Floodflow Alteration	☐	☑			
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	1, 10, 15, 16		
Nutrient Removal	☑	☐	3, 8		
Production Export	☑	☐	1, 4, 8		
Sediment/Shoreline Stabilization	☐	☑			
Wildlife Habitat	☑	☐	8, 14, 17, 19		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☑			

Notes: Wetland is located along the bank of McMichael Creek (S-2-00).

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.38 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Floodplain Distance to nearest roadway or other development 40 ft.

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-2-04 & W-2-04a

Prepared by: CCS Date 1/13/14

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	8, 13	Yes	
Floodflow Alteration	☑	☐	6, 8, 9, 10, 18	Yes	
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	1, 10, 15, 16		
Nutrient Removal	☑	☐	3, 8		
Production Export	☑	☐	1, 4, 8		
Sediment/Shoreline Stabilization	☐	☑			
Wildlife Habitat	☑	☐	8, 14, 19		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☑			

Notes: Wetland is located along the bank of McMichael Creek (S-2-00).

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 2.61 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Roadway Distance to nearest roadway or other development Adjacent

Dominant wetland systems present pfo/em/ss Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? >1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-2-05

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 7, 8, 13, 15	Yes	
Floodflow Alteration	☑	☐	1, 6, 7, 8, 9, 10, 11, 13, 18	Yes	
Fish and Shellfish Habitat	☑	☐	2, 4, 8, 10, 17		
Sediment/Toxicant Retention	☑	☐	2, 5, 10, 12, 16		
Nutrient Removal	☑	☐	3, 5, 8, 11, 12, 14		
Production Export	☑	☐	1, 2, 4, 7, 8, 9		
Sediment/Shoreline Stabilization	☑	☐	1, 7, 12, 13		
Wildlife Habitat	☑	☐	8, 9, 10, 13, 14, 15, 17, 19, 21		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland sits inside a bowl and along the toe of slope of I-80.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.79 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Roadway Distance to nearest roadway or other development Adjacent

Dominant wetland systems present pem/ss/fo Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? >1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-2-06

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 7, 8, 13, 15	Yes	
Floodflow Alteration	☑	☐	1, 6, 7, 8, 9, 10, 11, 13, 18	Yes	
Fish and Shellfish Habitat	☑	☐	2, 4, 8, 10, 17		
Sediment/Toxicant Retention	☑	☐	2, 5, 10, 12, 16		
Nutrient Removal	☑	☐	3, 5, 8, 11, 12, 14		
Production Export	☑	☐	1, 2, 4, 7, 8, 9		
Sediment/Shoreline Stabilization	☑	☐	1, 7, 12, 13		
Wildlife Habitat	☑	☐	8, 9, 10, 13, 14, 15, 17, 19, 21		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland sits along a tributary of McMichael Creek (S-2-11) and along the toe of slope of I-80.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.015 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Stream Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-2-08

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	4, 9		
Floodflow Alteration	☑	☐	5, 6, 8, 9, 10, 13	Yes	
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	1, 2, 4, 10		
Nutrient Removal	☑	☐	3, 4		
Production Export	☑	☐	2, 4		
Sediment/Shoreline Stabilization	☑	☐	1		
Wildlife Habitat	☑	☐	17, 19, 20		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland sits along a tributary of McMichael Creek (S-2-11) under I-80.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.003 Human made? Yes Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Comm Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-01

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 4, 7, 12	Yes	
Floodflow Alteration	☑	☐	5, 6, 10, 11, 13	Yes	
Fish and Shellfish Habitat	☑	☐	4, 7, 12, 17		
Sediment/Toxicant Retention	☑	☐	2, 6, 10		
Nutrient Removal	☑	☐	3, 4		
Production Export	☑	☐	1		
Sediment/Shoreline Stabilization	☑	☐	1, 9		
Wildlife Habitat	☑	☐	8, 19		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☑			Wetland is in a maintained area (landscaped, mowed).

Notes: Wetland is located between commercial businesses (gas station, Perkins).

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 6.37 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Residenti Distance to nearest roadway or other development 30 ft.

Dominant wetland systems present pow/em/s Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? >1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-02

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 7, 8, 12, 13		
Floodflow Alteration	☑	☐	1, 6, 8, 9, 10, 11, 13, 18	Yes	
Fish and Shellfish Habitat	☑	☐	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 17	Yes	
Sediment/Toxicant Retention	☑	☐	1, 2, 3, 5, 6, 10, 12, 15, 16		
Nutrient Removal	☑	☐	1, 2, 3, 4, 5, 8, 9, 11		
Production Export	☑	☐	1, 2, 4, 6, 7, 8, 9		
Sediment/Shoreline Stabilization	☑	☐	9, 12, 13, 15		
Wildlife Habitat	☑	☐	1, 3, 8, 9, 10, 11, 14, 15, 18	Yes	Rational # cont. 19, 20, 21, 23
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☑	☐	2, 3, 6, 8, 12		
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland consists of a large open water body with a wet fringe.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.12 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Floodplain Distance to nearest roadway or other development 60 ft.

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-04

Prepared by: CCS Date 1/13/14

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	8, 13	Yes	
Floodflow Alteration	☑	☐	6, 8, 9, 10, 18		
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	1, 3, 16		
Nutrient Removal	☑	☐	3, 8		
Production Export	☑	☐			
Sediment/Shoreline Stabilization	☐	☑			
Wildlife Habitat	☑	☐	6, 8, 13		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☑			

Notes: Wetland is located along the bank of Pocono Creek (S-3-00).

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.10 Human made? Yes Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Comm Distance to nearest roadway or other development 100 ft.

Dominant wetland systems present PSS/FO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-06

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	4, 6, 13	Yes	
Floodflow Alteration	☐	☑			
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	2, 4, 5		
Nutrient Removal	☑	☐	3, 7, 8, 9, 10		
Production Export	☐	☑			
Sediment/Shoreline Stabilization	☐	☑			
Wildlife Habitat	☑	☐	8, 13		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located in a basin along Pocono Creek (S-3-00).

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.01 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Stream Distance to nearest roadway or other development 50 ft.

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-07

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☐	☑			
Floodflow Alteration	☑	☐	5, 10, 13, 18	Yes	
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	1, 2, 4, 9, 10, 16		
Nutrient Removal	☑	☐	3, 4, 9, 10		
Production Export	☑	☐	1, 7		
Sediment/Shoreline Stabilization	☑	☐	2, 3, 4, 6, 12, 14, 15	Yes	
Wildlife Habitat	☑	☐	6, 8, 13		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located along the bank of Pocono Creek (S-3-00).

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 1.19 Human made? Yes Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Maint. Yd Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PEM/SS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-09

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	4, 8, 13, 15	Yes	
Floodflow Alteration	☑	☐	1, 5, 6, 7, 8, 9, 10, 13, 14, 18		
Fish and Shellfish Habitat	☑	☐	2, 4, 8, 10, 14, 17		
Sediment/Toxicant Retention	☐	☑			
Nutrient Removal	☐	☑			
Production Export	☑	☐	1, 2, 4, 7, 8, 10, 12		
Sediment/Shoreline Stabilization	☑	☐	1, 3, 4, 12, 14		
Wildlife Habitat	☑	☐	8, 9, 10, 13, 15, 17, 19, 20, 21	Yes	
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located behind a township maintenance yard.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.12 Human made? Yes Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Residenti Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PFO/EM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-10

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 7, 13	Yes	
Floodflow Alteration	☐	☑			
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☐	☑			
Nutrient Removal	☑	☐	3, 5, 14		
Production Export	☑	☐	1		
Sediment/Shoreline Stabilization	☐	☑			
Wildlife Habitat	☑	☐	6, 8, 19		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located on a residential property as part of a spring house ruin. *Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.08 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Residenti Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-11

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 4, 7, 8, 13	Yes	
Floodflow Alteration	☑	☐	6, 8, 9, 10, 11, 13	Yes	
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	2, 10, 14, 16		
Nutrient Removal	☑	☐	3, 8, 9, 10, 11, 12		
Production Export	☑	☐	1, 2, 4, 7		
Sediment/Shoreline Stabilization	☑	☐	1, 3, 4		
Wildlife Habitat	☑	☐	7, 8, 17, 19, 20, 21		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located on a residential property.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.04 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Residenti Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PEM/FO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-12

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ■

Corps manual wetland delineation completed? Y ■ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 4, 7, 8, 13	Yes	
Floodflow Alteration	☑	☐	6, 8, 9, 10, 11, 13	Yes	
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	2, 10, 14, 16		
Nutrient Removal	☑	☐	3, 8, 9, 10, 11, 12		
Production Export	☑	☐	1, 2, 4, 7		
Sediment/Shoreline Stabilization	☑	☐	1, 3, 4		
Wildlife Habitat	☑	☐	7, 8, 17, 19, 20, 21		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located on a residential property.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.02 Human made? Yes Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Roadway Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-13

Prepared by: CCS Date 10/22/13

Wetland Impact: Type None Area ____

Evaluation Based on: Office ☐ Field ☒

Corps manual wetland delineation completed? Y ☒ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 13	Yes	
Floodflow Alteration	☐	☑			
Fish and Shellfish Habitat	☐	☑			
Sediment/Toxicant Retention	☑	☐	2		
Nutrient Removal	☑	☐	3, 9, 10		
Production Export	☑	☐	1, 2		
Sediment/Shoreline Stabilization	☐	☑			
Wildlife Habitat	☑	☐	7, 8, 19, 21		
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☐	☑			
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes: Wetland is located on a highway (I-80) embankment.

*Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of Wetland 0.474 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Residenti Distance to nearest roadway or other development 150 ft

Dominant wetland systems present PFO/SS Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-3-14

Prepared by: MLL Date 06/06/14

Wetland Impact: Type None Area ____

Evaluation Based on: Office ■ Field ■

Corps manual wetland delineation completed? Y ■ N ☐

Function/Value	Suitability Y	Suitability N	Rational (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	☑	☐	2, 4, 7, 8, 10, 13	Yes	
Floodflow Alteration	☑	☐	5, 6, 7, 8, 9, 10, 13, 18	Yes	
Fish and Shellfish Habitat	☐	☑	1, 2		
Sediment/Toxicant Retention	☑	☐	4, 9, 10, 13, 15, 16	Yes	
Nutrient Removal	☐	☑	7, 8, 9		
Production Export	☐	☑	1, 2, 7		
Sediment/Shoreline Stabilization	☐	☐			
Wildlife Habitat	☑	☐	1, 3, 6, 7, 8, 13, 19, 21	Yes	
Recreation	☐	☑			
Educational/Scientific Value	☐	☑			
Uniqueness/Heritage	☐	☑			
Visual Quality/Aesthetics	☑	☐	3, 6, 8, 12		
ES Endangered Species Habitat	☐	☑			
Other	☐	☐			

Notes:

*Refer to backup list of numbered considerations.

Appendix D

Project Area Soil Descriptions

Appendix D: Project Area Soil Descriptions

Soil Name	Soil Symbol	Slope	Parent Material Setting
Alluvial land	As	0 to 3%	Alluvium
Bath very stony silt loam	BbB, BbC	0 to 8%, 8 to 25%	Loamy till derived mainly from gray and brown siltstone, sandstone, and shale
Benson-Rock outcrop complex	BeC, BeF	8 to 25% 25-70%	Loamy till
Braceville gravelly loam	BrB	3 to 8%	Coarse-loamy outwash
Chenango gravelly loam	ChA, ChB	0 to 3%, 3 to 8%	Gravelly outwash
Chippewa and Norwich extremely stony soils*	CnB	0 to 8%	Fine-loamy till derived from sandstone and siltstone
Cut and fill land	Cy	0 to 25%	Man made and altered materials from mixed rock types
Pit, Shale, and Gravel	Gp	---	---
Holly silt loam*	Ho	0 to 3%	Alluvium derived from sandstone and shale
Lordstown channery silt loam	LsD	15 to 25%	Coarse-loamy till derived from sandstone and siltstone
Philo silt loam	Ph	0 to 3%	Coarse-loamy alluvium derived from sandstone and siltstone
Pope silt loam	Po, Pp	0 to 3%	Coarse-loamy alluvium derived from sandstone and siltstone
Rexford gravelly silt loam*	ReA, ReB	0 to 3%, 3 to 8%	Coarse-loamy outwash derived from sandstone and shale
Sheffield silt loam*	Sh	0 to 3%	Till
Volusia gravelly silt loam	VoB	3 to 8%	Fine-loamy basal till derived from sandstone and siltstone
Water	W	0%	Rivers streams ponds
Wyoming gravelly sandy loam	WyA, WyB, WyC WyD WyE	0 to 3%, 3 to 8%, 8 to 15% 15-25% 25-70%	Sandy and gravelly glaciofluvial deposits derived from sandstone and siltstone

Source: Natural Resources Conservation Service, Web Soil Survey, 2014.
*Hydric soil.