WETLAND W-SRC-42

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 08.06.2012
Applicant/Owner: PTC	County: Somerset
Investigator(s): SAC & KLE	State: PA
Cowardin Classification (Percentage): PFO (100)	Wetland ID #: W SRC 4L
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes ☐ No
Are "Normal Circumstances" present?	☒ Yes ☐ No
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?	
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?	
NWI Classification: — (if applicable)	

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☐ Within Stream Channel
☐ Hillslope Seep/Spring	☒ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –

Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum: /
No. of Flags: (3) Open Ended Flag Nos. N/A	Photographs (with Direction of Photo or Description) 1 – OVERVIEW, NW/3 – WETLAND DT 2 – OVERVIEW, SSE/4 – UPLAND DT
Remarks: CONNECTED TO S-SRC-5G. JURISDICTIONAL.	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks: CANOPY @ 90%. TREES OUTSIDE OF BOUNDS.					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION
WETLAND ID #: W · SRC · 42

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	
#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	FOWL MEADOW (GLYCERIA STRIATA)	80	Y	OBL
2	SCIRPUS ATROVIRENS	30	Y	OBL
3	JEWELWEED (IMPATIENS CAPENSIS)	20	Y	FACW
4	ASTER SP.	10	N	-
5	GOLDENROD SP.	10	N	-
6				
7				
8				
9				
10				
			= Total Cover	
#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet

# of Dominant Species that are OBL, FACW, or FAC?	3 (A)
Total # of Dominant Species across all Strata?	3 (B)
% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)

Prevalence Index Worksheet

Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators

Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

CANOPY PROVIDED BY ELM & TULIP POPLAR - IMMED. OUTSIDE OF ISOLATED BOUNDS. PER USACE REG. SUPPLEMENT, ≥70% CANOPY BY TREES IMMED. OUTSIDE OF WETLAND BOUNDS → FAC

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SRC-42

SOILS

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	– / –	– / – / – / –	–	–
2 - 6	10YR 2/2 / 90	7.5YR 3/4 / 10 / RM / M	Few, Dull	Silt Loam w/ Gravel
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☒ ~~Sulfidic Odor (A4)~~	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present?	☒ Yes	☐ No

Remarks: Refusal @ 6" – Alluvial material from S-SRC-56

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SRC-42

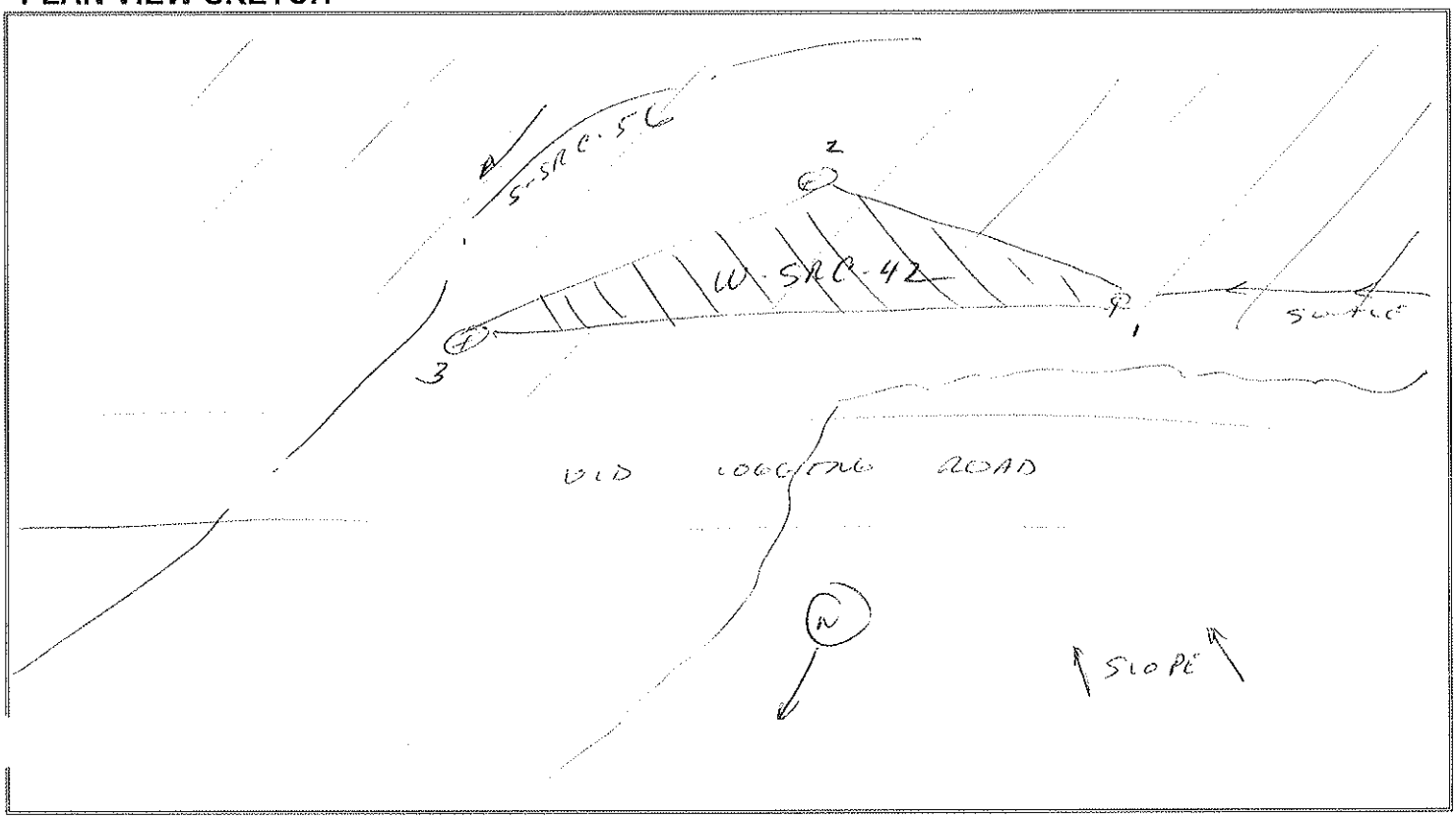
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☒ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☒ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☒ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☒ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: CONNECTED TO S-SRC-5C - POSSIBLY JURISDICTIONAL.

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point W-SRC-42

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	ELM (ULMUS RUBRA)	60	Y	FAC
2	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	40	Y	FACU
3				
4				
5				
6				
			= Total Cover	
Wetland Vegetation Present?		☒ Yes	☐ No	

Remarks: WETLAND VEG IS PRESENT AND DOMINANT @ SAMPLE PT. (50/20).

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 5	10YR 3/2 / 100	- / - / - / -	-	SILT LOAM
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☒ No

Remarks: REFUSAL @ 5" DUE TO ROCK. WETLAND SOIL NOT PRESENT @ SAMPLE.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☒ No	Depth of: - (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: - (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: - (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: NO WETLAND HYDROLOGY NOTED @ SAMPLE PT.

W·SRC·42

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
AIIS	PTC ALLEGHENY TUNNEL	08.06.12		W·SRC·42		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, KLE				CONNECTED TO STREAM S·SRC·56		

1. Wetland Zone of Influence Condition Index

	Condition Category				
Wetland Zone of Influence (300 foot area around AA perimeter)	**Optimal**	**Suboptimal**		**Marginal**		**Poor**	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** If tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE ___	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		5 4 3 2 1	

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

Scoring:								
	% ZOI Area>	0.60	0.40				1.00 0%	CI
	Score >	15	6				11.4 0.00	0.00

0.57

Comments:

POSSIBLY JURISDICTIONAL.

W-SRC-42 overview, facing east-southeast.

W-SRC-42 overview, facing west-northwest.

W-SRC-42 wetland soil test pit.

W-SRC-42 upland soil test pit.

WETLAND W-SRC-43

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 08.06.2012
Applicant/Owner: PTC	County: Somerset
Investigator(s): SAC, JLE	State: PA
Cowardin Classification (Percentage): PEM (100)	Wetland ID #: W-SAC-43
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes ☐ No
Are "Normal Circumstances" present?	☒ Yes ☐ No
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?	
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?	
NWI Classification: – (if applicable)	

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☐ Within Stream Channel
☐ Hillslope Seep/Spring	☒ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –

Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: (4) Open Ended Flag Nos. N/A	Photographs (with Direction of Photo or Description) 1 – S 3 – WETLAND PEM 2 – NNE 4 – UPLAND PEM
Remarks: CONNECTED TO S-SAC-64/65 JURISDICTIONAL.	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks:					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION
WETLAND ID #: W · SRC · 43

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	

#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	REED CANARY (PHALARIS ARUNDINACEA)	55		FACW
2	JEWELWEED (IMPATIENS CAPENSIS)	30		FACW
3	SCIRPUS ATROVIRENS	15		OBL
4	CATTAILS (TYPHA LATIFOLIA)	NOTED		OBL
5				
6				
7				
8				
9				
10				
		100	= Total Cover	

#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet

# of Dominant Species that are OBL, FACW, or FAC?	2 (A)
Total # of Dominant Species across all Strata?	2 (B)
% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)

Prevalence Index Worksheet

Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators

Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W · SRC · 43

SOILS

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 1	– / –	– / – / – / –	–	–
1 - 7	10YR 3/1 / 95	7.5YR 5/4 / 5 / RM / PL	FEW, FAINT	SILT & CLAY
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☒ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☒ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present?	☒ Yes	☐ No

Remarks: REFUSAL @ 7" - STREAM ALLUVIUM FROM S-SRC-04/05

WETLAND ID #: W-SRC-43

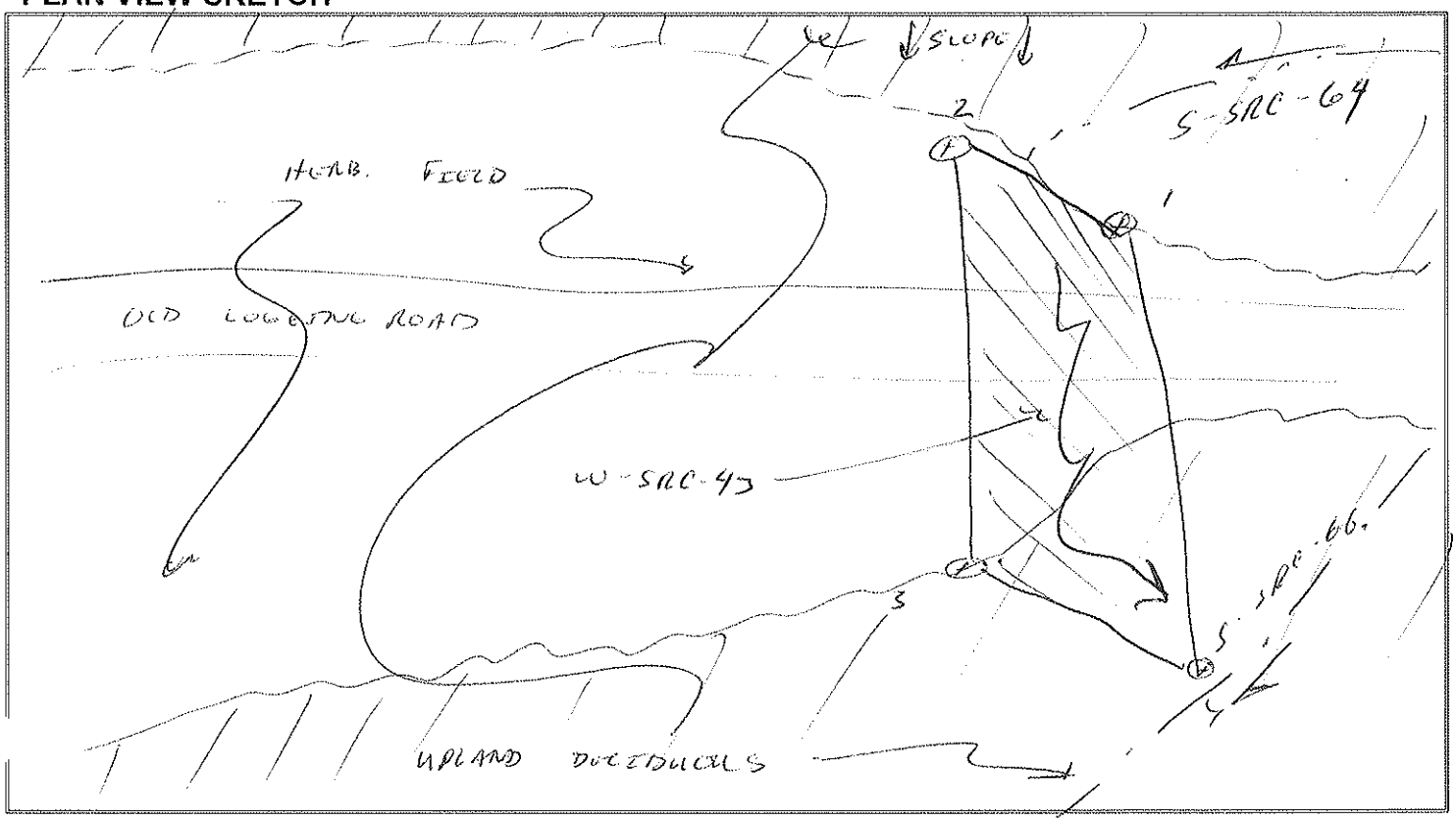
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☒ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☒ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☒ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: CONNECTED TO S-SRC-64 & S-SRC-65 → S-SRC-56

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: 1 W-SLC-43 **Upland Data Point**

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	SWEET BIRCH (BETULA LENTA)	60	Y	FACU
2	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	40	Y	FACU
3	SASSAFRAS SP.	NOTED	N	—
4				
5				
6				
			= Total Cover	
Wetland Vegetation Present?		☐ Yes	☒ No	

Remarks: WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☒ No

Remarks: WETLAND SOILS NOT PRESENT @ SAMPLE PT. ROCK @ 1"

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: — (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDROLOGY IS NOT PRESENT @ SAMPLE PT.

W · SRC · 43

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
A115	PTC Allegheny Tunnel	08.06.12		W·SRC·43		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, KLE				CONNECTED TO STREAMS S·SRC·64/66.		

1. Wetland Zone of Influence Condition Index

Wetland Zone of Influence (300 foot area around AA perimeter)	Condition Category				
	Optimal	**Suboptimal**		**Marginal**		**Poor**	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** If tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE___	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		5 4 3 2 1	

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

Scoring:									
	% ZOI Area>	0.90	0.10					100%	CI
	Score >	6	14					6.8 0.00	0.00 (0.34)

Comments:

POSSIBLY JURISDICTIONAL.

W-SRC-43 overview, facing north-northeast.

W-SRC-43 overview, facing south.

W-SRC-43 wetland soil test pit.

W-SRC-43 upland soil test pit.

WETLAND W-SRC-44

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 08.07.2012	
Applicant/Owner: PTC	County: Somerset	
Investigator(s): SRC ILE	State: PA	
Cowardin Classification (Percentage): PEM (100)	Wetland ID #: W SRC-44	
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes	☐ No
Are "Normal Circumstances" present?	☐ Yes	☒ No
Are ☐ Vegetation, ☒ Soils, or ☒ Hydrology significantly disturbed (Atypical)? PTC FILL SLOPE		
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?		
NWI Classification: (if applicable)		

Landform/Geomorphic Setting (Check All That Apply)	
☒ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☐ Within Stream Channel
☒ Hillslope Seep/Spring	☐ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –

Slope: 10 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: (4)	Photographs (with Direction of Photo or Description)
Open Ended Flag Nos. N/A	1 – NE 3 – WETLAND PIT 2 – SW 4 – UPLAND PIT
Remarks: CONNECTED VIA S-SRC-77.	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks:					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W - SRC-44

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	
#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	REED CANARY (PHALARIS ARUND.)	60	Y	FACW
2	RIVER OATS (CHASMANTHIUM LATIFOLIUM)	20	Y	FACW
3	SOLIDAGO	10	N	-
4	MINT (MENTHA ARVENSIS)	10	N	FACW
5				
6				
7				
8				
9				
10				
		100	= Total Cover	
#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet

# of Dominant Species that are OBL, FACW, or FAC?	2 (A)
Total # of Dominant Species across all Strata?	2 (B)
% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)

Prevalence Index Worksheet

Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators

Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SRC-44

SOILS

Soil Survey Map Unit Name/Symbol: - | Drainage Class: -

Taxonomy: - | Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 10+	10YR 2/1 / 95	7.5YR 4/6 / 5 / RM / M	FEW, DISTINCT	SILT LOAM W/ GRAVEL
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☐ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present? ☒ Yes ☐ No

Remarks: APPEARS TO BE DISTURBED - FILL ASSOC. W/ I-76.

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SAC-44

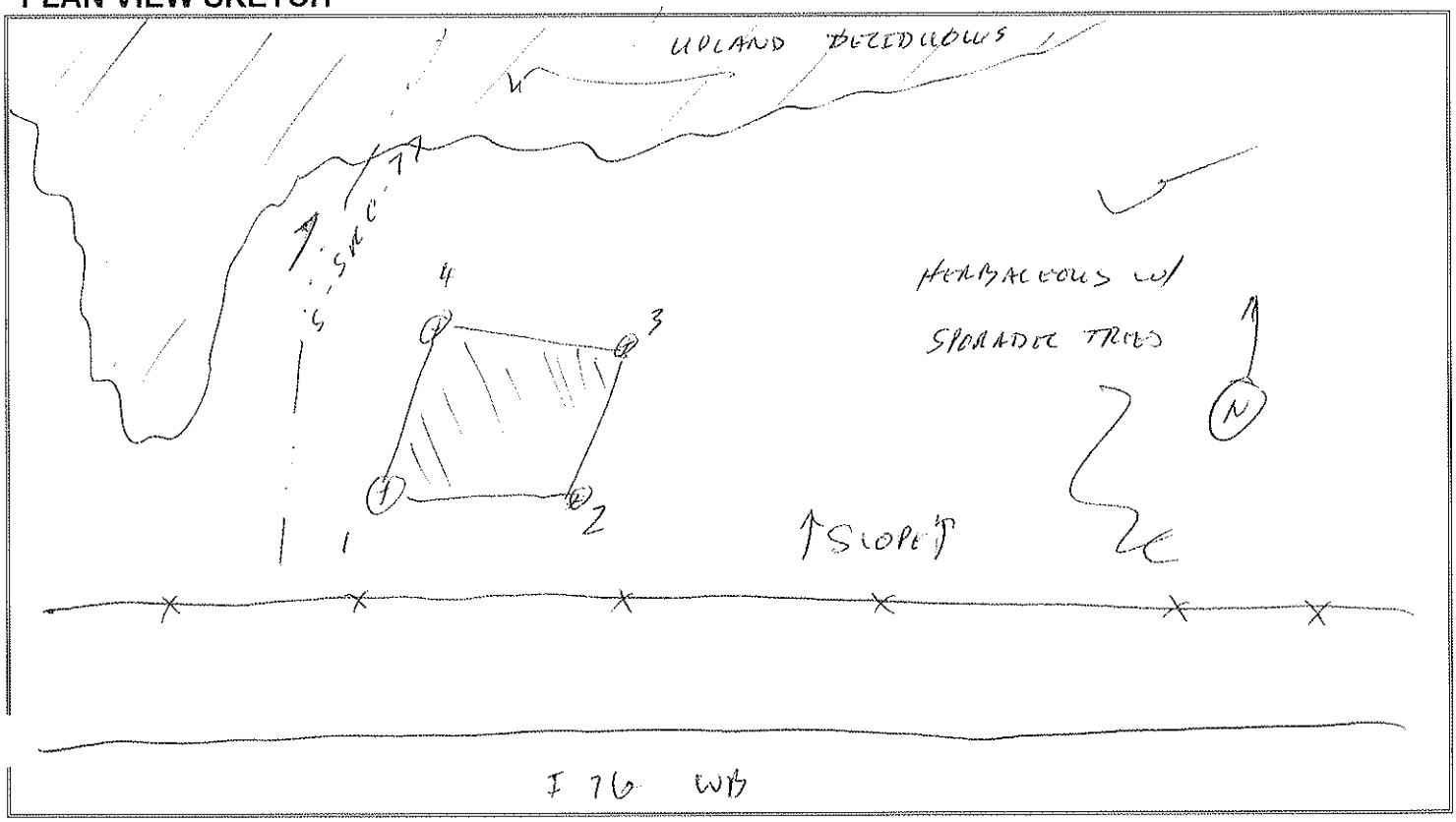
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☒ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☒ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☒ Yes	☐ No	Depth of: 6 (in)
Water Table Present in Pit?	☒ Yes	☐ No	Depth of: 8 (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: ASSOC. W/ S-SAC-77 - POSSIBLY JURISDICTIONAL

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point W-SAC-44

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	ASH (FRAXINUS PENNSYLVANICA)	50	Y	FACW
2	BL. LOCUST (ROBINIA PSEUDO ACACIA)	50	Y	FACU
3	CROWN VETCH (SECURIGERA VARIA)	60	Y	FACU
4	GOLDENROD (SOLIDAGO SP.)	40	Y	–
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		☐ Yes	☒ No	

Remarks: WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	/	/ / /		
2 - 10	7.5YR 2.5/1 / 100	– / – / – / –	–	SILT LOAM
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☒ Yes	☐ No

Remarks: REFUSAL @ 10" DUE TO ROCK.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☒ No	Depth of: – (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: – (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: – (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDROLOGY IS NOT PRESENT @ SAMPLE PT.

W-SRC-44

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
AIIJ	PTC ALLEGHENY TUNNEL	08.07.12		W-SRC-44		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, KLE				CONNECTED TO STREAM S-SRC-77.		

1. Wetland Zone of Influence Condition Index

Wetland Zone of Influence (300 foot area around AA perimeter)	Condition Category: Optimal	Suboptimal		Marginal		Poor	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** if tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE__	20 19 18 17 16	15 14	13 12 11	10 9	8 7 6	5 4	3 2 1

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

Scoring:									
	% ZOI Area>	0.90	0.10					1.00	CI
	Score >	6	13					6.7	0.34

Comments:

POSSIBLY JURISDICTIONAL.

W-SRC-44 overview, facing north-northeast.

W-SRC-44 overview, facing southwest.

W-SRC-44 wetland soil test pit.

W-SRC-44 upland soil test pit.

WETLAND W-SRC-45

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 08.07.2012
Applicant/Owner: PTC	County: Somerset
Investigator(s): SRC, KLL	State: PA
Cowardin Classification (Percentage): PEM (100)	Wetland ID #: W SRC 45
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes ☐ No
Are "Normal Circumstances" present?	☐ Yes ☒ No
Are ☐ Vegetation, ☒ Soils, or ☒ Hydrology significantly disturbed (Atypical)? OLD LOGGING ROAD	
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?	
NWI Classification: — (if applicable)	

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☐ Within Stream Channel
☒ Hillslope Seep/Spring	☐ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☒ Other – OLD LOGGING RD.

Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: (4)	Photographs (with Direction of Photo or Description)
Open Ended Flag Nos. N/A	1 – WSW 3 – WETLAND PIT 2 – ENE 4 – UPLAND PIT
Remarks: CONNECTED TO S-SRC-77.	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks: SOILS & HYDRO DISTURBED - OLD LOGGING RD.					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION
WETLAND ID #: W-SRC-45

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	

#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	DEER TONGUE (DICHANTHELIUM CLANDES.)	40	Y	FAC
2	GR. LEAF GOLDENROD (EUTHAMIA (GRAMIN)	30	Y	FAC
3	CATTAILS (TYPHA LATIFOLIA)	10	N	OBL
4	WOOLGRASS (SCIRPUS CYPERINUS)	10	N	FACW
5	JEWELWEED (IMPATIENS CAPENSIS)	10	N	FACW
6	SENSITIVE FERN (ONOCLEA SENSIBILIS)	NOTED	N	FACW
7	ROAD CROWFOOT (RANUNCULUS ABORTIVUS)	NOTED	N	FACW
8	DWARF BURWEED (SICYOS ANGULATUS)	NOTED	N	OBL
9				
10				
		100	= Total Cover	

#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet	
# of Dominant Species that are OBL, FACW, or FAC?	2 (A)
Total # of Dominant Species across all Strata?	2 (B)
% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)

Prevalence Index Worksheet		
Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators		
Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SRC 45

SOILS

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 1	- / -	- / - / - / -		
1 - 6	10YR 4/2 / 90	7.5YR 4/6 / 10 / RM / PL	FEW, BRIGHT	CLAY W/ GRAVEL
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☐ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present?	☒ Yes	☐ No

Remarks: REFUSAL @ 6" DUE TO ROCK & COMPACTION.

DATA FORM – ROUTINE WETLAND DETERMINATION
WETLAND ID #: W-SRC-45

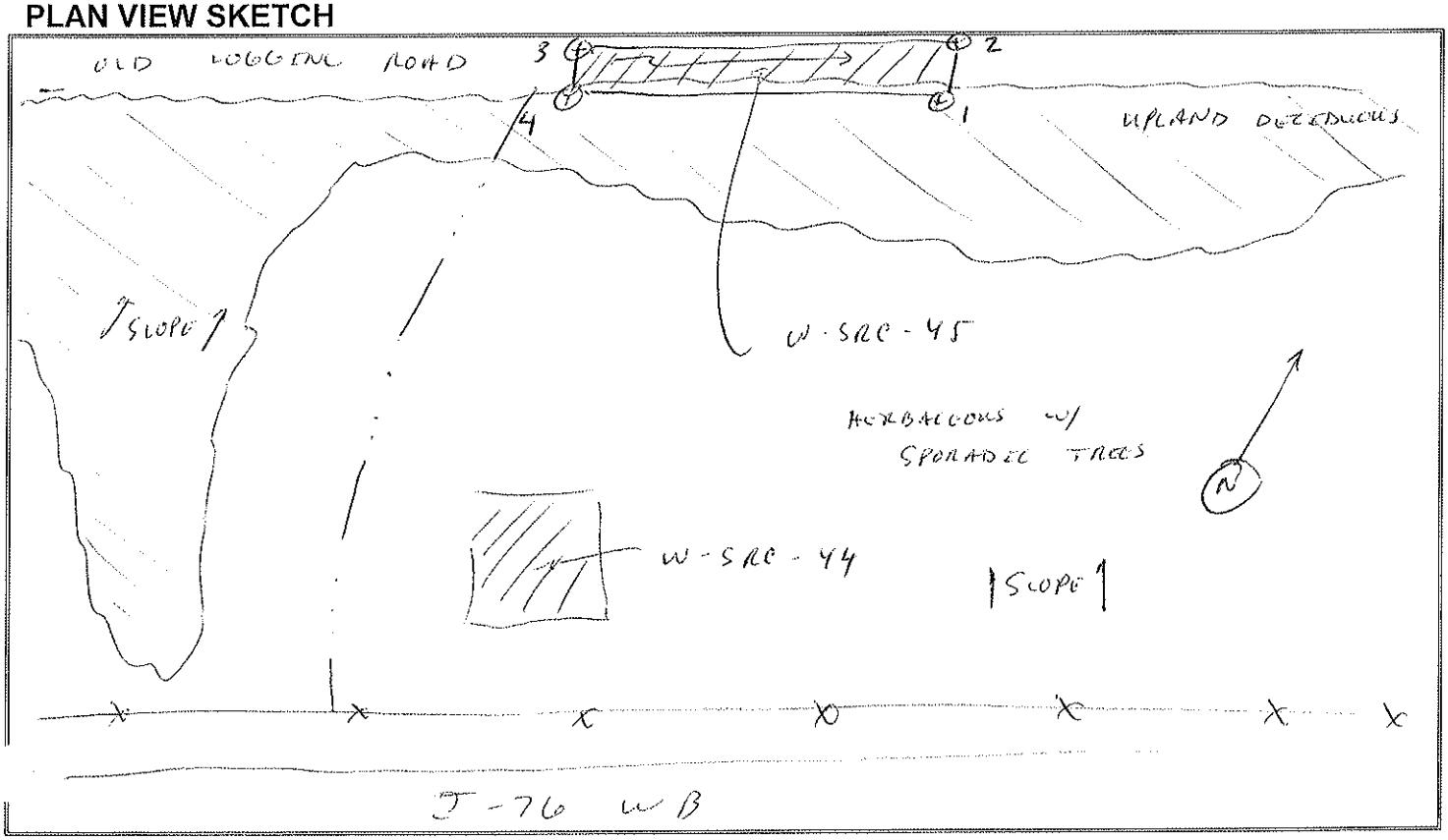
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☒ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☒ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☒ Yes	☐ No	Depth of: 3 (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: CONNECTED TO S-SRC-77. POSSIBLY JURIS

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: 1 Upland Data Point

W-SRC-45

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	WITCH HAZEL (HAMAMELIS VIRGINIANA)	40	Y	FACU
2	SWEET BIRCH (BETULA LENTA)	20	Y	FACU
3	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	20	Y	FACU
4	FALSE NETTLE (BOEHMERIA CYLINDRICA)	20	Y	FACW
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		☑ Yes	☐ No	

Remarks: WETLAND VEG. IS PRESENT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 1	- / -	- / - / - / -	-	-
1 - 8	2.5Y 5/4 / 100	- / - / - / -	-	SILT LOAM
-	/	/ / /		w/ ROCK

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☑ No

Remarks: REFUSAL @ 8" DUE TO ROCK / COMPACTION. WETLAND SOIL NOT PRESENT.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☒ No	Depth of: - (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: - (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: - (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDROLOGY IS NOT MET @ SAMPLE PT.

W·SRC·45

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
AIIJ	PTC ALLEGHENY TUNNEL	08.07.12		W·SRC·45		

Name(s) of Evaluator(s)	Lat (dd)	Long (dd)	Notes:
SRC, KLE			CONNECTED TO STREAM S·SRC·77.

1. Wetland Zone of Influence Condition Index

	Condition Category				
	Optimal	Suboptimal	Marginal		Poor	
Wetland Zone of Influence (300 foot area around AA perimeter)	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** if tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE___	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6			5 4 3 2 1	

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

Scoring:									CI
	% ZOI Area>	0.80	0.20					1.00 0%	
	Score >	5	3					4.6 0.00	0.00

0.23

Comments:

CONNECTED TO S·SRC·77 - POSSIBLY JURISDICTIONAL.

W-SRC-45 overview, facing east-northeast.

W-SRC-45 overview, facing west-southwest.

W-SRC-45 wetland soil test pit.

W-SRC-45 upland soil test pit.

WETLAND W-SRC-46

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel		Date: 08.08.2012	
Applicant/Owner: PTC		County: Somerset	
Investigator(s): SRC, KLE		State: PA	
Cowardin Classification (Percentage): PFO (100)		Wetland ID #: W SRC-4 G	
Climatic/Hydrologic Conditions Seasonally Typical?		☒ Yes	☐ No
Are "Normal Circumstances" present?		☒ Yes	☐ No
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?			
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?			
NWI Classification: --- (if applicable)			
Landform/Geomorphic Setting (Check All That Apply)			
☐ Built-up Land/Fill Area	☐ Terrace		
☐ Agricultural Drainage Swale	☒ Within Stream Channel		
☐ Hillslope Seep/Spring	☒ Floodplain		
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan		
☐ Closed Topographic Depression/Isolated System	☐ Delta		
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –		
Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None		
Latitude: Longitude:	Datum:		
No. of Flags: 10	Photographs (with Direction of Photo or Description)		
Open Ended Flag Nos. N/A	1 – NE 3 – WETLAND PIT		
	2 – WNW 4 – UPLAND PIT		
Remarks: CONNECTED TO S-SRC-56 AND S-SRC-82.			

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks: CANOPY @ 80%, PROVIDED BY TREES IMMEDIATELY OUTSIDE OF BOUNDS					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION **PAGE 2**

WETLAND ID #: W-SRC-46

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	

#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	CYPERUS STRIGOSUS	30	Y	FACW
2	JEWELWEED (IMPATIENS CAPENSIS)	30	Y	FACW
3	SMARTWEED (PERSICARIA HYDROPIPER)	10	N	OBL
4	DK-GR BINDWEED (SCIRPUS ATROVIRENS)	10	N	OBL
5				
6				
7				
8				
9				
10				
		80	= Total Cover	

#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet

# of Dominant Species that are OBL, FACW, or FAC?	2 (A)
Total # of Dominant Species across all Strata?	2 (B)
% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)

Prevalence Index Worksheet

Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators

Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

CANOPY @ 80%. PROVIDED BY SUGAR MAPLES, ELM, AND BEECH, ALL IMMED. OUTSIDE OF BOUNDARY PER USACE SUPPLEMENTS, 70% COVER PROVIDED BY TREES IMMED. OUTSIDE OF WETLANDS BOUND.

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SRC-46

SOILS

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 6	10YR 4/3 / 100	- / - / - / -	-	SILT w/ SAND
6 - 12+	10YR 3/2 / 95	7.5YR 3/4 / 5 / RM / M	FEW, DISTINCT	SILT w/ SAND
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☒ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☒ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present?	☒ Yes	☐ No
Remarks:		

WETLAND ID #: W-SRC-46

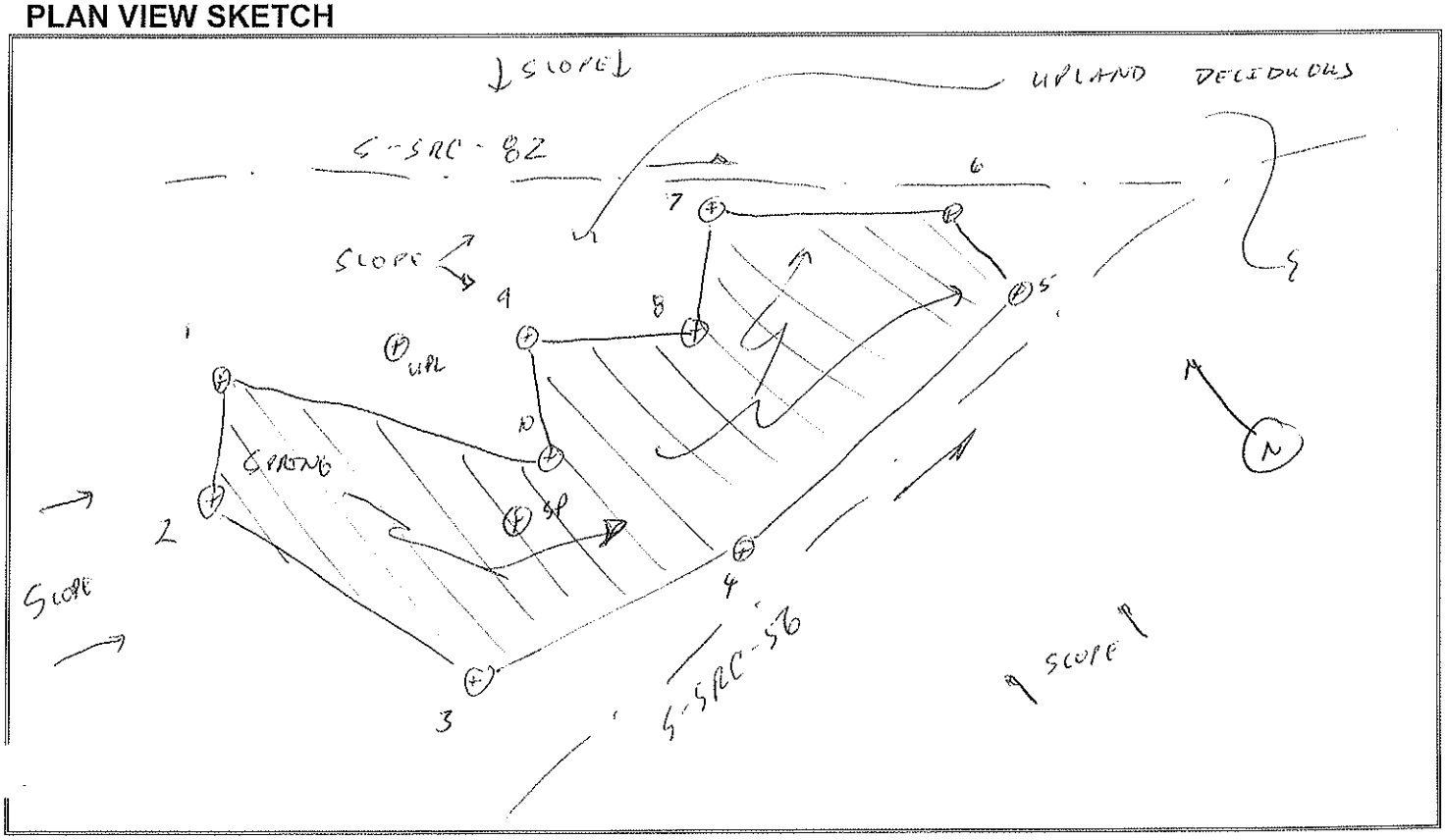
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☒ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☒ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☒ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☒ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☒ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☒ Yes	☐ No	Depth of: 8 (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: ASSOC. W/ S-SRC-56 AND S-SRC-82. POSSIBLY JURISDICTIONAL.

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: 2 W-SRC-46 **Upland Data Point**

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	SUGAR MAPLE (ACER SACCHARUM)	60	Y	FACU
2	STRIPED MAPLE (ACER PENSYLVANICUM)	40	Y	FACU
3				
4				
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		☐ Yes	☒ No	

Remarks: WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:				Drainage Class:
PROFILE DESCRIPTION				
Depth Range (in)	**Matrix Color / %**	**Mottle Color / % / Type / Loc**	**Mottle Abundance / Contrast**	**Texture**
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☒ No

Remarks: NO SAMPLE OBTAINED - ROCK (ALLUVIAL FROM S-SRC-56).

HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: – (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: – (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: – (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDROLOGY IS NOT PRESENT @ SAMPLE PT.

W-SRC-46

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
A115	PTC ALLEGHENY TUNNEL	08.08.12		W-SRC-46		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, KLE				CONNECTED TO STREAMS S-SRC-56/B2.		

1. Wetland Zone of Influence Condition Index

Wetland Zone of Influence (300 foot area around AA perimeter)	Condition Category: Optimal	Suboptimal		Marginal		Poor	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** If tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE __	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		5 4 3	2 1

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

Scoring:									
	% ZOI Area>	0.90	0.10					1.00 .00%	CI
	Score >	15	8					14.3 0.00	0.00

0.72

Comments:

POSSIBLY JURISDICTIONAL.

W-SRC-46 overview, facing northeast.

W-SRC-46 overview, facing west-northwest.

W-SRC-46 wetland soil test pit.

W-SRC-46 upland soil test pit.

WETLAND W-SRC-47

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 06.08.2012		
Applicant/Owner: PTC	County: Somerset		
Investigator(s): SRC, KLE	State: PA		
Cowardin Classification (Percentage): PFO (100)	Wetland ID #: W-SRC-47		
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes	☐ No	
Are "Normal Circumstances" present?	☒ Yes	☐ No	
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?			
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?			
NWI Classification: — (if applicable)			

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☐ Within Stream Channel
☐ Hillslope Seep/Spring	☐ Floodplain
☒ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –
Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: 6	Photographs (with Direction of Photo or Description)
Open Ended Flag Nos. N/A	1 – ESE 3 – WETLAND PET 2 – WNW 4 – UPLAND PET
Remarks: ASSOC. W/ S-SRC-86. POSSIBLY JURISDICTIONAL.	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks: CANOPY C ~ 75% - TREES OUTSIDE OF WETLAND BOUNDS.					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION **PAGE 2**

WETLAND ID #: W-SRC-47

√EGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	
#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	GLYCERIA MEXICANA	30	Y	OBL
2	FOWL MEADOW GR. (GLYCERIA STRICTA)	30	Y	OBL
3	DEVILWEED (EUPATORIUM CAPILLIFOLIUM)	15	N	FACW
4	DK. GR. BULRUSH (SCIRPUS ATROVIRENS)	10	N	OBL
5	CAREX SP.	NOTED	N	-
6				
7				
8				
9				
10				
		85	= Total Cover	
#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet		
# of Dominant Species that are OBL, FACW, or FAC?	2	(A)
Total # of Dominant Species across all Strata?	2	(B)
% of Dominant Species that are OBL, FACW, or FAC?	100	(A/B)

Prevalence Index Worksheet		
Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators		
Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

CANOPY @ 75% - SUGAR MAPLE & TULIP POPLAR IMMEDIATELY OUTSIDE OF BOUNDARY, PER USACE REG. SUPPL. 2.70% CANOPY IN TREES IMMED. OUTSIDE OF WETLAND BOUNDS → PFO

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SAC-47

SOILS

Soil Survey Map Unit Name/Symbol: - | Drainage Class: -

Taxonomy: - | Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 4	7.5YR 3/2 / 100	- / - / - / -	-	SILT w/ SAND
4 - 12+	10YR 3/2 / 70	2.5YR 4/8 / 30 / RM / PL	COMMON, BRIGHT	SILT w/SAND & GRAVEL
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☐ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present? ☒ Yes ☐ No

Remarks: HEAVY SEDIMENT DEPOSITION - TOE OF SLOPE.

DATA FORM – ROUTINE WETLAND DETERMINATION
WETLAND ID #: W-SRC-47

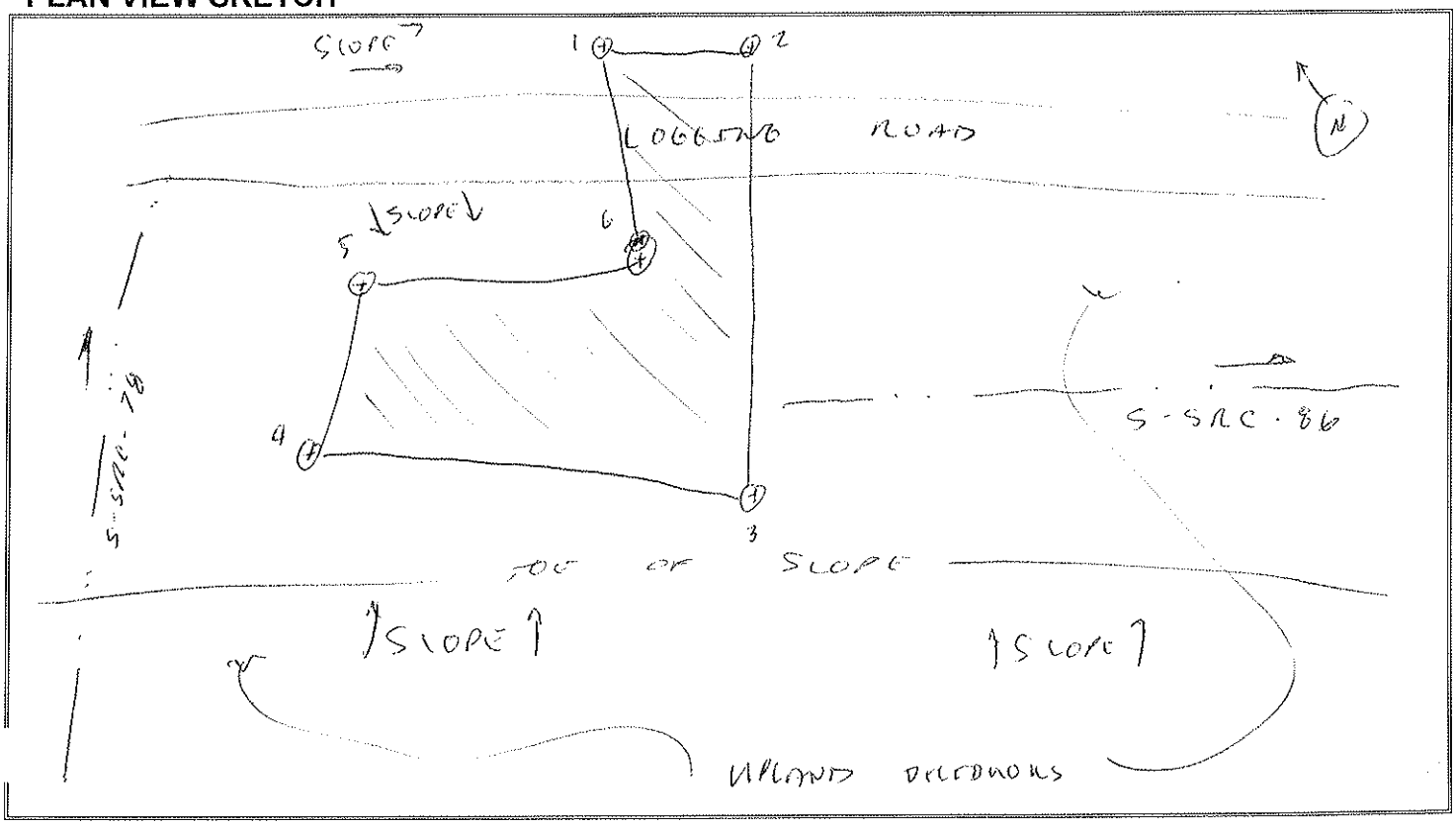
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☒ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☒ Drainage Patterns
☒ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☒ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☒ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: ASSOCIATED W/ S-SRC-86. POSSIBLY JURISDICTIONAL

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point W-SRC-47

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	STRIPED MAPLE (ACER PENNSYLVANICUM)	40	Y	FACU
2	WITCH HAZEL (HAMAMELIS VIRGINIANA)	20	Y	FACU
3	BASSWOOD (TILIA AMERICANA)	20	Y	FACU
4	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	20	Y	FACU
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		☐ Yes	☒ No	

Remarks: WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☒ No

Remarks: REFUSAL @ 2" DUE TO ROOTS AND ROCK - NO SAMPLE TAKEN.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: — (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDROLOGY IS NOT PRESENT @ SAMPLE PT.

W-SRC-47

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
A11J	PTC ALLEGHENY TUNNEL	08.08.12		W-SRC-47		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, KLG				ADJ. TO STREAM S-SRC-86		

1. Wetland Zone of Influence Condition Index

Wetland Zone of Influence (300 foot area around AA perimeter)	Condition Category: Optimal	Suboptimal		Marginal		Poor	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** If tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE ___	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		5 4 3 2 1	

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

Scoring:										
	% ZOI Area>	1.00							100 .0%	CI
	Score >	5							5 0.00	~~0.00~~ 0.25

Comments:

ADJ. TO S-SRC-86 - POSSIBLY JURISDICTIONAL.

W-SRC-47 overview, facing east-southeast.

W-SRC-47 overview, facing west-northwest.

W-SRC-47 wetland soil test pit.

W-SRC-47 upland soil test pit.

WETLAND W-SRC-48

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 08.08.2012
Applicant/Owner: PTC	County: Somerset
Investigator(s): SRC, RLC	State: PA
Cowardin Classification (Percentage): PFO (100)	Wetland ID #: W-SRC-4B
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes ☐ No
Are "Normal Circumstances" present?	☒ Yes ☐ No
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?	
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?	
NWI Classification: — (if applicable)	

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☒ Within Stream Channel
☒ Hillslope Seep/Spring	☐ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –
Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: (4)	Photographs (with Direction of Photo or Description)
Open Ended Flag Nos. N/A	1 – SSE 3 – WETLAND PET 2 – WSW 4 – UPLAND PET
Remarks: ASSOC. W/ S-SRC-86. POSSIBLY JURISDICTIONAL.	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks: CANOPY @ 80%. TREES OUTSIDE OF WETLAND BOUND					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION **PAGE 2**

WETLAND ID #: W-SRC-48

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	
#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	BASSWOOD (TILIA AMERICANA CAROLINIANA)	40	Y	FACU
2	CIRCAEA MOLLIFOLIA	30	Y	OBL
3	CAREX SP.	10	N	—
4				
5				
6				
7				
8				
9				
10				
		80	= Total Cover	
#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet		
# of Dominant Species that are OBL, FACW, or FAC?	2	(A)
Total # of Dominant Species across all Strata?	2	(B)
% of Dominant Species that are OBL, FACW, or FAC?	100	(A/B)

Prevalence Index Worksheet		
Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators		
Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

CANOPY @ 80% - PROVIDED BY BASSWOOD AND SUGAR MAPLE IMMEDIATELY OUTSIDE OF WETLAND BOUNDS; PER USACE REG. SUPPLEMENT, 270% CANOPY COVER PROVIDED BY TREES IMMED. OUTSIDE OF WETLAND BOUNDS → PFO

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: WD - SRC - 48

SOILS

Soil Survey Map Unit Name/Symbol: - | Drainage Class: -

Taxonomy: - | Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 4	10YR 3/2 / 100	- / - / - / -	-	SILT LOAM
4 - 10	2.5Y 3/2 / 90	10YR 3/6 / 10 / RM / PL	FEW, DISTINCT	SILT LOAM w/ GRAVEL & SAND
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☐ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present? ☒ Yes ☐ No

Remarks: REFUSAL @ 10" DUE TO ROCK

DATA FORM – ROUTINE WETLAND DETERMINATION
WETLAND ID #: W - SRC - 48

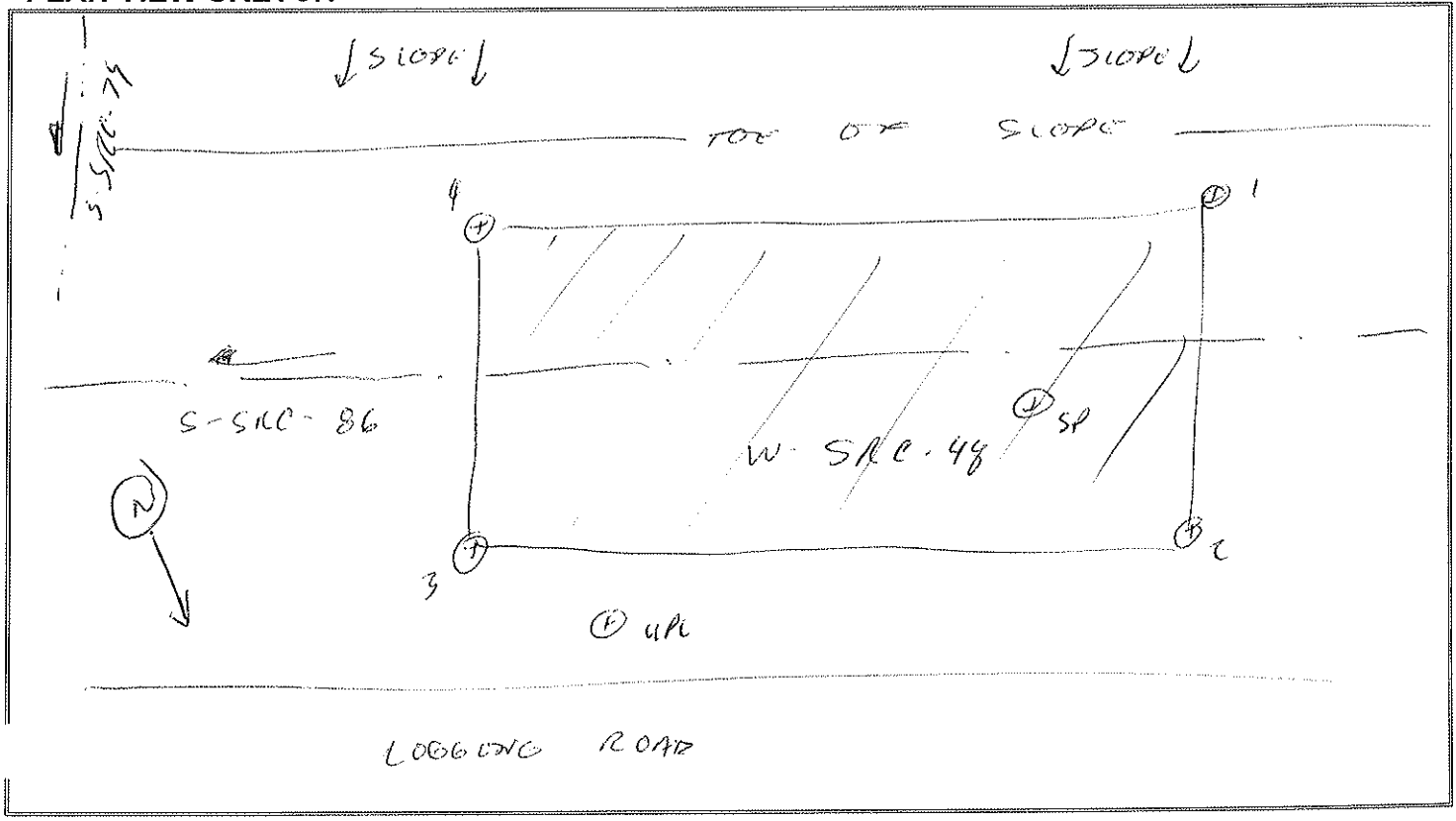
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☑ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☑ Saturation (A3)	☒ Drainage Patterns
☑ Water Marks (B1)	☐ Moss Trim Lines (B16)
☑ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☑ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☑ Yes	☐ No	Depth of: 2 (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☑ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☑ Yes	☐ No	

Remarks: ASSOC. W/ S - SRC - 86 . POSSIBLY JURISDICTIONAL.

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point ← W-SRC-45

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	SUGAR MAPLE (ACER SACCHARUM)	70	Y	FACU
2	BLACKWOOD (TILIA AMERICANA)	30	Y	FACU
3				
4				
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		☐ Yes	☒ No	

Remarks: WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 5	7.5YR 3/2 / 100	- / - / - / -	-	SILT LOAM
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☒ No

Remarks: REFUSAL @ 5" DUE TO ROOTS / ROCK.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☒ No	Depth of: ~ (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: ~ (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: ~ (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDRO NOT PRESENT @ SAMPLE PT.

W·SRC·48

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
A11J	PTC ALLEGHENY TUNNEL	08.08.12		W SRC·48		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, KLE				ADJ. TO STREAM S·SRC·86		

1. Wetland Zone of Influence Condition Index

Wetland Zone of Influence (300 foot area around AA perimeter)	Condition Category: Optimal	Suboptimal		Marginal		Poor	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** If tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries, no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE__	20 19 18 17 16	15 14	13 12 11	10 9	8 7 6	5 4 3	2 1

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

Scoring:									
	% ZOI Area>	0.75	0.25					1.00 0%	CI
	Score >	15	5					12.5 0.00	0.63

Comments:

POSSIBLY JURISDICTIONAL.

W-SRC-48 overview, facing south-southeast.

W-SRC-48 overview, facing west-southwest.

W-SRC-48 wetland soil test pit.

W-SRC-48 upland soil test pit.

WETLAND W-SRC-49

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 06.09.2012		
Applicant/Owner: PTC	County: Somerset		
Investigator(s): SRC KLE	State: PA		
Cowardin Classification (Percentage): PEO (100)	Wetland ID #: W-SRC-49		
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes	☐ No	
Are "Normal Circumstances" present?	☒ Yes	☐ No	
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?			
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?			
NWI Classification: — (if applicable)			

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☒ Within Stream Channel
☐ Hillslope Seep/Spring	☐ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –

Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: (3)	Photographs (with Direction of Photo or Description)
Open Ended Flag Nos. N/A	1 – SSE 3 – WETLAND PIT 2 – SW 4 – UPLAND PIT
Remarks: CONNECTED TO S-SRC-86 - POSSIBLY JURISDICTIONAL.	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks: CANOPY @ 75% - PROVIDED BY TREES OUTSIDE OF WETLAND BOUNDS					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W - SRC - 49

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	
#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	GLYCERIA MELICARIA	40	Y	OBL
2	FOWL MEADOW GR (GLYCERIA STRIATA)	40	Y	OBL
3	JEWELWEED (IMPATIENS CAPENSIS)	20	Y	FACW
4	CAREX SP.	NOTED	N	—
5				
6				
7				
8				
9				
10				
		100	= Total Cover	
#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet		
# of Dominant Species that are OBL, FACW, or FAC?	3 (A)	
Total # of Dominant Species across all Strata?	3 (B)	
% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)	

Prevalence Index Worksheet		
Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators		
Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

CANOPY @ 75% - PROVIDED BY SUGAR MAPLE AND BIRCH, ALL IMMEDIATELY OUTSIDE OF WETLAND BOUNDARY. PER USACE REG. SUPP., ≥ 70% CANOPY PROVIDED BY TREES IMMED. OUTSIDE OF WETLAND BOUNDS → PFO.

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SRC-49

SOILS

Soil Survey Map Unit Name/Symbol: - | Drainage Class: -

Taxonomy: - | Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 4	10YR 3/2 / 90	7.5YR 3/4 / 10 / RM / M	COMMON, DISTINCT	SIL w/ SAND
4 - 8	7.5YR 3/2 / 95	7.5YR 3/4 / 5 / RM / M	FEW, DISTINCT	SIL w/ SAND & GRAVEL
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☐ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present? ☒ Yes ☐ No

Remarks: REFUSAL @ 8" DUE TO ROCK - ALLUVIUM?

WETLAND ID #: W - SRC - 49

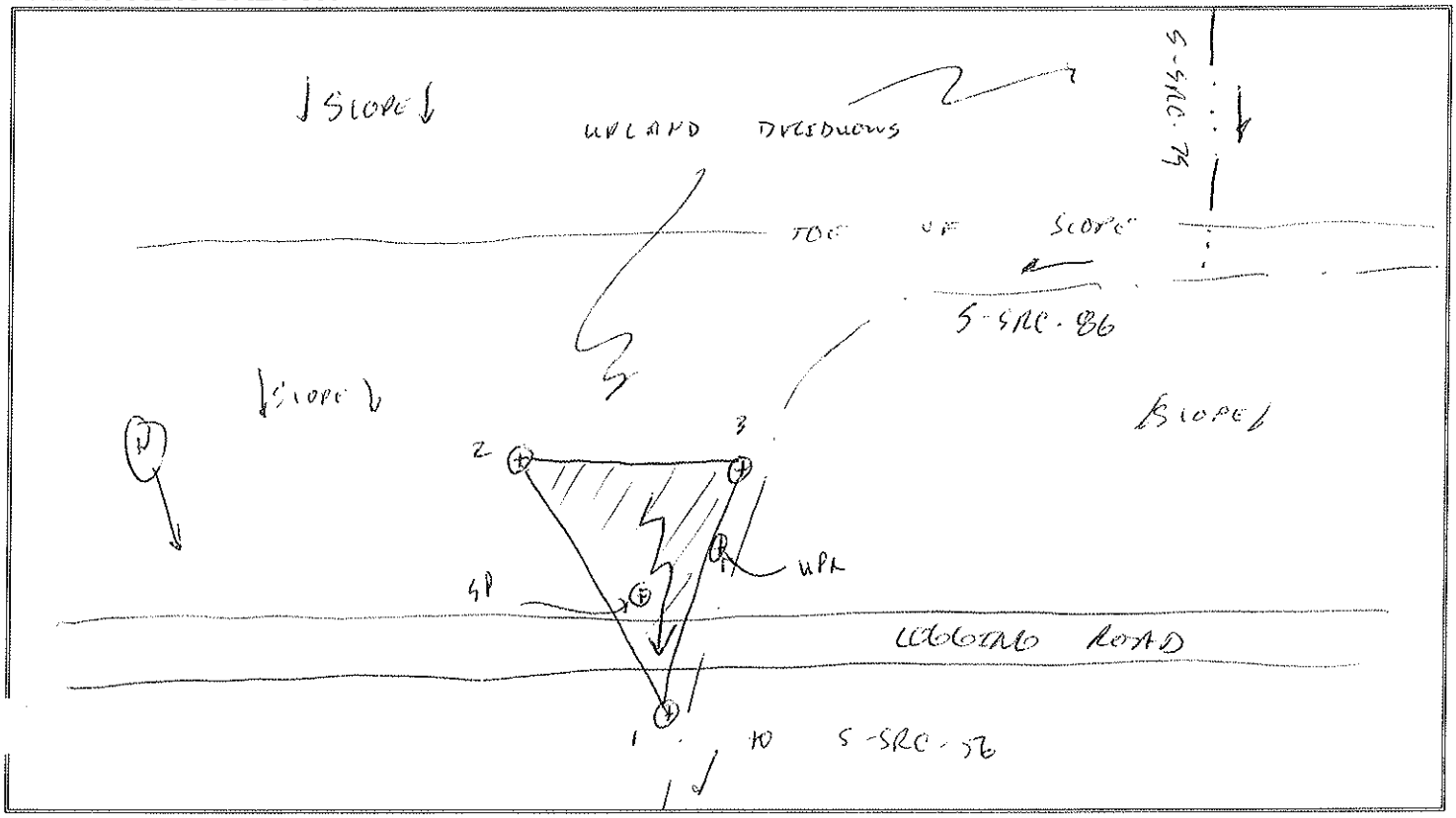
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☑ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☑ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☑ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☑ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: CONNECTED TO S-SRC-86. POSSIBLY JURISDICTIONAL.

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point W-SAC-49

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	SUGAR MAPLE (ACER SACCHARUM)	60	-	FACU
2	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	20	-	FACU
3	GREENBRIER (SMILAX SP.)	NOTED		-
4				
5				
6				
			= Total Cover	
Wetland Vegetation Present?		☐ Yes	☒ No	

Remarks: WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT

SOILS

Soil Survey Map Unit Name/Symbol:			Drainage Class:	
PROFILE DESCRIPTION				
Depth Range (in)	**Matrix Color / %**	**Mottle Color / % / Type / Loc**	**Mottle Abundance / Contrast**	**Texture**
0 - 2	- / -	- / - / - / -	-	-
2 - 6	7.5YR 3/3 / 100	- / - / - / -	-	SILT LOAM w/ SAND
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☒ No

Remarks: REFUSAL @ 6" DUE TO ROCK. WETLAND SOIL IS NOT PRESENT

HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: - (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: - (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: - (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDRO IS NOT PRESENT @ SAMPLE PT.

W-SRC-49

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
AIIS	PTC ALLEGHENY TUNNEL	08.09.12		W-SRC-49		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, ICLE				CONNECTED TO STREAM S-SRC-86		

1. Wetland Zone of Influence Condition Index

	Condition Category				
Wetland Zone of Influence (300 foot area around AA perimeter)	**Optimal**	**Suboptimal**		**Marginal**		**Poor**	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** If tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE ___	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		5 4 3	2 1

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

Scoring:									
	% ZOI Area>	0.90	0.10					1.00%	CI
	Score >	15	5					14.00	0.70

Comments:

POSSIBLY JURISDICTIONAL.

W-SRC-49 overview, facing south-southeast.

W-SRC-49 overview, facing southwest.

W-SRC-49 wetland soil test pit.

W-SRC-49 upland soil test pit.

WETLAND W-SRC-50

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 08.09.2012	
Applicant/Owner: PTC	County: Somerset	
Investigator(s): SRC, JLE	State: PA	
Cowardin Classification (Percentage): PFO (100)	Wetland ID #: W-SRC-SD	
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes	☐ No
Are "Normal Circumstances" present?	☒ Yes	☐ No
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?		
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?		
NWI Classification: — (if applicable)		

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☒ Within Stream Channel
☐ Hillslope Seep/Spring	☐ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –

Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: (3)	Photographs (with Direction of Photo or Description)
Open Ended Flag Nos. N/A	1 – W 3 – WETLAND PIT
	2 – E 4 – UPLAND PIT
Remarks: CONNECTED TO S-SRC-87. POSSIBLY JURISDICTIONAL	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			
Remarks: CANOPY @ 80% – TREES IMMED. OUTSIDE OF WETLAND BOUNDS!					

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W - SPC - SD

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	

#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	

#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	DK COR. BULRUSH (*SCIRPUS ATROVIRENS*)	25	Y	OBL
2	JEWEL WEED (*IMPATIENS CAPENSIS*)	25	Y	FACW
3	MOOSEWORT (*LYSIMACHIA NUMMULARIA*)	25	Y	FACW
4	SMART WEED (*PERSICARIA HYDROPIPER*)	10	N	OBL
5	CAREX MESOCARPA	10	N	OBL
6				
7				
8				
9				
10				
		95	= Total Cover	

#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet

# of Dominant Species that are OBL, FACW, or FAC?	3 (A)
Total # of Dominant Species across all Strata?	3 (B)
% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)

Prevalence Index Worksheet

Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators

Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

CANOPY @ 80% - PROVIDED BY SUGAR MAPLES & TULIP POPLAR, IMMED. OUTSIDE OF WETLAND BOUND. PER USACE REG. SUPPL., >70% CANOPY PROVIDED BY TREES IMMED. OUTSIDE OF WETLAND BOUNDS → FAC.

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W - SRC - 50

SOILS

Soil Survey Map Unit Name/Symbol: -

Drainage Class: -

Taxonomy: -

Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 4	2.5Y 3/3 / 100	- / - / - / -	-	SILT w/ SAND
4 - 6	10YR 2/1 / 95	5YR 3/4 / 5" / RM / M	FEW, DULL	SILT w/ SAND + GRAVEL
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☐ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☒ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present? ☒ Yes ☐ No

Remarks: REFUSAL @ 6" DUE TO ROCK - ALLUVIUM?

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W · SRC - S7

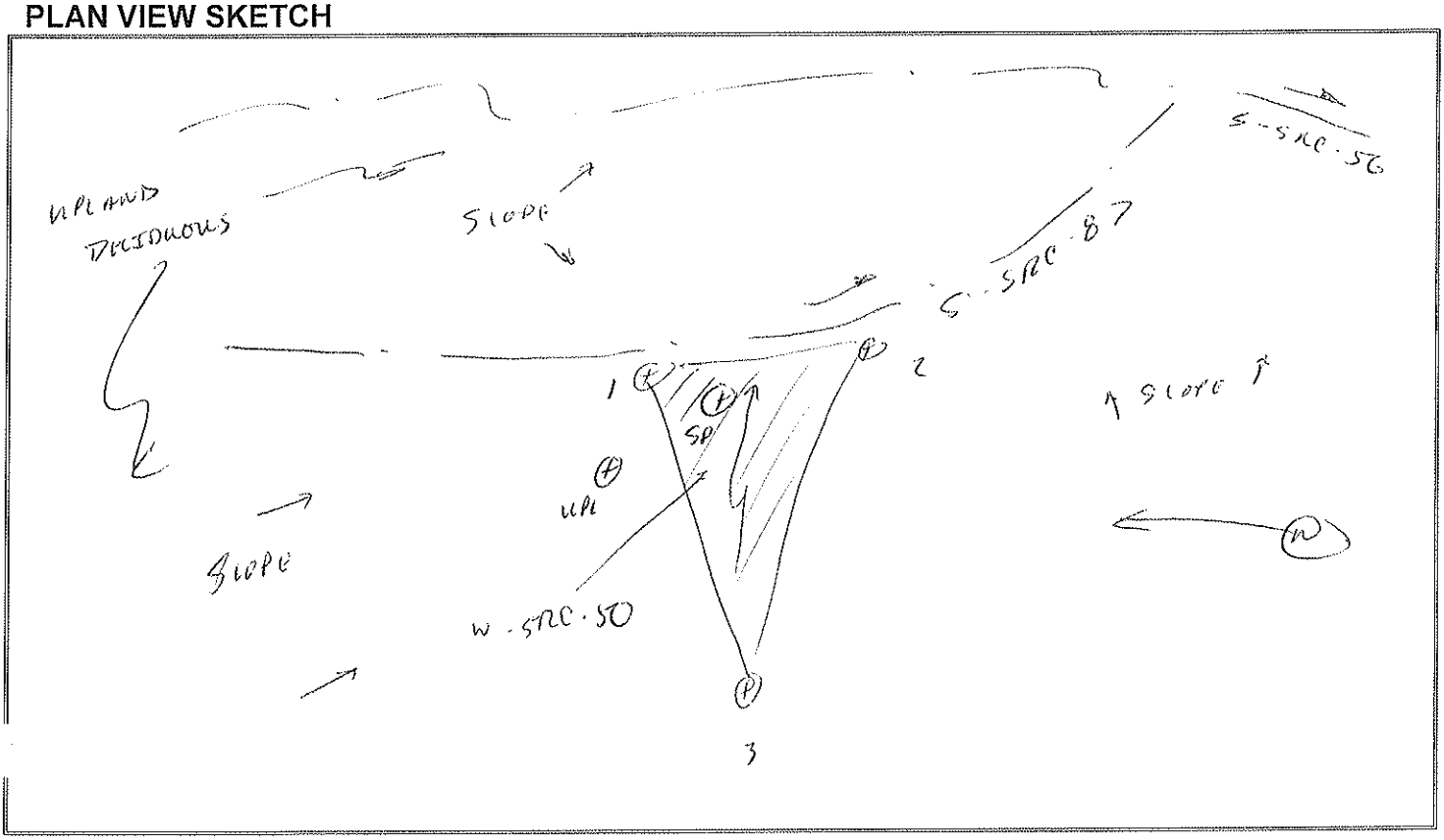
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☒ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☒ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: ~ (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: - (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: CONNECTED TO S-SRC-87. POSSIBLY JURISDICTIONAL.

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: 2 Upland Data Point W-SRC-52

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	SUGAR MAPLE (ACER SACCHARUM)	80	Y	FACU
2	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	20	Y	FACU
3				
4				
5				
6				
			= Total Cover	
Wetland Vegetation Present?		☐ Yes	☑ No	

Remarks: WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 1	- / -	- / - / - / -	-	-
1 - 8	10YR 2/1 / 100	- / - / - / -	-	SILT LOAM
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☑ No

Remarks: REFUSAL @ 8" DUE TO TREE ROOTS.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☑ No	Depth of: - (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: - (in)
Saturated Soils Present?	☐ Yes	☑ No	Depth to: - (in)
Wetland Hydrology Present?	☐ Yes	☑ No	

Remarks: WETLAND HYDRO IS NOT PRESENT @ SAMPLE PT.

W·SRC·50

Wetland Condition Assessment Form

Pennsylvania Wetland Condition Level 1 Rapid Assessment Version 1.0

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

Project #	Project Name	Date	Proposed Impact Size (acres)	AA #	AA Size (acres)	
AIIJ	PTC ALLEGHENY TUNNEL	08.09.12		W·SRC·50		
Name(s) of Evaluator(s)		**Lat (dd)**	**Long (dd)**	**Notes:**		
SRC, IICE				CONNECTED TO STREAM S·SRC·87		

1. Wetland Zone of Influence Condition Index

Wetland Zone of Influence (300 foot area around AA perimeter)	Condition Category: Optimal	Suboptimal		Marginal		Poor	
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Any areas comprised of wetlands or stream channels are also classified as optimal.	**High Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	**Low Suboptimal:** ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber hravesting cutover (< 5 years)	**High Marginal:** Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, ZOI areas lacking shrub and tree stratum **or** if tree stratum present, has <30% canopy cover with a maintained understory.	**High Poor:** Lawns, mowed and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
SCORE ___	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		5 4 3 2 1	

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

Scoring:										
	% ZOI Area>	1.00							1.00	CI
	Score >	15							15.0	0.00

0.75

Comments:

CONNECTED TO S·SRC·87 - POSSIBLY JURISDICTIONAL.

W-SRC-50 overview, facing east.

W-SRC-50 overview, facing west.

W-SRC-50 wetland soil test pit.

W-SRC-50 upland soil test pit.

WETLAND W-SRC-51

WETLAND DETERMINATION DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USCOE Wetlands Delineation Manual and Associated Regional Supplement)

Project/Site: Allegheny Tunnel	Date: 08.09.2012		
Applicant/Owner: PTC	County: Somerset		
Investigator(s): SRC, KLE	State: PA		
Cowardin Classification (Percentage): PFO (100)	Wetland ID #: W-SRC-57		
Climatic/Hydrologic Conditions Seasonally Typical?	☒ Yes	☐ No	
Are "Normal Circumstances" present?	☒ Yes	☐ No	
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology significantly disturbed (Atypical)?			
Are ☐ Vegetation, ☐ Soils, or ☐ Hydrology naturally Problematic?			
NWI Classification: — (if applicable)			

Landform/Geomorphic Setting (Check All That Apply)	
☐ Built-up Land/Fill Area	☐ Terrace
☐ Agricultural Drainage Swale	☒ Within Stream Channel
☐ Hillslope Seep/Spring	☐ Floodplain
☐ Toe-of-Slope/Hydrologic Jump	☐ Alluvial Fan
☐ Closed Topographic Depression/Isolated System	☐ Delta
☒ Hydrologically Connected to Other Aquatic Resources	☐ Other –

Slope: 5 %	Land Relief: ☒ Concave ☐ Convex ☐ None
Latitude: Longitude:	Datum:
No. of Flags: (3)	Photographs (with Direction of Photo or Description)
Open Ended Flag Nos. N/A	1 – WNW 3 – WETLAND PET
	2 – SE 4 – WETLAND PET

Remarks: CONNECTED TO S-SRC-56 AND S-SRC-90.

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is the Sampled Area Within a Wetland?	☒ Yes	☐ No
Hydric Soils Present?	☒ Yes	☐ No			
Wetland Hydrology Present?	☒ Yes	☐ No			

Remarks: CANOPY @ ~ 70% - TREES IMMED. OUTSIDE OF WETLAND.

NOTE:

- **Please draw a Plan View sketch (in the space provided on Page 4) of the wetland and surrounding area that includes the wetland's boundaries (provide flag numbers), any associated natural or man-made features (i.e., forest, ag fields, homes, roads, utility lines, etc.), connectivity to adjacent/abutting stream, and the locations of the wetland and upland soil pits. Also, please illustrate the general location of PEM, PSS, PFO, POW, PUB wetland components within the boundary of the wetland complex.**
- **Please complete the upland data sheet for each wetland found at the end of this form.**
- **Please GPS the wetland and upland soil pits and locate on the plan view map the location/direction (with arrows) of photos taken.**
- **Please make note of the wetland's connectivity to a jurisdictional water of the US (i.e., TNW [perennial & canoeable or larger stream], RPW [smaller perennial or intermittent stream], non-RPW [intermittent or ephemeral stream]) or whether it is an isolated system.**

DATA FORM – ROUTINE WETLAND DETERMINATION **PAGE 2**

WETLAND ID #: W. SRC - 5'

VEGETATION

#	Tree Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
6				
			= Total Cover	
#	Sapling Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Shrub Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
3				
4				
5				
			= Total Cover	
#	Herb Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	ROUGH LEAF GOLDENROD (SOLIDAGO PATULA)	20	Y	OBL
2	FOUR LEAVED OR (CLYCONIA STOLONIFERA)	20	Y	OBL
3	WOODLAND (IMPATIENS CAPENSIS)	20	Y	FACW
4	MONEY WORT (LYSIMACHIA NUMMULARIA)	20	Y	FACW
5	CLEARWEED (BOEHMERIA MACULATA)	10	N	FACW
6	WOOD SORREL (OXALIS SP.)	10	N	-
7				
8				
9				
10				
		100	= Total Cover	
#	Woody Vine Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1				
2				
			= Total Cover	

Dominance Test Worksheet		
# of Dominant Species that are OBL, FACW, or FAC?	4	(A)
Total # of Dominant Species across all Strata?	4	(B)
% of Dominant Species that are OBL, FACW, or FAC?	100	(A/B)

Prevalence Index Worksheet		
Total % Cover of:	Mult. by:	
OBL species	1 =	
FACW species	2 =	
FAC species	3 =	
FACU species	4 =	
UPL species	5 =	
Coln. Totals: (A)		(B)
Prevalence Index =	B/A =	

Hydrophytic Vegetation Indicators		
Rapid Test for Hydrophytic Veg.	☒ Yes	☐ No
Dominance Test is >50%	☒ Yes	☐ No
Prevalence Index is ≤3.0	☐ Yes	☐ No
Morphological Adaptations	☐ Yes	☒ No
Problematic Hydrophytic Veg	☐ Yes	☒ No

Vegetation Strata Definitions

Tree – Woody plant 20+ feet high & 3+ in. dbh

Sapling – Woody plant 20+ feet high & <3 in. dbh

Shrub – Woody plant ~3-20 feet high

Woody Vine – All woody vines

Hydrophytic Vegetation Present?	☒ Yes	☐ No

Remarks:

CANOPY @ 70% - SUGAR MAPLE & STRIPED MAPLE IMMED. OUTSIDE OF WETLAND BOUNDARY. PER USACE REG. SUPPL., ≥ 70% CANOPY PROVIDED BY TREES IMMED. OUTSIDE OF WETLAND BOUNDS → PFO.

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: W-SRC-51

SOILS

Soil Survey Map Unit Name/Symbol: - | Drainage Class: -

Taxonomy: - | Field Observations Confirm Mapped Type: ☐ Yes ☒ No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	
2 - 4	10YR 3/2 / 80	10YR 3/6 / 20 / RM / PL	COMMON, DISTINCT	SILT W/ SAND
4 - 10	10YR 3/1 / 80	10YR 4/4 / 20 / RM / PL	COMMON, DISTINCT	SILT W/ SAND & GRAVEL
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

HYDRIC SOIL INDICATORS (Check All That Apply)

☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)
☐ Sulfidic Odor (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5)	☑ Depleted Matrix (F3)
☐ 2 cm of Muck (A10)	☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1)	☐ Iron-Manganese Masses (F12)
☐ Sandy Gleyed Matrix (S4)	☐ Umbric Surface (F13)
☐ Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19)
☐ Stripped Matrix (S6)	☐ Other
☐ Dark Surface (S7)	

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

☐ 2 cm Muck (A10)	☐ Very Shallow Dark Surface (TF12)
☐ Piedmont Floodplain Soils (F19)	☐ Other
☐ Red Parent Material (TF2)	

Hydric Soil Present? ☑ Yes ☐ No

Remarks: Hydric Soil Due to Rock - Alluvium

WETLAND ID #: W · SRC · 51

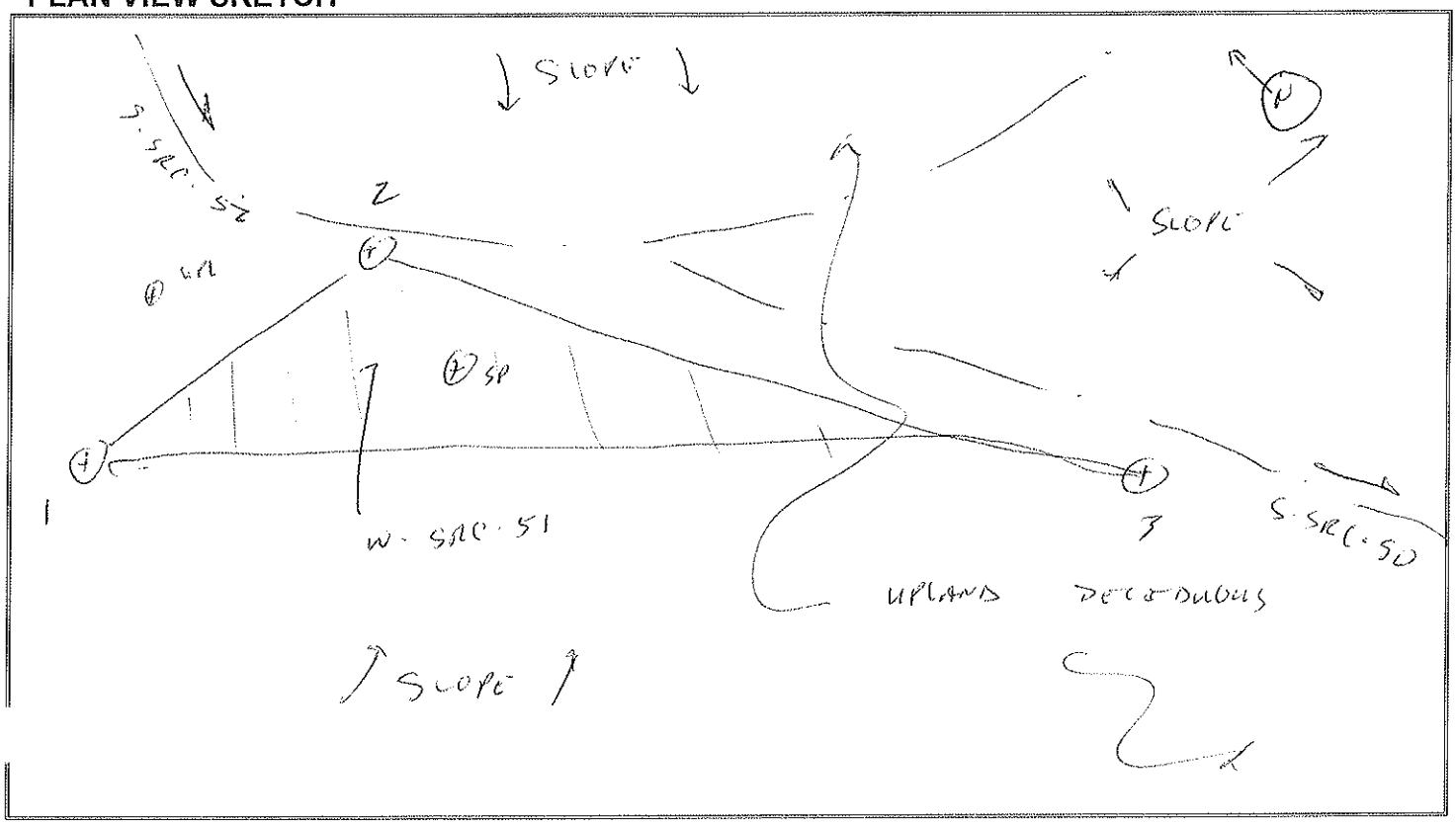
HYDROLOGY

WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	**Secondary Indicators (2 or more required)**
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☒ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☒ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☒ Geomorphic Position (D2)
☒ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☒ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☒ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☒ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS			
Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☒ Yes	☐ No	Depth of: 8 (in)
Saturated Soils Present?	☒ Yes	☐ No	Depth to: 0 (in)
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks: CONNECTED TO S-SRC-56 AND S-SRC-90

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point

W-SRC-57

VEGETATION

#	All Stratum Species Common Name (*Genus species*)	Absolute % Cover	Dominant Species	Indicator
1	SUGAR MAPLE (ACER SACCHARUM)	40	Y	FACU
2	STRIPED MAPLE (ACER PENSYLVANICUM)	40	Y	FACU
3	AM BEECH (FAGUS GRANDIFOLIA)	10	N	FACU
4	SPICE BUSH (LINDERA BENZOIN)	10	N	FAC
5				
6				
			= Total Cover	
Wetland Vegetation Present?		☐ Yes	☒ No	

Remarks: WETLAND VEG IS PRESENT, BUT NOT DOMINANT @ SAMPLE PT.

SOILS

Soil Survey Map Unit Name/Symbol:	Drainage Class:

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 8	10YR 4/2 / 100	- / - / - / -	-	SILT LOAM
-	/	/ / /		

Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains

Location: PL = Pore Lining and M = Matrix

Hydric Soil Present?	☐ Yes	☒ No

Remarks: REDUCTION @ 8" DUE TO TREE ROOTS. WETLAND SOILS NOT PRESENT.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (1 or more required)	Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Drainage Patterns
☐ Water Marks (B1)	☐ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Geomorphic Position (D2)
☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard
☐ Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
☐ True Aquatic Plants (B14)	☐ FAC-Neutral Test
☐ Hydrogen Sulfide Odor (C1)	☐ Other
☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Recorded Data (Describe in Remarks)
☐ Presence of Reduced Iron (C4)	☐ Stream, Lake, or Tidal Gauge
☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Aerial Photographs
☐ Thin Muck Surface (C7)	☐ Other - (i.e., well data)
☐ Other	☒ No Recorded Data Available

FIELD OBSERVATIONS

Surface Water Present?	☐ Yes	☒ No	Depth of: — (in)
Water Table Present in Pit?	☐ Yes	☒ No	Depth of: — (in)
Saturated Soils Present?	☐ Yes	☒ No	Depth to: — (in)
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks: WETLAND HYDRO NOT PRESENT @ SAMPLE PT.