





**W-SRC-51 overview, facing southeast.**



**W-SRC-51 overview, facing west-northwest.**



**W-SRC-51 wetland soil test pit.**



**W-SRC-51 upland soil test pit.**

**WETLAND W-SRC-52**

**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): SAC, JLE		State: PA	
Cowardin Classification (Percentage): PEM (100%)		Wetland ID #: W SAC-52	
Climatic/Hydrologic Conditions Seasonally Typical?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are "Normal Circumstances" present?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology significantly disturbed (Atypical)?			
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology naturally Problematic?			
NWI Classification: --- (if applicable)			
Landform/Geomorphic Setting (Check All That Apply)			
<input type="checkbox"/> Built-up Land/Fill Area	<input type="checkbox"/> Terrace		
<input type="checkbox"/> Agricultural Drainage Swale	<input type="checkbox"/> Within Stream Channel		
<input type="checkbox"/> Hillslope Seep/Spring	<input type="checkbox"/> Floodplain		
<input type="checkbox"/> Toe-of-Slope/Hydrologic Jump	<input type="checkbox"/> Alluvial Fan		
<input checked="" type="checkbox"/> Closed Topographic Depression/Isolated System	<input type="checkbox"/> Delta		
<input type="checkbox"/> Hydrologically Connected to Other Aquatic Resources	<input checked="" type="checkbox"/> Other - LOG LANDING		
Slope: 5-10 %		Land Relief: <input checked="" type="checkbox"/> Concave <input type="checkbox"/> Convex <input type="checkbox"/> None	
Latitude: Longitude:		Datum:	
No. of Flags: 4		Photographs (with Direction of Photo or Description)	
Open Ended Flag Nos. N/A		1- W                      3- WETLAND PIT 2- NE                    4- UPLAND PIT	
Remarks: APPARENTLY ISOLATED - NO NOTED INLET / OUTLET			

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is the Sampled Area Within a Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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-52

**SOILS**

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**PROFILE DESCRIPTION**

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 2	- / -	- / - / - / -	-	-
2 - 4	10YR 4/2 100	- / - / - / -	-	SILT LOAM
4 - 10	10YR 3/1 40	7.5YR 3/2 60 / RM / M	MANY, DULL	SILT LOAM w/ 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)**

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

**INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)**

<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Piedmont Floodplain Soils (F19)	<input type="checkbox"/> Other
<input type="checkbox"/> Red Parent Material (TF2)	

Hydric Soil Present?  Yes  No

Remarks: *Not used @ 10" due to rock / construction*

WETLAND ID #: W-SAC-52

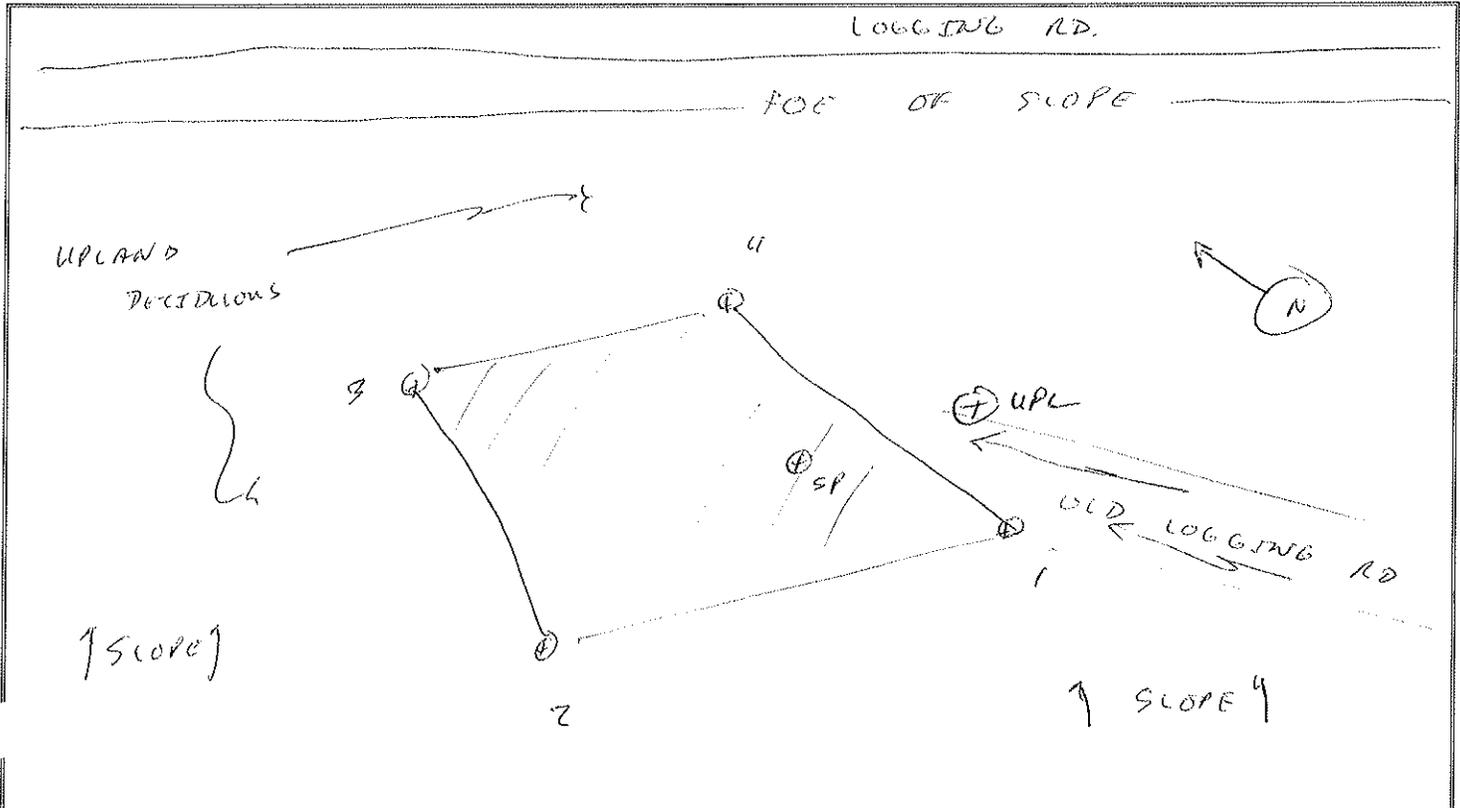
HYDROLOGY

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

FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: — (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: — (in)
Saturated Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth to: Z (in)
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Remarks: NO NOTED INLET/OUTLET - ISOLATED?

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point  
 W-SAC-52

VEGETATION

#	All Stratum Species Common Name (Genus species)	Absolute % Cover	Dominant Species	Indicator
1	BASSWOOD (TILIA AMERICANA)	40	Y	FACU
2	STRIPED MAPLE (ACER PENNSYLVANICUM)	30	Y	FACU
3	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	10	N	FACU
4				
5				
6				
				= Total Cover
Wetland Vegetation Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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 - 3	10YR 4/1 100	- / - / - / -	-	SILT loam
3 - 10	7.5YR 4/4 100	- / - / - / -	-	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?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: DISTURBED VIA COMPACTION + POSSIBLE EARTH MOVING!				

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Other	<input type="checkbox"/> Recorded Data (Describe in Remarks)
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	<input type="checkbox"/> Aerial Photographs
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Other - (i.e., well data)	<input checked="" type="checkbox"/> No Recorded Data Available
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth to: - (in)
Wetland Hydrology Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Remarks: WETLAND Hydro IS NOT PRESENT @ SAMPLE PT.			

### 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	PJC ALLEGHENY TUNNEL	08.09.12		W-SRC-52		
Name(s) of Evaluator(s)		Lat (dd)	Long (dd)	Notes:		
SRC, KLE				APPARENTLY ISOLATED		

**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.				<b>High Suboptimal:</b> 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				<b>Low Suboptimal:</b> ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber harvesting cutover (< 5 years)				<b>High Marginal:</b> Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.		<b>Low Marginal:</b> 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.		<b>High Poor:</b> 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.		<b>Low Poor:</b> 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	0%	CI
	Score >	5										50	0.00	0.00

0.25

Comments: NO NOTED INLET/OUTLET - APPARENTLY ISOLATED.



**W-SRC-52 overview, facing northeast.**



**W-SRC-52 overview, facing west.**



**W-SRC-52 wetland soil test pit.**



**W-SRC-52 upland soil test pit.**

**WETLAND W-SRC-53**

**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): SAC LLC		State: PA
Cowardin Classification (Percentage): PFO (100)		Wetland ID #: W-SAC-53
Climatic/Hydrologic Conditions Seasonally Typical?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are "Normal Circumstances" present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input checked="" type="checkbox"/> Hydrology significantly disturbed (Atypical)? ROADBED CONST. UPLAND POND.		
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology naturally Problematic?		
NWI Classification: (if applicable)		
Landform/Geomorphic Setting (Check All That Apply)		
<input type="checkbox"/> Built-up Land/Fill Area	<input type="checkbox"/> Terrace	
<input type="checkbox"/> Agricultural Drainage Swale	<input type="checkbox"/> Within Stream Channel	
<input type="checkbox"/> Hillslope Seep/Spring	<input type="checkbox"/> Floodplain	
<input checked="" type="checkbox"/> Toe-of-Slope/Hydrologic Jump	<input type="checkbox"/> Alluvial Fan	
<input checked="" type="checkbox"/> Closed Topographic Depression/Isolated System	<input type="checkbox"/> Delta	
<input type="checkbox"/> Hydrologically Connected to Other Aquatic Resources	<input type="checkbox"/> Other --	
Slope: 5 %	Land Relief: <input checked="" type="checkbox"/> Concave <input type="checkbox"/> Convex <input type="checkbox"/> None	
Latitude:	Longitude:	
Datum:		Photographs (with Direction of Photo or Description)
No. of Flags: 5	1- SE 3- WETLAND PIT	
Open Ended Flag Nos. N/A	2- NW 4- UPLAND PIT	
Remarks: NO APPARENT INLET/OUTLET. POSSIBLY ISOLATED.		

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area Within a Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Remarks: CANOPY @ 70% PROVIDED BY TREES SHOWN 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-SAC-53

**SOILS**

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 3/4 / 10 / RM / M	Low, Dull	SAR W/S MD
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

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)**

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

**INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)**

<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Piedmont Floodplain Soils (F19)	<input type="checkbox"/> Other
<input type="checkbox"/> Red Parent Material (TF2)	

Hydric Soil Present?  Yes  No

Remarks: Refusive @ 6" Due to rock.

WETLAND ID #: W. SRC. 53

HYDROLOGY

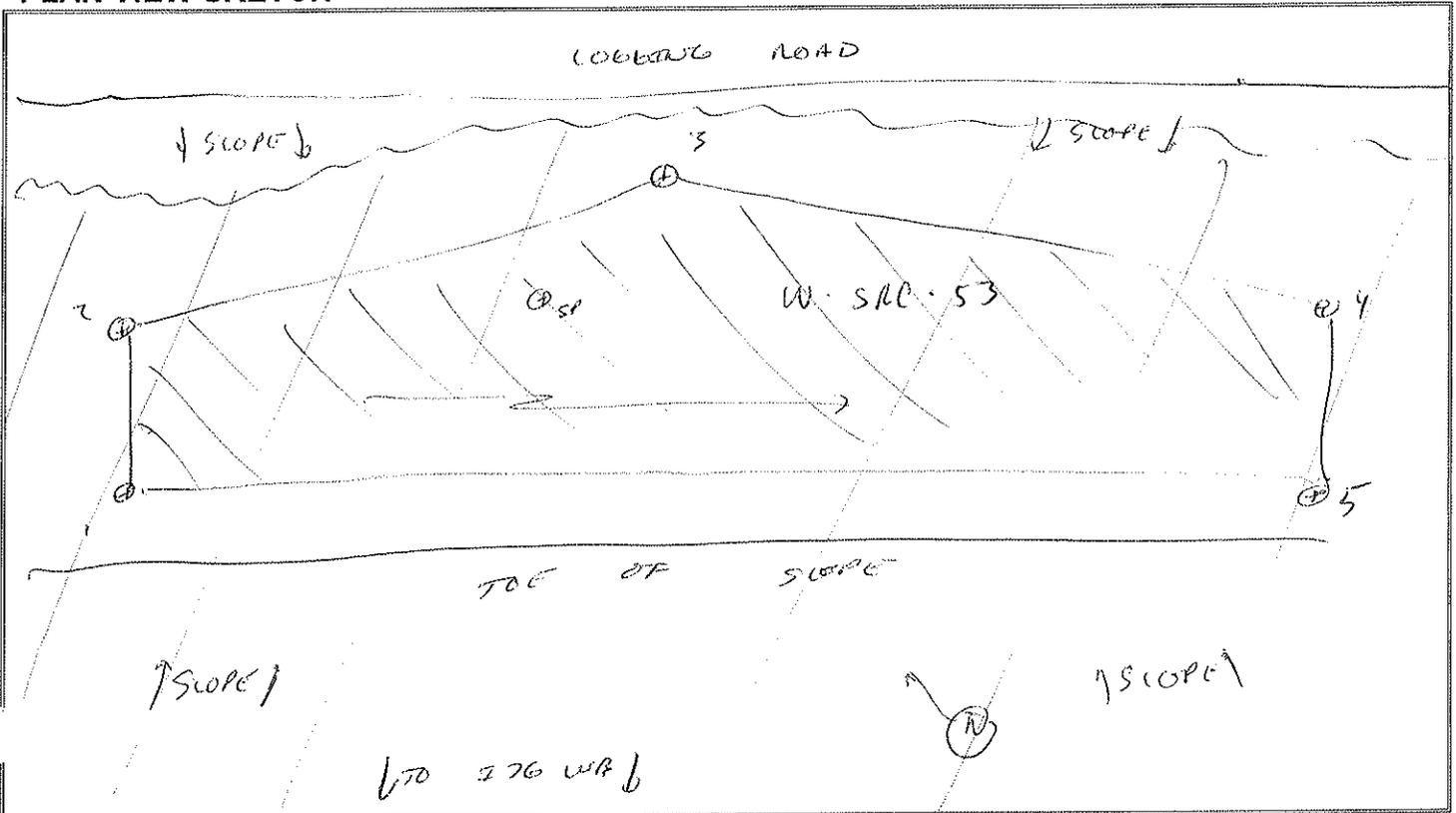
WETLAND HYDROLOGY INDICATORS	
Primary Indicators (1 or more required)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Sparsely Vegetated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

FIELD OBSERVATIONS

Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: — (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: — (in)
Saturated Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth to: 0 (in)
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Remarks: *BERM CREATED BY LOGGING RD. - TRAPS RUNOFF FROM UPSLOPE.*

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point

W-510-53

VEGETATION

#	All Stratum Species Common Name (Genus species)	Absolute % Cover	Dominant Species	Indicator
1	STRIPED MAPLE (ACER PENNSYLVANICUM)	00	Y	FACU
2	SUGAR MAPLE (ACER SACCHARUM)	40	Y	FACU
3				
4				
5				
6				
				= Total Cover
Wetland Vegetation Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: NO SAMPLE TAKEN DUE TO ROCK @ SURFACE.				

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Other	<input type="checkbox"/> Other
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Recorded Data (Describe in Remarks)	
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	
		<input type="checkbox"/> Aerial Photographs	
		<input type="checkbox"/> Other - (i.e., well data)	
		<input checked="" type="checkbox"/> No Recorded Data Available	
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth to: - (in)
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: WETLAND HYDRO IS NOT PRESENT @ SAMPLE PT.			





**W-SRC-53 overview, facing northwest.**



**W-SRC-53 overview, facing southeast.**



**W-SRC-53 wetland soil test pit.**



**W-SRC-53 upland soil test pit.**

**WETLAND W-SRC-54**

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

Project/Site: Allegheny Tunnel		Date: 06.13.2012	
Applicant/Owner: PTC		County: Somerset	
Investigator(s): SRC, KLE		State: PA	
Cowardin Classification (Percentage): P <sub>em</sub> (100)		Wetland ID #: W-SAC-54	
Climatic/Hydrologic Conditions Seasonally Typical?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are "Normal Circumstances" present?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology significantly disturbed (Atypical)?			
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology naturally Problematic?			
NWI Classification: - (if applicable)			
<b>Landform/Geomorphic Setting (Check All That Apply)</b>			
<input type="checkbox"/> Built-up Land/Fill Area	<input type="checkbox"/> Terrace		
<input type="checkbox"/> Agricultural Drainage Swale	<input type="checkbox"/> Within Stream Channel		
<input type="checkbox"/> Hillslope Seep/Spring	<input checked="" type="checkbox"/> Floodplain		
<input type="checkbox"/> Toe-of-Slope/Hydrologic Jump	<input type="checkbox"/> Alluvial Fan		
<input type="checkbox"/> Closed Topographic Depression/Isolated System	<input type="checkbox"/> Delta		
<input checked="" type="checkbox"/> Hydrologically Connected to Other Aquatic Resources	<input type="checkbox"/> Other -		
Slope: 5 %		Land Relief: <input checked="" type="checkbox"/> Concave <input type="checkbox"/> Convex <input type="checkbox"/> None	
Latitude: Longitude:		Datum:	
No. of Flags: 4		Photographs (with Direction of Photo or Description)	
Open Ended Flag Nos. N/A		1 - S                      3 - WETLAND PJT 2 - E                      4 - UPLAND PJT	
Remarks: CONNECTED TO S-SAC-56 AND S-SAC-93 POSSIBLY JURISDICT.			

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is the Sampled Area Within a Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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-SR0-54*

**SOILS**

Soil Survey Map Unit Name/Symbol: -		Drainage Class: -		
Taxonomy: -		Field Observations Confirm Mapped Type: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>PROFILE DESCRIPTION</b>				
Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
<i>0 - 2</i>	<i>- / -</i>	<i>- / - / - / -</i>	<i>-</i>	<i>-</i>
<i>2 - 7</i>	<i>7.5YR 7/2 / 70</i>	<i>7.5YR 4/4 / 30 / RM / M</i>	<i>MANY, DISCREET</i>	<i>SILT LOAMY</i>
<i>7 - 12</i>	<i>10YR 5/2 / 60</i>	<i>2.5YR 4/6 / 40 / RM / PL</i>	<i>MANY, BRIGHT</i>	<i>SILT LOAMY</i>
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		
<b>Type:</b> C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains <b>Location:</b> PL = Pore Lining and M = Matrix				
<b>HYDRIC SOIL INDICATORS (Check All That Apply)</b>				
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Polyvalue Below Surface (S8)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Thin Dark Surface (S9)		
<input type="checkbox"/> Sulfidic Odor (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Stratified Layers (A5)		<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> 2 cm of Muck (A10)		<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Umbric Surface (F13)		
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Piedmont Floodplain Soils (F19)		
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other		
<input type="checkbox"/> Dark Surface (S7)				
<b>INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)</b>				
<input type="checkbox"/> 2 cm Muck (A10)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Piedmont Floodplain Soils (F19)		<input type="checkbox"/> Other		
<input type="checkbox"/> Red Parent Material (TF2)				
<b>Hydric Soil Present?</b>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<b>Remarks:</b>				

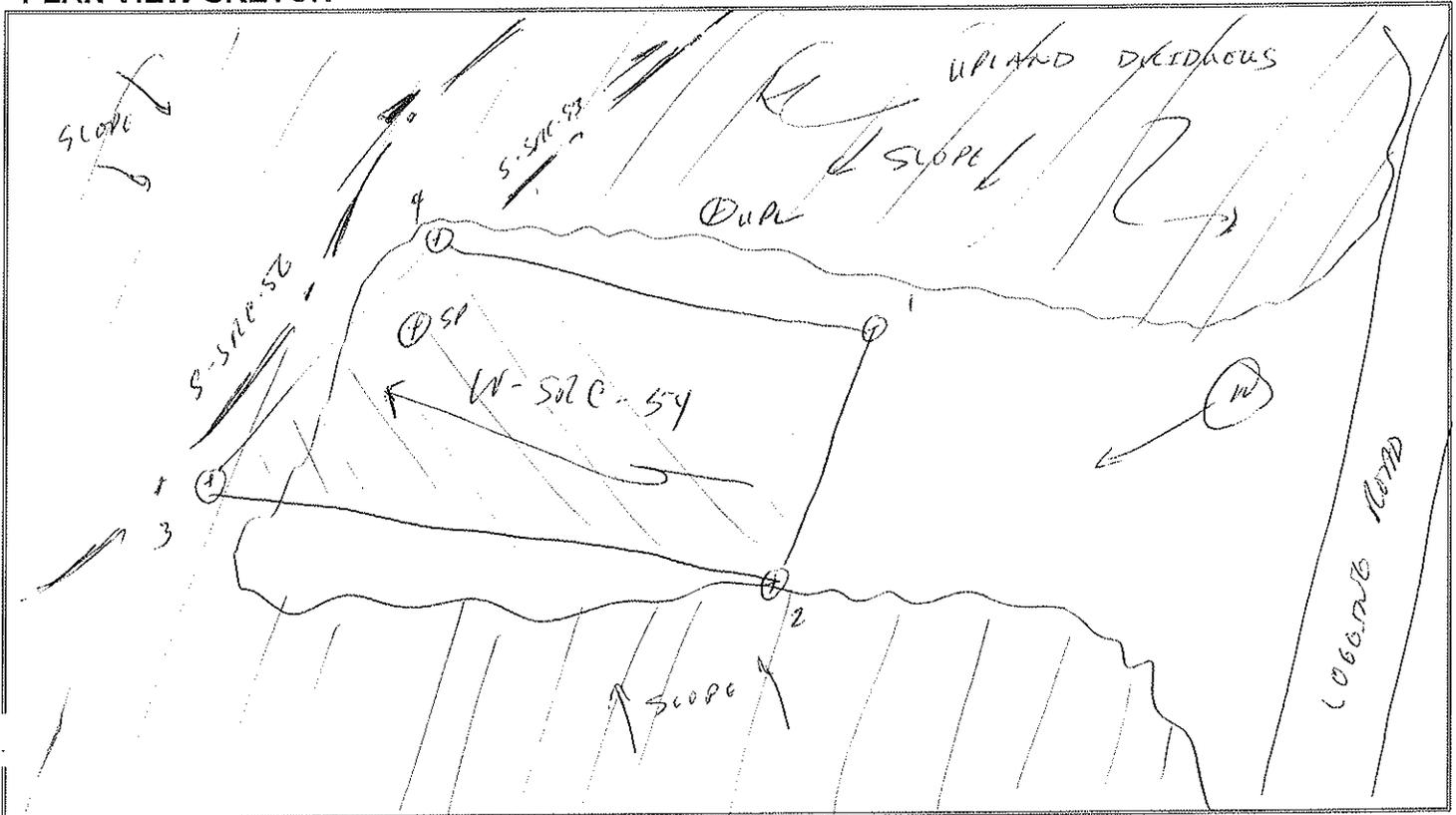
WETLAND ID #:

W- SAC- 54

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Recorded Data (Describe in Remarks)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge
<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Aerial Photographs	<input type="checkbox"/> Other - (i.e., well data)
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> No Recorded Data Available	
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth to: 3 (in)
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Remarks: ASSOC. /CONNECTED W/ S-SAC- 56 AND S-SAC- 93			

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point

W-SAC-54

VEGETATION

#	All Stratum Species Common Name (Genus species)	Absolute % Cover	Dominant Species	Indicator
1	SHAGBARK HICKORY (CARYA OVATA)	40 - T	Y	FACU
2	DOMESTIC APPLE (MALUS SP.)	20 - T	Y	-
3	STRIPED MAPLE (ACER PENNSYLVANICUM)	20 - T	Y	FACU
4	THREE LEAF (LIRIODENDRON TULIPIFERA)	20 - T	Y	FACU
5	CROOKED NEEDLE (SMILAX SP.)	5 - V	N	-
6				
		100 - T	= Total Cover	
Wetland Vegetation Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	- 1 -	- 1 - 1 - 1 -	-	-
2 - 10	10YR 3/3 1 100	- 1 - 1 - 1 -	-	SILT CLAY
-	1	1 1 1		
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains				
Location: PL = Pore Lining and M = Matrix				
Hydric Soil Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: WETLAND SOIL NOT PRESENT @ SAMPLE PT.				

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Other	
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Recorded Data (Describe in Remarks)	
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	
		<input type="checkbox"/> Aerial Photographs	
		<input type="checkbox"/> Other - (i.e., well data)	
		<input checked="" type="checkbox"/> No Recorded Data Available	
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth to: - (in)
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: WETLAND HYDRO NOT NOTED @ SAMPLE PT.			





**W-SRC-54 overview, facing south.**



**W-SRC-54 overview, facing west.**



**W-SRC-54 wetland soil test pit.**



**W-SRC-54 upland soil test pit.**

**WETLAND W-SRC-55**

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

Project/Site: Allegheny Tunnel		Date: 08.13.2012
Applicant/Owner: PTC		County: Somerset
Investigator(s): SRC, LLC		State: PA
Cowardin Classification (Percentage): PFO (100%)		Wetland ID #: W-SRC-55
Climatic/Hydrologic Conditions Seasonally Typical?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are "Normal Circumstances" present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology significantly disturbed (Atypical)?		
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology naturally Problematic?		
NWI Classification: — (if applicable)		
Landform/Gemorphic Setting (Check All That Apply)		
<input type="checkbox"/> Built-up Land/Fill Area	<input type="checkbox"/> Terrace	
<input type="checkbox"/> Agricultural Drainage Swale	<input checked="" type="checkbox"/> Within Stream Channel	
<input type="checkbox"/> Hillslope Seep/Spring	<input checked="" type="checkbox"/> Floodplain	
<input type="checkbox"/> Toe-of-Slope/Hydrologic Jump	<input type="checkbox"/> Alluvial Fan	
<input type="checkbox"/> Closed Topographic Depression/Isolated System	<input type="checkbox"/> Delta	
<input checked="" type="checkbox"/> Hydrologically Connected to Other Aquatic Resources	<input type="checkbox"/> Other —	
Slope: 5%	Land Relief: <input checked="" type="checkbox"/> Concave <input type="checkbox"/> Convex <input type="checkbox"/> None	
Latitude: Longitude:	Datum:	
No. of Flags: 3	Photographs (with Direction of Photo or Description)	
Open Ended Flag Nos. N/A	1- WSW	3- WETLAND PIT
	2- S	4- WETLAND PIT
Remarks: COMMENTS TO SRC-95.		

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area Within a Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Remarks: CANOPY 90% - TREES IMMED. OUTSIDE BOUNDARY.			

**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-SAC-55

VEGETATION

Tree Stratum Species					Dominance Test Worksheet	
#	Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator		
1					# of Dominant Species that are OBL, FACW, or FAC?	3 (A)
2					Total # of Dominant Species across all Strata?	3 (B)
3					% 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
					Dominance Test is >50%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
					Prevalence Index is ≤3.0	<input type="checkbox"/> Yes <input type="checkbox"/> No
					Morphological Adaptations	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
					Problematic Hydrophytic Veg	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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	
Herb Stratum Species					Hydrophytic Vegetation Present?	
#	Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator		
1	COYLLON MEGALANTH	50	Y	DBL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2	IRVINGIA (EMBARTENS CAPENSIS)	30	Y	FACW		
3	MUNSHWORT (LYONALCHA NUMMER)	20	Y	FACW		
4	CALOX SP	NONE	N	-		
5						
6						
7						
8						
9						
10						
					Remarks:	
					CANOPY 0-90% - PROVIDED BY TULIP POPLAR, SUGAR MAPLE, & SWEET BERRY, ALL IMMEDIATELY OUTSIDE OF BOUNDS.	
Woody Vine Stratum Species						
#	Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator		
1						
2						
					= Total Cover	

**DATA FORM – ROUTINE WETLAND DETERMINATION**

**WETLAND ID #:** *W-SAC-53*

**SOILS**

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**PROFILE DESCRIPTION**

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
<i>0 - 2</i>	<i>- / -</i>	<i>- / - / - / -</i>	<i>-</i>	<i>-</i>
<i>2 - 5</i>	<i>10YR 4/3 1 80</i>	<i>7.5YR 4/6 1 20 / RM 1 M</i>	<i>Common DISCREET</i>	<i>SANDY SILT</i>
<i>5 - 11*</i>	<i>10YR 3/2 1 100</i>	<i>- / - / - / -</i>	<i>-</i>	<i>SANDY CLAY COM</i>
<i>-</i>	<i>/</i>	<i>/ / /</i>		
<i>-</i>	<i>/</i>	<i>/ / /</i>		
<i>-</i>	<i>/</i>	<i>/ / /</i>		

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)**

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

**INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)**

<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Piedmont Floodplain Soils (F19)	<input type="checkbox"/> Other
<input type="checkbox"/> Red Parent Material (TF2)	

Hydric Soil Present?  Yes  No

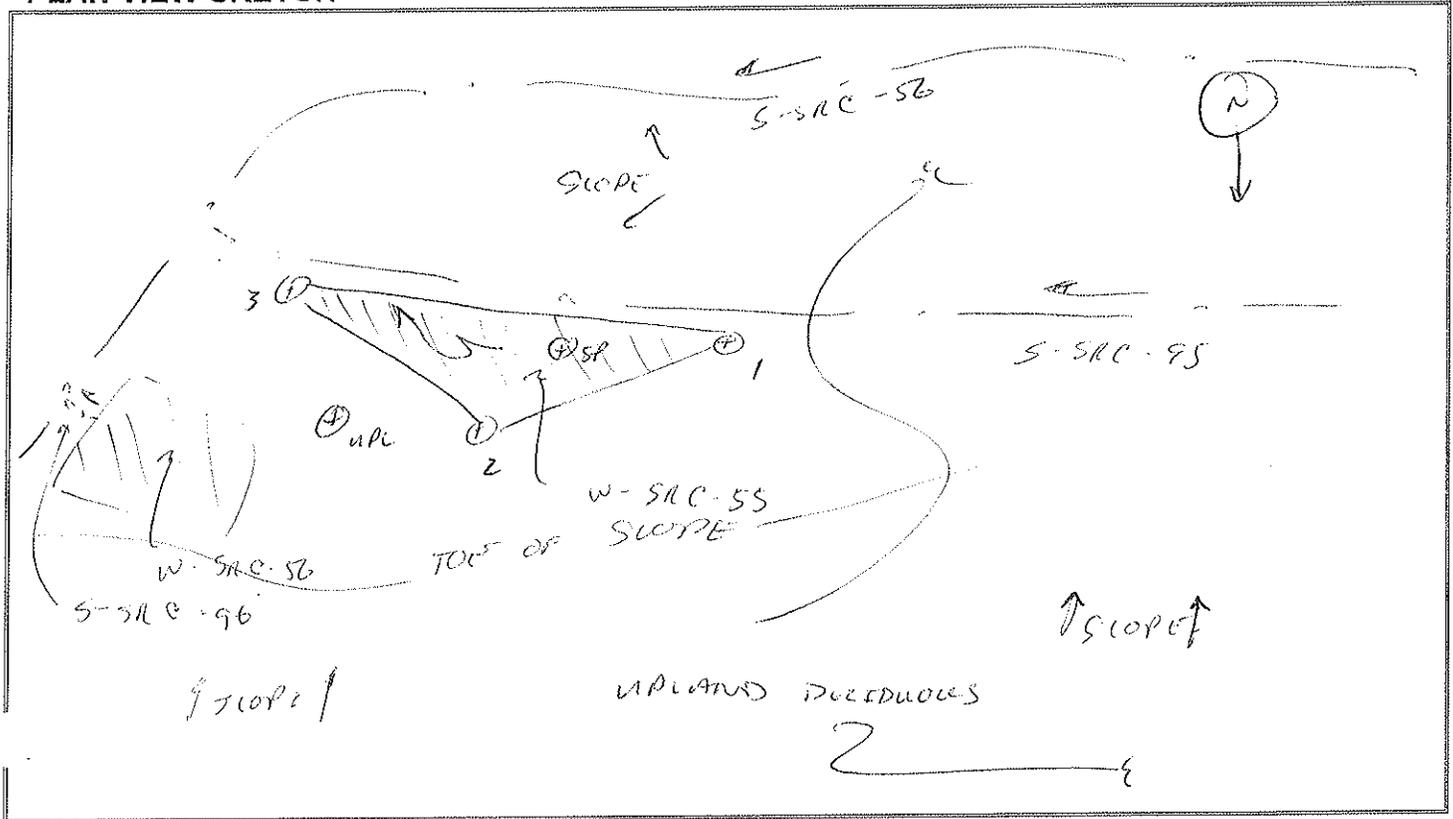
Remarks:

WETLAND ID #: W-SAC-55

**HYDROLOGY**

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input checked="" type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Other	<input type="checkbox"/> Recorded Data (Describe in Remarks)
<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	<input type="checkbox"/> Aerial Photographs
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Other - (i.e., well data)	<input checked="" type="checkbox"/> No Recorded Data Available
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth to: 0 (in)
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Remarks: CONNECTED VIA S-SAC-95, POSSIBLY JURISDICTIONAL.			

**PLAN VIEW SKETCH**



**UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION**

**WETLAND ID #:** Upland Data Point

*W-SRC-55 (AND W-SRC-56)*

**VEGETATION**

#	All Stratum Species Common Name (Genus species)	Absolute % Cover	Dominant Species	Indicator
1	TULIP POPLAR (LIRIODENDRON TULIPIFERA)	60	Y	FACU
2	SUGAR MAPLE (ACER SACCHARUM)	20	Y	FACU
3	SWAMP BEECH (BETULA LENTINA)	20	Y	FACU
4				
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: <i>WETLAND VEG. IS NOT PRESENT OR DOMINANT @ SAMPLE PT.</i>				

**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	- 1 -	- 1 - 1 - 1 -	-	-
2 - 6	7.5YR 3/0 1 RD	- 1 - 1 - 1 -	-	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?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: <i>REFUSAL @ 6" DUE TO ROCK &amp; ROOTS. WETLAND SOIL NOT PRESENT.</i>				

**HYDROLOGY**

**WETLAND HYDROLOGY INDICATORS**

Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Other	<input type="checkbox"/> Recorded Data (Describe in Remarks)
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	<input type="checkbox"/> Aerial Photographs
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Other - (i.e., well data)	<input checked="" type="checkbox"/> No Recorded Data Available
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth to: - (in)
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: <i>WETLAND HYDRO NOT NOTED @ SAMPLE PT.</i>			





**W-SRC-55 overview, facing south.**



**W-SRC-55 overview, facing west-southwest.**



**W-SRC-55 wetland soil test pit.**



**W-SRC-55 upland soil test pit.**

**WETLAND W-SRC-56**

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

Project/Site: Allegheny Tunnel		Date: 08.17.2012
Applicant/Owner: PTC		County: Somerset
Investigator(s): SRC, KLE		State: PA
Cowardin Classification (Percentage): PFO (100%)		Wetland ID #: W-5100-576
Climatic/Hydrologic Conditions Seasonally Typical?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are "Normal Circumstances" present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology significantly disturbed (Atypical)?		
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology naturally Problematic?		
NWI Classification: - (if applicable)		
Landform/Geomorphic Setting (Check All That Apply)		
<input type="checkbox"/> Built-up Land/Fill Area	<input type="checkbox"/> Terrace	
<input type="checkbox"/> Agricultural Drainage Swale	<input checked="" type="checkbox"/> Within Stream Channel	
<input checked="" type="checkbox"/> Hillslope Seep/Spring	<input checked="" type="checkbox"/> Floodplain	
<input type="checkbox"/> Toe-of-Slope/Hydrologic Jump	<input type="checkbox"/> Alluvial Fan	
<input type="checkbox"/> Closed Topographic Depression/Isolated System	<input type="checkbox"/> Delta	
<input checked="" type="checkbox"/> Hydrologically Connected to Other Aquatic Resources	<input type="checkbox"/> Other -	
Slope: 5 %	Land Relief: <input checked="" type="checkbox"/> Concave <input type="checkbox"/> Convex <input type="checkbox"/> None	
Latitude: Longitude:	Datum:	
No. of Flags: 3	Photographs (with Direction of Photo or Description)	
Open Ended Flag Nos. N/A	1 - E 3 - WETLAND PFT 2 - NW 4 - UPLAND PFT.	
Remarks: CONNECTED VIA S-SAC-96. POSSIBLY JURISDICTIONAL.		

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area Within a Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Remarks: CANOPY @ 80% - TREES IMMED. 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 - SNC - 56

SOILS

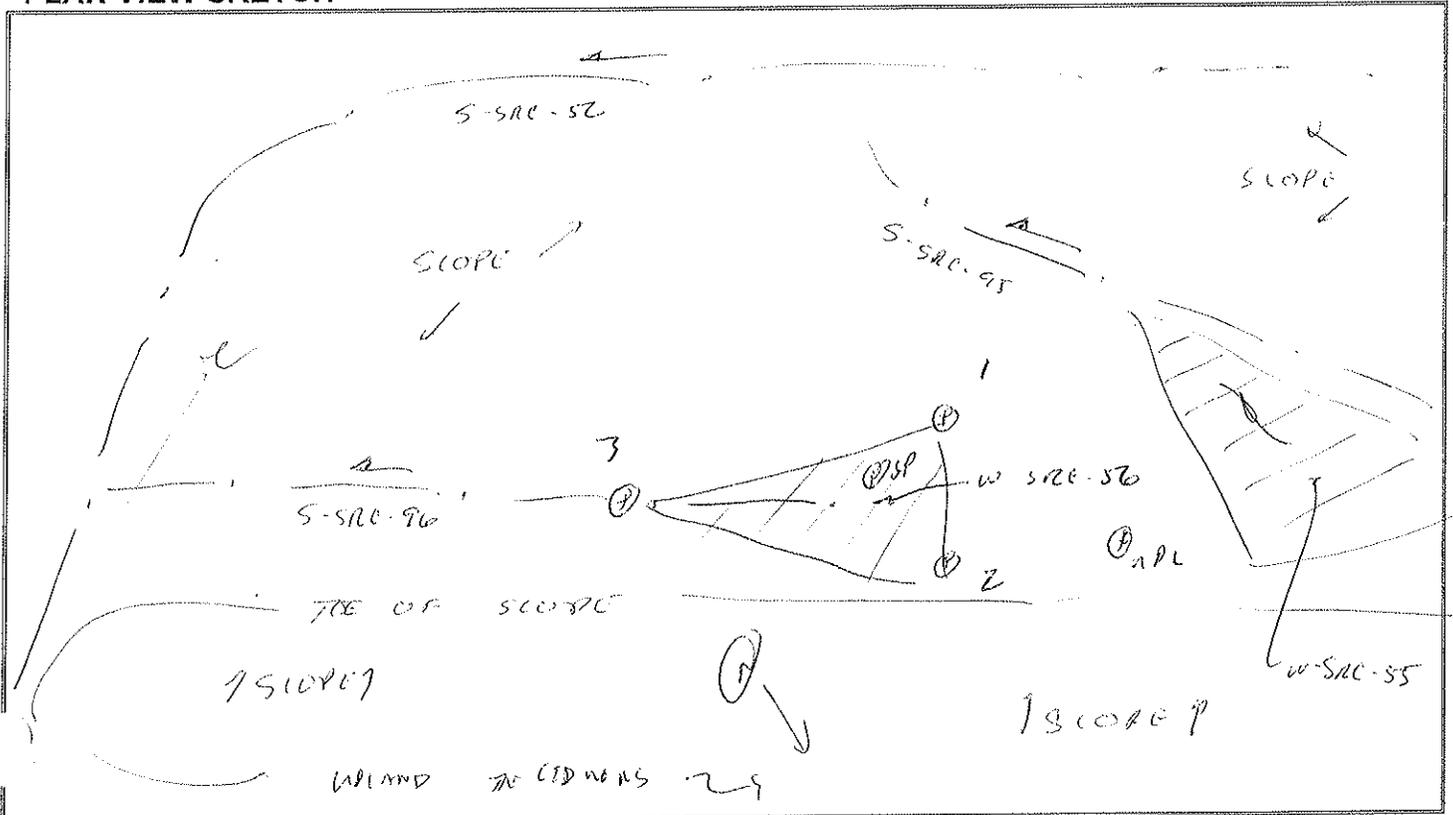
Soil Survey Map Unit Name/Symbol: -		Drainage Class: -	
Taxonomy: -		Field Observations Confirm Mapped Type: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PROFILE DESCRIPTION			
Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast
0 - 2	5 / -	- / - / - / -	-
2 - 6	2.5Y 3/1 / 100	- / - / - / -	-
-	/	/ / /	-
-	/	/ / /	-
-	/	/ / /	-
-	/	/ / /	-
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)			
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8)		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9)		
<input checked="" type="checkbox"/> Sulfidic Odor (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> 2 cm of Muck (A10)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other		
<input type="checkbox"/> Dark Surface (S7)			
INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)			
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Piedmont Floodplain Soils (F19)	<input type="checkbox"/> Other		
<input type="checkbox"/> Red Parent Material (TF2)			
Hydric Soil Present?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Remarks: <i>Perust @ 6" due to rock, ALLVISED FROM ALL SITES.</i>			

WETLAND ID #: W-SAC-86

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Recorded Data (Describe in Remarks)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Aerial Photographs	<input type="checkbox"/> Other - (i.e., well data)
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> No Recorded Data Available	
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth to: 0 (in)
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Remarks: CONNOR'S VEA S-SAC-96.			

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point

W-510-520 (AND W-510-55)

VEGETATION

#	All Stratum Species Common Name (Genus species)	Absolute % Cover	Dominant Species	Indicator
1	TULIP POPP (LIMNODENDRON TULIPIFERA)	60	Y	FACU
2	SUGAR MAPLE (ACER SACCHARUM)	20	Y	FACU
3	SWEET BENCH (BETULA LENTA)	20	Y	FACU
4				
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	- 1 -	- 1 - 1 - 1 -	-	-
2 - 6	7.5YR 3/6 1 100	- 1 - 1 - 1 -	-	SILT CLAY
-	1	1 1 1		
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains				
Location: PL = Pore Lining and M = Matrix				
Hydric Soil Present?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: WETLAND SOIL NOT PRESENT @ SAMPLE PT.				

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Other	<input type="checkbox"/> Recorded Data (Describe in Remarks)
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	<input type="checkbox"/> Aerial Photographs
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Other - (i.e., well data)	<input checked="" type="checkbox"/> No Recorded Data Available
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: - (in)
Saturated Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth to: - (in)
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: WETLAND HYDRO NOT PRESENT @ SAMPLE PT.			





**W-SRC-56 overview, facing east.**



**W-SRC-56 overview, facing west-northwest.**



**W-SRC-56 wetland soil test pit.**



**W-SRC-56 upland soil test pit.**

**WETLAND W-SRC-57**

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

Project/Site: Allegheny Tunnel		Date: 08.13.2012
Applicant/Owner: PTC		County: Somerset
Investigator(s): SJC, KLV		State: PA
Cowardin Classification (Percentage): P1m/P1o (67/33)		Wetland ID #: W-SRC-57
Climatic/Hydrologic Conditions Seasonally Typical?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are "Normal Circumstances" present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology significantly disturbed (Atypical)?		
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology naturally Problematic?		
NWI Classification: — (if applicable)		
Landform/Geomorphic Setting (Check All That Apply)		
<input type="checkbox"/> Built-up Land/Fill Area	<input type="checkbox"/> Terrace	
<input type="checkbox"/> Agricultural Drainage Swale	<input type="checkbox"/> Within Stream Channel	
<input type="checkbox"/> Hillslope Seep/Spring	<input checked="" type="checkbox"/> Floodplain	
<input type="checkbox"/> Toe-of-Slope/Hydrologic Jump	<input type="checkbox"/> Alluvial Fan	
<input type="checkbox"/> Closed Topographic Depression/Isolated System	<input checked="" type="checkbox"/> Delta	
<input checked="" type="checkbox"/> Hydrologically Connected to Other Aquatic Resources	<input type="checkbox"/> Other -	
Slope: 5 %	Land Relief: <input checked="" type="checkbox"/> Concave <input type="checkbox"/> Convex <input type="checkbox"/> None	
Latitude: Longitude:	Datum:	
No. of Flags: 13	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 A-SRC-56. POSSIBLY JURISDICTIONAL.		

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area Within a Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Remarks: CLANDPY ON PFO PORTION PROVIDED BY TRACER JUMMED. OUTSIDE.			

**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-920-57

VEGETATION

#	Tree Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator	Dominance Test Worksheet	
1					# of Dominant Species that are OBL, FACW, or FAC?	2 (A)
2					Total # of Dominant Species across all Strata?	2 (B)
3					% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)
4					= Total Cover	
5					= Total Cover	
6					= Total Cover	
#	Sapling Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator	Prevalence Index Worksheet	
1					OBL species	1 =
2					FACW species	2 =
3					FAC species	3 =
4					FACU species	4 =
5					UPL species	5 =
6					Coln. Totals: (A)	(B)
= Total Cover					Prevalence Index =	B/A =
#	Shrub Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator	Hydrophytic Vegetation Indicators	
1					Rapid Test for Hydrophytic Veg.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2					Dominance Test is >50%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3					Prevalence Index is ≤3.0	<input type="checkbox"/> Yes <input type="checkbox"/> No
4					Morphological Adaptations	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5					Problematic Hydrophytic Veg	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6					= Total Cover	
#	Herb Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator	Vegetation Strata Definitions	
1	Blue-cut GR. ( <i>CYPERUS OLYZOIDES</i> )	50	Y	OBL	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	
2	MARSH WARTWORT ( <i>POLYGONUM SP.</i> )	20	Y	OBL		
3	SWAMP GOLDENROD ( <i>SOLIDAGO SP.</i> )	10	N	OBL		
4	SWAMP WOOD ( <i>POLYTALEA HYDROPH.</i> )	10	N	OBL		
5	CAREX CLOSTRA	10	N	OBL		
6	SOFT RUSH ( <i>JUNCUS EFFUSUS</i> )	NOTED	N	FACW		
7	POWDER MILK ( <i>GLYCYLIS STRIATA</i> )	NOTED	N	OBL		
8	SWAMP WOOD ( <i>SOLIDAGO SP.</i> )	NOTED	N	—		
9	CAREX SP.	NOTED	N	OBL		
10	= Total Cover					
#	Woody Vine Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator	Hydrophytic Vegetation Present?	
1					<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2	= Total Cover					
					Remarks: CANOPY ON PFC PORTION FORMED BY TULIP POPLAR & SUGAR MAPLE, IMMED. OUTSIDE OF BOUNDS, AS PER PFC DEFINITION WHEN USACE REQ. SUPPLEMENTS.	

DATA FORM – ROUTINE WETLAND DETERMINATION

WETLAND ID #: *w - SAC - 57*

SOILS

Soil Survey Map Unit Name/Symbol: -	Drainage Class: -
Taxonomy: -	Field Observations Confirm Mapped Type: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PROFILE DESCRIPTION

Depth Range (in)	Matrix Color / %	Mottle Color / % / Type / Loc	Mottle Abundance / Contrast	Texture
0 - 3	- / -	- / - / - / -	-	-
3 - 6	<i>1.54R 3/2 / 100</i>	- / - / - / -	-	<i>VERY COAR</i>
6 - 12	<i>7.54R 3/1 / 90</i>	<i>7.54R 4/6 / 10 / RM / M</i>	<i>FEW, DULL</i>	<i>VERY COAR</i>
-	/	/ / /		
-	/	/ / /		
-	/	/ / /		

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)

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

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Piedmont Floodplain Soils (F19)	<input type="checkbox"/> Other
<input type="checkbox"/> Red Parent Material (TF2)	

Hydric Soil Present?  Yes  No

Remarks:

WETLAND ID #: W - SRC - 57

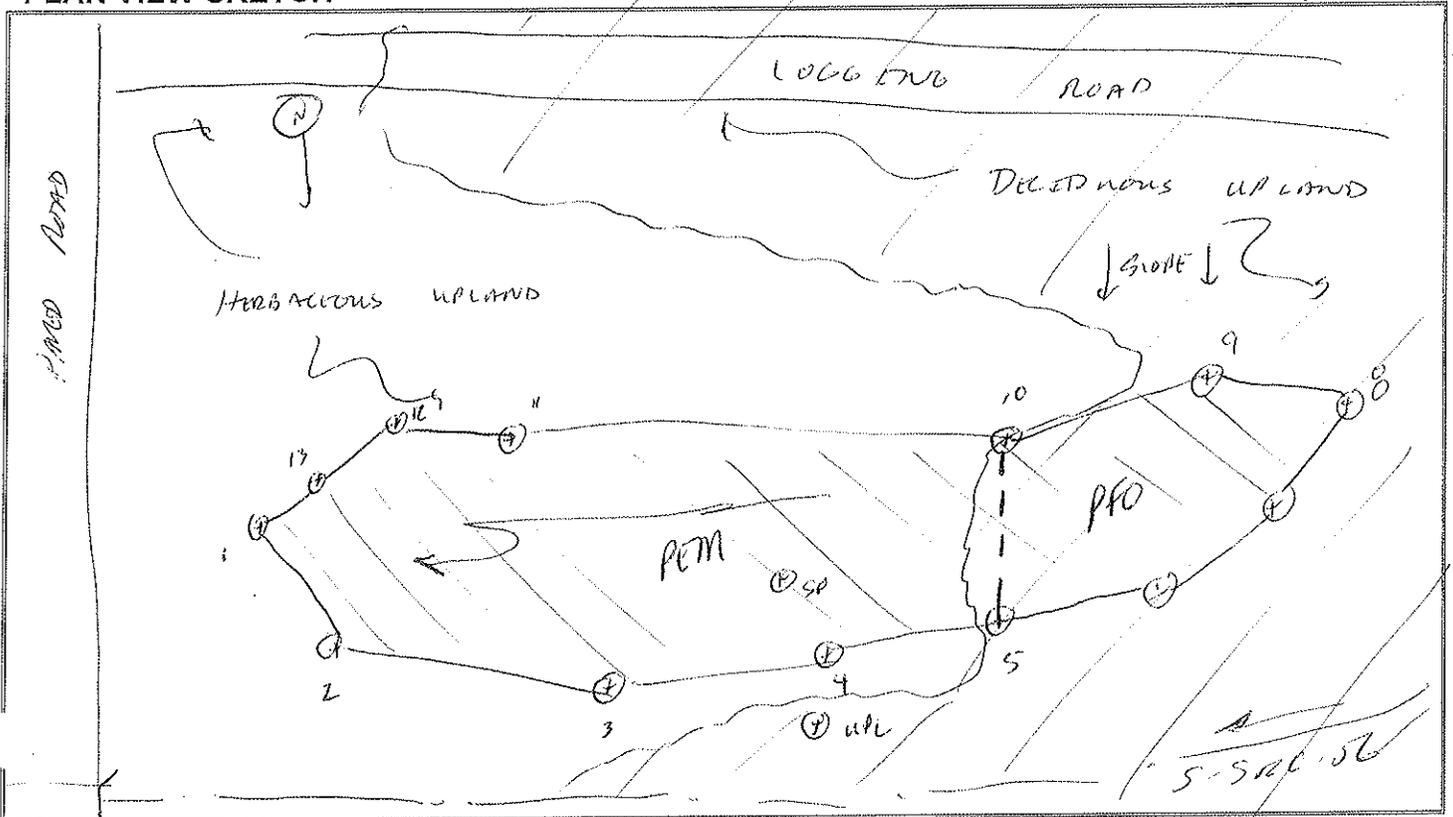
HYDROLOGY

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

FIELD OBSERVATIONS			
Surface Water Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth of: 4 (in)
Water Table Present in Pit?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth of: 6 (in)
Saturated Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth to: 17 (in)
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Remarks: CONVECTED TO S-SRC-57. POSSIBLY JURISDICTIONAL

PLAN VIEW SKETCH



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point

W-SAC-57

VEGETATION

#	All Stratum Species Common Name (Genus species)	Absolute % Cover	Dominant Species	Indicator
1	BLACK WIGWAG (ROBERTIA PSEUDOACACIA)	40 - 7	Y	FALU
2	GREEN BUSH (FLAXINUS PENNSYLVANICA)	20 - 5	Y	LACW
3	BLACK CHERRY (PRUNUS SEROTINA)	20 - 5	Y	WPL
4	ROUGH LEAF BORDENWOOD (SOLIDAGO PATULA)	100 - 11	Y	GBL
5				
6				
		100	= Total Cover	
Wetland Vegetation Present?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Remarks: WETLAND VEG IS PRESENT AND 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	- 1 -	- 1 - 1 - 1 -	-	-
2 - 6	10YR 4/3 1 100	- 1 - 1 - 1 -	-	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?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: Horizon @ 6" Due to rock. Wetland soils not present.				

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Other	<input type="checkbox"/> Recorded Data (Describe in Remarks)
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	<input type="checkbox"/> Aerial Photographs
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Other - (i.e., well data)	<input checked="" type="checkbox"/> No Recorded Data Available
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: ~ (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: ~ (in)
Saturated Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth to: ~ (in)
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: WETLAND HYDRO NOT PRESENT @ SAMPLE PT.			

## 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	PTE ALLEGHENY TUNNEL	08.13.12		W-SRC-57		
Name(s) of Evaluator(s)		Lat (dd)	Long (dd)	Notes:		
SAC, KLE				CONNECTED TO STREAM S-SRC-56.		

**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.	<b>High Suboptimal:</b> 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				<b>Low Suboptimal:</b> ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber harvesting cutover (< 5 years)				<b>High Marginal:</b> Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh > 3 inches) with < 30% tree canopy cover.				<b>Low Marginal:</b> 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.		<b>High Poor:</b> 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.		<b>Low Poor:</b> Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.			
<b>SCORE</b>	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 >	0.85	0.15								1.00	0%	CI	0.33
	Score >	5	15								6.5	0.00	0.00	

Comments: POSSIBLY TRANSITIONAL - CONNECTED TO S-SRC-56.



**W-SRC-57 overview, facing east.**



**W-SRC-57 overview, facing west.**



**W-SRC-57 wetland soil test pit.**



**W-SRC-57 upland soil test pit.**

**WETLAND W-SRC-58**

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

Project/Site: Allegheny Tunnel		Date: 08.13.2012
Applicant/Owner: PTC		County: Somerset
Investigator(s): SRC, KLE		State: PA
Cowardin Classification (Percentage): form (100)		Wetland ID #: W-SAC-58
Climatic/Hydrologic Conditions Seasonally Typical?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are "Normal Circumstances" present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are <input type="checkbox"/> Vegetation, <input checked="" type="checkbox"/> Soils, or <input checked="" type="checkbox"/> Hydrology significantly disturbed (Atypical)? SHALLOW ROCK LAYER - LOW WAT.		
Are <input type="checkbox"/> Vegetation, <input type="checkbox"/> Soils, or <input type="checkbox"/> Hydrology naturally Problematic?		
NWI Classification: - (if applicable)		
Landform/Gemorphic Setting (Check All That Apply)		
<input type="checkbox"/> Built-up Land/Fill Area	<input type="checkbox"/> Terrace	
<input type="checkbox"/> Agricultural Drainage Swale	<input type="checkbox"/> Within Stream Channel	
<input checked="" type="checkbox"/> Hillslope Seep/Spring	<input type="checkbox"/> Floodplain	
<input type="checkbox"/> Toe-of-Slope/Hydrologic Jump	<input type="checkbox"/> Alluvial Fan	
<input type="checkbox"/> Closed Topographic Depression/Isolated System	<input type="checkbox"/> Delta	
<input checked="" type="checkbox"/> Hydrologically Connected to Other Aquatic Resources	<input type="checkbox"/> Other -	
Slope: 5%	Land Relief: <input checked="" type="checkbox"/> Concave <input type="checkbox"/> Convex <input type="checkbox"/> None	
Latitude:	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-SAC-101 → S-SAC-58 POSSIBLY SHALLOW.		

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area Within a Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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. SAC. 58

VEGETATION

#	Tree Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator	Dominance Test Worksheet	
1					# of Dominant Species that are OBL, FACW, or FAC?	2 (A)
2					Total # of Dominant Species across all Strata?	2 (B)
3					% of Dominant Species that are OBL, FACW, or FAC?	100 (A/B)
4					<b>Prevalence Index Worksheet</b>	
5					Total % Cover of:	Mult. by:
6					OBL species	1 =
					FACW species	2 =
					FAC species	3 =
					FACU species	4 =
					UPL species	5 =
					Coln. Totals:	(A) (B)
					Prevalence Index =	B/A =
					<b>Hydrophytic Vegetation Indicators</b>	
					Rapid Test for Hydrophytic Veg.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
					Dominance Test is >50%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
					Prevalence index is ≤3.0	<input type="checkbox"/> Yes <input type="checkbox"/> No
					Morphological Adaptations	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
					Problematic Hydrophytic Veg	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
					<b>Vegetation Strata Definitions</b>	
					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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
					Remarks:	
#	Herb Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator		
1	REED CANARY GR. ( <i>PHALARIS ARUND.</i> )	20	Y	FACW		
2	FOWL MALLOW GR. ( <i>GLYCELHA STRLSTRAH</i> )	20	Y	OBL		
3	PK GR. BURRUSH ( <i>SCIRPUS ATROVENTENS</i> )	15	N	OBL		
4	DOWNWOOD ( <i>IMPHATIENS CATTENSIS</i> )	15	N	FACW		
5	CYPERUS SPLENDENS	10	N	FACW		
6	GLYCELHA MULLARBIA	10	N	OBL		
7	POW. PENW ( <i>ONCLEN SENSIENS</i> )	5	N	FACW		
8	WATER GR. ( <i>LEERSIA OXYRHOIDE</i> )	5	N	OBL		
9	CAREX CRINITA	N/A	N	OBL		
10	SMOOTHWAF. SPERMATOPHYTES ( <i>POLYGONUM SAG.</i> )	N/A	N	OBL		
		100		= Total Cover		
#	Woody Vine Stratum Species Common Name ( <i>Genus species</i> )	Absolute % Cover	Dominant Species	Indicator		
1						
2						
					= Total Cover	

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 - 12"	2.5Y 3/2 / 20	7.5YR 3/4 / 20 / RM / PL	COMMON, DISTINCT	SILT (COMMON) / ROCK - 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)

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

INDICATORS FOR PROBLEMATIC HYDRIC SOILS (Check All That Apply)

<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Piedmont Floodplain Soils (F19)	<input type="checkbox"/> Other
<input type="checkbox"/> Red Parent Material (TF2)	

Hydric Soil Present?  Yes  No

Remarks: 46% VV 500' DEP - TOP OF SURF.



UPLAND DATA SHEET – ROUTINE WETLAND DETERMINATION

WETLAND ID #: Upland Data Point

*W-51C-58*

VEGETATION

#	All Stratum Species Common Name (Genus species)	Absolute % Cover	Dominant Species	Indicator
1	SUGAR MAPLE (ALN. SACCHARUM)	30	Y	FACU
2	GREEN ASH (FRAXINUS PENNSYLVANICA)	20	Y	FACU
3	BASSWOOD (TILIA AMERICANA)	20	Y	FACU
4				
5				
6				
		70	= Total Cover	
Wetland Vegetation Present?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Remarks: <i>WETLAND VEG. IS DOMINANT &amp; PRESENT @ SAMPLE PT.</i>				

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?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Remarks: <i>SAMPLE NOT OBSERVED DUE TO SURFACE ROCK.</i>				

HYDROLOGY

WETLAND HYDROLOGY INDICATORS			
Primary Indicators (1 or more required)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Other	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Recorded Data (Describe in Remarks)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stream, Lake, or Tidal Gauge	
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other	<input type="checkbox"/> Aerial Photographs	
		<input type="checkbox"/> Other - (i.e., well data)	
		<input checked="" type="checkbox"/> No Recorded Data Available	
FIELD OBSERVATIONS			
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: <i>1</i> (in)
Water Table Present in Pit?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth of: <i>1</i> (in)
Saturated Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth to: <i>1</i> (in)
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks: <i>WETLAND HYDRO NOT NOTED @ SAMPLE PT.</i>			

## 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	PTR ALLEGHENY TUNNEL	08.13.12		W.SRC.58		
Name(s) of Evaluator(s)		Lat (dd)	Long (dd)	Notes:		
SRC, NLE				CONNECTED TO SITE AA S-SRC-101		

**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.	<b>High Suboptimal:</b> 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				<b>Low Suboptimal:</b> ZOI areas with tree stratum (dbh > 3 inches, with 30-60% tree canopy cover and a maintained understory or recent timber harvesting cutover (< 5 years)				<b>High Marginal:</b> Non-maintained, dense herbaceous vegetation, with either a shrub or tree layer (dbh>3 inches) with <30% tree canopy cover.				<b>Low Marginal:</b> 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.				<b>High Poor:</b> 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.				<b>Low Poor:</b> 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	3%	CI
	Score >	5	15													6.0	0.00	0.00

Comments: POSSIBLY JURISDICTIONAL - CONNECTED TO S-SRC-56 VIA S-SRC-101.

0.30



**W-SRC-58 overview, facing east.**



**W-SRC-58 overview, facing west.**



**W-SRC-58 wetland soil test pit.**



**W-SRC-58 upland soil test pit.**

## **APPENDIX B**

### **STREAM RESOURCE DATA PACKAGES**

**STREAM S-JHS-01**

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET

STREAM NAME	S-JHS-01 V2/BR			CLIENT	PTC	
STREAM CLASS	PERENNIAL			PROJECT	Allegheny Tunnel	
INVESTIGATORS	DLM LAU	DATE	5/9/12	MM/DD/YR	LOCATION	Somerset County, PA
		TIME	10:35	24 HOUR (I.E. 16:45)		
LATITUDE	apl from GPS	LONGITUDE		RIVER BASIN	Stony Creek R.	
STATION #	-	RIVERMILE	-	STORET #	-	

WEATHER CONDITIONS	NOW	PAST 24 HOURS			HAS THERE BEEN A HEAVY RAIN IN THE LAST 7 DAYS?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	<input type="checkbox"/>	STORM (HEAVY RAIN)	<input type="checkbox"/>		AIR TEMPERATURE	~60 °F	
	<input type="checkbox"/>	RAIN (STEADY RAIN)	<input checked="" type="checkbox"/>				
	<input type="checkbox"/>	SHOWERS (INTERMITTENT)	<input type="checkbox"/>		OTHER		
	<input checked="" type="checkbox"/>	100% CLOUD COVER	<input type="checkbox"/>				
<input type="checkbox"/>	CLEAR/SUNNY	<input type="checkbox"/>					

**SITE LOCATION MAP**

PROVIDE A PLAN VIEW SKETCH WITH A NORTH ARROW (INDICATE DIRECTIONS OF PHOTOGRAPHS)

<p>FOR LINEAR PROJECTS, PROVIDE DIMENSIONS AT THE CENTERLINE OF THE STREAM CROSSING.</p> <div style="text-align: center;"> </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2">RIGHT BANK (FACE DOWNSTREAM)</td> <td>HORIZONTAL (A)</td> <td>0</td> <td>FT.</td> </tr> <tr> <td>VERTICAL (B)</td> <td>1.0</td> <td>FT.</td> </tr> <tr> <td rowspan="2">LEFT BANK (FACE DOWNSTREAM)</td> <td>HORIZONTAL (C)</td> <td>1.0</td> <td>FT.</td> </tr> <tr> <td>VERTICAL (D)</td> <td>2.5</td> <td>FT.</td> </tr> <tr> <td rowspan="6">CHANNEL DIMENSIONS</td> <td>TOP WIDTH (E)</td> <td>7.0</td> <td>FT.</td> </tr> <tr> <td>BOTTOM WIDTH (F)</td> <td>6.0</td> <td>FT.</td> </tr> <tr> <td>OVERALL DEPTH (G)</td> <td>1.175</td> <td>FT.</td> </tr> <tr> <td>ORDINARY HIGH WATER MARK (H)</td> <td>1.50</td> <td>FT.</td> </tr> <tr> <td>FLOW DEPTH (I)</td> <td>0.83</td> <td>FT.</td> </tr> <tr> <td>APPROX. SURFACE VELOCITY</td> <td>10-20</td> <td>FT./SEC</td> </tr> </table>	RIGHT BANK (FACE DOWNSTREAM)	HORIZONTAL (A)	0	FT.	VERTICAL (B)	1.0	FT.	LEFT BANK (FACE DOWNSTREAM)	HORIZONTAL (C)	1.0	FT.	VERTICAL (D)	2.5	FT.	CHANNEL DIMENSIONS	TOP WIDTH (E)	7.0	FT.	BOTTOM WIDTH (F)	6.0	FT.	OVERALL DEPTH (G)	1.175	FT.	ORDINARY HIGH WATER MARK (H)	1.50	FT.	FLOW DEPTH (I)	0.83	FT.	APPROX. SURFACE VELOCITY	10-20	FT./SEC
RIGHT BANK (FACE DOWNSTREAM)	HORIZONTAL (A)		0	FT.																														
	VERTICAL (B)	1.0	FT.																															
LEFT BANK (FACE DOWNSTREAM)	HORIZONTAL (C)	1.0	FT.																															
	VERTICAL (D)	2.5	FT.																															
CHANNEL DIMENSIONS	TOP WIDTH (E)	7.0	FT.																															
	BOTTOM WIDTH (F)	6.0	FT.																															
	OVERALL DEPTH (G)	1.175	FT.																															
	ORDINARY HIGH WATER MARK (H)	1.50	FT.																															
	FLOW DEPTH (I)	0.83	FT.																															
	APPROX. SURFACE VELOCITY	10-20	FT./SEC																															

STREAM CHARACTERIZATION	STREAM SUBSYSTEM		STREAM TYPE	
	<input checked="" type="checkbox"/> PERENNIAL	<input type="checkbox"/> INTERMITTENT	<input type="checkbox"/> COLD WATER	<input checked="" type="checkbox"/> WARM WATER
	<input type="checkbox"/> EPHEMERAL	<input type="checkbox"/> TIDAL	CATCHMENT AREA _____ SQ. MI	
	STREAM ORIGIN		OTHER <i>cl ch 93</i>	
	<input type="checkbox"/> GLACIAL	<input checked="" type="checkbox"/> SPRING FED		
	<input type="checkbox"/> NON-GLACIAL MONTANE	<input checked="" type="checkbox"/> MIXTURE OF ORIGINS		
	<input type="checkbox"/> SWAMP AND BOG	<input checked="" type="checkbox"/> OTHER <i>stormwater</i>		

STREAM ID:

S-JHS-01

1 photo downstream 1 photo upstream

**PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET**

WATERSHED FEATURES	PREDOMINANT SURROUNDING LANDUSE <input type="checkbox"/> FOREST <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> FIELD/PASTURE <input checked="" type="checkbox"/> INDUSTRIAL <input type="checkbox"/> AGRICULTURAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> RESIDENTIAL <i>transportation</i>		LOCAL WATERSHED NPS POLLUTION <input type="checkbox"/> NO EVIDENCE <input checked="" type="checkbox"/> SOME POTENTIAL SOURCES <input type="checkbox"/> OBVIOUS SOURCES <i>Ret-76</i>	
	LOCAL WATERSHED EROSION <input type="checkbox"/> NONE <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> HEAVY			
RIPARIAN VEG. (18 M. BUFFER)	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT <input type="checkbox"/> TREES <input checked="" type="checkbox"/> SHRUBS <input type="checkbox"/> GRASSES <input checked="" type="checkbox"/> HERBACEOUS <i>meadow sweet, meadow</i> DOMINANT SPECIES PRESENT? <i>arrowwood, phragmites, tussock sedge, grasses</i>			
INSTREAM FEATURES	STUDY LENGTH	2280	FT.	CANOPY COVER <input type="checkbox"/> OPEN <input checked="" type="checkbox"/> PARTLY OPEN <input type="checkbox"/> PARTLY SHADED <input type="checkbox"/> SHADED
	STREAM WIDTH	7	FT.	
	STUDY REACH AREA		AC.	PROPERTIES OF REACH, STREAM MORPHOLOGY TYPES <input checked="" type="checkbox"/> RIFFLE      75% <input type="checkbox"/> RUN      _____% <input checked="" type="checkbox"/> POOL      25% <input type="checkbox"/> CHANNELIZED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> DAM PRESENT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	EST. DRAINAGE AREA		SQ. MI.	
	MACROINVERTEBRATES PRESENT?	<input checked="" type="checkbox"/>	YES	
	TAXA PRESENT	<i>caddis, stonefly</i>		
LARGE WOODY DEBRIS	LWD	—		FT. <sup>2</sup>
	DENSITY OF LWD	—		FT. <sup>2</sup> /MI. <sup>2</sup>
AQUATIC VEGETATION	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT <input type="checkbox"/> ROOTED EMERGENT <input type="checkbox"/> ROOTED SUBMERGENT <input type="checkbox"/> ROOTED FLOATING <input type="checkbox"/> FLOATING ALGAE <input type="checkbox"/> ATTACHED ALGAE <input type="checkbox"/> FREE FLOATING			
	DOMINANT SPECIES PRESENT PORTION OF THE REACH WITH AQUATIC VEGETATION _____ %			
WATER QUALITY	TEMPERATURE		°C	WATER ODORS <input type="checkbox"/> NORMAL/NONE <input type="checkbox"/> SEWAGE <input type="checkbox"/> PETROLEUM <input type="checkbox"/> CHEMICAL <input type="checkbox"/> FISHY <input checked="" type="checkbox"/> OTHER <i>possible AMD</i>
	SPEC. CONDUCTANCE			
	DISSOLVED OXYGEN			WATER SURFACE OILS <input type="checkbox"/> SLICK <input type="checkbox"/> SHEEN - Oily <input type="checkbox"/> GLOBS <input type="checkbox"/> FLECKS <input checked="" type="checkbox"/> NONE <input type="checkbox"/> OTHER
	pH			
	TURBIDITY			TURBIDITY (IF NOT MEASURED) <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> OPAQUE <input type="checkbox"/> STAINED <input checked="" type="checkbox"/> OTHER <i>runoff event in the past 24 hrs.</i>
	WQ INSTRUMENT USED			
SEDIMENT/SUBSTRATE	ODORS <input type="checkbox"/> NORMAL <input type="checkbox"/> ANAEROBIC <input type="checkbox"/> SEWAGE <input type="checkbox"/> NONE <input type="checkbox"/> PETROLEUM <input type="checkbox"/> CHEMICAL <input checked="" type="checkbox"/> OTHER <i>AMD</i>		DEPOSITS <input type="checkbox"/> SLUDGE <input type="checkbox"/> SAWDUST <input type="checkbox"/> PAPER/FIBER <input type="checkbox"/> SAND <input type="checkbox"/> RELICT SHELLS <input checked="" type="checkbox"/> OTHER	
	OILS <input checked="" type="checkbox"/> ABSENT <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> PROFUSE		UNDERSIDES OF NON-EMBEDDED STONES BLACK IN COLOR? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

INORGANIC SUBSTRATE COMPONENTS (ADD TO 100%)			ORGANIC SUBSTRATE COMPONENTS (MAY ADD TO LESS THAN 100%)		
SUBSTRATE TYPE	DIAMETER	% COMPOSITION IN SAMPLING REACH	SUBSTRATE TYPE	CHARACTERISTIC	% COMPOSITION IN SAMPLING REACH
BEDROCK		—	DETRITUS	STICKS, WOOD, COARSE PLANT MATERIALS (CPOM)	—
BOULDER	256 MM (10"+)	5%			
COBBLE	64 - 256 MM (2.5 - 10")	15%	MUCK - MUD	BLACK, VERY FINE ORGANIC (FPOM)	—
GRAVEL	2 - 64 MM (0.1 - 2.5")	50%			
SAND	0.06 - 0.2 MM (GRITTY)	25%			
SILT	0.004 - 0.06 MM	5%	MARL	GREY, SHELL FRAGMENTS	—
CLAY	<0.004 MM (SLICK)	—			

# Riverine Assessment Form

Pennsylvania Riverine Condition Level 1 Rapid Assessment Version 1.0

For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	HUC	Date	AA #	AA length
A115	PT ALLEGHENY TUNNEL			05.09.12	SJHS-01	
Name(s) of Evaluator(s)		Stream Name and Information				
DLM, LAU		S-JHS-01 UNT TO STONEY CREEK RIVER				

1. RIPARIAN VEGETATION: Assess the floodplain along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian Vegetation (Floodplain)	Conditional Category								NOTES>>
	Optimal		Suboptimal		Marginal		Poor		
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.	High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with maintained understory.	High Poor: Lawns, mowed, and maintained areas, nurseries, no-til 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.		
Scores	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1					

1. Identify Condition Category areas along the floodplain using the descriptors above.  
 2. Estimate the % area within each condition category. Calculators are provided for you below.

3. Enter the % Riparian Area and Score for each category in the blocks below.		Ensure the sums of % Riparian Blocks equal 100	
Right Side	% Riparian Area > 1.00 Score > 6		1.000% 6
Left Side	% Riparian Area > 1.00 Score > 1		1.000% 1
		CI = Sum (Rt and Lt sub-Indexes)/2	
		Rt Sub-Index > 0.00	0.00
		Lt Sub-Index > 0.00	0.00

0.18

2. RIPARIAN ZONE OF INFLUENCE: Assess land cover along both sides, 100 foot from edge of floodplain into the upland along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian ZOI	Conditional Category								NOTES>>
	Optimal		Suboptimal		Marginal		Poor		
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.	High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with maintained understory.	High Poor: Lawns, mowed, and maintained areas, nurseries; no-til 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 Condition Category areas along each side of the Riparian ZOI using the descriptors above.  
 2. Estimate the % area within each condition category. Calculators are provided for you below.  
 3. Enter the % Riparian ZOI Area and Score for each condition category observed in the blocks below.

Ensure the sums of % Riparian ZOI Blocks equal 100	
Right Side	% Riparian Area > 1.00 Score > 6
Left Side	% Riparian Area > 1.00 Score > 1
	CI = Sum (Rt and Lt sub-Indexes)/2
	Rt Sub-Index > 0.00
	Lt Sub-Index > 0.00

0.18

Comments:

STREAM IS AT TOE OF EMBANKMENT OF I-76 WEST-BOUND.

RIPARIAN ECOTONE CONDITION INDEX	RECI
	0.00

NOTE: The CIs and RECI should be rounded to 2 decimal places.

THE RIPARIAN ECOTONE CONDITION INDEX (RECI)  
 RECI = (Sum of CIs)/2

0.18



**S-JHS-01 overview, facing upstream.**



**S-JHS-01 overview, facing downstream.**

**STREAM S-JHS-02**

5/9/2012  
**PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET**

STREAM NAME		5-JHS-02		CLIENT	PTC
STREAM CLASS		Perennial		PROJECT	Allegheny Tunnel
INVESTIGATORS	DEM	DATE	5/9/12	LOCATION	Somerset County, PA
	LAU	TIME	2:30		
		MM/DD/YR	24 HOUR (I.E. 16:45)		
LATITUDE		LONGITUDE		RIVER BASIN	Stony Creek R.
STATION #		RIVERMILE		STORET #	

<b>WEATHER CONDITIONS</b>	NOW	PAST 24 HOURS	HAS THERE BEEN A HEAVY RAIN IN THE LAST 7 DAYS?	
	<input type="checkbox"/> STORM (HEAVY RAIN)	<input type="checkbox"/>	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	<input type="checkbox"/> RAIN (STEADY RAIN)	<input checked="" type="checkbox"/>		
	<input type="checkbox"/> SHOWERS (INTERMITTENT)	<input type="checkbox"/>		
		AIR TEMPERATURE	100 °F	
		% CLOUD COVER	100	
		OTHER		
		<input checked="" type="checkbox"/> CLEAR/SUNNY		

**SITE LOCATION MAP**

PROVIDE A PLAN VIEW SKETCH WITH A NORTH ARROW (INDICATE DIRECTIONS OF PHOTOGRAPHS)

RT 76

Study boundary

<p>FOR LINEAR PROJECTS, PROVIDE DIMENSIONS AT THE CENTERLINE OF THE STREAM CROSSING.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="text-align: center;">RIGHT BANK (FACE DOWNSTREAM)</td> <td style="text-align: center;">HORIZONTAL (A)</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td style="text-align: center;">VERTICAL (B)</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td rowspan="2" style="text-align: center;">LEFT BANK (FACE DOWNSTREAM)</td> <td style="text-align: center;">HORIZONTAL (C)</td> <td style="text-align: center;">0</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td style="text-align: center;">VERTICAL (D)</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td rowspan="6" style="text-align: center;">CHANNEL DIMENSIONS</td> <td style="text-align: center;">TOP WIDTH (E)</td> <td style="text-align: center;">5.0</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td style="text-align: center;">BOTTOM WIDTH (F)</td> <td style="text-align: center;">4.5</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td style="text-align: center;">OVERALL DEPTH (G)</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td style="text-align: center;">ORDINARY HIGH WATER MARK (H)</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td style="text-align: center;">FLOW DEPTH (I)</td> <td style="text-align: center;">0.33</td> <td style="text-align: center;">FT.</td> </tr> <tr> <td style="text-align: center;">APPROX. SURFACE VELOCITY</td> <td style="text-align: center;">10</td> <td style="text-align: center;">FT./ SEC</td> </tr> </table>	RIGHT BANK (FACE DOWNSTREAM)	HORIZONTAL (A)	0.5	FT.	VERTICAL (B)	0.5	FT.	LEFT BANK (FACE DOWNSTREAM)	HORIZONTAL (C)	0	FT.	VERTICAL (D)	1.0	FT.	CHANNEL DIMENSIONS	TOP WIDTH (E)	5.0	FT.	BOTTOM WIDTH (F)	4.5	FT.	OVERALL DEPTH (G)	1.0	FT.	ORDINARY HIGH WATER MARK (H)	0.5	FT.	FLOW DEPTH (I)	0.33	FT.	APPROX. SURFACE VELOCITY	10	FT./ SEC
RIGHT BANK (FACE DOWNSTREAM)	HORIZONTAL (A)		0.5	FT.																														
	VERTICAL (B)	0.5	FT.																															
LEFT BANK (FACE DOWNSTREAM)	HORIZONTAL (C)	0	FT.																															
	VERTICAL (D)	1.0	FT.																															
CHANNEL DIMENSIONS	TOP WIDTH (E)	5.0	FT.																															
	BOTTOM WIDTH (F)	4.5	FT.																															
	OVERALL DEPTH (G)	1.0	FT.																															
	ORDINARY HIGH WATER MARK (H)	0.5	FT.																															
	FLOW DEPTH (I)	0.33	FT.																															
	APPROX. SURFACE VELOCITY	10	FT./ SEC																															

<b>STREAM CHARACTERIZATION</b>	STREAM SUBSYSTEM		STREAM TYPE	
	<input checked="" type="checkbox"/> PERENNIAL	<input type="checkbox"/> INTERMITTENT	<input type="checkbox"/> COLD WATER	<input checked="" type="checkbox"/> WARM WATER
	<input type="checkbox"/> EPHEMERAL	<input type="checkbox"/> TIDAL	CATCHMENT AREA	
	STREAM ORIGIN		SQ. MI	
		ch Ch 93		
		<input checked="" type="checkbox"/> GLACIAL	OTHER	
		<input type="checkbox"/> NON-GLACIAL MONTANE		
		<input type="checkbox"/> SWAMP AND BOG		

STREAM ID: S-JHS-02

**PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET**

WATERSHED FEATURES	PREDOMINANT SURROUNDING LANDUSE		LOCAL WATERSHED NPS POLLUTION	
	<input checked="" type="checkbox"/> FOREST	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> NO EVIDENCE	<input checked="" type="checkbox"/> SOME POTENTIAL SOURCES
	<input type="checkbox"/> FIELD/PASTURE	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> OBVIOUS SOURCES	R-76
	<input type="checkbox"/> AGRICULTURAL	<input type="checkbox"/> OTHER	LOCAL WATERSHED EROSION	
	<input type="checkbox"/> RESIDENTIAL		<input type="checkbox"/> NONE	<input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> HEAVY
RIPARIAN VEG. (18 M. BUFFER)	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT			
	<input checked="" type="checkbox"/> TREES <input type="checkbox"/> SHRUBS <input type="checkbox"/> GRASSES <input checked="" type="checkbox"/> HERBACEOUS			
	DOMINANT SPECIES PRESENT? <i>Ironwood, skunk cabbage</i>			
INSTREAM FEATURES	STUDY LENGTH	350	PT.	CANOPY COVER
	STREAM WIDTH	5.0	FT.	<input type="checkbox"/> OPEN <input type="checkbox"/> PARTLY OPEN <input checked="" type="checkbox"/> PARTLY SHADED <input type="checkbox"/> SHADED
	STUDY REACH AREA		AC.	PROPERTIES OF REACH, STREAM MORPHOLOGY TYPES
	EST. DRAINAGE AREA		SQ. MI.	<input checked="" type="checkbox"/> RIFFLE 70% <input type="checkbox"/> RUN
	MACROINVERTEBRATES PRESENT?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> POOL 30% <input type="checkbox"/> CHANNELIZED
	TAXA PRESENT	<i>Caddis, Water skipper</i>		
	DAM PRESENT	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
LARGE WOODY DEBRIS	LWD		FT. <sup>2</sup>	
	DENSITY OF LWD		FT. <sup>2</sup> /MI. <sup>2</sup>	
AQUATIC VEGETATION	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT			
	<input type="checkbox"/> ROOTED EMERGENT	<input type="checkbox"/> ROOTED SUBMERGENT	<input type="checkbox"/> ROOTED FLOATING	
	<input type="checkbox"/> FLOATING ALGAE	<input type="checkbox"/> ATTACHED ALGAE	<input type="checkbox"/> FREE FLOATING	
	DOMINANT SPECIES PRESENT			
	PORTION OF THE REACH WITH AQUATIC VEGETATION %			
WATER QUALITY	TEMPERATURE		°C	WATER ODORS
	SPEC. CONDUCTANCE			<input checked="" type="checkbox"/> NORMAL/NONE
	DISSOLVED OXYGEN			<input type="checkbox"/> PETROLEUM
	pH			<input type="checkbox"/> FISHY
	TURBIDITY			<input type="checkbox"/> SEWAGE
	WQ INSTRUMENT USED			<input type="checkbox"/> CHEMICAL
			<input type="checkbox"/> OTHER	
			WATER SURFACE OILS	
			<input type="checkbox"/> SLICK	
			<input type="checkbox"/> GLOBS	
			<input checked="" type="checkbox"/> NONE	
			<input type="checkbox"/> SHEEN - Oily	
			<input type="checkbox"/> FLECKS	
			<input type="checkbox"/> OTHER	
			TURBIDITY (IF NOT MEASURED)	
			<input checked="" type="checkbox"/> CLEAR	
			<input type="checkbox"/> TURBID	
			<input type="checkbox"/> STAINED	
			<input type="checkbox"/> SLIGHTLY TURBID	
			<input type="checkbox"/> OPAQUE	
			<input type="checkbox"/> OTHER	
SEDIMENT/SUBSTRATE	ODORS		DEPOSITS	
	<input checked="" type="checkbox"/> NORMAL	<input type="checkbox"/> ANAEROBIC	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> SAWDUST
	<input type="checkbox"/> SEWAGE	<input type="checkbox"/> NONE	<input type="checkbox"/> PAPER FIBER	<input type="checkbox"/> SAND
	<input type="checkbox"/> PETROLEUM	<input type="checkbox"/> CHEMICAL	<input type="checkbox"/> RELICT SHELLS	
	<input type="checkbox"/> OTHER		<input type="checkbox"/> OTHER	
	OILS	UNDERSIDES OF NON-EMBEDDED STONES BLACK IN COLOR?		
	<input checked="" type="checkbox"/> ABSENT	<input type="checkbox"/> SLIGHT	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	<input type="checkbox"/> MODERATE	<input type="checkbox"/> PROFUSE		

INORGANIC SUBSTRATE COMPONENTS (ADD TO 100%)			ORGANIC SUBSTRATE COMPONENTS (MAY ADD TO LESS THAN 100%)		
SUBSTRATE TYPE	DIAMETER	% COMPOSITION IN SAMPLING REACH	SUBSTRATE TYPE	CHARACTERISTIC	% COMPOSITION IN SAMPLING REACH
BEDROCK			DETRITUS	STICKS, WOOD, COARSE PLANT MATERIALS (CPOM)	
BOULDER	256 MM (10"+)	5%			
COBBLE	64 - 256 MM (2.5 - 10")		MUCK - MUD	BLACK, VERY FINE ORGANIC (FPOM)	
GRAVEL	2 - 64 MM (0.1 - 2.5")	45%			
SAND	0.06 - 0.2 MM (GRITTY)	50%			
SILT	0.004 - 0.06 MM		MARL	GREY, SHELL FRAGMENTS	
CLAY	<0.004 MM (SLICK)				

# Riverine Assessment Form

Pennsylvania Riverine Condition Level 1 Rapid Assessment Version 1.0

For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	HUC	Date	AA #	AA length
A11J	PTE MUEHONEY TUNNEL			05.09.12	S-JHS-02	
Name(s) of Evaluator(s)		Stream Name and Information				
DLM, LAU		S.JHS.02 UNT TO STONEY CREEK REVER				

1. RIPARIAN VEGETATION: Assess the floodplain along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian Vegetation (Floodplain)	Conditional Category								NOTES>>
	Optimal		Suboptimal		Marginal		Poor		
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.	High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with 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.		
	High	Low	High	Low	High	Low			
Scores	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1					

- Identify Condition Category areas along the floodplain using the descriptors above.
- Estimate the % area within each condition category. Calculators are provided for you below.
- Enter the % Riparian Area and Score for each category in the blocks below. Ensure the sums of % Riparian Blocks equal 100

Right Side	% Riparian Area >	1.00							1.00%	
	Score >	18							18	
Left Side	% Riparian Area >	1.00							1.00%	CI
	Score >	18							18	Lt Sub-Index > 0.90 0.90

2. RIPARIAN ZONE OF INFLUENCE: Assess land cover along both sides, 100 foot from edge of floodplain into the upland along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian ZOI	Conditional Category								NOTES>>
	Optimal		Suboptimal		Marginal		Poor		
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.	High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with 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.		
	High	Low	High	Low	High	Low			
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1					

- Identify Condition Category areas along each side of the Riparian ZOI using the descriptors above.
- Estimate the % area within each condition category. Calculators are provided for you below.
- Enter the % Riparian ZOI Area and Score for each condition category observed in the blocks below. Ensure the sums of % Riparian ZOI Blocks equal 100

Right Side	% Riparian Area >	1.00							1.00%	
	Score >	18							18	
Left Side	% Riparian Area >	1.00							1.00%	CI
	Score >	18							18	Lt Sub-Index > 0.90 0.90

Comments:

ZOI IS MATURE, UPLAND DECIDUOUS FOREST.

RIPARIAN ECOTONE CONDITION INDEX

NOTE: The CIs and RECI should be rounded to 2 decimal places.	THE RIPARIAN ECOTONE CONDITION INDEX (RECI) RECI = (Sum of CI's)/2	RECI 0.90
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**S-JHS-02 overview, facing upstream.**



**S-JHS-02 overview, facing downstream.**

**STREAM S-JHS-03**

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET

STREAM NAME	S-JHS-03		CLIENT	PTC	
STREAM CLASS	Perennial		PROJECT	Allegheny Tunnel	
INVESTIGATORS	DLM LAW	DATE	5/16/12	LOCATION	Somerset County, PA
		TIME	1:00		
LATITUDE		LONGITUDE		RIVER BASIN	Snyder Creek R.
STATION #		RIVERMILE		STORET #	

WEATHER CONDITIONS	NOW	PAST 24 HOURS	HAS THERE BEEN A HEAVY RAIN IN THE LAST 7 DAYS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
	<input type="checkbox"/> STORM (HEAVY RAIN)	<input type="checkbox"/>		AIR TEMPERATURE
	<input type="checkbox"/> RAIN (STEADY RAIN)	<input type="checkbox"/>		
	<input type="checkbox"/> SHOWERS (INTERMITTENT)	<input checked="" type="checkbox"/>		OTHER
	<input type="checkbox"/> % CLOUD COVER	<input type="checkbox"/>		
	<input checked="" type="checkbox"/> CLEAR/SUNNY	<input type="checkbox"/>		

**SITE LOCATION MAP**

PROVIDE A PLAN VIEW SKETCH WITH A NORTH ARROW (INDICATE DIRECTIONS OF PHOTOGRAPHS)

<p>FOR LINEAR PROJECTS, PROVIDE DIMENSIONS AT THE CENTERLINE OF THE STREAM CROSSING.</p>	RIGHT BANK (FACE DOWNSTREAM)	HORIZONTAL (A)	0.17	FT.
			VERTICAL (B)	0
	LEFT BANK (FACE DOWNSTREAM)	HORIZONTAL (C)	0	FT.
		VERTICAL (D)	0.83	FT.
CHANNEL DIMENSIONS	TOP WIDTH (E)	10.0	FT.	
	BOTTOM WIDTH (F)	10.0	FT.	
	OVERALL DEPTH (G)	0.83	FT.	
	ORDINARY HIGH WATER MARK (H)	0.83	FT.	
	FLOW DEPTH (I)	0.50	FT.	
	APPROX. SURFACE VELOCITY	10	FT./SEC	

STREAM CHARACTERIZATION	STREAM SUBSYSTEM		STREAM TYPE	
	<input checked="" type="checkbox"/> PERENNIAL	<input type="checkbox"/> INTERMITTENT	<input type="checkbox"/> COLD WATER	<input checked="" type="checkbox"/> WARM WATER
	<input type="checkbox"/> EPHEMERAL	<input type="checkbox"/> TIDAL	CATCHMENT AREA _____ SQ. MI.	
	STREAM ORIGIN		OTHER	
	<input type="checkbox"/> GLACIAL	<input checked="" type="checkbox"/> SPRING FED		
	<input type="checkbox"/> NON-GLACIAL MONTANE	<input checked="" type="checkbox"/> MIXTURE OF ORIGINS		
	<input type="checkbox"/> SWAMP AND BOG	<input checked="" type="checkbox"/> OTHER		

STREAM ID: S-JHS-03

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET

WATERSHED FEATURES	PREDOMINANT SURROUNDING LANDUSE		LOCAL WATERSHED NPS POLLUTION		
	<input checked="" type="checkbox"/> FOREST	<input type="checkbox"/> COMMERCIAL	<input checked="" type="checkbox"/> NO EVIDENCE	<input type="checkbox"/> SOME POTENTIAL SOURCES	
	<input type="checkbox"/> FIELD/PASTURE	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> OBVIOUS SOURCES		
	<input type="checkbox"/> AGRICULTURAL	<input checked="" type="checkbox"/> OTHER	LOCAL WATERSHED EROSION		
	<input type="checkbox"/> RESIDENTIAL	<i>transpiration</i>	<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> MODERATE <input type="checkbox"/> HEAVY	
RIPARIAN VEG. (18 M. BUFFER)	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT				
	<input checked="" type="checkbox"/> TREES	<input type="checkbox"/> SHRUBS	<input type="checkbox"/> GRASSES	<input type="checkbox"/> HERBACEOUS	
	DOMINANT SPECIES PRESENT? <i>birch, maple (sugar)</i>				
INSTREAM FEATURES	STUDY LENGTH	<i>get from map</i>	FT.	CANOPY COVER	
	STREAM WIDTH	<i>10</i>	FT.	<input type="checkbox"/> OPEN <input type="checkbox"/> PARTLY OPEN <input checked="" type="checkbox"/> PARTLY SHADED <input type="checkbox"/> SHADED	
	STUDY REACH AREA		AC.	PROPERTIES OF REACH, STREAM MORPHOLOGY TYPES	
	EST. DRAINAGE AREA	<i>5</i>	SQ. MI.	<input checked="" type="checkbox"/> RIFFLE <i>80</i> %	<input type="checkbox"/> RUN <i>20</i> %
	MACROINVERTEBRATES PRESENT?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> POOL <i>20</i> %	
	TAXA PRESENT	<i>Caddis - larval + fly eggs, mayflies</i>	CHANNELIZED	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
			DAM PRESENT	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
LARGE WOODY DEBRIS	LWD		FT. <sup>2</sup>		
	DENSITY OF LWD		FT. <sup>2</sup> /MI. <sup>2</sup>		
AQUATIC VEGETATION	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT				
	<input type="checkbox"/> ROOTED EMERGENT	<input type="checkbox"/> ROOTED SUBMERGENT	<input type="checkbox"/> ROOTED FLOATING	<input type="checkbox"/> FREE FLOATING	
	<input type="checkbox"/> FLOATING ALGAE	<input type="checkbox"/> ATTACHED ALGAE			
	DOMINANT SPECIES PRESENT				
	PORTION OF THE REACH WITH AQUATIC VEGETATION				
WATER QUALITY	TEMPERATURE		°C	WATER ODORS	
	SPEC. CONDUCTANCE			<input checked="" type="checkbox"/> NORMAL/NONE	
	DISSOLVED OXYGEN			<input type="checkbox"/> PETROLEUM	
	pH			<input type="checkbox"/> FISHY	
	TURBIDITY			<input type="checkbox"/> SEWAGE	
				<input type="checkbox"/> CHEMICAL	
				<input type="checkbox"/> OTHER	
				WATER SURFACE OILS	
			<input type="checkbox"/> SLICK		
			<input type="checkbox"/> GLOBS		
			<input checked="" type="checkbox"/> NONE		
			<input type="checkbox"/> SHEEN - Oily		
			<input type="checkbox"/> FLECKS		
			<input type="checkbox"/> OTHER		
			TURBIDITY (IF NOT MEASURED)		
			<input checked="" type="checkbox"/> CLEAR		
			<input type="checkbox"/> TURBID		
			<input type="checkbox"/> SLIGHTLY TURBID		
			<input type="checkbox"/> OPAQUE		
			<input type="checkbox"/> STAINED		
			<input type="checkbox"/> OTHER		
SEDIMENT/SUBSTRATE	ODORS		DEPOSITS		
	<input checked="" type="checkbox"/> NORMAL	<input type="checkbox"/> ANAEROBIC	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> SAWDUST	
	<input type="checkbox"/> SEWAGE	<input type="checkbox"/> NONE	<input type="checkbox"/> PAPER/FIBER	<input type="checkbox"/> SAND	
	<input type="checkbox"/> PETROLEUM	<input type="checkbox"/> CHEMICAL	<input type="checkbox"/> RELICT SHELLS		
	<input type="checkbox"/> OTHER		<input type="checkbox"/> OTHER		
	OILS		UNDERSIDES OF NON-EMBEDDED STONES BLACK IN COLOR?		
	<input checked="" type="checkbox"/> ABSENT	<input type="checkbox"/> SLIGHT	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
	<input type="checkbox"/> MODERATE	<input type="checkbox"/> PROFUSE			

INORGANIC SUBSTRATE COMPONENTS (ADD TO 100%)			ORGANIC SUBSTRATE COMPONENTS (MAY ADD TO LESS THAN 100%)		
SUBSTRATE TYPE	DIAMETER	% COMPOSITION IN SAMPLING REACH	SUBSTRATE TYPE	CHARACTERISTIC	% COMPOSITION IN SAMPLING REACH
BEDROCK	-	0	DETRITUS	STICKS, WOOD, COARSE PLANT MATERIALS (CPOM)	-
BOULDER	256 MM (10")	1	MUCK - MUD	BLACK, VERY FINE ORGANIC (FPOM)	-
COBBLE	64 - 256 MM (2.5 - 10")	15			
GRAVEL	2 - 64 MM (0.1 - 2.5")	25	MARL	GREY, SHELL FRAGMENTS	-
SAND	0.06 - 0.2 MM (GRITTY)	50			
SILT	0.004 - 0.06 MM	10			
CLAY	<0.004 MM (SLICK)	-			

# Riverine Assessment Form

Pennsylvania Riverine Condition Level 1 Rapid Assessment Version 1.0

For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	HUC	Date	AA #	AA length
A115	PTE ALLEGHENY TRUNDEL			05.16.12	S-JMS-03	
Name(s) of Evaluator(s)		Stream Name and Information				
DLM, LAU		S-JMS-03 UNT TO STONEY CREEK REVER				

1. RIPARIAN VEGETATION: Assess the floodplain along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian Vegetation (Floodplain)	Conditional Category								NOTES>>
	Optimal		Suboptimal		Marginal		Poor		
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.	High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation)	High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with 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.		
Scores	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1					

- Identify Condition Category areas along the floodplain using the descriptors above.
- Estimate the % area within each condition category. Calculators are provided for you below.
- Enter the % Riparian Area and Score for each category in the blocks below. Ensure the sums of % Riparian Blocks equal 100

Right Side	% Riparian Area >	1.00								1.00 0%		
	Score >	11								11		
Left Side	% Riparian Area >	1.00								1.00 0%	Rt Sub-Index > 0.550,00	CI
	Score >	11								11	Lt Sub-Index > 0.550,00	0.00

0.55

2. RIPARIAN ZONE OF INFLUENCE: Assess land cover along both sides, 100 foot from edge of floodplain into the upland along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian ZOI	Conditional Category								NOTES>>
	Optimal		Suboptimal		Marginal		Poor		
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.	High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory	Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation)	High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with 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					

- Identify Condition Category areas along each side of the Riparian ZOI using the descriptors above.
- Estimate the % area within each condition category. Calculators are provided for you below.
- Enter the % Riparian ZOI Area and Score for each condition category observed in the blocks below. Ensure the sums of % Riparian ZOI Blocks equal 100

Right Side	% Riparian Area >	0.60	0.40							1.000%		
	Score >	11	3							7.0		
Left Side	% Riparian Area >	0.75	0.25							1.00 0%	Rt Sub-Index > 0.370,00	CI
	Score >	4	4							9.25	Lt Sub-Index > 0.460,00	0.00

0.43

Comments:  
 STREAM IS LOCATED BETWEEN PTE WEST PORTAL ACCESS ROAD AND ELECTRICAL POWERLINE ROAD.

RIPARIAN ECOTONE CONDITION INDEX		RECI
NOTE: The CIs and RECI should be rounded to 2 decimal places.		0.00
THE RIPARIAN ECOTONE CONDITION INDEX (RECI) RECI = (Sum of CI's)/2		0.49

0.49



**S-JHS-03 overview, facing upstream.**



**S-JHS-03 overview, facing downstream.**

**STREAM S-JHS-04**

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET

STREAM NAME	S-JHS-04		CLIENT	PTC	
STREAM CLASS	Intermittent		PROJECT	Allegheny Tunnel	
INVESTIGATORS	DEM LAV	DATE	5/16/12	LOCATION	Somerset County, PA
		TIME	12:30 PM (I.E. 16:45)		
LATITUDE		LONGITUDE		RIVER BASIN	Stony Creek R.
STATION #		RIVERMILE		STORET #	

WEATHER CONDITIONS	NOW		PAST 24 HOURS			HAS THERE BEEN A HEAVY RAIN IN THE LAST 7 DAYS?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	<input type="checkbox"/>	STORM (HEAVY RAIN)	<input type="checkbox"/>			AIR TEMPERATURE	70	°F
	<input type="checkbox"/>	RAIN (STEADY RAIN)	<input type="checkbox"/>			OTHER		
	<input type="checkbox"/>	SHOWERS (INTERMITTENT)	<input checked="" type="checkbox"/>					
	<input type="checkbox"/>	% CLOUD COVER	<input type="checkbox"/>					
	<input type="checkbox"/>	CLEAR/SUNNY	<input type="checkbox"/>					

**SITE LOCATION MAP**

PROVIDE A PLAN VIEW SKETCH WITH A NORTH ARROW (INDICATE DIRECTIONS OF PHOTOGRAPHS)

<p>FOR LINEAR PROJECTS, PROVIDE DIMENSIONS AT THE CENTERLINE OF THE STREAM CROSSING.</p>	RIGHT BANK (FACE DOWNSTREAM)	HORIZONTAL (A)	0	FT.
		VERTICAL (B)	0.50	FT.
	LEFT BANK (FACE DOWNSTREAM)	HORIZONTAL (C)	0	FT.
		VERTICAL (D)	0.25	FT.
	CHANNEL DIMENSIONS	TOP WIDTH (E)	2.0	FT.
		BOTTOM WIDTH (F)	2.0	FT.
		OVERALL DEPTH (G)	0.25	FT.
		ORDINARY HIGH WATER MARK (H)	0.42	FT.
		FLOW DEPTH (I)	0.25	FT.
		APPROX. SURFACE VELOCITY	10	FT./SEC

STREAM CHARACTERIZATION	STREAM SUBSYSTEM	<input type="checkbox"/> PERENNIAL	<input checked="" type="checkbox"/> INTERMITTENT	STREAM TYPE	<input type="checkbox"/> COLD WATER	<input checked="" type="checkbox"/> WARM WATER
		<input type="checkbox"/> EPHEMERAL	<input type="checkbox"/> TIDAL	CATCHMENT AREA		SQ. MI.
	STREAM ORIGIN	<input type="checkbox"/> GLACIAL	<input checked="" type="checkbox"/> NON-GLACIAL MONTANE	<input checked="" type="checkbox"/> SPRING FED		
	<input type="checkbox"/> SWAMP AND BOG	<input checked="" type="checkbox"/> MIXTURE OF ORIGINS	<input type="checkbox"/> OTHER			

STREAM ID:

S-JHS-04

**PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET**

WATERSHED FEATURES	PREDOMINANT SURROUNDING LANDUSE <input checked="" type="checkbox"/> FOREST <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> FIELD/PASTURE <input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> AGRICULTURAL <input type="checkbox"/> OTHER <input type="checkbox"/> RESIDENTIAL		LOCAL WATERSHED NPS POLLUTION <input checked="" type="checkbox"/> NO EVIDENCE <input type="checkbox"/> SOME POTENTIAL SOURCES <input type="checkbox"/> OBVIOUS SOURCES	
	LOCAL WATERSHED EROSION <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MODERATE <input type="checkbox"/> HEAVY			
RIPARIAN VEG. (18 M. BUFFER)	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT <input checked="" type="checkbox"/> TREES <input type="checkbox"/> SHRUBS <input type="checkbox"/> GRASSES <input type="checkbox"/> HERBACEOUS			
	DOMINANT SPECIES PRESENT? <i>Bracon, wasps</i>			
INSTREAM FEATURES	STUDY LENGTH	FT.	CANOPY COVER	
	STREAM WIDTH	2	<input type="checkbox"/> OPEN <input checked="" type="checkbox"/> PARTLY OPEN <input type="checkbox"/> PARTLY SHADED <input type="checkbox"/> SHADED	
	STUDY REACH AREA	AC.	PROPERTIES OF REACH, STREAM MORPHOLOGY TYPES	
	EST. DRAINAGE AREA	SQ. MI.	<input type="checkbox"/> RIFFLE    % <input checked="" type="checkbox"/> RUN    % <input checked="" type="checkbox"/> POOL    %	
MACROINVERTEBRATES PRESENT?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CHANNELIZED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	DAM PRESENT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	TAXA PRESENT <i>Hops - Caddis</i>
LARGE WOODY DEBRIS	LWD	FT. <sup>2</sup>		
	DENSITY OF LWD	FT. <sup>2</sup> /MI. <sup>2</sup>		
AQUATIC VEGETATION	INDICATE THE DOMINANT TYPE AND RECORD THE DOMINANT SPECIES PRESENT <input type="checkbox"/> ROOTED-EMERGENT <input type="checkbox"/> ROOTED SUBMERGENT <input type="checkbox"/> ROOTED FLOATING <input checked="" type="checkbox"/> FLOATING ALGAE <input type="checkbox"/> ATTACHED ALGAE <input type="checkbox"/> FREE-FLOATING			
	DOMINANT SPECIES PRESENT PORTION OF THE REACH WITH AQUATIC VEGETATION _____ %			
WATER QUALITY	TEMPERATURE	°C	WATER ODORS	
	SPEC. CONDUCTANCE		<input checked="" type="checkbox"/> NORMAL/NONE <input type="checkbox"/> SEWAGE <input type="checkbox"/> PETROLEUM <input type="checkbox"/> CHEMICAL <input type="checkbox"/> FISHY <input type="checkbox"/> OTHER	
	DISSOLVED OXYGEN		WATER SURFACE OILS	
	pH		<input checked="" type="checkbox"/> SLICK <input type="checkbox"/> SHEEN - Oily <input checked="" type="checkbox"/> GLOBS <input type="checkbox"/> FLECKS <input checked="" type="checkbox"/> NONE <input type="checkbox"/> OTHER	
	TURBIDITY		TURBIDITY (IF NOT MEASURED)	
	WQ INSTRUMENT USED		<input checked="" type="checkbox"/> CLEAR <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> OPAQUE <input type="checkbox"/> STAINED <input type="checkbox"/> OTHER	
SEDIMENT/SUBSTRATE	ODORS		DEPOSITS	
	<input type="checkbox"/> NORMAL <input checked="" type="checkbox"/> ANAEROBIC <input type="checkbox"/> SEWAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> PETROLEUM <input type="checkbox"/> CHEMICAL <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> SLUDGE <input type="checkbox"/> SAWDUST <input type="checkbox"/> PAPER/FIBER <input checked="" type="checkbox"/> SAND <input type="checkbox"/> RELICT SHELLS <input type="checkbox"/> OTHER	
	OILS		UNDERSIDES OF NON-EMBEDDED STONES BLACK IN COLOR?	
	<input checked="" type="checkbox"/> ABSENT <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> PROFUSE		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <i>N/A</i>	

INORGANIC SUBSTRATE COMPONENTS (ADD TO 100%)			ORGANIC SUBSTRATE COMPONENTS (MAY ADD TO LESS THAN 100%)		
SUBSTRATE TYPE	DIAMETER	% COMPOSITION IN SAMPLING REACH	SUBSTRATE TYPE	CHARACTERISTIC	% COMPOSITION IN SAMPLING REACH
BEDROCK	-	-	DETRITUS	STICKS, WOOD, COARSE PLANT MATERIALS (CPOM)	25% leaves + sticks
BOULDER	256 MM (10"+)	10%	MUCK - MUD	BLACK, VERY FINE ORGANIC (FPOM)	-
COBBLE	64 - 256 MM (2.5 - 10")	-	MARL	GREY, SHELL FRAGMENTS	-
GRAVEL	2 - 64 MM (0.1 - 2.5")	-			
SAND	0.06 - 0.2 MM (GRITTY)	70%			
SILT	0.004 - 0.06 MM	20%			
CLAY	<0.004 MM (SLICK)	-			

# Riverine Assessment Form

Pennsylvania Riverine Condition Level 1 Rapid Assessment Version 1.0

For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	HUC	Date	AA #	AA length
A11J	PT ALLEGHENY TUNNEL				S.JHS-04	
Name(s) of Evaluator(s)		Stream Name and Information				
DLM, LAU		S.JHS 09 UNT TO STONEY CREEK REVER				

1. RIPARIAN VEGETATION: Assess the floodplain along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian Vegetation (Floodplain)	Conditional Category																NOTES>>										
	Optimal				Suboptimal				Marginal				Poor														
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.				High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.				Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).				High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.					Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with 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.	
Scores	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1							

1. Identify Condition Category areas along the floodplain using the descriptors above.  
 2. Estimate the % area within each condition category. Calculators are provided for you below.  
 3. Enter the % Riparian Area and Score for each category in the blocks below. Ensure the sums of % Riparian Blocks equal 100

Right Side	% Riparian Area>	0.70	0.30																1.00 0%		
	Score >	14	4																11.		
CI = Sum (Rt and Lt sub-Indexes)/2																					
Left Side	% Riparian Area>	0.70	0.30																1.00 0%	Rt Sub-Index> 0.55 0.00	CI
	Score >	14	4																11	Lt Sub-Index> 0.55 0.00	0.00

0.55

2. RIPARIAN ZONE OF INFLUENCE: Assess land cover along both sides, 100 foot from edge of floodplain into the upland along the entire SAR (Visual estimates of areal coverage from aerial photos with field verified acceptable).

Riparian ZOI	Conditional Category																NOTES>>										
	Optimal				Suboptimal				Marginal				Poor														
	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover. Wetlands and stream channels located within the riparian areas.				High Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.				Low Suboptimal: Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).				High Marginal: Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.					Low Marginal: Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh > 3 inches) present, with <30% tree canopy cover with 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 Condition Category areas along each side of the Riparian ZOI using the descriptors above.  
 2. Estimate the % area within each condition category. Calculators are provided for you below.  
 3. Enter the % Riparian ZOI Area and Score for each condition category observed in the blocks below. Ensure the sums of % Riparian ZOI Blocks equal 100

Right Side	% Riparian Area>	0.70	0.30																1.00 0%		
	Score >	14	4																11		
CI = Sum (Rt and Lt sub-Indexes)/2																					
Left Side	% Riparian Area>	0.70	0.30																1.00 0%	Rt Sub-Index> 0.55 0.00	CI
	Score >	14	4																11	Lt Sub-Index> 0.55 0.00	0.00

0.55

Comments:  
 ZOI INCLUDES UPLAND, DECIDUOUS FOREST AND HERMITICAL POWERLINE ROW.

RIPARIAN ECOTONE CONDITION INDEX		RECI
NOTE: The CIs and RECI should be rounded to 2 decimal places.		0.00
THE RIPARIAN ECOTONE CONDITION INDEX (RECI) RECI = (Sum of Ci's)/2		0.55

0.55



**S-JHS-04 overview, facing upstream.**



**S-JHS-04 overview, facing downstream.**

**STREAM S-JHS-05**