SUNOCO PIPELINE L.P.

Pennsylvania Pipeline Project

Wetland Functions and Values Assessment
-Cambria County

Joint Permit Application for a
Pennsylvania Water Obstruction & Encroachment Permit and a U.S.
Army Corps of Engineers Section 404 Permit Application

Revised October 2016



Table of Contents

1.0	Introduction	3
2.0	Methods	3
3.0	Results and Impact Assessment	. 12
4.0	References	. 14

 $Attachment\ A-EV\ Wetland\ Highway\ Method\ Function\ and\ Value\ Evaluation\ Forms$ $Attachment\ B-Other\ Wetland\ Highway\ Method\ Function\ and\ Value\ Assessments$

WETLAND FUNCTIONS AND VALUES ASSESSMENT

1.0 INTRODUCTION

Sunoco Pipeline's, L.P. (SPLP) is seeking Pennsylvania Department of Environmental Protection (PADEP) Chapter 105 Water Obstruction and Encroachment and U.S. Army Corps of Engineers (USACE) Section 404 permits to allow temporary impacts to aquatic resources associated with the installation and operation of the Pennsylvania Pipeline Project (Project). To support the Cambria County Joint Application, and in accordance with 25 Pa Code §105.13(e)(3), a wetland functions and values assessment is required and has been prepared for the proposed wetland impacts. The USACE Highway Methodology (USACE 1999) was chosen as the assessment method as it is generally acceptable to the PADEP and the USACE.

SPLP has been diligent in siting and designing the Project to avoid and minimize adverse effects to environmental resources located along the approximately 300-mile route. As part of the application materials, an in-depth alternatives analysis is presented to demonstrate these efforts. Within that alternatives analysis it is apparent that the highest quality wetlands on the Project area being avoided through reroutes and use of horizontal directional drill (HDD) technology. Direct impacts to almost all forested wetlands, the majority of scrub-shrub wetlands, and all federally listed endangered species occupied wetlands are avoided. The remaining impacted wetlands are often small, man-made, palustrine emergent, and limited to occurring within existing rights-of-way. This functions and values assessment provides further characterization of the impacted wetlands to assist the PADEP in its evaluation of the Chapter 105 application.

2.0 METHODS

As stated, the USACE Highway Methodology (USACE 1999) was chosen as the assessment method as it is generally acceptable to the PADEP and the USACE. In accordance with the method the eight functions and five values listed below were assessed for each impacted wetland. A Wetland Function-Value Evaluation Form is provided within the method's workbook and was used in the assessment of this Project's exceptional value (EV) wetlands. As first step, descriptor information on the wetland or wetland complex is provided within the header portion of the form and allows for information in respect to surround landscape as well as the impacts to be entered. As a second step, the suitability of the wetland to provide the function is assessed. Those determined to not provide the function or value or provide it at an insignificant level were considered not to be providing the function and "No" was checked. The rational for making the suitability decision and the considerations/qualifiers are then listed by code within the form in accordance with those listed in Table 1. Having a consideration/qualifier present did not automatically qualify the wetland as suitable for the function or value, but was a result of a combination of the presence and the evaluator's best professional judgment. Wetland delineation data sheets, pictures, topographical maps, soils maps, aerial maps, wetland and stream delineations, agency information (e.g., endangered species presence, designated exceptional value), other field survey information (e.g., threatened and endangered species), and best professional judgement were used during each evaluation. The third and final step, was to identify principle functions and values as those determined to be the most important. The objective of filling out the form is to document an unbiased record of the wetland, including

its location, function, appearance and relationship to its adjacent land use (USACE 1999). For non-exceptional value wetlands or "other wetlands" the same methodology was used but the results are presented in tabular format and lists only the principle functions provided.

GROUNDWATER RECHARGE/DISCHARGE — this function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where groundwater can be discharged to the surface.

FLOODFLOW ALTERATION (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.

FISH AND SHELLFISH HABITAT — This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.

SEDIMENT/TOXICANT/PATHOGEN RETENTION — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens.

NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

PRODUCTION EXPORT (Nutrient) — This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

SEDIMENT/SHORELINE STABILIZATION — This function relates to the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

WILDLIFE HABITAT — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.

RECREATION (Consumptive and Non-Consumptive) — This value considers the effectiveness of the wetland and associated watercourses to provide recreational opportunities such as canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive activities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland, whereas non-consumptive activities do not.

EDUCATIONAL/SCIENTIFIC VALUE — This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

UNIQUENESS/HERITAGE — This value relates to the effectiveness of the wetland or its associated waterbodies to produce certain special values. Special values may include such things as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

VISUAL QUALITY/AESTHETICS — This value relates to the visual and aesthetic qualities of the wetland.

THREATENED or ENDANGERED SPECIES HABITAT — This value relates to the effectiveness of the wetland or associated waterbodies to support threatened or endangered species.

Table 1 – Function-Value Considerations/Qualifiers

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS				
Groundwater Recharge/Discharge	 Public or private wells occur downstream of the wetland. Potential exists for public or private wells downstream of the wetland. Wetland is underlain by stratified drift. Gravel or sandy soils present in or adjacent to the wetland. Fragipan does not occur in the wetland. Fragipan, impervious soils, or bedrock does occur in the wetland. Wetland is associated with a perennial or intermittent watercourse. Signs of groundwater recharge are present or piezometer data demonstrates recharge. Wetland is associated with a watercourse but lacks a defined outlet or contains a constricted outlet. Wetland contains only an outlet, no inlet. Groundwater quality of stratified drift aquifer within or downstream of wetland meets drinking water standards. Quality of water associated with the wetland is high. Signs of groundwater discharge are present (e.g., springs). Water temperature suggests it is a discharge site. Wetland shows signs of variable water levels. Other 				
Floodflow Alteration	 Area of this wetland is large relative to its watershed. Wetland occurs in the upper portions of its watershed. Effective flood storage is small or non-existent upslope of or above the wetland. Wetland watershed contains a high percent of impervious surfaces. Wetland contains hydric soils which are able to absorb and detain water. Wetland exists in a relatively flat area that has flood storage potential. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level. 				

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS
	8. During flood events, this wetland can retain higher volumes of water
	than under normal or average rainfall conditions.
	9. Wetland receives and retains overland or sheet flow runoff from
	surrounding uplands.
	10. In the event of a large storm, this wetland may receive and detain
	excessive flood water from a nearby watercourse.
	11. Valuable properties, structures, or resources are located in or near the
	floodplain downstream from the wetland.
	12. The watershed has a history of economic loss due to flooding.
	13. This wetland is associated with one or more watercourses.
	14. This wetland watercourse is sinuous or diffuse.
	15. This wetland outlet is constricted.
	16. Channel flow velocity is affected by this wetland.
	17. Land uses downstream are protected by this wetland.
	18. This wetland contains a high density of vegetation.
	19. Other
Fish and Shellfish Habitat	1. Forest land dominant in the watershed above this wetland.
	2. Abundance of cover objects present.
	STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A
	WATERCOURSE
	3. Size of this wetland is able to support large fish/shellfish populations.
	4. Wetland is part of a larger, contiguous watercourse.
	5. Wetland has sufficient size and depth in open water areas so as not to
	freeze solid and retain some open water during winter.
	6. Stream width (bank to bank) is more than 50 feet.
	7. Quality of the watercourse associated with this wetland is able to
	support healthy fish/shellfish populations.
	8. Streamside vegetation provides shade for the watercourse.
	9. Spawning areas are present (submerged vegetation or gravel beds).
	10. Food is available to fish/shellfish populations within this wetland.
	11. Barrier(s) to anadromous fish (such as dams, including beaver dams,
	waterfalls, road crossing) are absent from the stream reach associated
	with this wetland.
	12. Evidence of fish is present.
	13. Wetland is stocked with fish.
	14. The watercourse is persistent.
	15. Man-made streams are absent.
	16. Water velocities are not too excessive for fish usage.
	17. Defined stream channel is present.
	18. Other
Sediment/Toxicant/Pathogen	1. Potential sources of excess sediment are in the watershed above the
Retention	wetland.
	2. Potential or known sources of toxicants are in the watershed above the
	wetland. 3. Opportunity for sadiment trapping by slow moving water or deepwater.
	3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
	naonat are present in tins wettand.

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS
	4. Fine grained mineral or organic soils are present.
	5. Long duration water retention time is present in this wetland.
	6. Public or private water sources occur downstream.
	7. The wetland edge is broad and intermittently aerobic.
	8. The wetland is known to have existed for more than 50 years.
	9. Drainage ditches have not been constructed in the wetland.
	STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A
	WATERCOURSE.
	10. Wetland is associated with an intermittent or perennial stream or a
	lake.
	11. Channelized flows have visible velocity decreases in the wetland.
	12. Effective floodwater storage in wetland is occurring. Areas of
	impounded open water are present.
	13. No indicators of erosive forces are present. No high water velocities
	are present.
	14. Diffuse water flows are present in the wetland.
	15. Wetland has a high degree of water and vegetation interspersion.
	16. Dense vegetation provides opportunity for sediment trapping and/or
	signs of sediment accumulation by dense vegetation is present.
	17. Other
Nutrient	1. Wetland is large relative to the size of its watershed.
Removal/Retention/Transformation	2. Deep water or open water habitat exists.
	3. Overall potential for sediment trapping exists in the wetland.
	4. Potential sources of excess nutrients are present in the watershed
	above the wetland.
	5. Wetland saturated for most of the season. Ponded water is present in
	the wetland.
	6. Deep organic/sediment deposits are present.
	7. Slowly drained fine grained mineral or organic soils are present.
	8. Dense vegetation is present.
	9. Emergent vegetation and/or dense woody stems are dominant.
	10. Opportunity for nutrient attenuation exists.
	11. Vegetation diversity/abundance sufficient to utilize nutrients.
	STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A
	WATERCOURSE.
	12. Waterflow through this wetland is diffuse.
	13. Water retention/detention time in this wetland is increased by
	constricted outlet or thick vegetation.
	14. Water moves slowly through this wetland.
	15. Other
Production Export (Nutrient)	1. Wildlife food sources grow within this wetland.
	2. Detritus development is present within this wetland
	3. Economically or commercially used products found in this wetland.
	4. Evidence of wildlife use found within this wetland.
	5. Higher trophic level consumers are utilizing this wetland.
	6. Fish or shellfish develop or occur in this wetland.
	7. High vegetation density is present.
	8. Wetland exhibits high degree of plant community structure/species
	diversity.

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS
	9. High aquatic vegetative diversity/abundance is present.10. Nutrients exported in wetland watercourses (permanent outlet
	present). 11. "Flushing" of relatively large amounts of organic plant material
	occurs from this wetland. 12. Wetland contains flowering plants that are used by nectar-gathering
	insects.
	13. Indications of export are present.14. High production levels occurring, however, no visible signs of export
	(assumes export is attenuated).
	15. Other
Sediment/Shoreline Stabilization	 Indications of erosion or siltation are present. Topographical gradient is present in wetland.
	3. Potential sediment sources are present up-slope.
	4. Potential sediment sources are present upstream.
	5. No distinct shoreline or bank is evident between the waterbody and the wetland or upland.
	6. A distinct step between the open waterbody or stream and the adjacent
	land exists (i.e., sharp bank) with dense roots throughout.
	7. Wide wetland (>10') borders watercourse, lake, or pond.
	8. High flow velocities in the wetland.
	9. The watershed is of sufficient size to produce channelized flow.
	10. Open water fetch is present.
	11. Boating activity is present.12. Dense vegetation is bordering watercourse, lake, or pond.
	13. High percentage of energy-absorbing emergents and/or shrubs border
	a watercourse, lake, or pond. 14. Vegetation is comprised of large trees and shrubs that withstand
	major flood events or erosive incidents and stabilize the shoreline on a large scale (feet).
	15. Vegetation is comprised of a dense resilient herbaceous layer that
	stabilizes sediments and the shoreline on a small scale (inches) during
	minor flood events or potentially erosive events. 16. Other
Wildlife Habitat	Wetland is not degraded by human activity.
	2. Water quality of the watercourse, pond, or lake associated with this
	wetland meets or exceeds Class A or B standards.
	3. Wetland is not fragmented by development.
	4. Upland surrounding this wetland is undeveloped.
	5. More than 40% of this wetland edge is bordered by upland wildlife
	habitat (e.g., brushland, woodland, active farmland, or idle land) at least
	500 feet in width.6. Wetland is contiguous with other wetland systems connected by a
	watercourse or lake.
	7. Wildlife overland access to other wetlands is present.
	8. Wildlife food sources are within this wetland or are nearby.
	9. Wetland exhibits a high degree of interspersion of vegetation classes
	and/or open water.
	1

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS			
	10. Two or more islands or inclusions of upland within the wetland are			
	present.			
	11. Dominant wetland class includes deep or shallow marsh or wooded			
	swamp.			
	12. More than three acres of shallow permanent open water (less than 6.6			
	feet deep), including streams in or adjacent to wetland, are present.			
	13. Density of the wetland vegetation is high.			
	14. Wetland exhibits a high degree of plant species diversity.			
	15. Wetland exhibits a high degree of diversity in plant community			
	structure (e.g., tree/			
	shrub/vine/grasses/mosses)			
	16. Plant/animal indicator species are present. (List species for project)			
	17. Animal signs observed (tracks, scats, nesting areas, etc.)			
	18. Seasonal uses vary for wildlife and wetland appears to support varied			
	population diversity/abundance during different seasons.			
	19. Wetland contains or has potential to contain a high population of			
	insects.			
	20. Wetland contains or has potential to contain large amphibian			
	populations.			
	21. Wetland has a high avian utilization or it's potential.			
	22. Indications of less disturbance-tolerant species are present.			
	23. Signs of wildlife habitat enhancement are present (birdhouses,			
	nesting boxes, food			
	sources,			
Recreation	1. Wetland is part of a recreation area, park, forest, or refuge.			
	2. Fishing is available within or from the wetland.3. Hunting is permitted in the wetland.			
	4. Hiking occurs or has potential to occur within the wetland.			
	5. Wetland is a valuable wildlife habitat.			
	6. The watercourse, pond, or lake associated with the wetland is			
	unpolluted.			
	7. High visual/aesthetic quality of this potential recreation site.			
	8. Access to water is available at this potential recreation site for boating,			
	canoeing, or fishing.			
	9. The watercourse associated with this wetland is wide and deep enough			
	to accommodate canoeing and/or non-powered boating.			
	10. Off-road public parking available at the potential recreation site.			
	11. Accessibility and travel ease is present at this site.12. The wetland is within a short drive or safe walk from highly			
	populated public and private areas.			
	13. Other			
Education/Scientific Value	1. Wetland contains or is known to contain threatened, rare, or			
	endangered species.			
	2. Little or no disturbance is occurring in this wetland.			
	3. Potential educational site contains a diversity of wetland classes which			
	are accessible or potentially accessible.			
	4. Potential educational site is undisturbed and natural.			

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS
	5. Wetland is considered to be a valuable wildlife habitat.6. Wetland is located within a nature preserve or wildlife management
	area. 7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.).
	8. Off-road parking at potential educational site suitable for school bus access in or near wetland.
	9. Potential educational site is within safe walking distance or a short drive to schools.
	10. Potential educational site is within safe walking distance to other plant communities.11. Direct access to perennial stream at potential educational site is
	available. 12. Direct access to perennal stream at potential educational site is available.
	 13. No known safety hazards exist within the potential educational site. 14. Public access to the potential educational site is controlled. 15. Handicap accessibility is available.
	16. Site is currently used for educational or scientific purposes.17. Other
Uniqueness/Heritage	 Upland surrounding wetland is primarily urban. Upland surrounding wetland is developing rapidly. More than 3 acres of shallow permanent open water (less than 6.6 feet
	deep), including streams, occur in wetlands. 4. Three or more wetland classes are present.
	5. Deep and/or shallow marsh or wooded swamp dominate.6. High degree of interspersion of vegetation and/or open water occur in this wetland.
	7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland.
	8. Potential educational site is within a short drive or a safe walk from schools.
	9. Off-road parking at potential educational site is suitable for school buses.
	10. No known safety hazards exist within this potential educational site.11. Direct access to perennial stream or lake exists at potential educational site.
	12. Two or more wetland classes are visible from primary viewing locations.
	13. Low-growing wetlands (marshes, scrub-shrub, bogs, and open water) are visible from primary viewing locations.
	14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations.
	15. Large area of wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons.16. General appearance of the wetland visible from primary viewing
	locations is unpolluted and/or undisturbed. 17. Overall view of the wetland is available from the surrounding upland.
	18. Quality of the water associated with the wetland is high. 19. Opportunities for wildlife observations are available.

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS
	20. Historical buildings are found within the wetland.
	21. Presence of pond or pond site and remains of a dam occur within the
	wetland.
	22. Wetland is within 50 yards of the nearest perennial watercourse.
	23. Visible stone or earthen foundations, berms, dams, standing
	structures, or associated features occur within the wetland.
	24. Wetland contains critical habitat for a state- or federally-listed
	threatened or endangered species.
	25. Wetland is known to be a study site for scientific research.26. Wetland is a natural landmark or recognized by the state natural
	heritage inventory authority as an exemplary natural community.
	27. Wetland has local significance because it serves several functional
	values.
	28. Wetland has local significance because it has biological, geological,
	or other features that are locally rare or unique.
	29. Wetland is known to contain an important archaeological site.
	30. Wetland is hydrologically connected to a state or federally designated
	scenic river.
	31. Wetland is located in an area experiencing a high wetland loss rate.
	32. Other
Visual Quality/Aesthetics	1. Multiple wetland classes are visible from primary viewing locations.
	2. Emergent marsh and/or open water are visible from primary viewing
	locations.
	3. A diversity of vegetative species is visible from primary viewing locations.
	4. Wetland is dominated by flowering plants or plants that turn vibrant
	colors in different seasons.
	5. Land use surrounding the wetland is undeveloped as seen from
	primary viewing locations.
	6. Visible surrounding land use form contrasts with wetland.
	7. Wetland views absent of trash, debris, and signs of disturbance.
	8. Wetland is considered to be a valuable wildlife habitat.
	9. Wetland is easily accessed.
	10. Low noise level at primary viewing locations.
	11. Unpleasant odors absent at primary viewing locations.
	12. Relatively unobstructed sight line exists through wetland.
Endangered Species Habitat	13. Other 1. Watland contains or is known to contain threatened or endangered
Endangered Species Habitat	1. Wetland contains or is known to contain threatened or endangered species.
	2. Wetland contains critical habitat for a state or federally listed
	threatened or endangered species.
	uncatened of chadingered species.

3.0 RESULTS AND IMPACT ASSESSMENT

The Project crosses a total of 20 exceptional value wetlands in Cambria County. The Wetland Function-Value Evaluation Form is filled out for each of these wetlands and is located in Attachment A. For the non-exceptional value wetlands, the assessment is provided in Tabular format and is located in Attachment B. Please see the Alternative Analysis part of the application, specifically prepared in accordance with Title 25 of the Pennsylvania Code 105.18a(a), to demonstrate that the Project has avoided impacts to aquatic resources to the maximum extent practicable and has been designed to avoid significant adverse impact on wetlands, either through aerial extent or impacts on wetland function and values.

The Project crosses the 20 exceptional value wetlands and 67 other wetlands in Cambria County. The wetland impacts associated with the Project are temporary, and original grades and hydrology will be restored. Wetland functions and values, including exceptional value wetlands, will not be significantly altered. Those wetlands crossed by an HDD have already implemented measures to reduce the potential for inadvertent return through design phase geotechnical study and careful drill alignment planning. No surface impact or function and value impact to these drilled wetlands is expected as a result of the Project. During drill operation an inadvertent return contingency plan will be implemented at all times to further reduce the potential for impacts to wetlands or the functions and values provided.

Extra precautions are taken at each wetland to protect functions and values. Before construction begins, all Project workspaces are surveyed and marked including wetland boundaries. During construction these areas are inspected often to ensure these limits are adhered too. This ensures that only permitted wetland disturbances occur. Limiting the disturbance level to the authorized and minimum amount practicable significantly reduces the potential for unplanned impacts to functions and values.

The Project will be constructed under a PADEP Chapter 102 Erosion and Sediment Control General Permit authorization. This authorization, provides for the construction sequence and requires the installation of BMPs to protect the wetland during and post-construction. The BMPs are derived directly from PADEP manuals and are designed to protect aquatic resource function and value. For example, the installation of trench breakers at wetland entry and exit points is designed to protect wetland hydrology and maintain preconstruction groundwater recharge/discharge, floodflow alteration, sediment/toxicant retention, nutrient removal, and production export when these functions are present. The erosion and control permit will also stipulate top-soil separation in non-saturated wetlands to ensure proper restoration of the native seedbank. In addition, permit authorizations will require monitoring and that monitoring will establish criteria for contour, hydrology, and vegetation restoration. This monitoring and required agency reporting will further ensure functions and values are not lost.

Stream bed and banks are required to be restored to stabilized condition, and as a result, for wetlands directly abutting stream banks the sediment/shoreline stabilization function is expected to remain unchanged. Fish and shellfish habitat is often degraded as a result of undue sedimentation at Project areas or within downstream waters. The implementation of dry crossing methods at all flowing streams, reduces during construction sedimentation impacts and restoration of stream beds and banks after installation further protects adjacent wetlands and downstream waters. In addition, stream bed substrate is required to be separated and restored to protect important fish spawning habitat. Most streams will be traversed

(trenched and backfilled) within 24 hours to reduce exposure to Project activities and unforeseen weather events.

Although many impacts are avoided and minimized, some functions and values would be temporarily affected by construction of the Project. All noted functions and values may be temporarily lost during construction as in the case of very small wetlands completely impacted by Project activities. However, these smaller wetlands often do not provide principal functions, unless an endangered species or unique/heritage value is noted. Large wetlands extending beyond the Project boundaries would still continue to provide the noted functions and values during construction as the impact area relative to the size of the wetland is minor. Several wetlands are noted as providing the wildlife habitat function. While temporary, short-term impacts may be unavoidable to non-mobile wildlife occupying these wetlands, the wetland will be restored and re-occupation is expected by the general wildlife community. More mobile species are expected to occupy adjacent habitats and all sensitive species occupied wetlands have been avoided through re-routes or Project design (e.g., HDD).

In summary, the exceptional value and other wetlands impacted provide functions and values at varying levels. SPLP has taken great steps to avoid and minimize wetland impacts across Cambria County. Permanent and temporary wetland impacts are based on PADEP definitions. Permanent impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into the floodway. Although PADEP defines operation and maintenance activities as permanent impacts, all wetlands affected by the Project will be restored to pre-construction conditions including the presence of wetland soils, hydrology, and hydrophytic vegetation. In addition, the Project does not involve any permanent fill and there will be no permanent loss of wetland area associated with the Project. SPLP will not maintain the ROW through wetland areas (i.e., no mowing); therefore, the pre-and post-construction conditions of the wetland areas will be the same, except for a nominal areal extent of forested wetland that will be converted to emergent wetland.

Temporary impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This does not include areas that will be maintained as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into the floodway.

Given the PADEP permanent and temporary impact definitions, Permanent ROW impacts total 3.607 acres and temporary impacts total 1.193 acres for the 23.5 miles of construction ROW located in Cambria County. These impacts include 0.152 acres of cover type conversion in forested wetlands. As indicated in Attachment B, wetlands affected by the Project lack several of the 13 functions and values and are of low value. Impacts are not only small-scale, but also are minimal in nature with respect to functions and values. Impacts to functions and values will be temporary, especially given restoration will occur immediately following construction and revegetation of wetlands (with the exception of forested wetlands) will occur within the first growing season.

4.0 REFERENCES

USACE. 1999. The Highway Methodology Workbook Supplemental. US Army Corps of Engineers New England Division. 39 pp. NAEEP-360-1-30a.

Attachment A

Total area of wetland 0.015 ac. Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No					Wetland I.D. W139	
					Latitude 40.427064 Longitude -78.944714	
Adjacent land use Gas ROW Distance to nearest roadway or other development 1.35 mi.					Prepared by: KMM Date 10/10/2016	
Dominant wetland systems present_PEM Contiguous undeveloped buffer zone present_yes					Wetland Impact: See Permit Tables	
Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? How many tributaries contribute to the wetland? Wildlife & vegetation diversity/abundance (see attached list) Suitability Rationale Principal Function/Value Y N (Reference #)* Function(s)/Value(s)					Evaluation based on: Office Field Corps manual wetland delineation completed? Y N Comments	
Groundwater Recharge/Discharge		N	(Reference III)	ranon	On(3)/ Value(3)	Comments
Floodflow Alteration		~				
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 6, 9	V		
Nutrient Removal		V	4			
→ Production Export		~				
Sediment/Shoreline Stabilization		~				
wildlife Habitat		~	4, 5			
Recreation		V				
Educational/Scientific Value		V				
★ Uniqueness/Heritage		~				
Visual Quality/Aesthetics						
ES Endangered Species Habitat		~				
Other						

^{*} Refer to backup list of numbered considerations.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: 6/39- WET1

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				100
3				Total Number of Dominant
4.		-		Species Across All Strata: (B)
5	2/2011	-		Percent of Dominant Species
/	•			That Are OBL, FACW, or FAC: (A/B)
6		********		Prevalence Index worksheet:
7				
		= Total Cov	/er	Total % Cover of:Multiply by:
50% of total cover:	20% of	total cover	<u> </u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)				FACW species x 2 =
1		·		FAC species x 3 =
2		-		FACU species x 4 =
3		S - 11-11-1		UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
7			-	Hydrophytic Vegetation Indicators:
8.				
9				_ ✓ 2 - Dominance Test is >50%
		T-4-10:	7111111	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:		Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size:)	20 % 01	total cover;		data in Remarks or on a separate sheet)
1. Oportea sensibilis	20	L.	Inne	
2 Michael Committee		$\frac{x}{x}$	1700	
2. Microsiegium Vimineum	520		- / -	¹ Indicators of hydric soil and wetland hydrology must
3. Seripur atrivirens	10		DBL	be present, unless disturbed or problematic.
4	<u> </u>			Definitions of Four Vegetation Strata:
5				
6				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7	REPORTED TO			more in diameter at breast height (DBH), regardless of height.
8				00:00:00:00:00:00:00:00:00:00:00:00:00:
9				Sapling/Shrub - Woody plants, excluding vines, less
10				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11		-		79
The same state of the same sta	65	Total Cove		Herb - All herbaceous (non-woody) plants, regardless
50% of total appear	200/ -54	lotal Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover:) Woody Vine Stratum (Plot size:)	20% 011	otal cover:		Woody vine – All woody vines greater than 3.28 ft in
1				height.
3				
4				Hydrophytic
5				Vacatation
	=	Total Cove	r	Present? Yes No
50% of total cover:		otal cover:_		
Remarks: (Include photo numbers here or on a separate s	heet.)	-		
_				
60% cover =	Shusa	um	11055	
₩ 0/ <i>a</i>	1	-1	, pr	

The state of the s						Wetland I.D. W140
Total area of wetland 0.048 ac. Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No Latitude 40.426933 Longitude -78.94387						
						Prepared by: KMM Date 10/10/2016
Dominant wetland systems present PEM Contiguous undeveloped buffer zone present yes						Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? Yes		If r	not, where does the wetland li	e in the dra	ainage basin?	Evaluation based on:
How many tributaries contribute to the wetland? 0			_Wildlife & vegetation divers	ity/abunda	ince (see attached list)	Office Field
_					,	Corps manual wetland delineation completed? Y N
Function/Value		abilit N	y Rationale (Reference #)*	Princip		Comments
	1		(Reference #)	Tuncti	on(s)/ value(s)	omments
₹ Groundwater Recharge/Discharge		~				
Floodflow Alteration		~				
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 6, 9	~		
Nutrient Removal		~	4			
→ Production Export		~				
Sediment/Shoreline Stabilization		~				
W ildlife Habitat		~	4, 5			
A Recreation		•				
Educational/Scientific Value		~	_			
tuniqueness/Heritage		•				
Visual Quality/Aesthetics						
ES Endangered Species Habitat		~				
Other						

^{*}Refer to backup list of numbered considerations.

Sampling Point: W/40-WET/

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Species? Status	Number of Dominant Species
1,	· — · — · —	That Are OBL, FACW, or FAC:(A)
2		Total Number of Dominant
3		Species Across All Strata:(B)
4		Percent of Dominant Species
5,		That Are OBL, FACW, or FAC: (A/B)
6		
7		Prevalence Index worksheet:
	= Total Cover	Total % Cover of: Multiply by:
50% of total cover:	20% of total cover:	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)		FACW species x 2 =
1		FAC species x 3 =
2		FACU species x 4 =
3		UPL species x 5 =
4		Column Totals: (A) (B)
5		
6		Prevalence Index = B/A =
7.		Hydrophytic Vegetation Indicators:
8		1 - Rapid Test for Hydrophytic Vegetation
9		2 - Dominance Test is >50%
225 255 265 - 111 111 12 - 11 111 11 11 1	= Total Cover	3 - Prevalence Index is ≤3.01
50% of total cover:		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 7		data in Remarks or on a separate sheet)
1 TUMMED OFFICE	30 X FACOU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Scingus eyperinus		
3. proclea gensibiles	20 X 6BC	¹ Indicators of hydric soil and wetland hydrology must
S. CHOCKE SELSIBILIT	ZO X FOREW	be present, unless disturbed or problematic.
	_/0	Definitions of Four Vegetation Strata:
5		The World of the State of the S
6		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		height.
8		Sanling/Chrub Wasadu alasta sustada da l
9		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11,		Herb – All herbaceous (non-woody) plants, regardless
	70 = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 35	20% of total cover:	
Woody Vine Stratum (Plot size:)		Woody vine – All woody vines greater than 3.28 ft in height.
1	**************************************	nagu.
2		
3		
4		
5		Hydrophytic Vegetation
	= Total Cover	Present? Yes No
50% of total cover:	20% of total cover:	
Remarks: (Include photo numbers here or on a separate si		
Incompanies 1	,	
0/0		
0605		
- w		

Total area of weekland 0.460.20 H	,					Wetland I.D. W-N33	
Total area of wetland 0.460 ac. Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No Latitude 40.422275 Longitude -78.9062							
Adjacent land use Gas ROW	Prepared by: KMM Date 10/10/2016						
Dominant wetland systems present_PEM	Wetland Impact: See Permit Tables						
Is the wetland a separate hydraulic system? No	Evaluation based on:						
How many tributaries contribute to the wetland? 2	Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Upper How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)						
Function/Value	Suita		ty Rationale	Princip	76 TO CO	Corps manual wetland delineation completed? Y_V N	
	Y	N	(Reference #)*	Functi	on(s)/Value(s)	Comments	
	~		2, 4, 5, 7, 15				
Floodflow Alteration	~		2, 3, 5, 6, 7, 9, 10, 13, 18	~			
Fish and Shellfish Habitat		~					
Sediment/Toxicant Retention	V		1, 2, 4, 5, 6, 10, 16	~			
Nutrient Removal	~		3, 4, 5, 7, 9, 10, 14	V			
→ Production Export		~	1, 12				
Sediment/Shoreline Stabilization	~		1, 3, 4, 6, 9				
W ildlife Habitat		~	4, 5				
A Recreation		~					
Educational/Scientific Value		~					
★ Uniqueness/Heritage		~					
Visual Quality/Aesthetics		V					
ES Endangered Species Habitat		~					
Other							

^{*} Refer to backup list of numbered considerations.

/EGETATION (Four Str	'ata) – Use scientific r				Sampling Point: W-N	133
Tree Stratum (Plot size:	15	Absolute % Cover			Dominance Test worksheet:	
1,				3(Number of Dominant Species That Are OBL, FACW, or FAC: 2	(A)
2, 3,					Total Number of Dominant Species Across All Strata: 2*	(B)
4 5				88 	Percent of Dominant Species That Are OBL, FACW, or FAC: 100%	/ A /F
6						(A/E
7				-	Prevalence Index worksheet:	
	50% of total cover:0		Total Cover	er 0	OBL species x 1 =	
Sapling/Shrub Stratum (Plot s	4 ==	2070 01 0	otal cover.		FACW species x 2 =	
					FAC species x 3 =	
1			====		FACU species x 4 =	
					UPL species x 5 =	
					Column Totals: (A)	
<u> </u>						
		0			Prevalence Index = B/A =	70
					1 - Rapid Test for Hydrophytic Vegetation	
<u>, </u>					2 - Dominance Test is >50%	
					3 - Prevalence Index is ≤3,0 ¹	
			Total Cove	er		
	50% of total cover: 0	20% of to	otal cover:_	0	4 - Morphological Adaptations ¹ (Provide sup	
lerb Stratum (Plot size:					data in Remarks or on a separate sheet)	
Osmundastrum cinnamo	meum	20		FACW	Problematic Hydrophytic Vegetation ¹ (Expla	in)
Scirpus atrovirens		20		OBL		
Dryopteris sp.		20	~	ND	¹ Indicators of hydric soil and wetland hydrology r be present, unless disturbed or problematic.	must
Leersia virginica		10		FACW	**************************************	
Microstegium vimineum		10		FAC	Definitions of Four Vegetation Strata:	
Carex lurida		5		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6	cm) c
Juncus effusus		5		FACW	more in diameter at breast height (DBH), regardl height.	less o
Juncus tenuis		5		FAC	Treight.	
Carex scoparia		5		FACW	Sapling/Shrub - Woody plants, excluding vines,	, less
					than 3 in. DBH and greater than or equal to 3.28 m) tall.	ft (1
0 1		18		-	and the second s	
` `		100 =	Total Cove		Herb – All herbaceous (non-woody) plants, regal of size, and woody plants less than 3.28 ft tall.	rdless
	50% of total cover:50	20% of to	otal cover:_	20		
loody Vine Stratum (Plot size	e;15)				Woody vine – All woody vines greater than 3.28 height.	itt in
		v <u> </u>				
7					Lludraphytia	
					Hydrophytic Vegetation	
			Total Cove	r	Present? Yes No	
	50% of total cover: 0	20% of to	tal cover:_	0		
emarks: (Include photo numb	bers here or on a separate s	heet.)				
D- Not Determined	. 520					
egetation not ID'd dowr	n to the species level is	not includ	led in the	domina	ance test	
J	openion in to in			. GOTTINIC	100 1001.	

Total area of wetland 0.034 ac. Human made? No	I	s wetl	and part of a wildlife corridor	r? No	or a "habitat island"? No	Wetland I.D. W-N30
	- Latitude 40.421012 Longitude -78.897392 Prepared by: KMM Date 10/10/2016					
Adjacent land use Gas ROW Distance to nearest roadway or other development 0.43 mi.						
Dominant wetland systems present PEM Contiguous undeveloped buffer zone present yes						Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Upper How many tributaries contribute to the wetland? Wildlife & vegetation diversity/abundance (see attached list)						Evaluation based on: Office Field Corps manual wetland delineation completed? Y N
Function/Value		abilit N	ty Rationale (Reference #)*	Princi _l Functi	oal on(s)/Value(s)	Comments
▼ Groundwater Recharge/Discharge		~	2, 4, 5, 7			
Floodflow Alteration		V	2, 9, 13			
Fish and Shellfish Habitat		V				8
Sediment/Toxicant Retention	~		1, 2, 6, 9, 10	V		
Nutrient Removal		V	4, 5			
→ Production Export		~	1			
Sediment/Shoreline Stabilization		~	2, 3, 4, 9			
⋙ Wildlife Habitat		V	4, 5, 8			
A Recreation		~				
Educational/Scientific Value		~				
★ Uniqueness/Heritage		~				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		~				
Other						

^{*} Refer to backup list of numbered considerations.

/EGETATION (Four Strata) – Use scientific n		Dominant I	ndicator	Sampling Point: W-N30 Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:15) 1	% Cover	Species?	Status ———	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
3				Total Number of Dominant Species Across All Strata: 4* (B)
4 5	-			Percent of Dominant Species That Are OBL, FACW, or FAC:100% (A/B
6,				Prevalence Index worksheet:
				Total % Cover of:Multiply by:
50% of total cover:0		total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15	_	_		FACW species x 2 =
4				FAC species x 3 =
•				FACU species x 4 =
				UPL species x 5 =
				Column Totals: (A) (B)
·				
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
·				✓ 2 - Dominance Test is >50%
-				3 - Prevalence Index is ≤3.0 ¹
_ 3		Total Cover		4 - Morphological Adaptations ¹ (Provide supportin
50% of total cover: 0	20% of t	otał cover:_	0	data in Remarks or on a separate sheet)
erb Stratum (Plot size:5)	4-			Problematic Hydrophytic Vegetation ¹ (Explain)
Microstegium vimineum	15	<u> </u>	FAC	Problematic Hydrophytic vegetation (Explain)
Osmundastrum cinnamomeum	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
Scirpus atrovirens	15		OBL	be present, unless disturbed or problematic.
Dichanthelium clandestinum	15	<u> </u>	FAC	Definitions of Four Vegetation Strata:
Rubus sp.	15		ND	
Dryopteris sp. Juncus effusus	15 10		ND FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
				Sapling/Shrub – Woody plants, excluding vines, less than 3 in, DBH and greater than or equal to 3.28 ft (1
0				m) tall.
50% of total cover: 50	100=	Total Cover	20	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size:15	_	otal cover:		Woody vine – All woody vines greater than 3.28 ft in height.
÷				
· · · · · · · · · · · · · · · · · · ·	(*)			Hydrophytic
•	0 =	Total Cours		Vegetation Present? Yes <u>✓</u> No
50% of total cover:0		Total Cover otal cover:	_	103NU
temarks: (Include photo numbers here or on a separate sh				
D- Not Determined				
- 1.5. Dotominou				
/egetation not ID'd down to the angelies lavel is	not includ	had in the	donele -	anna taat
egetation not ID'd down to the species level is	HOL INCIUC	aeu in the	uomina	ance test.

Total area of wetland 0.243 ac. Human made? No.	ī	c wetl	land part of a wildlife corrido	r? No	on a "babitat ialan 400 Maa	Wetland I.D. W-N29	
Total area of wetland 0.243 ac. Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? Yes Latitude 40.419547 Longitude -78.884513							
Adjacent land use Forested Floodplain / Gas ROW	Prepared by: KMM Date 10/10/2016						
Dominant wetland systems present PEM, PFO	Wetland Impact: See Permit Tables						
Is the wetland a separate hydraulic system? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Evaluation based on:						
How many tributaries contribute to the wetland? 2	Office Field Field Corps manual wetland delineation completed? Y N						
Function/Value	Suita		ty Rationale	Princip			
	<u>Y</u>	N	(Reference #)*	Functi	on(s)/Value(s)	Comments	
¥ Groundwater Recharge/Discharge		-					
Floodflow Alteration		~	2, 9, 13				
Fish and Shellfish Habitat		~					
Sediment/Toxicant Retention	V		1, 2, 6, 9, 10	~			
Nutrient Removal		~	4, 5				
→ Production Export		~	1				
Sediment/Shoreline Stabilization		~	2, 3, 4, 9				
W ildlife Habitat		~	4, 5, 8				
Recreation		~			3.		
Educational/Scientific Value		~					
tuniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

^{*} Refer to backup list of numbered considerations.

VEGETATION (Four Strata) - Use scientific names of plants. W-N29 Sampling Point: Absolute Dominant Indicator Dominance Test worksheet: 30 Tree Stratum (Plot size: % Cover Species? Status Number of Dominant Species 1 Betula alleghaniensis **FAC** That Are OBL, FACW, or FAC: (A) 2 Tsuga canadensis 20 FACU 3. Acer rubrum **Total Number of Dominant** 10 FAC Species Across All Strata: (B) Percent of Dominant Species 60% That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: . = Total Cover 50% of total cover: 30 12 OBL species _____ x 1 = ____ 20% of total cover: FACW species _____ x 2 = _____ Sapling/Shrub Stratum (Plot size:______15 1 Tsuga canadensis FAC species _____ x 3 = ____ FACU ₂ Betula lenta 5 **FACU** FACU species _____ x 4 = ____ UPL species _____ x 5 = ___ Column Totals: _____ (A) ____ (B) Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: __ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 15 = Total Cover 4 - Morphological Adaptations¹ (Provide supporting 50% of total cover: __7.5 20% of total cover:_ data in Remarks or on a separate sheet) Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) 1 Microstegium vimineum 20 FAC 2 Parathelypteris noveboracensis 20 FAC ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of heiaht. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless = Total Cover of size, and woody plants less than 3.28 ft tall. 50% of total cover: 20 20% of total cover: Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: _____15 Hydrophytic Vegetation Yes _____ No _____ Present? _ = Total Cover 50% of total cover: __ 20% of total cover:__ Remarks: (Include photo numbers here or on a separate sheet.)

15	Dominant Species?	Status FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A
15			That Are OBL, FACW, or FAC:3 (A
			Total Number of Dominant Species Across All Strata: 4 (B
	(i====================================		Percent of Dominant Species
	-		That Are OBL, FACW, or FAC: 75% (A.
	· //		Prevalence Index worksheet:
4 =	Tabel Carr		Total % Cover of: Multiply by:
	= 10tal COVE	3	OBL species x 1 =
2070 01	total cover.		FACW species x 2 =
			FAC species x 3 =
			FACU species x 4 =
	-		
			UPL species x 5 =
			Column Totals: (A) (E
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			1
0	= Total Cove	:r	3 - Prevalence Index is ≤3.0 ¹
20% of	total cover:_	0	4 - Morphological Adaptations ¹ (Provide supporti
			data in Remarks or on a separate sheet)
20	· ·	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
15		OBL	
20	V	FAC	¹ Indicators of hydric soil and wetland hydrology must
30		FAC	be present, unless disturbed or problematic.
			Definitions of Four Vegetation Strata:
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
		 -	more in diameter at breast height (DBH), regardless
			height.
			Sapling/Shrub - Woody plants, excluding vines, less
	-		than 3 in. DBH and greater than or equal to 3.28 ft (1
			m) tall.
			Herb – All herbaceous (non-woody) plants, regardles
			of size, and woody plants less than 3.28 ft tall.
20% of	total cover:_	19	 Woody vine – All woody vines greater than 3.28 ft in
			height.

			Hydrophytic Vegetation
0	Total Cove		Present? Yes No
20% of	total cover		
	15 20% of 20% of 20 30 10 95 20% of	15 = Total Cover: 20% of total cover: 0 = Total Cove 20% of total cover: 20	15 = Total Cover 20% of total cover: 3 O = Total Cover 0 20

Total area of						Wetland I.D. W-O20		
Total area of wetland 0.160 ac. Human made? No	ı	s wet	land part of a wildlife corrido	or?_ No	or a "habitat island"? No	Latitude 40.420895 Longitude -78.834982		
Adjacent land use Shrubby/Ticket and Emergent Wetland / Residential Distance to nearest roadway or other development 120 ft. Prepared by: KMM Date 10/10/2016								
Dominant wetland systems present PEM, PSS	Wetland Impact: See Permit Tables							
Is the wetland a separate hydraulic system? No	Evaluation based on:							
How many tributaries contribute to the wetland? 1	Office Field Forps manual wetland delineation							
Function/Value	Suita Y	abili N	ry Rationale (Reference #)*	Princip Function		completed? Y_V N		
¥ Groundwater Recharge/Discharge	~		2, 4, 5, 7					
Floodflow Alteration	~		2, 3, 5, 6, 9, 13	v				
Fish and Shellfish Habitat		V						
Sediment/Toxicant Retention	~		1, 2, 4, 5, 6, 10	v				
Nutrient Removal	~		3, 4, 5, 7, 8, 9, 10, 11	~				
→ Production Export		V	1					
Sediment/Shoreline Stabilization	~		1, 3, 4, 6, 9, 14					
W ildlife Habitat	~		4, 5, 6, 7, 8					
Recreation		~						
Educational/Scientific Value		~						
★ Uniqueness/Heritage		~						
Visual Quality/Aesthetics		V						
ES Endangered Species Habitat		V						
Other								

^{*} Refer to backup list of numbered considerations.

Sampling Point: W-O20

Tree Stratum (Plot size: 30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
The state of the s	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 4 (A)
2,				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Dereant of Developer Consider
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100% (A/B
6				(100
7,				Prevalence Index worksheet:
	0	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover:0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
			l=	Column Totals:(A)(B)
4		-		Column rotals(A)(B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7,				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
	0 _	Total Cove	ЭГ	3 - Prevalence Index is ≤3.0¹
50% of total cover:0	20% of I	otal cover:	0	4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size:5')				data in Remarks or on a separate sheet)
1. Impatiens capensis	20	V	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Microstegium vimineum	20	~	FAC	
3 Pilea pumila	15	-	FACW	¹ Indicators of hydric soil and wetland hydrology must
4 Juncus effusus	15		FACW	be present, unless disturbed or problematic.
5. Carex vulpinoidea				Definitions of Four Vegetation Strata:
	10		OBL	- M
6. Dichanthelium clandestinum	5		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Agrimonia parviflora	5		FACW	height.
8. Solidago rugosa	5		FAC	
g Onoclea sensibilis	3		FACW	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
_{10,} Eupatorium perfoliatum	2		FACW	m) tall.
11:				Hand AD I State Reserved
	100 =	Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		otal cover:	20	Stores and troopy plants loss than 5,20 it tall.
Woody Vine Stratum (Plot size: 15')	/-			Woody vine – All woody vines greater than 3.28 ft in
1.				height.
2				
3				
4,				Hydrophytic
5,				Vegetation
		Total Cove		Present? Yes No
50% of total cover:0	_	otal cover:_	_0	
Remarks: (Include photo numbers here or on a separate sh	eet.)			

Sampling Point: W-O20 (1)

Tree Stratum (Plot size: 30')	Absolute	Dominant	Indicator	Dominance Test worksheet:
1)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:6 (A)
3,		Y		Total Number of Dominant Species Across All Strata: 6 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6,				
7,				Prevalence Index worksheet:
		= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'	40			FACW species x 2 =
1. Salix nigra	40		OBL	FAC species x 3 =
2. Viburnum dentatum	10		FAC	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5			*	Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7,				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	50			3 - Prevalence Index is ≤3.0 ¹
50% of total cover:25		 Total Cover: 		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	20% 01	iotai cover:	10	data in Remarks or on a separate sheet)
1. Impatiens capensis	20	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Microstegium vimineum	20		FAC	
3. Pilea pumila	15			¹ Indicators of hydric soil and wetland hydrology must
4. Juncus effusus			FACW	be present, unless disturbed or problematic.
5. Carex vulpinoidea	15		FACW	Definitions of Four Vegetation Strata:
6 Dichanthelium clandestinum	 5		OBL	Tree Westerness and discussions
			FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Agrimonia parviflora	5		FACW	height.
8. Solidago rugosa	5		FAC_	Sapling/Shrub – Woody plants, excluding vines, less
9. Onoclea sensibilis	3		FACW	than 3 in. DBH and greater than or equal to 3.28 ft (1
10. Eupatorium perfoliatum	2		FACW	m) tall.
11	100 _			Herb - All herbaceous (non-woody) plants, regardless
50% of total cover: 50		Total Cove		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 15')	20% 011	otai cover:_		Woody vine - All woody vines greater than 3.28 ft in height.
1:				
2				
3,				
4				Hydrophytic
5				Vegetation
		Total Cove	_	Present? Yes No
50% of total cover:0		otal cover:_	0	
Remarks: (Include photo numbers here or on a separate sh	eet.)			

Sampling Point: W-O20 (2)

Tree Stratum (Plot size:30')		Dominant		Dominance Test worksheet:
Part 1	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC:5 (A)
2				Total Number of Danis and
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				opodos Across All Strata.
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:100% (A/B)
6,				
7				Prevalence Index worksheet:
	0 _	Total Cove	er	Total % Cover of: Multiply by:
50% of total cover: 0		total cover:	_	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')		•		FACW species x 2 =
1. Salix nigra	25	~	OBL	FAC species x 3 =
2 Viburnum dentatum			$\overline{}$	
			FAC_	FACU species x 4 =
3. Juglans nigra	5		FACU	UPL species x 5 =
4				Column Totals: (A) (B)
5			-	======================================
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7,,				1 - Rapid Test for Hydrophytic Vegetation
8				1 1
9,				2 - Dominance Test is >50%
	50 _	Total Cove		3 - Prevalence Index is ≤3.01
50% of total cover: 25		otal cover:		4 - Morphological Adaptations (Provide supporting
Horb Stratum (Diet sine) 5'	2070 011	otal cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	00		E 4 0144	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Impatiens sp.	20		FACW	Problematic Hydrophytic vegetation (Explain)
_{2,} Pilea pumila	15	V	FACW	
3. Solidago rugosa	10	V	FAC	Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				T W-
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7,				height.
8				
				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11,				Herb – All herbaceous (non-woody) plants, regardless
		Total Cove	r	of size, and woody plants less than 3.28 ft tail.
50% of total cover: 22.5	20% of to	otal cover:	9	81
Woody Vine Stratum (Plot size: 15')	_	_		Woody vine - All woody vines greater than 3.28 ft in
1				height.
2				
3				
4				
5,				Hydrophytic Vegetation
···	0 _	Total Cava		Present? Yes No
50% of total cover: 0		Total Cover otal cover:_		103 100
		nar cover:_		
Remarks: (Include photo numbers here or on a separate sh	eet.)			

Total area of western d 0.340.30 Heren was 1.0 Me			1 . 0 . 11110			Wetland I.D. W-O42
Total area of wetland 0.340 ac. Human made? No	I	s wet	and part of a wildlife corrido	or?_No	or a "habitat island"? No	Latitude 40.423248 Longitude -78.823551
Adjacent land use Gas ROW	Prepared by: KMM Date 10/10/2016					
Dominant wetland systems present PEM	Wetland Impact: See Permit Tables					
Is the wetland a separate hydraulic system? No	Evaluation based on:					
How many tributaries contribute to the wetland? 2	Office Field Corps manual wetland delineation completed? Y V N					
Function/Value		abilit N	y Rationale (Reference #)*	Princip Function	**************************************	Comments
¥ Groundwater Recharge/Discharge	V		1, 2, 4, 5, 7, 13, 15	V	(0)	Somments
Floodflow Alteration	~		2, 5, 9, 13, 18			
Fish and Shellfish Habitat		V				
Sediment/Toxicant Retention	~		1, 2, 4, 5, 6, 7, 9, 10, 16	~		
Nutrient Removal	V		3, 4, 5, 7, 8, 9, 10, 11, 13	V		
→ Production Export		~	1, 12			
Sediment/Shoreline Stabilization	~		2, 3, 4, 6, 9			
❤ Wildlife Habitat	V		4, 5, 19, 20			
**Recreation		~				
Educational/Scientific Value		~				
tuniqueness/Heritage		V				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		~				
Other						

^{*} Refer to backup list of numbered considerations.

Sampling Point: W-O42

Tree Stratum (Plot size: 30'		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30') 1 Acer rubrum	% Cover 5	Species?		Number of Dominant Species _
**	10		FAC	That Are OBL, FACW, or FAC:5 (A)
2, Ulmus rubra	5		FAC	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4,			/	
5,				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet;
7,	4.5			
		Total Cove		Total % Cover of: Multiply by:
50% of total cover: 7.5	20% of to	tal cover:	3	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3			·	
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7,				100 2000 000 000 000 000 000 000 000 000
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
-		F-1-10		3 - Prevalence Index is ≤3.01
50% of total cover:0		Fotal Cove		4 - Morphological Adaptations ¹ (Provide supporting
Market of the second se	20% 01 101	tai cover:_		data in Remarks or on a separate sheet)
TIBIB Stratum (Flot size.	0.5	4		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Scirpus atrovirens	25		OBL	Problematic Hydrophytic Vegetation (Explain)
2, Microstegium vimineum	20	V	FAC	10 VIVE OF 10
3 Dichanthelium clandestinum	20	~	FAC	Indicators of hydric soil and wetland hydrology must
4 Carex lurida	18		OBL	be present, unless disturbed or problematic.
5. Leersia oryzoides	12		OBL	Definitions of Four Vegetation Strata:
6. Impatiens sp.	10			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
			FACW	more in diameter at breast height (DBH), regardless of
7. Dryopteris sp.	10		ND_	height.
8				0 11 160 1
9			W	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10			********	m) tall.
11/				, -=
(3	115 _{- T}			Herb - All herbaceous (non-woody) plants, regardless
50% of total cover; 57.5		otal Cove	23	of size, and woody plants less than 3.28 ft tall.
the state of the s	20% of tot	ai cover:_		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size;15')				height.
17				
2				
3,				
4				
5				Hydrophytic
·	0 _{- T}			Vegetation Present? Yes ✓ No
500/ -f. t-t-1 0		otal Cove		resentr res_ No
50% of total cover:0	20% of tota	al cover:_		
Remarks: (Include photo numbers here or on a separate sh	ieet.)			

Total area of wetland 0.10 ac. Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No					Wetland I.D. W-O37	
					Latitude 40.42495 Longitude -78.817444	
Adjacent land use Forested Floodplain / Gas ROW Distance to nearest roadway or other development 100 ft.						Prepared by: KMM Date 10/10/2016
Dominant wetland systems present PEM, PFO Contiguous undeveloped buffer zone present no						Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Upper						Evaluation based on: Office Field Corps manual wetland delineation
How many tributaries contribute to the wetland? 3Wildlife & vegetation diversity/abundance (see attached list)						
Function/Value	Suita Y		(Reference #)*	Princi _l Functi	**************************************	completed? Y N omments
¥ Groundwater Recharge/Discharge		~	2, 4, 5, 7			
Floodflow Alteration	~		2, 5, 6, 9, 10, 13	~		
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	V		1, 2, 6, 7, 9, 10	~		
Nutrient Removal	~		3, 4, 7, 9, 10			
Production Export		•	1			
Sediment/Shoreline Stabilization	V		1, 2, 3, 4, 6, 9, 15	~		
ॐ Wildlife Habitat	V		4, 5, 6, 7, 8			
Recreation		~				
Educational/Scientific Value		~				**
★ Uniqueness/Heritage		~				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

^{*} Refer to backup list of numbered considerations.

Sampling Point: W-O37 PEM

Tree Stratum (Plot size: 30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tras statistic (r lot bizor	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3			-	Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5,			0	That Are OBL, FACW, or FAC:100% (A/B)
6				Particular Company
7,				Prevalence Index worksheet:
		Total Cove		Total % Cover of:Multiply by:
50% of total cover: 0	20% of to	otal cover:_		OBL species x 1 =
Sapling/Shrub Stratum (Plot size; 15'				FACW species x 2 =
1				FAC species x 3 =
2,				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9		===		2 - Dominance Test is >50%
91,	0 -	T-1-1-0		3 - Prevalence Index is ≤3.01
50% of total cover: 0		Total Cove	er O	4 - Morphological Adaptations1 (Provide supporting
Herb Stratum (Plot size: 5')	20% 01 10	tai cover:_		data in Remarks or on a separate sheet)
1. Dichanthelium clandestinum	25		EAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phalaris arundinacea			FAC	
\$70 i			FACW	Indicators of hydric soil and wotlered hydrala
3. Pilea pumila			FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Leersia oryzoides	10		OBL	Definitions of Four Vegetation Strata:
_{5.} Impatiens sp.	10		FACW	
6				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				100 mm 2000 0770 0
9			1	Sapling/Shrub – Woody plants, excluding vines, less
10				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11,				
	80 - 7	otal Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 40			16	or size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:15')	2070 01 101			Woody vine - All woody vines greater than 3.28 ft in
1,				height.
2				
3				
4	-			Hydrophytic
5				Vegetation
		otal Cover		Present? Yes No
50% of total cover: 0	20% of tot	al cover:_	_0	
Remarks: (Include photo numbers here or on a separate sh	ieet.)			
				Į.
				1

Sampling Point: W-O37 PFO

Tree Stratum (Plot size: 30')	Absolute Domi	nant Indicator	Dominance Test worksheet:
1. Acer rubrum	% Cover Spec		Number of Dominant Species
2 Fraxinus pennsylvanica			That Are OBL, FACW, or FAC: 4 (A)
3 Malus sp.	20	171011	Total Number of Dominant
	10	UPL	Species Across All Strata: 4 (B)
4			Day of Day of the Control of the Con
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6			(A/B)
7,,			Prevalence Index worksheet:
·	60 _{= Total}	Cover	Total % Cover of: Multiply by:
50% of total cover:30			OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')			FACW species x 2 =
1. Cornus amomum	15	f FACW	FAC species x 3 =
2			FACU species x 4 =
			UPL species x 5 =
3			
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
6			Hydrophytic Vegetation Indicators:
7			1 - Rapid Test for Hydrophytic Vegetation
8			✓ 2 - Dominance Test is >50%
9			
	15 = Total	Cover	3 - Prevalence Index is ≤3.0¹
50% of total cover: 7.5	20% of total co	over:3	4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5')			data in Remarks or on a separate sheet)
1. Impatiens capensis	55 🗸	' FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2			
3			¹ Indicators of hydric soil and wetland hydrology must
4			be present, unless disturbed or problematic.
5			Definitions of Four Vegetation Strata:
6,			Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
			more in diameter at breast height (DBH), regardless of
7,			height.
8			Sapling/Shrub – Woody plants, excluding vines, less
9			than 3 in. DBH and greater than or equal to 3.28 ft (1
10,			m) tall.
11,			Herb – All herbaceous (non-woody) plants, regardless
27.5	<u>55</u> = Total		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 27.5	_ 20% of total co	ver: 11	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')			height.
18			
2,	(::	2,1	
3,			
4			Hydrophytic
5,			Vegetation
	0 = Total	Cover	Present? Yes No
50% of total cover: 0	_ 20% of total co	ver:0	
Remarks: (Include photo numbers here or on a separate sh	eet.)		
Control Contro	A CONTRACTOR OF THE CONTRACTOR		
			i

Total area of watland 0.271 ac Hyman model No. 15 and 15 decided 1.10 M. W. Linds and 15 decided 1.10 M.						Wetland I.D. W-O16
Total area of wetland 0.271 ac. Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No					Latitude 40.425174 Longitude -78.81553	
Adjacent land use Forested Floodplain / Gas ROW Distance to nearest roadway or other development 215 ft.						Prepared by: KMM Date 10/10/2016
Dominant wetland systems present PEM, PFO Contiguous undeveloped buffer zone present no						Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Upper How many tributaries contribute to the wetland? Wildlife & vegetation diversity/abundance (see attached list)						Evaluation based on: Office Field Corps manual wetland delineation completed? Y N
Function/Value	Suita		y Rationale (Reference #)*	Princip Function	**************************************	Comments
▼ Groundwater Recharge/Discharge	V		2, 4, 5, 7, 10, 13, 15	·		JOHN MICHEL
Floodflow Alteration	~		2, 5, 6, 7, 9, 13			
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 4, 5, 6, 7, 9, 10, 15	V		
Nutrient Removal	V		3, 4, 5, 7, 8, 9, 10, 11, 13	V		
→ Production Export		~	1			II.
Sediment/Shoreline Stabilization	~		1, 2, 3, 4, 9			
wildlife Habitat	~		4, 5, 6, 8			
Recreation		~				
Educational/Scientific Value		~				
★ Uniqueness/Heritage		~				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		V				
Other						

^{*} Refer to backup list of numbered considerations.

Sampling Point: W-O16 PFO

30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	Committee of the commit	NOTE OF THE OWNER.	Status	Number of Dominant Species
1. Crataegus sp.	45		ND_	That Are OBL, FACW, or FAC: 2 (A)
2. Carpinus caroliniana	20		FAC	Total Number of Dominant
3. Acer rubrum	15		FAC	Species Across All Strata: 2* (B)
4				· · · · · · · · · · · · · · · · · · ·
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6,				THAT AIR OBE, I ACW, OF I AC.
7,			2	Prevalence Index worksheet:
	80	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover: 40				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')		_		FACW species x 2 =
1,4				FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3				Column Totals: (A) (B)
4				(A)(B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		-		✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover:_	0	1
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1, Impatiens capensis	20		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2, Geum sp.	15		ND	1 35
3				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				
5				Definitions of Four Vegetation Strata:
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
				height.
8			/ 	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3,28 ft (1
10				m) tall.
11,	25			Herb - All herbaceous (non-woody) plants, regardless
500 S		Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 17.5	20% of	total cover:_		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1,				
2				
3				
4				Hydrophytic
5				Vegetation
	0 =	Total Cove	-	Present? Yes No
50% of total cover:0	20% of I	total cover:_	0	6
Remarks: (Include photo numbers here or on a separate sh	eet.)			
ND - Not Determined				
* Vegetation not identified down to species not in	ıcluded ir	n dominan	ce test.	
,				

Sampling Point: W-O16 PEM (1)

201	Absolute Dor	minant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:30')	% Cover Sp	ecies? Status	Number of Dominant Species
1:	: 		That Are OBL, FACW, or FAC:3 (A)
2			
3			Total Number of Dominant Species Across All Strata: 3 (B)
4			
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6			That Are OBL, FACW, or FAC:100% (A/B)
7,			Prevalence Index worksheet:
	= Tot	tal Cover	Total % Cover of: Multiply by:
50% of total cover:0	20% of total	cover: 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'			FACW species x 2 =
			FAC species x 3 =
1			FACU species x 4 =
2			
3			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
6			Hydrophytic Vegetation Indicators:
7			1 - Rapid Test for Hydrophytic Vegetation
8			✓ 2 - Dominance Test is >50%
9			
9	^	al Cover	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0			4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5'			data in Remarks or on a separate sheet)
1. Microstegium vimineum	30	✓ FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Eleocharis palustris	25	✓ OBL	
3 Scirpus atrovirens		✓ OBL	¹ Indicators of hydric soil and wetland hydrology must
△ Carex Iurida	15	OBL	be present, unless disturbed or problematic.
5. Dichanthelium clandestinum	15	FAC	Definitions of Four Vegetation Strata:
6. Agrostis gigantea	10 —	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Impatiens sp.			more in diameter at breast height (DBH), regardless of
	10	FACW	height.
8,			Sapling/Shrub - Woody plants, excluding vines, less
9,			than 3 in, DBH and greater than or equal to 3.28 ft (1
10			m) tall.
11,			Herb – All herbaceous (non-woody) plants, regardless
	125 = Tota	al Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 62.5	20% of total	cover:25	
Woody Vine Stratum (Plot size: 15')			Woody vine – All woody vines greater than 3.28 ft in height.
1			noight.
2			
3			
4,			
-			Hydrophytic
5-		10	Vegetation Present? Yes✓_ No
50% of total cover:0	= 1 ota 20% of total o	al Cover cover: 0	165 V NO
		cover:u	
Remarks: (Include photo numbers here or on a separate sh	ieet.)		

Sampling Point: W-O16 PEM (2)

Tree Stratum (Plot size:30')	Absolute	Dominant		Dominance Test worksheet:
	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dayley
3	\v			Total Number of Dominant Species Across All Strata:3 (B)
4				(b)
			2	Percent of Dominant Species
5				That Are OBL, FACW, or FAC:100%(A/B)
6,		-	-	Prevalence Index worksheet:
7				
_		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =
1 Carpinus caroliniana	10	V	FAC	FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3			1	
4				Column Totals: (A) (B)
5				Prevalence Index - B/A
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
9	10			3 - Prevalence Index is ≤3.0 ¹
		Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:5	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
1, Impatiens sp.	45		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Pilea pumila	20	V	FACW	
3. Boehmeria cylindrica	15		FACW	Indicators of hydric soil and wetland hydrology must
4 Dryopteris sp.	10		ND	be present, unless disturbed or problematic.
	$\overline{}$		ND	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9			7	Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				ini) taii.
11,				Herb - All herbaceous (non-woody) plants, regardless
45		Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45	20% of t	otal cover:_	18	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1				William V
2,				
3				
4,				Hydrophytic
5				Vegetation
		Total Cove		Present? Yes No
50% of total cover:0		otal cover:_	0	
Remarks: (Include photo numbers here or on a separate sh	eet.)			

						Wetland I.D. W-CC6
Total area of wetland 0.024 ac. Human made? No	I	s wetl	and part of a wildlife corrido	or? <u>No</u>	or a "habitat island"?_No	Latitude 40.433012 Longitude -78.78222
Adjacent land use Gas ROW	Prepared by: KMM Date 10/10/2016					
Dominant wetland systems present PEM			Contiguous undev	eloped bufi	fer zone present no	Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland	lie in the dr	ainage basin? Upper	_ Evaluation based on:
How many tributaries contribute to the wetland? 3			_Wildlife & vegetation diver	rsity/abunda	ance (see attached list)	Office Field Field Corps manual wetland delineation
Function/Value		abilit N	(Reference #)*	Princi Functi	pal ion(s)/Value(s)	completed? Y_ V N
¥ Groundwater Recharge/Discharge		~	2, 5, 7	4		
Floodflow Alteration	V		2, 5, 6, 9, 13			
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 4, 5, 6, 7, 9, 10	~		
Nutrient Removal		V	3, 4, 7, 9, 10			
→ Production Export		~	1			
Sediment/Shoreline Stabilization	~		1, 3, 4, 6, 9			
Wildlife Habitat	~		4, 5, 6, 7, 8			
A Recreation		~				
Educational/Scientific Value		~				
★ Uniqueness/Heritage		~				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		V				
Other						

^{*} Refer to backup list of numbered considerations.

VEGETATION (Four Strata) – Use scientific names of plants. W-CC6 PEM Sampling Point: Absolute Dominant Indicator Dominance Test worksheet: 30' Tree Stratum (Plot size: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: ___ (A) Total Number of Dominant 2 (B) Species Across All Strata: Percent of Dominant Species 100% That Are OBL, FACW, or FAC (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: 0 ___ = Total Cover OBL species _____ x 1 = ____ 50% of total cover: ____0 ___ 20% of total cover:___ FACW species _____ x 2 = ____ Sapling/Shrub Stratum (Plot size: 15') FAC species _____ x 3 = ____ FACU species _____ x 4 = ____ UPL species _____ x 5 = ____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = ____ Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.01 0 __ = Total Cover 4 - Morphological Adaptations¹ (Provide supporting 50% of total cover: __ 0 20% of total cover: data in Remarks or on a separate sheet) Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) 1. Glyceria melicaria 30 OBL 2 Persicaria saggittata 20 OBL ¹Indicators of hydric soil and wetland hydrology must 3. Juncus effuses 20 **FACW** be present, unless disturbed or problematic. 4. Symphyotrichum novae-angliae 10 **FACW** Definitions of Four Vegetation Strata: 5 Impatiens capensis 30 **FACW** 6. Carex sp. 20 Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or ND more in diameter at breast height (DBH), regardless of Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 10.____ m) tall. Herb - All herbaceous (non-woody) plants, regardless 130 = Total Cover of size, and woody plants less than 3.28 ft tall. 50% of total cover: 65 20% of total cover: 26 Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: 30') Hydrophytic Vegetation Yes _____ No _____ 0 Present? _ = Total Cover 50% of total cover: ___0 20% of total cover: Remarks: (Include photo numbers here or on a separate sheet.) ND - Not determined *Vegetation not ID'd down to species level not included in dominance test.

						Wetland I.D. W-CC7
Total area of wetland 0.331 ac. Human made? No	I	s wetl	and part of a wildlife corrido	r?_No	or a "habitat island"?_No	Latitude 40.433317 Longitude -78.781047
Adjacent land use Gas ROW			Distance to nearest	roadway or	other development 0.25 mi.	Prepared by: KMM Date 10/10/2016
Dominant wetland systems present PEM			Contiguous undeve	eloped buff	er zone present no	Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland li	ie in the dra	ainage basin? <u>Upper</u>	Evaluation based on:
How many tributaries contribute to the wetland? 2			_Wildlife & vegetation divers	sity/abunda	ance (see attached list)	Office Field Corps manual wetland delineation
Function/Value	Suita Y	abilit N	y Rationale (Reference #)*	Princij Functi	\$1111111120020022222222	completed? Y / N
¥ Groundwater Recharge/Discharge		~	2, 5, 7			
Floodflow Alteration	v		2, 5, 6, 9, 13			
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 4, 5, 6, 7, 9, 10	~		
Nutrient Removal		~	3, 4, 7, 9, 10			
→ Production Export		~	1			
Sediment/Shoreline Stabilization	~		1, 3, 4, 6, 9			
Wildlife Habitat	V		4, 5, 6, 7, 8			
A Recreation		~				
Educational/Scientific Value		~				
★ Uniqueness/Heritage		~				.1
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		V				
Other						

^{*} Refer to backup list of numbered considerations.

VEGETATION (Four Strata) – Use scientific names of plants. W-CC7 Sampling Point: Absolute Dominant Indicator Dominance Test worksheet: 30' Tree Stratum (Plot size: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant 3 Species Across All Strata: (B) Percent of Dominant Species 100% That Are OBL, FACW, or FAC: - (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: = Total Cover OBL species _____ x 1 = ____ 50% of total cover: 20% of total cover: Sapling/Shrub Stratum (Plot size: 15') FACW species _____ x 2 = _____ FAC species _____ x 3 = ____ FACU species _____ x 4 = ___ UPL species _____ x 5 = ____ Column Totals: _____ (A) ____ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: _ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.01 0 = Total Cover 4 - Morphological Adaptations (Provide supporting 50% of total cover: ___0 20% of total cover:__ data in Remarks or on a separate sheet) Herb Stratum (Plot size: ___ Problematic Hydrophytic Vegetation¹ (Explain) 1. Dicanthelium clandestinum FAC 2. Scirpus atrovirens 20 OBL ¹Indicators of hydric soil and wetland hydrology must 3. Solidago rugosa 20 FAC be present, unless disturbed or problematic. Carex crinita 10 OBL Definitions of Four Vegetation Strata: 5. Carex stipata 20 OBL Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 6. Thelypteris noveboracencis 20 FAC 7 Rubus hispidus 30 **FACW** 8. Persicaria sagittata 30 OBL Sapling/Shrub - Woody plants, excluding vines, less g Osmunda cinnamomea 10 **FACW** than 3 in. DBH and greater than or equal to 3.28 ft (1 10. m) tall. Herb - All herbaceous (non-woody) plants, regardless 220 _ = Total Cover of size, and woody plants less than 3.28 ft tall. 50% of total cover: 110 20% of total cover: 44 Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: 30') Hydrophytic Vegetation Yes ____ No ____ 0 __ = Total Cover Present? 50% of total cover: _ 20% of total cover:_ Remarks: (Include photo numbers here or on a separate sheet.)

T . 1						Wetland I.D. W-CC21
Total area of wetland 0.041 ac. Human made? No	I	s wetl	and part of a wildlife corridor	r?_No	or a "habitat island"? No	Latitude 40.43442 Longitude -78.774981
Adjacent land use Gas ROW			Distance to nearest	roadway or	other development 0.31 mi.	Prepared by: KMM Date 10/11/2016
Dominant wetland systems present_PEM			Contiguous undeve	loped buffe	er zone present yes	Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Upper How many tributaries contribute to the wetland? Wildlife & vegetation diversity/abundance (see attached list)						Evaluation based on: Office Field Corps manual wetland delineation completed? Y N
Function/Value	Suita	abilit N	y Rationale (Reference #)*	Princip Function	10 10 10 July 12 12 12 12 12 12 12 12 12 12 12 12 12	Comments
¥ Groundwater Recharge/Discharge	V		2, 5, 7, 10, 13, 15	~	()	· · · · · · · · · · · · · · · · · · ·
Floodflow Alteration		~	2, 5, 9			
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 4, 6, 9, 10, 16	V		
Nutrient Removal		V	4, 8, 13			
→ Production Export		~	1, 12			
Sediment/Shoreline Stabilization		V	2, 3, 4, 6, 9			
wildlife Habitat		~	4, 5, 7, 8, 13			
Recreation		~				
Educational/Scientific Value		V				
★ Uniqueness/Heritage		>				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

^{*} Refer to backup list of numbered considerations.

VEGETATION (Four Strata) – Use scientific names of plants. W-CC21 Sampling Point: Absolute Dominant Indicator Dominance Test worksheet: 30' Tree Stratum (Plot size: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: ___ (A) Total Number of Dominant Species Across All Strata: ____ (B) Percent of Dominant Species 100% That Are OBL, FACW, or FAC: _ (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: 0 = Total Cover 0 ___ 20% of total cover:__ OBL species x 1 = _____ 50% of total cover: Sapling/Shrub Stratum (Plot size: 15') FACW species _____ x 2 = ____ FAC species ____ x 3 = ____ FACU species ____ x 4 = ___ UPL species ____ ____ x 5 = ___ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = ___ Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.01 0 _ = Total Cover 4 - Morphological Adaptations (Provide supporting 50% of total cover: ___0 20% of total cover: data in Remarks or on a separate sheet) Herb Stratum (Plot size: ___ Problematic Hydrophytic Vegetation¹ (Explain) 60 1. Scirpus atrovirens OBL 2. Carex crinita 20 OBL ¹Indicators of hydric soil and wetland hydrology must 3. Persicaria sagittata 20 OBL be present, unless disturbed or problematic. A Rubus hispudis 10 **FACW** Definitions of Four Vegetation Strata: 5 Eleocharis obtusa 40 OBL 6. Viola sp. 10 Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or ND more in diameter at breast height (DBH), regardless of Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 10.___ m) tall. Herb - All herbaceous (non-woody) plants, regardless 160 = Total Cover of size, and woody plants less than 3.28 ft tall. 50% of total cover: 80 20% of total cover: 32 Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: ______) Hydrophytic Vegetation Yes _____ No _____ 0 Present? _ = Total Cover 50% of total cover: ___ 20% of total cover: Remarks: (Include photo numbers here or on a separate sheet.) ND - Not determined *Vegetation not ID'd down to species level not included in dominance test.

T-t-1 C -tl -1195-00 YY		, ,	land part of a wildlife corridor? Y			Wetland I.D. W-CC17
Total area of wetland 1.85 ac. Human made? No	Latitude 40.435817 Longitude -78.7693					
Adjacent land use Forested Stream Valley / Gas RO	Prepared by: KMM Date 10/11/2016					
Dominant wetland systems present PEM, PFO	Wetland Impact: See Permit Tables					
Is the wetland a separate hydraulic system? No How many tributaries contribute to the wetland? 1	Evaluation based on: Office Field Corps manual wetland delineation completed? Y N					
Function/Value		abili N		rinci	□ 1012 AEFE □ □ □ □ □ □ □	omments
✓ Groundwater Recharge/Discharge	V		2, 4, 5, 7, 15		ion(s), varac(s)	Official
Floodflow Alteration	~		2, 5, 6, 7, 8, 9, 13, 16	V		
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 4, 5, 6, 7, 9, 10, 14, 16	V	PEM Portion lying within existing gas R0	DW is disturbed.
Nutrient Removal	~		3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14	V	PEM Portion lying within existing gas RO	DW is disturbed.
→ Production Export	~		1, 7, 10, 12			
Sediment/Shoreline Stabilization	~		1, 2, 3, 4, 6, 9, 14			
wildlife Habitat	V		4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 21	V	PEM Portion lying within existing gas RO	DW is disturbed.
Recreation	~		2, 4, 5, 6, 8, 11		Private Land - Land access granted by F a principal function due to access restric	Property owner permission only. Suitable - But not tions.
Educational/Scientific Value	V		3, 5, 10, 11, 12, 13, 14		Private Land - Land access granted by F a principal function due to access restric	Property owner permission only. Suitable - But not tions.
★ Uniqueness/Heritage	~		4, 10, 11, 12, 13, 14, 19, 21, 22		Private Land - Land access granted by F a principal function due to access restric	Property owner permission only. Suitable - But not tions.
Visual Quality/Aesthetics	~		1, 2, 3, 6, 7, 8, 9, 10		Private Land - Land access granted by F a principal function due to access restric	Property owner permission only. Suitable - But not tions.
ES Endangered Species Habitat		~				
Other						

Notes: Evaluation based on delineated wetland within a 200-foot study corridor.

* Refer to backup list of numbered considerations.

Sampling Point: W-CC17

Two Sharton (Diet sine, 30'	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30'	% Cover Species? Status	Number of Dominant Species
1,		That Are OBL, FACW, or FAC:3 (A)
2,	<u> </u>	Total Number of Deminant
3,		Total Number of Dominant Species Across All Strata: 3 (B)
4		(B)
		Percent of Dominant Species
5		That Are OBL, FACW, or FAC:100 (A/B)
6		Prevalence Index worksheet:
7.		
	= Total Cover	Total % Cover of:Multiply by:
50% of total cover:0_	20% of total cover:0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'		FACW species x 2 =
1		FAC species x 3 =
		FACU species x 4 =
2		
3		UPL species x 5 =
4		Column Totals: (A) (B)
5		Dravalanca Index. D/A
6,		Prevalence Index = B/A =
7		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3.0 ¹
_ a	= Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of total cover:0	
Herb Stratum (Plot size: 5')		data in Remarks or on a separate sheet)
1, Carex crinita	30 ✔ OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Rubus hispidus	30 ✓ FACW	1
3 Scirpus cyperinus	30 ✓ FACW	¹ Indicators of hydric soil and wetland hydrology must
		be present, unless disturbed or problematic.
4 ₋ Sabatia campanulata	<u> </u>	Definitions of Four Vegetation Strata:
5. Juncus effusus	FACW	
6 Persicaria sagittata	20 OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7,		more in diameter at breast height (DBH), regardless of
		height.
8		Sapling/Shrub - Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11,		Herb – All herbaceous (non-woody) plants, regardless
	140 _ = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 70 _	20% of total cover: 28	
Woody Vine Stratum (Plot size;15')		Woody vine – All woody vines greater than 3.28 ft in
		height.
1,		
2		
3		
4		Lludrophytic
5,		Hydrophytic Vegetation
·	0 = Total Cover	Present? Yes No
50% of total cover: 0	20% of total cover:0	
Remarks: (Include photo numbers here or on a separate sh		
Remarks: (include prioto numbers here or on a separate sh	eet.)	

Sampling Point: W-CC17 PFO 1

Tree Stratum (Plot size: 30')	Absolute		Indicator	Dominance Test worksheet:
Acer rubrum	45	Species'		Number of Dominant Species
2 Carpinus caroliniana	15	- V	<u>FAC</u>	That Are OBL, FACW, or FAC:8 (A)
3 Ulmus rubra	-		FAC	Total Number of Dominant
	10		<u>FAC</u>	Species Across All Strata: 8 (B)
				Dercept of Derginant Species
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
6				(A/B)
7				Prevalence Index worksheet:
	70	= Total Co	ver	Total % Cover of:Multiply by:
50% of total cover:35		total cover		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =
1. Carpinus caroliniana	20	~	FAC	FAC species x 3 =
2 Acer rubrum	15	-		FACU species x 4 =
· · · · · · · · · · · · · · · · · · ·			FAC	
3,			-	UPL species x 5 =
4				Column Totals: (A) (B)
5:				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9			: ::	2 - Dominance Test is >50%
	35	= Total Cov	105	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:17.5	20% of	total cover	. 7	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	2070 01	total covol	·——	data in Remarks or on a separate sheet)
1. Scirpus polyphylus	30	V	OBL	Problematic Hydrophytic Vegetation¹ (Explain)
2. impatiens capensis	25		-	
			FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Gyceria striata	25		OBL	be present, unless disturbed or problematic.
4. Carex crinita	25		<u>QBL</u>	Definitions of Four Vegetation Strata:
5				173
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.				more in diameter at breast height (DBH), regardless of height.
8				noight,
				Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10			80	Triy talis:
11,	105		·	Herb - All herbaceous (non-woody) plants, regardless
50.5		Total Cov	er 04	of size, and woody plants less than 3.28 ft tall.
50% of total cover:52.5	20% of I	total cover:	21	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1,2				
2				
3				
4				
5.				Hydrophytic
3/2	0 -	Total Cov	0.5	Vegetation Present? Yes_ ✓ No
50% of total cover: 0		otal cover:		100
		.otal cover,		
Remarks: (Include photo numbers here or on a separate sh	reet.)			

Sampling Point: W-CC17 PFO 1

Tree Stratum (Plot size: 30'	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover 35	Species		Number of Dominant Species
2 Carpinus caroliniana	15		FAC_	That Are OBL, FACW, or FAC: 7 (A)
3. Salix nigra	20		_ FAC	Total Number of Dominant
		4	OBL_	Species Across All Strata: 7 (B)
4		3		Percent of Dominant Species
5,				That Are OBL, FACW, or FAC: 100 (A/B)
6			-	Prevalence Index worksheet:
7	70			Total % Cover of: Multiply by:
50% of total cover: 35		 Total Co total cove 		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	20% 01	total cove	i: !=	FACW species x 2 =
1 Carpinus caroliniana	20	~	FAC	FAC species x 3 =
2 Acer rubrum	15	~		FACU species x 4 =
2 Salix nigra	10	-	FAC	UPL species x 5 =
-		£	OBL	
4,		·		Column Totals: (A) (B)
5				Prevalence Index = B/A =
6			-	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		-		✓ 2 - Dominance Test is >50%
9	45			3 - Prevalence Index is ≤3.0 ¹
50% of total cover: _ 22.5		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	20% 01	total cove		data in Remarks or on a separate sheet)
1. impatiens capensis	40	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Poylgonum sagittatum	25		OBL	
3, Verbesina alternifolia	10	**	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Carex crinita	10			be present, unless disturbed or problematic.
5. Scirpus polyphylus	10		OBL	Definitions of Four Vegetation Strata:
	=	_	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7,			A	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9		:		than 3 in. DBH and greater than or equal to 3.28 ft (1
10			-2	m) tall.
11,	-05			Herb - All herbaceous (non-woody) plants, regardless
500/ 51 1 47 5		Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 47.5	20% of	total cover	:19	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
2			::====================================	
2		-	00	
3				
A				Hydrophytic
5				Vegetation
F00/ -f4-1-1		Total Cov		Present? Yes No No
50% of total cover: 0		total cover	:0	
Remarks: (Include photo numbers here or on a separate sh	ieet.)			

						Wetland I.D. W-CC4
Total area of wetland 0.055 ac. Human made? No	I	s wetl	and part of a wildlife corrido	r?_No	or a "habitat island"?_No	Latitude 40.436775 Longitude -78.764987
Adjacent land use Gas ROW Distance to nearest roadway or other development 40 ft.						Prepared by: KMM Date 10/11/2016
Dominant wetland systems present PEM			Contiguous undeve	eloped buff	er zone present none	Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No How many tributaries contribute to the wetland?	Evaluation based on: Office Field Corps manual wetland delineation completed? Y N					
Function/Value	Suita	abilit N	y Rationale (Reference #)*	Princij Functi	Management of the management	Comments
✓ Groundwater Recharge/Discharge	~		2, 4, 5, 7, 13, 15	~		
Floodflow Alteration	V		2, 3, 5, 7, 9			
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	V		1, 2, 4, 6, 10, 14	V		
Nutrient Removal	V		4, 5, 7			
→ Production Export		~	1			
Sediment/Shoreline Stabilization	~		2, 3, 4, 9			
™ Wildlife Habitat	V		4, 5, 6, 7, 8			
A Recreation		~				
Educational/Scientific Value		~				
★ Uniqueness/Heritage		~				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

^{*}Refer to backup list of numbered considerations.

VEGETATION (Four Strata) – Use scientific names of plants. W-CC4 Sampling Point: Absolute Dominant Indicator Dominance Test worksheet: 30' Tree Stratum (Plot size: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: ____ (B) Percent of Dominant Species 100% That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: Total % Cover of: = Total Cover OBL species _____ x 1 = _____ 50% of total cover: 20% of total cover: Sapling/Shrub Stratum (Plot size: 15') FACW species _____ x 2 = ____ FAC species _____ x 3 = ____ FACU species _____ x 4 = ____ UPL species ____ x 5 = Column Totals; _____ (A) _____ (B) Prevalence Index = B/A = ___ Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% __ 3 - Prevalence Index is ≤3.0¹ 0 = Total Cover 4 - Morphological Adaptations¹ (Provide supporting 50% of total cover: 0 20% of total cover:_ data in Remarks or on a separate sheet) Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) 10 1. Echinochloa crus-galli FAC 2. Juncus effuses 10 **FACW** ¹Indicators of hydric soil and wetland hydrology must 3. Leersia oryzoides 40 OBL be present, unless disturbed or problematic. 4 Persicaria sagittata 10 OBL Definitions of Four Vegetation Strata: 20 5. Nasturtium microphyllum OBL Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 10. Herb - All herbaceous (non-woody) plants, regardless 90__ = Total Cover of size, and woody plants less than 3.28 ft tall. 50% of total cover: 45 20% of total cover: 18 Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: 30') Hydrophytic Végetation Yes_____ No_____ 0 Present? _ = Total Cover 50% of total cover: ___ 20% of total cover: Remarks: (Include photo numbers here or on a separate sheet.)

						Wetland I.D. W-N4
Total area of wetland 0.343 ac. Human made? No	I	s wetl	and part of a wildlife corrido	r? Yes	or a "habitat island"? No	Latitude_40.451041 Longitude -78.7046
Adjacent land use Forested Floodplain / Gas ROW			Distance to nearest	roadway o	r other development 0.03 mi.	Prepared by: KMM Date 10/11/2016
Dominant wetland systems present PEM, PFO			Contiguous undeve	eloped bufi	er zone present yes	Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland l	ie in the dr	ainage basin? Mid	Evaluation based on:
How many tributaries contribute to the wetland? 3	-		_Wildlife & vegetation diver	sity/abunda	ance (see attached list)	Office Field Field Corps manual wetland delineation completed? Y N N
Function/Value		abilit N	y Rationale (Reference #)*	Princi	● 1000,020,000 B (0.000)	Comments
✓ Groundwater Recharge/Discharge	V	IN	2, 4, 5, 7,15		on(s)/ varae(s)	omments.
Floodflow Alteration	V		5, 6, 7, 8, 9, 10, 13, 14, 16	V		
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	V		1, 2, 4, 5, 6, 9, 10, 14	~		
Nutrient Removal	~		3, 4, 5, 7, 10, 11, 13	V		
→ Production Export		~	1			
Sediment/Shoreline Stabilization	~		1, 2, 3, 4, 6, 9			
W ildlife Habitat	~		4, 5, 6, 8			
Recreation		~				
Educational/Scientific Value		~				
★ Uniqueness/Heritage		~				
Visual Quality/Aesthetics		~	1			
ES Endangered Species Habitat	~		1*	~	*Mountain Bugbane (Actaea podocarpa 12 individuals identified. (40.450876, -78	
Other						

^{*}Refer to backup list of numbered considerations.

Sampling Point: W-N4 PFO

Tran Stratum (Plot size, 30'		Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size: 30") 1 Betula alleghaniensis	% Cover :	Species? _		Number of Dominant Species
2 Tsuga canadensis	10		FAC	That Are OBL, FACW, or FAC: 3 (A)
3			FACU	Total Number of Dominant Species Across All Strata: 5* (B)
4				Descent of Deminent Charles
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)
6				Prevalence Index worksheet:
7	60 _	T		Total % Cover of: Multiply by:
50% of total cover:30		Total Cover tal cover:_		OBL species x 1 =
Septime/Should Stretum (Diet size 15'	20% 01 10	itai cover:_		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1 Tsuga canadensis	10	~	FACU	FAC species x 3 =
2 Acer rubrum	10	~		
(A)			FAC	FACU species x 4 =
3. Betula alleghaniensis	10		FAC_	UPL species x 5 =
4,				Column Totals: (A) (B)
5,				Prevalence Index = B/A =
6				
7.				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dorninance Test is >50%
		Fotal Cover		3 - Prevalence Index is ≤3.0 ¹
50% of total cover:15		tal cover:_	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Dryopteris sp.	30	~	ND	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Tussilago farfara	30	~	FACU	
3. Galium asprellum		 -	OBL	¹ Indicators of hydric soil and wetland hydrology must
Panunaulus an	10		ND	be present, unless disturbed or problematic.
			- ND	Definitions of Four Vegetation Strata:
.5				Trop Woody plants evaluding vines 2 in (7.6 cm) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7,				height.
8				Capling/Shrub Woody plants evaluding vines loss
9				Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11,				Horb All horboscous (non-woody) plants, regardless
	85	Fotal Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5		tal cover:	17	
Woody Vine Stratum (Plot size: 15'			10	Woody vine - All woody vines greater than 3.28 ft in height.
112				
2,				
3			:	
4				Hydrophytic
5				Vegetation
_ a	= -	Fotal Cover		Present? Yes No
50% of total cover:0	20% of to	tal cover:_	0	
Remarks: (Include photo numbers here or on a separate sh	neet.)			
ND - Not Determined				
* Vegetation not identified down to species not ir	ncluded in	dominan	ce test.	
	•			

Sampling Point: W-N4 PEM

Tree Stratum (Plot size: 30'		ant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30")	% Cover Speci	es? Status	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species Across All Strata:(B)
4			Percent of Dominant Species That Are OBL, FACW, or FAC:50 (A/B)
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
50% of total cover: 0	= Total		OBL species10
	20% of total co	over: 0	FACW species 30 x 2 = 60
Sapling/Shrub Stratum (Plot size: 15'	10	ND	FAC species 50 x 3 = 150
			FACU species30 x 4 =120
2		-	UPL species x 5 =
3			Column Totals: 120 (A) 340 (B)
4			Column Totals (A) (B)
5,			Prevalence Index = B/A =2.83
6,			Hydrophytic Vegetation Indicators:
7,			1 - Rapid Test for Hydrophytic Vegetation
8			2 - Dominance Test is >50%
9,	10		✓ 3 - Prevalence Index is ≤3.01
500/ -5 5	= Total		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 5	20% of total co	over:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5') 1 Impatiens capensis	30	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Tussilago farfara	30	FACU	
3. Monarda didyma	20		¹ Indicators of hydric soil and wetland hydrology must
		FAC	be present, unless disturbed or problematic.
4. Rumex crispus		FAC	Definitions of Four Vegetation Strata:
5. Ranunculus repens		FAC	Tree Meady plants evaluding visce 3 is (7.5 see) se
6. Galium asprellum	10	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
72			height.
8			Sapling/Shrub – Woody plants, excluding vines, less
9			than 3 in. DBH and greater than or equal to 3.28 ft (1
10			m) tall:
11,			Herb – All herbaceous (non-woody) plants, regardless
	120 = Total		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 60	20% of total co	ver: 24	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')			height.
18			
2			
3,			
4			Hydrophytic
5,			Vegetation
	= Total (_	Present? Yes No
50% of total cover: 0	20% of total co	ver:0	
Remarks: (Include photo numbers here or on a separate s	heet.)		
ND - Not Determined			
* Vegetation not identified down to species not in	ncluded in dom	inance test.	

						Wetland I.D. W-K27	
Total area of wetland 0.086 ac. Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? Yes Latitude 40.454176 Longitude -78.617301							
Adjacent land use Forest herbaceous opening / Gas	Prepared by: KMM Date 10/11/2016						
Dominant wetland systems present_PEM	Wetland Impact: See Permit Tables						
Is the wetland a separate hydraulic system? Yes How many tributaries contribute to the wetland?	Evaluation based on: Office Field Corps manual wetland delineation completed? Y N						
Function/Value	Suita	abilit N	y Rationale (Reference #)*	Princi Functi		omments	
▼ Groundwater Recharge/Discharge	V		5, 13				
Floodflow Alteration		V					
Fish and Shellfish Habitat		V					
Sediment/Toxicant Retention	~		1, 2, 4, 5, 9	V			
Nutrient Removal		V	4, 5, 7				
→ Production Export		~	1				
Sediment/Shoreline Stabilization		~					
⋘ Wildlife Habitat		~	4, 5, 8				
A Recreation		~					
Educational/Scientific Value		~	1				
★ Uniqueness/Heritage		~					
Visual Quality/Aesthetics		V	1				
ES Endangered Species Habitat	~		1*	~	*Appalachian Blue Violet (Viola appalach 50+ individuals identified. (40.454373, -7	niensis) Population 3 - PA Threatened Status. 8.617114)	
Other							

^{*}Refer to backup list of numbered considerations.

Sampling Point: W-K27

30'	Absolute Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size; 30' 1 Crataegus sp.	% Cover Species? 5	Status ND	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2			That Aid OBE, THOW, OF THO.
3			Total Number of Dominant Species Across All Strata: 2* (B)
4			
5	st 		Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6			Prevalence Index worksheet:
7	C		Total % Cover of: Multiply by:
50% of total cover: 2.5			OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070 01 total covor		FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3			UPL species x 5 =
			Column Totals: (A) (B)
4			
5			Prevalence Index = B/A =
6			Hydrophytic Vegetation Indicators:
7			1 - Rapid Test for Hydrophytic Vegetation
8			2 - Dominance Test is >50%
9	Δ.		3 - Prevalence Index is ≤3.01
50% of total cover:0	Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
FI	20% or total cover:_		data in Remarks or on a separate sheet)
Herb Stratum (Plot size; 5') 1 Onoclea sensibilis	30	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Juncus effusus	25	FACW	
3 Scirpus atrocinctus	15	FACW	¹ Indicators of hydric soil and wetland hydrology must
4 Dichanthelium clandestinum	15	FAC	be present, unless disturbed or problematic.
		TAC	Definitions of Four Vegetation Strata:
5,			Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6			more in diameter at breast height (DBH), regardless of
7,			height.
8,			Sapling/Shrub – Woody plants, excluding vines, less
9,			than 3 in. DBH and greater than or equal to 3.28 ft (1
10			m) tall.
11,			Herb – All herbaceous (non-woody) plants, regardless
			There is the badded (not woody) plants, regardless
40.6	85 = Total Cove	. —	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5		. —	of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 15')	20% of total cover:_	. —	
Woody Vine Stratum (Plot size:15')	5 20% of total cover:_	. —	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
<u>Woody Vine Stratum</u> (Plot size:	20% of total cover:_	. —	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')	20% of total cover:_	. —	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
<u>Woody Vine Stratum</u> (Plot size:	20% of total cover:_	. —	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size:	20% of total cover:_	. —	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
Woody Vine Stratum (Plot size:	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
Woody Vine Stratum (Plot size:15') 1	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
Woody Vine Stratum (Plot size:15') 1	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
Woody Vine Stratum (Plot size:	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
Woody Vine Stratum (Plot size:	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No
Woody Vine Stratum (Plot size:	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No
Woody Vine Stratum (Plot size:	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No
Woody Vine Stratum (Plot size:	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No
Woody Vine Stratum (Plot size:15') 1	20% of total cover:	17	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No

						Wetland I.D. W-M59
Total area of wetland 5.976 ac. Human made? No	I:	s wetl	and part of a wildlife corrido	r? No	or a "habitat island"?_No	Latitude 40.413534 Longitude -78.565697
Adjacent land use Forested wetland / Gas ROW	Prepared by: KMM Date 10/11/2016					
Adjacent land use Forested wetland / Gas ROW Distance to nearest roadway or other development 2.25 mi. Dominant wetland systems present PEM, PFO Contiguous undeveloped buffer zone present yes						Wetland Impact: See Permit Tables
Is the wetland a separate hydraulic system? Yes How many tributaries contribute to the wetland?	Evaluation based on: Office Field Corps manual wetland delineation completed? Y N					
Suitability Rationale Principal Function/Value Y N (Reference #)* Function(s)/Value(s) Comments						
¥ Groundwater Recharge/Discharge	~		2, 4, 6, 7, 13, 15	~		
Floodflow Alteration		~	2, 9, 13			
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	V		1, 2, 4, 5, 6, 10	V		
Nutrient Removal		V	5, 7, 9, 10			
→ Production Export		~	1, 7, 12			
Sediment/Shoreline Stabilization		~	1, 2, 3, 4, 6, 9, 14			TX.
₩ Wildlife Habitat	~		4, 5, 6, 7, 8, 9, 10, 15, 19	V		
A Recreation	~		1, 3, 4, 5, 6			
Educational/Scientific Value		V	5, 13			
★ Uniqueness/Heritage		~	10, 12, 19			
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

^{*} Refer to backup list of numbered considerations.

Sampling Point: W-M59 PEM (1)

001	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size:30')	% Cover	Species?	Status	Number of Dominant Species
1,5		-	·	That Are OBL, FACW, or FAC;4 (A)
2.,				Total Niverbas of Daniel
3				Total Number of Dominant Species Across All Strata: 4 (B)
4				Opocios Across Air Strata.
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6,				Prevalence Index worksheet:
7		-		Total % Cover of: Multiply by:
		= Total Cove		
50% of total cover: 0	20% of	total cover:_		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =
1. Vaccinium corymbosum	10		FACW	FAC species x 3 =
2,				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
		= Total Cove	r	I
50% of total cover:5	20% of	total cover:_	2	4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5'				data in Remarks or on a separate sheet)
1. Eleocharis palustris	40	V	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Juncus tenuis	15		FAC	
3 Carex scoparia	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
		-		be present, unless disturbed or problematic.
4. Carex lurida	10		OBL	Definitions of Four Vegetation Strata:
5Osmundastrum cinnamomeum	10		FACW	
6. Carex crinita	10		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Rubus sp.	5		ND	more in diameter at breast height (DBH), regardless of height.
8,				
9,				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10		=======================================		11) (311)
11,	105	====		Herb – All herbaceous (non-woody) plants, regardless
500/ 51.1 52.5	100	= Total Cove	21	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>52.5</u>	20% or	total cover:_		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1,				
2,				
3				
4				l.,
5.				Hydrophytic Vegetation
	0	Total Cove		Present? Yes No
50% of total cover:0		total cover:_		
		total cover		
Remarks: (Include photo numbers here or on a separate sl	neet.)			
ND - Not determined				

Tree Stretum (Blot size) 30'	Absolute	Dominant I		Dominance Test worksheet:
Tiee Stratum (Flot Size)		Species?		Number of Dominant Species
1, Acer rubrum	40		FAC	That Are OBL, FACW, or FAC:3 (A)
2. Quercus rubra	20		FACU	Total Number of Dominant
3_Nyssa sylvatica	10		FAC	Species Across All Strata: 5* (B)
4. Tsuga canadensis	10		FACU	
5,				Percent of Dominant Species That Are OBL FACW or FAC: 60% (A/B)
6,				That Are OBL, FACW, or FAC:(A/B)
7				Prevalence Index worksheet:
	80	= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 40		= Total Cove total cover:_		OBL species x 1 =
	20% 01	total cover:_		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1 Kalmia latifolia	30	~	FACU	
			FACO	FACULTURE X 3 =
2,				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
9	30			3 - Prevalence Index is ≤3.01
500/ -54-4-1 15		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 15 Herb Stratum (Plot size: 5'	20% of	total cover:_		data in Remarks or on a separate sheet)
TIGITS STRUCTURE (1 FOR SIZE).	F0		E 4 C) 4 /	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Osmundastrum cinnamomeum	50		FACW	
2. Carex crinita	20		OBL	The Reserve of the William Control of the Control o
3, Sphagnum sp.	20		_ND_	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Rubus sp.	15		ND :	Definitions of Four Vegetation Strata:
5,				Definitions of Four vegetation Strata:
6,				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9			 :	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11,				Herb – All herbaceous (non-woody) plants, regardless
	105	= Total Cove	- 0.4	of size, and woody plants less than 3.28 ft tall.
50% of total cover:52.5	20% of	total cover:_	21	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1:		-		
2				
3				
4				
5.		8		Hydrophytic Vegetation
· · · · · · · · · · · · · · · · · · ·	0	= Total Cove		Present? Yes No
50% of total cover: 0		total cover:_		
Remarks: (Include photo numbers here or on a separate si		total cover		
ND- Not determined	neet.)			
ND- Not determined				
l.,				
*Vegetation not ID'd down to species level not in	ıcluded ir	n dominano	ce test.	

Tree Stratum (Plot size:) 1, Acer rubrum	40	~	ndicator Status FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2. Pinus sp. 3	15			Total Number of Dominant Species Across All Strata: 4* (B)
4 5		÷		Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
	55	= Total Cove	r	Total % Cover of: Multiply by:
50% of total cover: <u>27.5</u>	20% of	total cover:_	_11	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'	70		E 4 (C) 4 (FACW species x 2 =
1. Vaccinium corymbosum 2. Tsuga canadensis	70 10		FACU	FACUS precises x 3 =
1/24 /			FACU	FACU species x 4 = UPL species x 5 =
3				Column Totals: (A) (B)
4 5				
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
	80	= Total Cove	г	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 40	20% of	total cover:_	16	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Sphagnum sp.	25		ND	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Eleocharis palustris	20		OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Juncus tenuis	20		FAC	be present, unless disturbed or problematic.
4. Poa sp.	$\frac{3}{3}$		ND	Definitions of Four Vegetation Strata:
5. Pteridium aquilinum			FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6 7				more in diameter at breast height (DBH), regardless of height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11,	71_	Total Cove	:	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 35.5 Woody Vine Stratum (Plot size: 15')			14.2	Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
4				
5			-	Hydrophytic Vegetation
	0 .	Total Cove		Present? Yes No
50% of total cover:0	20% of	total cover:_	0	
Remarks: (Include photo numbers here or on a separate sh ND - Not determined	ieet.)			
* Vegetation not ID'd to species level not include	d in dom	inance tes	st	

	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size:)			Status	Number of Dominant Species
1 Acer rubrum	60	V	FAC	That Are OBL, FACW, or FAC: 4 (A)
7 Tsuga canadensis	30		FACU	That his obe, thow, of the
3. Quercus rubra	10	12	FACU	Total Number of Dominant
3. Quelcus lubia	10	0	FACU	Species Across All Strata: 5 (B)
4				Downant of Dominant Curving
5,				Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)
6,				That Are OBL, I ACVV, of FAC, (A/B)
		-		Prevalence Index worksheet:
7	400			Total % Cover of: Multiply by:
	100	= Total Cove		
50% of total cover:50	20% of	total cover:_	20	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =
1. Vaccinium corymbosum	45	~	FACW	FAC species x 3 =
2. Tsuga canadensis	5	-	FACU	FACU species x 4 =
		-	$\overline{}$	
3. Sassafras albidum	5		FACU	UPL species x 5 =
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9				2 - Dominance Test is >50%
	55	T		3 - Prevalence Index is ≤3.0 ¹
27.5		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>27.5</u>	20% of	total cover:_		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
1. Carex crinita	30	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Osmundastrum cinnamomeum	20	_	FACW	
	10	-	ND	¹ Indicators of hydric soil and wetland hydrology must
3. Rubus sp.				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Sommons of Four Fogotation Official
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
		***********	$\overline{}$	
11,	-60	-		Herb – All herbaceous (non-woody) plants, regardless
		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:30	20% of	total cover:_	12	Woody vine All woody vines greater than 3.39 ft in
Woody Vine Stratum (Plot size:15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				noight
2			 :	
3				
4,				Hydrophytic
5.				Vegetation
	0	- Total Cove	/====#	Present? Yes No
50% of total cover: 0		total cover:_		
		total cover:_		
Remarks: (Include photo numbers here or on a separate sh	neet.)			
ND - Not determined				

Sampling Point: W-M59 PEM (2)

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?	Status	Number of Dominant Species
1			-	That Are OBL, FACW, or FAC: 4 (A)
2.				Total Number of Dominant
3,				Species Across All Strata: 4 (B)
4,				Dercont of Deminont Species
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover:0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1 Vaccinium corymbosum	10	V	FACW	FAC species x 3 =
2				FACU species x 4 =
3,				UPL species x 5 =
				Column Totals: (A) (B)
4				(5)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8,		-		2 - Dominance Test is >50%
9,				3 - Prevalence Index is ≤3.0 ¹
_		= Total Cove	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:5	20% of	total cover:_	2	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1, Eleocharis palustris	40		OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Juncus tenuis	15		FAC	
3. Carex scoparia	15	V	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Carex lurida	10		OBL	
5. Osmundastrum cinnamomeum	10		FACW	Definitions of Four Vegetation Strata:
6 Carex crinita	10		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Rubus sp.	5		ND	more in diameter at breast height (DBH), regardless of
100				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.	105		انسست	Herb – All herbaceous (non-woody) plants, regardless
50.5		= Total Cove	r O4	of size, and woody plants less than 3.28 ft tall.
50% of total cover:52.5	20% of	total cover:_		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1				
2		-		
3				
4				Hydrophytic
5				Vegetation
	0	Total Cove	г	Present? Yes No
50% of total cover:0	20% of	total cover:_	0	
Remarks: (Include photo numbers here or on a separate sh	neet.)			
ND - Not determined				

Sampling Point: W-M59 PFO (4)

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	. you are not a proposal transmitter.	Species?		Number of Dominant Species _
1, Nyssa sylvatica	20	·	FAC	That Are OBL, FACW, or FAC:5 (A)
2. Acer rubrum	20		FAC	Total Number of Dominant
3 _x Tsuga canadensis	5		FACU	Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)
				That Are OBL, FACW, or FAC: 83% (A/B)
6		0	-	Prevalence Index worksheet:
7.4	45	3 0		Total % Cover of: Multiply by:
50% ()		= Total Cove		OBL species x 1 =
50% of total cover: 22.5	20% of	total cover:_	9	
Sapingranius Stratini (Flot size.	45			FACW species x 2 =
1. Vaccinium corymbosum	15		FACW	FAC species x 3 =
2, Tsuga canadensis	7		FACU	FACU species x 4 =
_{3.} Kalmia latifolia	5		FACU	UPL species x 5 =
4		A ²		Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
		Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>13.5</u>	20% of	total cover:_	5.4	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Osmundastrum cinnamomeum	20	V	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex crinita	10	~	OBL	
V-2-				¹ Indicators of hydric soil and wetland hydrology must
3,				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		a=======		height.
8			3	
9				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Thy tail.
11	-20	-		Herb – All herbaceous (non-woody) plants, regardless
45		Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:15	20% of	total cover:_	6	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1		-		
2,				
3				
4				
5		f=====*		Hydrophytic
0	0 .	T-1-LO		Vegetation Present? Yes <u>✓</u> No
50% of total cover: 0		Total Cove	_	163 140
		total cover:_		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Tree Stratum (Plot size: 30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Flot size)		Species?	<u>Status</u>	Number of Dominant Species
1. Nyssa sylvatica	20		FAC	That Are OBL, FACW, or FAC:5 (A)
2, Acer rubrum	20		FAC	Total Number of Dominant
_{3.} Tsuga canadensis	5	·	FACU	Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FACW 83% (A/B)
6				That Are OBL, FACW, or FAC 83% (A/B)
				Prevalence Index worksheet:
7	4.5	T-1-10	-	Total % Cover of: Multiply by:
50% of total cover: <u>22</u> .		= Total Cove		OBL species x 1 =
451	20% or	total cover:		
Departed of the State (1 for State)	4.5			FACW species x 2 =
1. Vaccinium corymbosum	15		FACW	FAC species x 3 =
2. Tsuga canadensis	7	·	FACU	FACU species x 4 =
3. Kalmia latifolia	5		FACU	UPL species x 5 =
4				Column Totals: (A) (B)
5		-		
		K -		Prevalence Index = B/A =
6,				Hydrophytic Vegetation Indicators:
7,				1 - Rapid Test for Hydrophytic Vegetation
8,				✓ 2 - Dominance Test is >50%
9				I —
	27	= Total Cove	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:13.5				4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5'		_		data in Remarks or on a separate sheet)
1. Osmundastrum cinnamomeum	20	V	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Carex crinita	10		OBL	
			ODL	¹ Indicators of hydric soil and wetland hydrology must
3,				be present, unless disturbed or problematic.
4,				Definitions of Four Vegetation Strata:
5,				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8		1.0		l noight.
				Sapling/Shrub – Woody plants, excluding vines, less
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10	-	-		m) tall.
11,				Herb - All herbaceous (non-woody) plants, regardless
	30	Total Cove	er	of size, and woody plants less than 3,28 ft tall.
50% of total cover:15	20% of	total cover:_	6	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1				Trong no
2):			
		-		
3				
4				Hydrophytic
5				Vegetation
		Total Cove	_	Present? Yes No
50% of total cover:0	20% of	total cover:_	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Tree Stratum (Plot size: 30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
ince stratum (Flot size.		Species?	Status	Number of Dominant Species
1 Nyssa sylvatica	20		_FAC_	That Are OBL, FACW, or FAC:5 (A)
2, Acer rubrum	20	V	FAC	
3 Tsuga canadensis	5		FACU	Total Number of Dominant Species Across All Strata: 6 (B)
· · · · · · · · · · · · · · · · · · ·			0	Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83% (A/B)
6				
7.				Prevalence Index worksheet:
* 	4.5	= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 22.				OBL species x 1 =
4=1	20% 01	total cover:		
Separation de Statem (Fiet Size:				FACW species x 2 =
1. Vaccinium corymbosum	15		FACW	FAC species x 3 =
2 Tsuga canadensis	7	V	FACU	FACU species x 4 =
3. Kalmia latifolia	5		FACU	1
Manager and the second			TACO	
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
	27	Total Cove	ır.	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:13.5				4 - Morphological Adaptations ¹ (Provide supporting
Name of the second seco	20% 01	total cover;_		data in Remarks or on a separate sheet)
Trong Stratem (Flot Size)				· · · · · ·
1, Osmundastrum cinnamomeum	20		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Carex crinita	10	V	OBL	
3				¹ Indicators of hydric soil and wetland hydrology must
NAT				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				J
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11:		-		·
1.52				Herb – All herbaceous (non-woody) plants, regardless
4 =		Total Cove	_	of size, and woody plants less than 3.28 ft tall.
50% of total cover:15	20% of	total cover:_	6	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15'				height.
1			i	Noghu
	===			
2		====	 :	
3				
4				Hudraphytia
5,				Hydrophytic Vegetation
	0_	Total Cours	· ·	Present? Yes _ V No
500/ of hatel annua 0		Total Cove		100
50% of total cover: 0		total cover:_	0	
Remarks: (Include photo numbers here or on a separate sl	neet.)			

						Wetland I.D. W-L62			
Total area of wetland 0.170 ac. Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? Yes Latitude 40.412061 Longitude -78.5625									
Adjacent land use Forested wetland depression / Gas	Prepared by: KMM Date 10/10/2016								
Dominant wetland systems present_PEM, PFO	Wetland Impact: See Permit Tables								
Is the wetland a separate hydraulic system? Yes	Evaluation based on:								
How many tributaries contribute to the wetland? 0	ance (see attached list)	Office Field Corps manual wetland delineation completed? Y N							
Function/Value	Suita	abilit N	y Rationale (Reference #)*	Princi	택	omments			
✓ Groundwater Recharge/Discharge	1	IN	6, 15	Tuncti	on(s)/ value(s)	Onlinents			
Groundwater Recharge/Discharge			2, 9	_					
Floodflow Alteration		~	2, 3						
Fish and Shellfish Habitat		~							
Sediment/Toxicant Retention	V		1, 4, 5						
Nutrient Removal		~	5, 7						
→ Production Export		~	1						
Sediment/Shoreline Stabilization		~	3, 4						
❤ Wildlife Habitat	~		4, 5, 7, 8	V	Potential habitat for birds and small amp	hibians.			
A Recreation		~	1, 3, 4						
Educational/Scientific Value		•	1, 13						
★ Uniqueness/Heritage		V	1, 10, 12						
Visual Quality/Aesthetics	~		1, 5, 6, 7, 10, 12	~					
ES Endangered Species Habitat	~		1*	V	*Federally Endangered Northeastern Bul 55 individuals identified. (40.412056, -78	rush (Scirpus ancistrochaetus) Population 1. .562579)			
Other									

^{*} Refer to backup list of numbered considerations.

Sampling Point: W-L62 PEM

Tree Stratum (Plot size:)	(A)
Z Total Number of Dominant	(B)
4 Percent of Dominant Species That Are OBL. FACW, or FAC: 75%	(4 (5)
5 That Are OBL, FACW, or FAC:	(A/B)
7Prevalence Index worksheet:	
0 = Total Cover of: Multiply by:	
50% of total cover: 0 OBL species x1 =	
Sapling/Shrub Stratum (Plot size: 15') FACW species x 2 =	
Vessinium angustifalium	
LIBI :	
	701
	(B)
5 Prevalence Index = B/A =	
6. Hydrophytic Vegetation Indicators:	_
7	
8 2 - Dominance Test is >50%	
9	
TO = Total Cover 4 Marphalogical Adaptational (Provide cum	orting
50% of total cover: 7.5 20% of total cover: 3	Tung
Herb Stratum (Plot size: 5' data in Remarks or on a separate sheet)	.
1, Eleocharis palustris 20 OBL Problematic Hydrophytic Vegetation¹ (Explain	'
2. Osmundastrum cinnamomeum 20 🗸 FACW	
3. Juncus tenuis 10 FAC Indicators of hydric soil and wetland hydrology me be present, unless disturbed or problematic.	ıst
L. Scirnus cynerinus 10 V FACW	
5. Carex scoparia 10 FACW Definitions of Four Vegetation Strata:	
c Leersia gryzoides 10 PRI Tree – Woody plants, excluding vines, 3 in. (7.6 ci	n) or
Frageric vesses and diameter at breast height (DBH), regardles	ss of
Lungua officia	
Colium energine Sapling/Shrub – Woody plants, excluding vines,	ess
than 3 in. DBH and greater than or equal to 3.26 in	. (1
11	
Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	less
50% of total covery 50 20% of total covery 20	
Woody Vine - All woody vines greater than 3.28 f	; in
height.	
2	
3	
4 Hydrophytic	
5Vegetation 0 = Total Cover Present? Yes NoNo	
U = Total Cover 50% of total cover: 0 20% of total cover: 0 Present? Yes ▶ No	
Remarks: (Include photo numbers here or on a separate sheet.)	

Sampling Point: W-L62 PFO

201	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover			Number of Dominant Species
1. Acer rubrum	30		FAC	That Are OBL, FACW, or FAC:2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2* (B)
4-				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				That Are OBL, FACW, or FAC: 100% (A/B)
7	-			Prevalence Index worksheet:
	30 _	Total Cave		Total % Cover of: Multiply by:
50% of total cover:15		Total Cove otal cover:	_	OBL species x 1 =
15!	20 /0 0/ 1	otal cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15) 1 Vaccinium corymbosum	20	~	FACW	FAC species x 3 =
` ``			FACVV	
2				FACU species x 4 =
3,				UPL species x 5 =
4				Column Totals: (A) (B)
5				Provolonce Index - D/A
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
C2				2 - Dominance Test is >50%
9	20 _			3 - Prevalence Index is ≤3.01
50% of total cover:10		Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
	20% 01 0	otal cover:_		data in Remarks or on a separate sheet)
TIGID Stratum (Flot Sizo.	40	.,	NID	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Sphagnum sp.			ND	
2. Osmundastrum cinnamomeum	5		FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Juncus effusus	5		FACW	be present, unless disturbed or problematic.
4. Scirpus cyperinus	5		FACW	Definitions of Four Vegetation Strata:
5				
6		· ·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7		***		more in diameter at breast height (DBH), regardless of height.
8				noight
				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3,28 ft (1 m) tall.
10				
11,				Herb – All herbaceous (non-woody) plants, regardless
27.5		Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 27.5	20% of to	otal cover:_		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
Ing				
2				
3,				
4				No. december 41:
5				Hydrophytic Vegetation
	0 =	Total Cove	r	Present? Yes No
50% of total cover: 0		otal cover:		
Remarks: (Include photo numbers here or on a separate sh				
ND- Not determined	10011)			
The tractal training				
*\/ogotation not ID'd down to the angeles level a	ot include	d in dee-!	nancs t-	
*Vegetation not ID'd down to the species level no	ot incinae	u iii aomi	nance te	#St.

						Wetland I.D. W-BB111
Total area of wetland .03 acres Human made? No	Latitude 40.408548 Longitude -78.556922					
Adjacent land use Forested	Prepared by: JMM Date 11/02/2015					
Dominant wetland systems present PEM	Wetland Impact: See General Permit Table					
Is the wetland a separate hydraulic system? No		_ If n	ot, where does the wetland lie in	the dra	ninage basin?	Evaluation based on:
How many tributaries contribute to the wetland? 0			_Wildlife & vegetation diversity/	abunda	ance (see attached list)	Office Field Corps manual wetland delineation
Function/Value	Suita Y	abilit N		rincij uncti	FOR THE PROPERTY OF THE PROPER	omments N
Groundwater Recharge/Discharge		~				
Floodflow Alteration	V		2, 3, 4, 5, 6, 8, 9,	~		
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention		V				
Nutrient Removal	~		3, 4, 5, 7, 10,			
→ Production Export		V				
Sediment/Shoreline Stabilization		~				
❤ Wildlife Habitat	~		1, 3, 4, 5, 7, 8, 9, 17, 18, 19, 20,	~		
Recreation		V				
Educational/Scientific Value		V				
which was a second with the contract of the co		~				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		~				
Other		V				

^{*}Refer to backup list of numbered considerations.

	Absolute Dominant II	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 0	% Cover Species?		Number of Dominant Species
1,			That Are OBL, FACW, or FAC:1 (A)
2			
3			Total Number of Dominant Species Across All Strata: 1* (B)
			Species Across All Strata: (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC: 100% (A/B)
6	/ //		
7,			Prevalence Index worksheet:
	0 = Total Cove	г	Total % Cover of: Multiply by:
50% of total cover:0			OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 0			FACW species x 2 =
1,			FAC species x 3 =
			FACU species x 4 =
2,			
3,			UPL species x 5 =
4			Column Totals: (A) (B)
5			Describe and hade BIA
6			Prevalence Index = B/A =
7,			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
8,			2 - Dominance Test is >50%
9,			3 - Prevalence Index is □3.01
	= Total Cover		4 - Morphological Adaptations (Provide supporting
50% of total cover:0	20% of total cover:_	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')			
1. Osmunda claytoniana	20%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
_{2.} Poa sp.	15%	ND	
o Scirnus en	30%	ND	¹Indicators of hydric soil and wetland hydrology must
(FO)			be present, unless disturbed or problematic.
4			Definitions of Four Vegetation Strata:
5			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			more in diameter at breast height (DBH), regardless of
7,			height.
8			
9,		======	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10			m) tall.
11,	CE.		Herb – All herbaceous (non-woody) plants, regardless
6	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>32.5</u>	20% of total cover:	13	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 0)			height.
1,			
2			
3			
4			
			Hydrophytic
5			Vegetation Present? Yes V
	0 = Total Cover		Present? Yes No No
50% of total cover: 0	20% of total cover:	0	
Remarks: (Include photo numbers here or on a separate shape)	neet.)		
ND- Not determined			
*Vegetation not ID'd down to species level not in	cluded in dominand	e test	
g-tanet. Her te a down to apoolog lover het in	saea iii aoiiiiiidiic		

			and part of a wildlife corridor? N			Wetland I.D. W-L70
Total area of wetland .42 acres Human made? No	Latitude 40.408229 Longitude -78.556449					
Adjacent land use Forested	Prepared by: JMM Date 11/03/2015					
Dominant wetland systems present PFO	Wetland Impact: See General Permit Table					
Is the wetland a separate hydraulic system? No How many tributaries contribute to the wetland? 1	Evaluation based on: Office Field Corps manual wetland delineation completed? Y N					
Function/Value	Suita Y	abilit N		rinci _l uncti	[MTTT] [[[[[[[[[[[[[[[[[[Comments
✓ Groundwater Recharge/Discharge	~		1, 2, 7, 8, 9, 10, 12, 13,	~		
Floodflow Alteration	V		2, 3, 4, 5, 9, 13, 15	~		
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	V		1, 2, 4, 5, 6, 10, 13	~		
Nutrient Removal	V		3, 4, 5, 6, 7, 8, 9, 11	~		
→ Production Export		~	1, 2, 4, 8,			
Sediment/Shoreline Stabilization		~	<			
™ Wildlife Habitat	~		1, 3, 4, 5, 6, 7, 8, 9, 13, 15, 18, 20,	~		
A Recreation		V				
Educational/Scientific Value		~				
y Uniqueness/Heritage		٧				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		>				
Other		~				

^{*} Refer to backup list of numbered considerations.

Sampling Point: W-L70 PFO

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant I Species?		Dominance Test worksheet:
1, Acer rubrum	40	V	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2, Nyssa sylvatica	20	V	FAC	
3 Carya lacinosa	10		FAC	Total Number of Dominant Species Across All Strata: 5 (B)
4,				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)
6,				(100)
7			2	Prevalence Index worksheet:
		= Total Cove	r	Total % Cover of: Multiply by:
50% of total cover: <u>35</u>	20% of	total cover:_	14	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Acer pensylvanicum	20		FACU	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5,				B 1 1 1 20
6				Prevalence Index = B/A =
74				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9,				2 - Dominance Test is >50%
		= Total Cove	r	3 - Prevalence Index is ≤3.01
50% of total cover:10		total cover:_		4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5'	_	_		data in Remarks or on a separate sheet)
1 Osmunda claytonia	30	✓	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Poa trivialis	25	~	FACW	
3. Sphagnum sp.	20	-	ND	¹ Indicators of hydric soil and wetland hydrology must
4 Carex crinita	20	-	OBL	be present, unless disturbed or problematic.
5. Parathelypteris noveboracensis	10	(FAC	Definitions of Four Vegetation Strata:
6		====2		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
8,				height.
9				Sapling/Shrub – Woody plants, excluding vines, less
10				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11.				, ·
	105	= Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 52.5		total cover:		of size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size:)		total covori		Woody vine – All woody vines greater than 3.28 ft in
1				height.
2				
3,		(
4				
-				Hydrophytic
5+	0	= Total Cove	 ;	Vegetation Present? Yes No
50% of total cover:0		total cover:	_	· · · · · · · · · · · · · · · · · · ·
Remarks: (Include photo numbers here or on a separate sl		total cover		
ND - Not determined	ieet.)			
TVD - TVOL GELETITINEG				

Attachment B

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
A20A	PEM	Washington	Sediment/Toxicant Retention	х	Poor	N/A
SZ1	PEM	Washington	None	х	Poor	N/A
SZ2	PEM	Washington	None	х	Poor	N/A
T1	PEM	Washington	Groundwater Recharge/Discharge, Floodflow Alteration,	X	Fair	N/A
T27	PEM	Washington	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	X	Fair	N/A
T28	PEM	Washington	Sediment/Toxicant Retention	X	Poor	N/A
	1 2	Truomington	Sediment/Toxicant Retention, Nutrient Removal		1 001	N/A
W12	PEM	Washington		х	Poor	
W13	PEM	Washington	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	х	Fair	N/A
W14	PEM	Washington	Sediment/Toxicant Retention	х	Poor	N/A
W204	PEM	Washington	None	X	Poor	N/A
W37	PEM	Washington	Nutrient Removal	Х	Poor	N/A
W42	PEM	Washington	Sediment/Toxicant Retention	х	Poor	N/A
		_	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and			N/A
W43	PEM	Washington	Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline		Fair	N/A
W44	PEM	Washington	stabilization		Fair	
W5	PEM	Washington	Sediment/Toxicant Retention	X	Poor	N/A
W8	PEM	Washington	Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline stabilization	X	Fair	N/A
W46-1	PEM	Allegheny	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and	х	Fair	N/A N/A
W62	PEM	Allegheny	Nutrient Removal	X	Poor	IN/A
W63	PEM	Allegheny	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
	55		Codiment Potential and Division			N/A
BB77	PEM	Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal		Poor	N/A
BB80	PEM/PSS	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Fair	N/A
CS1	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
CS3	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal	X	Poor	N/A
M67	PEM	Westmoreland	None		Poor	N/A
M69	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
M71	PEM/PSS	Westmoreland	Sediment/Toxicant Retention, Export Production, Nutrient Removal		Fair	N/A
	PEM		Sediment/Toxicant Retention, Nutrient Removal	V		N/A
M72 M73	PEM PEM	Westmoreland Westmoreland	Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal	X X	Poor Poor	N/A N/A
M75	PEM/PFO	Westmoreland	Sediment vox.cair Retention, voquerin Rentrovia Floodflow Alteration, Sediment/Toxicant Retention, Floodflow Alteration, Nutrient Removal, Sediment/Shoreline stabilization	x	Good	HQ watershed, large aerial extent (>1 ac including wetlands off-ROW), riparian to Porters Run, landscape support present (provides downstream benefits, part of larger contiguous habitat)
M76	PEM	Westmoreland	none		Poor	N/A
M77	PEM	Westmoreland	none	Х	Poor	N/A
M78	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Poor	N/A
N28	PEM/PFO	Westmoreland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, Sediment Shoreline Stabilization, Wildlife Habitat	X	Excellent	Located within PGC State Gameland, large aerial extent, large buffer to UNT to Conemaugh River, landscape support present (provides downstream benefits, part of larger contiguous habitat)
N72	PEM	Westmoreland	Sediment/ Toxicant Retention, and Nutrient Removal	X	Poor	N/A
N76	PEM	Westmoreland	Sediment/ Toxicant Retention, Nutrient Removal	X	Poor	N/A
N78	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention	X	Poor	N/A
N79	PEM	Westmoreland	Sediment/ Toxicant Retention, and Nutrient Removal Nutrient Removal	X	Poor	N/A
N80 N81	PEM PEM	Westmoreland	None	X X	Poor	N/A N/A
N81 N82	PEM/PSS	Westmoreland Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor	N/A N/A
N82 O45	PEM/PSS PEM/PFO	Westmoreland Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair	N/A N/A
P13	PEM	Westmoreland	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention,		Good	Provides buffer and is riparian to UNT of Boatyard Run
P14	PEM	Westmoreland	and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X X	Fair	N/A
P15	PEM/PFO	Westmoreland	Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, and Nutrient Removal	X	Good	Wetland is buffered by forested habitat, provides buffer and is riparian to UNT of Boatyard Run, landscape support present (provides downstream benefits, part of larger contiguous habitat), adjacent land use natural
P16	PEM	Westmoreland	Sediment/ Toxicant Retention, and Nutrient Removal	X	Poor	N/A
P17	PEM	Westmoreland	None	Х	Poor	N/A
P18	PEM	Westmoreland	Sediment/ Toxicant Retention, and Nutrient Removal		Poor	N/A
P20	PEM	Westmoreland	Sediment/ Toxicant Retention, Nutrient Removal	X	Poor	N/A
P22	PEM/PFO	Westmoreland Westmoreland	Sediment/ Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Poor Good	N/A HQ watershed, large aerial extent (>1 ac including wetlands off-ROW), provides buffer and riparian to UNT to Beaver Run, landscape support present (provides downstream benefits, part of larger contiguous habitat), wildlife corridor, wetland buffered by forested habitat, adjacent land use natural
P26	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Floodflow Alteration, Nutrient Removal, Sediment/Shoreline stabilization Floodflow Alteration, Sediment/Toxicant Retention, Floodflow	х	Good	HQ watershed, large aerial extent (>1 ac on and off-ROW), riparian to UNT to Porters Run, provides only buffer to UNT to Porters Run HQ watershed, large aerial extent (>1 ac on and off-ROW),
P27	PEM	Westmoreland	Alteration, Nutrient Removal, Sediment/Shoreline stabilization	х	Good	riparian to UNT to Porters Run, provides only buffer to UNT to Porters Run
P28	PEM	Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor	N/A

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
P29	PEM	Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor	N/A
P30	PEM/PFO	Westmoreland Westmoreland	None Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x x	Poor Good	N/A HQ watershed, large aerial extent (>1 ac including wetlands off-ROW), provides buffer and riparian to UNT to Beaver Run, landscape support present (provides downstream benefits, part of larger contiguous habitat), wetland is buffered by forested habitat, adjacent land use low intensity (residential)
P34	PEM	Westmoreland	None	х	Poor	N/A
P35	PEM	Westmoreland	None	Х	Poor	N/A
P7	PEM	Westmoreland	Sediment/Toxicant Retention	X	Poor	N/A
Q4	PEM	Westmoreland	Groundwater Recharge/Discharge	X	Poor	N/A N/A
Q6	PEM/PFO	Westmoreland	Sediment/Toxicant Retention,Groundwater Recharge/Discharge	X	Poor	IN/A
Q69	PEM, PSS, PFO	Westmoreland	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal, Production Export, Wildlife Habitat	х	Good	Large aerial extent (>1 ac in ROW), buffer to several UNTs to Conemaugh River, landscape support present (provides downstream benefits, part of larger contiguous habitat), wetland is buffered by extensive forested habitat, wildlife habitat and corridor.
Q7	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	х	Poor	N/A
Q70	PFO/PEM	Westmoreland	Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal, Production Export, Wildlife Habitat		Good	Large aerial extent (>1 ac in ROW), buffer to several UNTs to Conemaugh River, landscape support present (provides downstream benefits, part of larger contiguous habitat), wetland is buffered by extensive forested habitat, habitat is contiguous with PGC State Gameland to the north, adjacent land use is natural
Q8	PSS	Westmoreland	Sediment/Toxicant Retention	Х	Poor	N/A
Q92	PEM/PSS	Westmoreland	Sediment/Toxicant Retention		Poor	N/A
SZ6	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Poor	N/A
SZ7	PEM	Westmoreland	Nutrient Removal	x	Poor	N/A
W48	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline stabilization	X	Fair	N/A
W49	PEM, PFO	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline stabilization	x	Good	N/A
W52	PEM	Westmoreland	None	х	Poor	N/A
W53	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal,	x	Good	N/A
			Sediment/Shoreline stabilization			
W54	PEM	Westmoreland	None	X	Poor	N/A
W56 W58	PEM PEM	Westmoreland Westmoreland	Sediment/Toxicant Retention, Nutrient Removal None	X X	Poor Poor	N/A N/A
			Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline			N/A
W60 W61	PEM PSS	Westmoreland Westmoreland	Stabilization Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	X X	Poor Fair	N/A
			Removal, Wildlife Habitat			
W64	PEM	Westmoreland	Nutrient Removal	Х	Poor	N/A
W65	PEM	Westmoreland	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal, Wildlife Habitat	X	Good	N/A
W68	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
W69	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
W70	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
W71	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline stabilization	Х	Fair	N/A
CC30	PEM	Indiana	Sediment/Toxicant Retention and Nutrient Removal		poor	N/A
J51	PEM/PFO/PSS	Indiana	Sediment/Toxicant Retention and Nutrient Removal	X	Poor	N/A
J52	PEM	Indiana	None	X	Poor	N/A
J53	PEM	Indiana	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
N34	PEM, PFO	Indiana	Groundwater Recharge/Discharge, Floodflow Alteration,	х	Good	N/A
N35	PSS	Indiana	Sediment/Toxicant Retention, Nutrient Removal, Wildlife Habitat Sediment/Toxicant Retention and Nutrient Removal	^	Poor	N/A
N37	PEM	Indiana	None	х	Poor	N/A
N38	PEM, PSS	Indiana	Groundwater Recharge/Discharge, Floodflow Alteration,		Fair	N/A
			Sediment/Toxicant Retention Groundwater Recharge/ Discharge	X		NI/A
N39 N45	PEM PEM	Indiana Indiana	Groundwater Recharge/ Discharge Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention	X	Poor	N/A N/A
N47	PEM	Indiana	Sediment/ Toxicant Retention	х	Poor	N/A
N49	PEM	Indiana	Sediment/ Toxicant Retention	X	Poor	N/A
N50	PEM	Indiana	Sediment/ Toxicant Retention	Х	Poor	N/A
N52	PEM	Indiana	None	Х	Poor	N/A
N53	PEM	Indiana	Sediment/Toxicant Retention and Nutrient Removal	X	Poor	N/A
N54	PEM	Indiana	Sediment/Toxicant Retention and Nutrient Removal	Х	Poor	N/A
N55	PEM	Indiana	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention,		Poor	N/A N/A
N56 N57	PEM, PSS	Indiana	Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention,	X	Poor	N/A
N60	PEM	Indiana	Nutrient Removal Sediment/ Toxicant Retention	X X	Poor	N/A
N61	PEM	Indiana	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention		Poor	N/A
N69	PEM	Indiana	None	X X	Poor	N/A
			Sediment/Toxicant Retention, Nutrient Removal, and Export Removal	^		N/A N/A
N70 N71	PEM PEM	Indiana	Sediment/Toxicant Retention, Nutrient Removal, and Export Removal		Fair Fair	N/A
			Sediment/ Toxicant Retention	v		N/A
O51 O56	PEM PEM, PSS	Indiana Indiana	Sediment/ Loxicant Retention Sediment/Toxicant Retention and Nutrient Removal	X	Poor Poor	N/A N/A
U36	FEIN, PSS	ındıana	Occument toxicant retention and nument removal	Х	Poor	I IN/A

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
O57	PEM	Indiana	None	Х	Poor	N/A
O58	PEM	Indiana	Sediment/Toxicant Retention and Nutrient Removal	Х	Poor	N/A
O59	PEM	Indiana	Groundwater Recharge/ Discharge		Poor	N/A
O60	PEM	Indiana	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention,	v	Poor	N/A
O61	PEM	Indiana	Nutrient Removal Sediment/ Toxicant Retention	X X	Poor	N/A
062	PEM	Indiana	Sediment/ Toxicant Retention	X	Poor	N/A
068	PEM	Indiana	None	X	Poor	N/A
			Groundwater Recharge/Discharge, Floodflow Alteration,	~		N/A
070	PEM, PFO	Indiana	Sediment/Toxicant Retention	Х	Fair	
071	PEM	Indiana	None	Х	Poor	N/A
072	PEM	Indiana	Sediment/Toxicant Retention and Nutrient Removal	Х	Poor	N/A
077	PEM, PSS	Indiana	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Wildlife Habitat	x	Good	Large aerial extent (>1 ac in ROW), buffer to UNT to Bucklick Creek, landscape support present (provides downstream benefits, part of larger contiguous habitat)
P1	PEM	Indiana	None	Х	Poor	N/A
P2	PEM/PSS	Indiana	Sediment/Toxicant Retention and Nutrient Removal	Х	poor	N/A
Pond-N6	PUB	Indiana	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
				^		
BB141	PEM	Cambria	None		Poor	N/A
	PEM, PSS	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
BB142			Groundwater Recharge/Discharge, Sediment/Toxicant Retention			N/A
BB144	PEM, PSS	Cambria	oroundwater recinarge/bischarge, Sediment/Toxicant Retention		Poor	N/A
BB145	PEM	Cambria	None		Poor	N/A
BB146	PEM	Cambria	None		Poor	N/A
	PEM, PSS	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,		Fair	N/A
BB147			Nutrient Removal			N1/A
BB148	PEM PSS PEO	Cambria	Sediment/Toxicant Retention Sediment/Toxicant Retention		Poor	N/A N/A
BB67	PEM, PSS, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor	N/A N/A
BB89	PEM	Cambria	o. canamator reconargo, Discharge, Geuiment Toxicant Retention		Poor	IVA
CC12	PEM	Cambria	None		Poor	N/A
CC13	PEM	Cambria	None		Poor	N/A
0045	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Fair	N/A
CC15	PEM	Cambria	Sediment/Toxicant Retention	X	Poor	N/A
CC16 CC18	PEM	Cambria	None	X	Poor	N/A
CC19	PEM	Cambria	Sediment/Toxicant Retention	x	Poor	N/A
CC2	PEM	Cambria	None		Poor	N/A
CC20	PEM	Cambria	Sediment/Toxicant Retention		Poor	N/A
	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	х	Fair	N/A
K28			Nutrient Removal	^		
K30	PFO	Cambria	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
K31	PEM, PSS, PFO	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat		Excellent	Large aerial extent (>1 ac on and off-ROW), floodplain/large buffer to Little Conemaugh River, landscape support present (provides downstream benefits, is part of larger contiguous habitat), buffered by forested habitat
L63	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
L64	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
L65	PEM, PFO	Cambria	Sediment/Toxicant Retention		Poor	N/A
L66	PEM	Cambria	None	х	Poor	N/A
M60	PEM, PSS	Cambria	Sediment/Toxicant Retention	Х	Poor	N/A
M61	PEM, PSS	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
N1	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N10	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N11	PEM, PFO, PUB	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N12	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N14	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N15	PEM, PSS, PFO	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildliffe Habitat	х	Good	Large aerial extent (5-1 ac including wetlands off-ROW), buffer and riparian to UNT to North Branch Little Conemaugh River, landscape support present (provides downstream benefits, is part of larger contiguous habitat), buffered by forested habitat.
	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N17		- 3	Groundwater Recharge/Discharge, Floodflow Alteration,		. 551	Large aerial extent (>1 ac on and off-ROW), floodplain/large
N18	PEM, PSS, PFO	Cambria	Groundwater Recharge/Liscnarge, Floodnow Aiteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Good	Large aerial extent (>1 a co n and on-ROW), floooplainirarge buffer to North Branch Little Conemaugh Rwer, landscape support present (provides downstream benefits, is part of larger contiguous habitat), buffered by forested habitat
	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
N2 N20	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good	Large aerial extent (on and off-ROW), large buffer and riparian to UNT to Hinckston Run, landscape support present (provides downstream benefits, part of larger contiguous habitat), buffered by forested habitat, adjacent land use intensity low (residential)
N24	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good	Large aerial extent (on and off-ROW), buffer and riparian to Hinckston Run, landscape support present (provides downstream benefits, part of larger contiguous habitat), buffered by forested habitat, adjacent land use intensity low (residential)
N25	PSS	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	Х	Poor	N/A
	PSS PEM, PSS PEM	Cambria Cambria	Sediment/Toxicant Retention, and Nutrient Removal Sediment/Toxicant Retention, and Nutrient Removal Sediment/Toxicant Retention, and Nutrient Removal	X X X	Poor Poor Poor	N/A N/A N/A

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
N31	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	Х	Poor	N/A
N5	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N6	PEM	Cambria	Groundwater Recharge/Discharge		Poor	N/A
	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N8	DEM DEO	Combrie	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	х	F-1-	N/A
N9	PEM, PFO	Cambria	Nutrient Removal		Fair	N/A
O1 O10	PEM, PSS PEM	Cambria Cambria	None Groundwater Recharge/Discharge	X X	Poor Poor	N/A N/A
012	PEM	Cambria	Sediment/Toxicant Retention	X	Poor	N/A
015	PEM	Cambria	None		Poor	N/A
017	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Fair	N/A
02	PEM, PSS	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	х	Good	HQ watershed, large aerial extent (>1 ac on and off-ROW), floodplain/large buffer and inparian to UNT to Noels Creek, landscape support present (provides benefits downstream, part of larger contiguous habitat), adjacent land use natural
021	PEM	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	Х	Poor	N/A
	PEM	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A
O23	I EW	Cambria		^	1 001	
024	PEM	Cambria	Sediment/Toxicant Retention		Poor	N/A
025	PEM PEM	Cambria Cambria	Sediment/Toxicant Retention, and Nutrient Removal Sediment/Toxicant Retention, and Nutrient Removal	X X	Poor Poor	N/A N/A
O27	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Excellent	HQ watershed, large aerial extent (>1 ac on and off-ROW), floodplain/large buffer and riparian to UNT to Noels Creek, landscape support present (provides benefits downstream, part of larger contiguous habitat), adjacent land use natural
O35	PSS	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal		Fair	N/A
035	DEM	Combrie	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Deer	N/A
04	PEM	Cambria		X	Poor	N/A
O5	PEM	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	х	Fair	N/A
O6	PEM	Cambria	None	X	Poor	N/A
08	PEM	Cambria	Sediment/Toxicant Retention Groundwater Recharge/Discharge, Sediment/Toxicant Retention	Х	Poor	N/A N/A
О9	PEM	Cambria	Groundwater Nechalge/Discharge, Sediment/Toxicant Netention	х	Poor	IV/A
Q49	PEM	Cambria	None	X	Poor	N/A
Q50 Q51	PEM PEM	Cambria Cambria	None None	X X	Poor Poor	N/A N/A
Q65	PEM	Cambria	None		Poor	N/A
BB159	PEM	Blair	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
BB59	PEM	Blair	None		Poor	N/A
L42	PEM	Blair	Groundwater Recharge/Discharge	Х	Poor	N/A
L43	PEM	Blair	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	x	Fair	N/A
L44	PEM	Blair	Nutrient Removal	Х	Poor	N/A
L59	PEM	Blair	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
Q54 Q56	PEM PEM	Blair Blair	None None		Poor Poor	N/A N/A
Q58	PEM	Blair	None		Poor	N/A N/A
BB127 CC27	PEM, PSS, PFO PEM	Huntingdon Huntingdon	Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal	x	Poor Fair	N/A N/A
CC28	PEM	Huntingdon	Sediment/Toxicant Retention	^	Poor	N/A
K63	PEM	Huntingdon	None		Poor	N/A
K65	PEM	Huntingdon	None Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A N/A
K66	PEM	Huntingdon	3		Fair	
K67	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention		Fair	N/A
K68	PEM, PSS, PFO	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Good	Large aerial extent (>1 ac on and off-ROW), landscape support present (provides large buffer to UNT to George Creek, downstream benefits, part of larger contiguous habitat), larger wetland system buffered by forested land
K69	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Large aerial extent (>1 ac on and off-ROW), landscape support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habitat), provides wildlife corridor
K70	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Large aerial extent (>1 ac on and off-ROW), landscape support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habitat), provides wildlife corridor
K72	PEM	Huntingdon	None	X	Poor	N/A
L10 L11	PEM PEM	Huntingdon Huntingdon	None Sediment/Toxicant Retention, Nutrient Removal	X X	Poor Poor	N/A N/A
L12	PEM	Huntingdon	Sediment/Toxicant Retention, Nutrient Removal	X	Poor	N/A
L13	PEM	Huntingdon	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
L14	PEM	Huntingdon	Sediment/Toxicant Retention, Nutrient Removal	X	Poor	N/A
L15 L16	PEM PEM	Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal	X X	Poor Poor	N/A N/A
L16	PEM	Huntingdon	None	X	Poor	N/A N/A
	, 2141	· · · · · · · · · · · · · · · · · · ·			. 301	

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
L18	PEM	Huntingdon	None	Х	Poor	N/A
L20	PEM	Huntingdon	None	Х	Poor	N/A
L21	PEM	Huntingdon	None	Х	Poor	N/A
L24/L25	PEM	Huntingdon	Groundwater Recharge/Discharge		Poor	N/A
L27	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Large aerial extent (>1 ac on and off-ROW), landscape support present (provides large buffer to Little Trough Creek and UNT to Little Trough Creek, downstream benefits, part of larger contiguous habitat), provides wildlife corridor
L28	PEM	Huntingdon	None	Х	Poor	N/A
L29	PEM	Huntingdon	Sediment/Toxicant Retention	Х	Poor	N/A
L31	PEM	Huntingdon	Sediment/Toxicant Retention		Poor	N/A
100	DEM	·	Groundwater Recharge/Discharge, Floodflow Alteration,	v		N/A
L32	PEM	Huntingdon	Sediment/Toxicant Retention	Х	Fair	
L33a [L33]	PEM	Huntingdon	Sediment/Toxicant Retention		Poor	
L36	PSS	Huntingdon	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
			NI .			N/A
L5	PEM	Huntingdon	None	X	Poor	N/A
L6	PEM	Huntingdon	None	Х	Poor	N/A
L7	PEM	Huntingdon	Sediment/Toxicant Retention		Poor	N/A
L8	PEM	Huntingdon	None		Poor	N/A
L9	PEM	Huntingdon	None		Poor	N/A
LK-2 (Raystown Lake)	PUB	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Fish and Shellfish Habitat, Sediment/Toxicant Retention, Nutrient Removal, Production Export, Sediment/Shoreline Stabilization, Wildlife Habitat, Recreation, Educational/Scientific Value, Uniqueness/Heritage, and Visual Quality/Aesthetics		Excellent	Large aerial extent (-1 ac on and off-ROW), provides opportunity for boating, fishing, and other recreational uses, serves as a wildlife habitat and corridor, aestheticly pleasing, managed floodflow control, amoung other miscellaneous uses.
M1	PEM	Huntingdon	Floodflow Alteration, Sediment/Toxicant Retention	Х	Poor	N/A
M10	PEM	Huntingdon	Floodflow Alteration, Sediment/Toxicant Retention	Х	Poor	N/A
M12	PEM	Huntingdon	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
M13	PEM	Huntingdon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	х	Good	Provides buffer to Hares Valley Creek, landscape support
		-	Nutrient Removal, Sediment/Shoreline Stabilization			present (provides downstream benefits)
M15	PEM	Huntingdon	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
M17	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration,	х	Fair	N/A
M2	PEM	Huntingdon	Sediment/Toxicant Retention Floodflow Alteration, Sediment/Toxicant Retention	X	Poor	N/A
IVIZ	PEIVI	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration,		Poor	N/A
M3	PEM, PSS	Huntingdon	Sediment/Toxicant Retention	X	Fair	IN/A
M6	PEM	Huntingdon	None	X	Poor	N/A
			Groundwater Recharge/Discharge, Floodflow Alteration,	.,		N/A
M7	PEM	Huntingdon	Sediment/Toxicant Retention	Х	Fair	·
M8	PEM	Huntingdon	None	х	Poor	N/A
M9	PEM	Huntingdon	Sediment/Toxicant Retention Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	х	Poor	N/A Deepwater habitat provides opportunity for downstream
Pond-I4	PUB	Huntingdon	Removal, Wildlife Habitat	х	Good	beepmaker habitate, provides upporturing for combination benefits such as floodflow control, sediment and nutrient settling and attenuation, and wildlife habitat and corridor; landscape support present (provides large buffer to an UNT to Little Trough Creek.
W332	PEM	Huntingdon	None		Poor	N/A
W333	PEM	Huntingdon	None		Poor	N/A
Y1	PFO	Huntingdon	None	x	Poor	N/A
Y12	PEM	Huntingdon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	х	Fair	N/A
Y13	PEM	Huntingdon	Nutrient Removal None	X	Poor	N/A
Y14	PEM	Huntingdon	Sediment/Toxicant Retention, Nutrient Removal	^	Poor	N/A
Y2	PSS	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	In PGC State Gameland, large areal extent (>1 ac on and off- ROW), provides buffer to James Creek, landscape support present (provides benefits downstream, part of larger contiguous habitat), provides wildlife corridor
Y3	PSS	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	in PGC State Gameland, large areal extent (>1 ac on and off- ROW), provides buffer to James Creek, landscape support present (provides benefits downstream, part of larger contiguous habitat), provides wildlife corridor
Y4	PFO	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	In PGC State Gameland, large areal extent (>1 ac on and off- ROW), provides buffer to UNT to Raystown Branch Juniata River, landscape support present provides benefits downstream, part of larger contiguous habitat), provides wildlife corridor
Y6	PFO	Huntingdon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
Y7	PEM, PFO	Huntingdon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	х	Fair	N/A
Y9	PFO	Huntingdon	Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	x	Fair	N/A
			Wildlife Habitat			N/A
K58	PEM	Juniata	Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration,	X	Poor	N/A N/A
K59	PEM	Juniata	Sediment/Toxicant Retention	x	Fair	IN/A
K60	PFO	Juniata	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	х	Fair	N/A
1,00	FFU	Juillata	Nutrient Removal	۸	rair	

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
L3 Q64	PEM PEM	Juniata Juniata	None Sediment/Toxicant Retention, Nutrient Removal	X X	Poor Poor	N/A N/A
			Sediment/Toyloont Petention			N/A
K50 W36d	PEM PEM	Perry Perry	Sediment/Toxicant Retention Recreation	X X	Poor Poor	N/A N/A
11000	7 2	,			1 001	
BB129	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
BB15	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention		Poor	N/A
			None			N/A
BB151	PEM	Cumberland			Poor	
BB155	PEM, PSS, PFO	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export		Good	Provides buffer to UNT to Bloser Creek, landscape support present (provides downstream benefits)
BB43	PEM	Cumberland	None		Poor	N/A
BB44	PEM	Cumberland	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Fair	N/A
H54	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
124	PEM, PFO	Cumberland	Floodflow Alteration, Fish and Shellfish Habitat, Sediment/Toxicant	х		N/A
	,		Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A N/A
126	PEM	Cumberland	The second secon	х	Poor	
127	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal	х	Poor	N/A
			Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal,			Large aerial extent (>1 ac), provides buffer to Conodoguinet
136	PEM, PFO	Cumberland	Sediment/Shoreline Stabilization	X	Good	Creek, landscape support present (provides downstream
139	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Good	Provides buffer to UNT to Conodoguinet Creek, landscape support present (provides downstream benefits, contiguous with other riparian areas along UNT to Conodoguinet Creek)
I 41	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
	-		Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal			N/A
143	PEM	Cumberland	i Toodhow Alteration, Sediment Toxicant Retention, Nutrient Removal	Х	Fair	INA
144	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
145	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
146	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A N/A
148	PEM	Cumberland	i rodanow zateranon, ocument rozdani reternion, retirent removal	Х	Fair	INA
149	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
152	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal	х	Poor	N/A
		Cambonana	Groundwater Recharge/Discharge, Floodflow Alteration,		1 001	HQ watershed, headwater of UNT to Opossum Creek,
153	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	х	Good	landscape support present (provides downstream benefits)
154	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration,	х	Fair	N/A
104	T EIVI	Cumbenana	Sediment/Toxicant Retention Sediment/Toxicant Retention	^	i an	N/A
155	PEM	Cumberland	South of the southout of the south of the south of the south of the south of the so	х	Poor	
156	PEM	Cumberland	None	X	Poor	N/A
158	PEM	Cumberland	None	X	Poor	N/A
160	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
I61	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Good	Potential bog turtle habitat, large aerial extent (>1 ac with off- ROW wetlands), provides buffer for UNT to Conodoguinet Creek, landscape support present (provides downstream benefits)
162	PEM	Cumberland	Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration,	X	Poor	N/A N/A
163	PEM	Cumberland	Sediment/Toxicant Retention	Х	Fair	
164	PEM	Cumberland	Sediment/Toxicant Retention	Х	Poor	N/A
J20	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Fair	N/A
J21	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	х	Fair	N/A
			Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient			N/A
J22	PEM	Cumberland	Removal	Х	Fair	
J23	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor	N/A
J24	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient None	Х	Fair	N/A N/A
J25	PEM	Cumberland	1000	x	Poor	IWA
J26	PEM	Cumberland	None	x	Poor	N/A
J27	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	Х	Poor	N/A
J31	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration,	х	Fair	N/A
			Sediment/Toxicant Retention Groundwater Recharge/Discharge, Sediment/Toxicant Retention			N/A
J32 J35	PEM PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Fish and Shellfish Habitat, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Fair Excellent	Large aerial extent (>1 ac on and off-ROW), potential bog turtle habitat, provides large buffer to Locust Creek, landscape support present (provides downstream benefits, part of larger contiguous habitat)
J36	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	х	Poor	N/A
	I LIVI	Cambonanu		. ^	1 001	· · · ·

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
J40	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration,	х	Good	HQ watershed, potential bog turtle habitat, large aerial extent
J9	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	Х	Poor	N/A
K1	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	х	Fair	N/A
K11	PEM	Cumberland	Removal Sediment/Toxicant Retention	х	Poor	N/A
K12	PEM	Cumberland	None	X	Poor	N/A
K13	PEM	Cumberland	None	X	Poor	N/A
K14	PEM	Cumberland	None	Х	Poor	N/A
K15	PEM	Cumberland	Sediment/Toxicant Retention	Х	Poor	N/A
K16	PEM	Cumberland	Sediment/Toxicant Retention	Х	Poor	N/A
K2	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient		Fair	N/A N/A
K3 K41	PEM PEM	Cumberland Cumberland	Removal None	Х	Fair Poor	N/A
K44	PEM, PFO	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	х	Good	Large aerial extent (>1 ac on and off-ROW), provides buffer to two UNT's to Conodoguinet Creek, landscape support present (provides downstream benefits, part of larger contiguous habitat)
K5	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor	N/A
K6 K7	PEM PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal None	X X	Poor Poor	N/A N/A
K7 K9	PEM	Cumberland Cumberland	None	X	Poor	N/A N/A
Pond-J3	PUB	Cumberland	None	^	Poor	N/A N/A
			Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient			N/A
Pond-J4 W14e	PUB PEM	Cumberland Cumberland	Removal None	Х	Fair Poor	N/A
W177	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good	Large aerial extent (>1 ac), provides buffer to Bloser Creek, landscape support present (provides downstream benefits)
W19d	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good	Provides buffer to UNT to Bloser Creek, landscape support present (provides downstream benefits)
W22d	PEM	Cumberland	None	Х	Poor	N/A
W33d	PEM	Cumberland	Sediment/Toxicant Retention	Х	Poor	N/A
BB1	PEM	York	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	Х	Fair	N/A
BB152	PEM	York	Floodflow Alteration, Sediment/Toxicant Retention	X	Poor	N/A
BB21	PEM	York	Sediment/Toxicant Retention Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	Х	Poor	N/A N/A
H50	PEM	York	Nutrient Removal	X	Fair	IV/A
H51	PEM, PFO	York	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Large aerial extent (-1 ac on and off-ROW), potential bog turtle habitat, provides buffer to UNT to Susquehanna River, buffered by adjacent forested area, landscape support present (part of larger contiguous habitat that is contiguous with the Susquehanna River)
120	PEM	York	Sediment/Toxicant Retention, Nutrient Removal	X	Poor	N/A
I22 I23	PEM PEM	York York	None None	X X	Poor	N/A N/A
J63	PFO	York	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor	N/A
W3c	PEM	York	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
A16	PEM	Dauphin	Sediment/Toxicant Retention	Х	Poor	N/A
A17	PEM	Dauphin	Sediment/Toxicant Retention	Х	Poor	N/A
A18	PSS	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	х	Good	Saturated PFO, large areal extent (>ac and riparian to Susquehanna River), provides buffer to Susquehanna River, landscape support present (part of larger contiguous riverine habitat)
A22	PEM	Dauphin	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Fair	N/A
A23	PEM	Dauphin	Sediment/Toxicant Retention, and Nutrient Removal	Х	Poor	N/A
A25	PEM	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Good	Large aerial extent (>1 ac with off-ROW wetlands), provides buffer for Spring Creek, landscape support present (part of larger contiguous habitat, provides downstream benefits)
A27	PEM	Dauphin	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
B55	PEM	Dauphin	None	X	Poor	N/A
B56 B57	PEM PEM	Dauphin Dauphin	Floodflow Alteration and Sediment/Toxicant Retention Floodflow Alteration and Sediment/Toxicant Retention	X X	Poor Poor	N/A N/A
B57	PEM, PFO	Dauphin	Frouding Autoration and Securiter Oxtean Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Good	Large aerial extent (>1 ac on and off-ROW), provides large buffer for Iron Run, landscape support present (part of larger contiguous habitat, provides downstream benefits)
B59	PEM	Dauphin	Sediment/Toxicant Retention, Nutrient Removal	х	Poor	N/A
B60	PEM	Dauphin	Sediment/Toxicant Retention, Nutrient Removal	x	Poor	N/A
B61	PEM, PFO	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	х	Good	Large aerial extent (>1 ac on and off-ROW), provides large buffer for Iron Run, landscape support present (part of larger contiguous habitat, provides downstream benefits)
B64	PFO	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Large aerial extent (>1 ac with off-ROW wetlands), provides buffer to UNT to Lisa Lake, landscape support present (provides downstream benefits)
B76	PSS	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Good	Provides buffer to UNT to Lisa Lake, landscape support present (provides downstream benefits), adjacent land use intensity low (residential). buffered by surrounding forested.
BB36	PEM	Dauphin	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	,,	Poor	N/A N/A
BB39	PEM	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration,	Х	Fair	Large aerial extent (>1 ac on and off-ROW), provides large
C26	PEM, PFO	Dauphin	Sediment/Toxicant Retention, Nutrient Removal	Х	Good	buffer for Iron Run, landscape support present (part of larger

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
C27	PEM, PSS	Dauphin	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
C28	PEM	Dauphin	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
CC22	PEM	Dauphin	None	х	Poor	N/A
J47	PEM, PFO	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Large aerial extent (>1 ac on and off-ROW), provides large buffer for UNT to Spring Creek, landscape support present (part of larger contiguous habitat, provides downstream benefits), buffered by adjacent forested lands
K23	PEM PEM, PFO	Dauphin Dauphin	None Sediment/Toxicant Retention, Nutrient Removal	Х	Poor Fair	N/A N/A
A1	PEM	Lebanon	None	х	Poor	N/A
A11	PEM	Lebanon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Potential bog turtle habitat, riparian to Beck Creek - provides buffer
A13	PEM	Lebanon	None	х	Poor	N/A
A2 A3	PEM PEM	Lebanon Lebanon	None None	X X	Poor Poor	N/A N/A
A6	PEM	Lebanon	None	X	Poor	N/A
A9	PEM	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
B66	PEM	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
BB154	PEM	Lebanon	None	х	Poor	N/A
C16	PEM, PFO	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	х	Fair	N/A
C17	PEM	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
H13	PEM, PSS, PFO	Lebanon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	х	Excellent	On PGC State Game Land, potential bog turtle habitat, large aerial extent (>1 ac on and off-ROW), large buffer to Middle Creek, landscape support present (provides benefits downstream, part of larger contiguous habitat), provide wildlife corridor to Middle Creek Reservoir
H14	PEM, PFO	Lebanon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	х	Excellent	On PGC State Game Land, potential bog turtle habitat, large aerial extent (>1 ac on and off-ROW), large buffer to Middle Creek, landscape support present (provides benefits downstream, part of larger contiguous habitat), provide wildlife corridor to Middle Creek Reservoir
B10	PEM	Lancaster	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
B11	PEM	Lancaster	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
B5	PEM	Lancaster	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
B7	PEM	Lancaster	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
B72	PEM	Lancaster	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Good	Large aerial extent (>1 ac), provides buffer to Harnish Run, landscape support present (provides downstream benefits)
B74	PEM	Lancaster	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
H28	PEM	Lancaster	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A HQ watershed, large aerial extent (>1 ac on and off-ROW), provides buffer to UNT to Cocalico Creek, landscape
J54	PFO	Lancaster			Good	support present (provides downstream benefits), provides wildlife corridor to forested areas to south and southeast
W8c	PEM	Lancaster	None		Poor	N/A
A37	PEM	Berks	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Good	Nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga River, landscape support present, buffer present, creates buffer to East Branch Conestoga River, adjacent land use intensity low (forested and school)
A45	PEM	Berks	Sediment/Toxicant Retention, and Nutrient Removal	х	Poor	N/A
A49	PEM	Berks	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Good	Potential bog turtle habitat, landscape support present, buffer present, adjacent land use intensity low (forested and residential)
B16	PEM	Berks	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Fair	N/A
B18	PEM	Berks	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Good	Large aerial extent (>1 ac with off-ROW wetland), potential bog turtle habitat, landscape support present (adjacent to and benefits UNT to Little Cocalico Creek, part of larger surrounding extensive habitat)
B40	PEM	Berks	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	х	Fair	N/A
B48	PEM	Berks	Sediment/Toxicant Retention, and Nutrient Removal	х	Poor	N/A
BA10	PEM	Berks	None	Х	Poor	N/A
H23	PEM, PFO	Berks Berks	None Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Poor Excellent	N/A Large aerial extent (>1 ac), nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga River, landscape support present, buffer present, creates buffer to East Branch Conestoga River, adjacent land use intensity low (forested and school)
W35	PEM	Berks	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	х	Good	Nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga River, landscape support present, adjacent land use low overall (forested and residential)

Wetland	Cowardin ¹	County	Provided Principal Functions ²	Within Existing ROW	Assessed Quality ³	Unique Functions and Values (for only "Good" or "Excellent")
B19	PEM	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	х	Fair	N/A
B71	PFO	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Production Export	х	Good	Large aerial extent (>1 ac on and off-ROW), buffers UNT to Valley Creek, provides benefits downstream to Valley Creek impaired waterbody (impairment unknown)
C42	PEM	Chester	None	Х	Poor	N/A
C43	PEM, PFO	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export,	х	Excellent	Potential bog turtle habitat, large aerial extent (>1 ac), nutrient removal prior to discharge to UNT to Marsh Creek,
C47	PEM	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export	х	Good	Potential bog turtle habitat, large aerial extent (>1 ac), buffered by other habitat, buffers UNT to Marsh Creek, landscape support present (upstream of DCNR State Park - Marsh Creek - provides downstream benefits, part of larger contiguous habitat)
C48	PEM	Chester	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
C49	PEM	Chester	Sediment/Toxicant Retention	Х	Poor	N/A
H15	PEM, PFO	Chester	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A
H16	PEM	Chester	Sediment/Toxicant Retention	Х	Poor	N/A
H17	PEM, PFO	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Potential bog turtle habitat, large aerial extent (>1 ac), buffers UNT to Marsh Creek, landscape support present (upstream of DCNR State Park - Marsh Creek - provides downstream benefits, part of larger contiguous habitat)
K21	PEM	Chester	None	X	Poor	N/A
Q75	PFO	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Buffers UNT to Marsh Creek, landscape support present (upstream of DCNR State Park - Marsh Creek - provides downstream benefits, part of larger contiguous habitat)
Q76	PSS	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Buffers UNT to Marsh Creek, landscape support present (upstream of DCNR State Park - Marsh Creek - provides downstream benefits, part of larger contiguous habitat)
Q77	PEM	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Good	Buffers UNT to Marsh Creek, landscape support present (upstream of DCNR State Park - Marsh Creek - provides downstream benefits, part of larger contiguous habitat)
BA5	PFO	Delaware	Sediment/Toxicant Retention		Poor	N/A
BA6	PFO	Delaware	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
C21	PFO	Delaware	Wildlife Habitat	Х	Poor	N/A
H41	PEM, PSS	Delaware	Sediment/Toxicant Retention	Х	Poor	N/A
l1	PEM, PSS	Delaware	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Production Export	х	Good	N/A
116	PEM, PFO	Delaware	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	х	Fair	N/A
15	PEM	Delaware	Sediment/Toxicant Retention, Nutrient Removal	Х	Poor	N/A

Footnotes:

¹Cowardin classification only included for impacted portion of the wetland.

²Wetland functions were determined using the Highway Method.

Not a Highway Method category, assigned based on presence of principle functions given the presences absence of the consderations and qualifiers listed below, as well as best

Part or all of the assessed wetland [complex] is located within an existing [maintained] right-of-way.

	Generalized Assessment of Quality ³
Excellent	Many to All Functions and Values
Good	Several to Many Functions and Values
Fair	Few to Several Functions and Values
Poor	Fourto No Functions and Values

Poor Few to No Functions and Values

Unique Functions and Values Considered Size - at least one acre of wetland visible on topo/NWI (large aerial extent)

Saturated PFO or PSS wetland

Bog or fen possible

HQ or EV watershed

On state or Federal land

Provides nutrient removal or other benefit upstream of a USEPA 303(b) impaired waterbody

Bog turtle habitat (O = occupied) or potential habitat (1P or 2P), or pending (P*) / T&E habitat

Landscape Support (habitat surrounding wetland extensive/part of larger habitat, provides benefits to water quality and wildlife using wetland)

Buffer (habitat surrounding wetland not extensive but buffered such that impacts to water quality and wildlife minimized, or provides a buffer to a feature)

Adjacent Land Use (not intense such that water flowing into wetland anticipated to be better quality and land use result in minor disturbance to wildlife using wetland)

Wildlife Corridor