# SUNOCO PIPELINE L.P.

# **Pennsylvania Pipeline Project**

Wetland Functions and Values Assessment

-Berks 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** 



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### 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 Berks 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 nonexceptional 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.

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

#### Table 1 – Function-Value Considerations/Qualifiers

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.					
	<ol> <li>Size of this wetand is able to support large fish sherifish populations.</li> <li>Wetland is part of a larger, contiguous watercourse.</li> </ol>					
	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.					
	<ol> <li>9. Spawning areas are present (submerged vegetation or gravel beds).</li> </ol>					
	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.					
	<ul><li>17. Defined stream channel is present.</li><li>18. Other</li></ul>					
Sadimant/Taxiaart/Dathagan						
Sediment/Toxicant/Pathogen	1. Potential sources of excess sediment are in the watershed above the wetland.					
Retention	2. Potential or known sources of toxicants are in the watershed above the					
	wetland.					
	3. Opportunity for sediment trapping by slow moving water or deepwater					
	habitat are present in this wetland.					

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
	<ul><li>9. High aquatic vegetative diversity/abundance is present.</li><li>10. Nutrients exported in wetland watercourses (permanent outlet</li></ul>
	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	<ol> <li>Indications of erosion or siltation are present.</li> <li>Topographical gradient is present in wetland.</li> </ol>
	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	1. 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.

FUNCTION/VALUE	CONSIDERATIONS/QUALIFIERS
	<ul> <li>10. Two or more islands or inclusions of upland within the wetland are present.</li> <li>11. Dominant wetland class includes doop or shallow marsh or wooded</li> </ul>
	<ul> <li>11. Dominant wetland class includes deep or shallow marsh or wooded swamp.</li> <li>12. More then three series of shallow permenent open water (less then 6.6.)</li> </ul>
	<ul><li>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.</li><li>13. Density of the wetland vegetation is high.</li></ul>
	<ul><li>14. Wetland exhibits a high degree of plant species diversity.</li><li>15. Wetland exhibits a high degree of diversity in plant community</li></ul>
	structure (e.g., tree/ shrub/vine/grasses/mosses)
	<ul> <li>16. Plant/animal indicator species are present. (List species for project)</li> <li>17. Animal signs observed (tracks, scats, nesting areas, etc.)</li> <li>18. Seasonal uses vary for wildlife and wetland appears to support varied</li> </ul>
	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.
	<ul><li>22. Indications of less disturbance-tolerant species are present.</li><li>23. Signs of wildlife habitat enhancement are present (birdhouses,</li></ul>
	nesting boxes, food
	sources,
Recreation	<ol> <li>Wetland is part of a recreation area, park, forest, or refuge.</li> <li>Fishing is available within or from the wetland.</li> <li>Hunting is permitted in the wetland.</li> </ol>
	<ul><li>4. Hiking occurs or has potential to occur within the wetland.</li><li>5. Wetland is a valuable wildlife habitat.</li></ul>
	<ul> <li>6. The watercourse, pond, or lake associated with the wetland is unpolluted.</li> <li>7. Uigh visual/aesthatic quality of this potential representation site.</li> </ul>
	<ul><li>7. High visual/aesthetic quality of this potential recreation site.</li><li>8. Access to water is available at this potential recreation site for boating, canoeing, or fishing.</li></ul>
	9. The watercourse associated with this wetland is wide and deep enough to accommodate canoeing and/or non-powered boating.
	<ul><li>10. Off-road public parking available at the potential recreation site.</li><li>11. Accessibility and travel ease is present at this site.</li><li>12. The wetland is within a short drive or safe walk from highly populated public and private areas.</li></ul>
	13. Other
Education/Scientific Value	<ol> <li>Wetland contains or is known to contain threatened, rare, or endangered species.</li> <li>Little or no disturbance is occurring in this wetland.</li> </ol>
	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
	<ul><li>5. Wetland is considered to be a valuable wildlife habitat.</li><li>6. Wetland is located within a nature preserve or wildlife management</li></ul>
	area.
	7. Signs of wildlife habitat enhancement present (bird houses, nesting
	<ul><li>boxes, food sources, etc.).</li><li>8. Off-road parking at potential educational site suitable for school bus</li></ul>
	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 pond or lake 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.
	<ul><li>16. Site is currently used for educational or scientific purposes.</li><li>17. Other</li></ul>
Uniqueness/Heritage	1. Upland surrounding wetland is primarily urban.
	2. Upland surrounding wetland is developing rapidly.
	3. 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.
	13. Other
Endangered Species Habitat	1. Wetland contains or is known to contain threatened or endangered
6	species.
	2. Wetland contains critical habitat for a state or federally listed
	threatened or endangered species.
	incucion of champered species.

## 3.0 RESULTS AND IMPACT ASSESSMENT

The Project crosses a total of 30 exceptional value wetlands in Berks 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 30 exceptional value wetlands and 11 other wetlands in Berks County. 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 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 Berks 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 2.151 acres and temporary impacts total 0.030 acre for the 21.2 miles of construction ROW located in Berks County. These impacts include no 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 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

Wetland Function-V	alue Evaluation	Form
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						Wetland I.D. W-B24		
Total area of wetland 0.09 ac. Human made? <u>No</u> Is wetland part of a wildlife corridor? <u>No</u> or a "habitat island"? <u>No</u>					Latitude 40.2951 Longitude -76.0829			
Adjacent land use <u>Wooded Residential</u> , gas pipeline ROW, Ag field Distance to nearest roadway or other development 450 ft.					Prepared by: C. Vileno Date 11/02/2015			
Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No					Wetland Impact: See General Permit Table			
Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid				Evaluation based on:				
How many tributaries contribute to the wetland? 1			Wildlife & vegetation diversity/abundance (see attached list)			Office Field		
				sity/abanda		Corps manual wetland delineation completed? Y V N		
Function/Value	Suita		y Rationale (Reference #)*	Princip				
		N	2, 4, 6, 10, 13, 12		on(s)/Value(s)	Comments		
Groundwater Recharge/Discharge	~			~				
Floodflow Alteration		~						
		~						
Kediment/Toxicant Retention	v		1, 2, 4, 6, 13	~				
Nutrient Removal	~		7, 8, 13, 15	~				
Production Export		V	1, 2, 7, 12					
Sediment/Shoreline Stabilization		V	3, 8, 15					
🖢 Wildlife Habitat	V		3, 5, 8, 13,					
A 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 na	ames of	plants,		Sampling Point: W-B24
Tree Stratum (Plot size: 30')	Absolute	Dominant	Indicator	Dominance Test worksheet:
		Species?		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				Prevalence Index worksheet:
	0	= Total Cove		Total % Cover of: Multiply by:
50% 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 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
7		1		Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
	0 =	Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^{1}$
50% of total cover:0_	20% of	total cover:_	0	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Phalaris arundinacea		<u> </u>	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Cyperus esculentus	10		FACW	1 Indianteer of budging and unstand budgets of the
3. Carex Sp.	10	<u> </u>	ND	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Microstegium vimineum	10		FAC	Definitions of Four Vegetation Strata:
5. Epilobium coloratum	10		FACW	-
6, Onoclea sensibilis	5		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8		. <u> </u>		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 an	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>57.5</u>	20% of t	otal cover:_		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30')				height.
1,		·		
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes <u>/</u> No
50% of total cover: 0		Total Cove		
		otal cover:	<u> </u>	
Remarks: (Include photo numbers here or on a separate sh ND- Not Determined	ieet.)			
AD- NOT Determined				

Wetland Function-	Value Ev	aluation	Form
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	_					Wetland I.D. VV-AM2
Total area of wetland 0.086 ac. Human made? <u>No</u>	I	s wetl	and part of a wildlife corridor?	Yes	or a "habitat island"?	Latitude 40.257503 Longitude -75.99113
Adjacent land use Residential, gas pipeline ROW, mo	Prepared by: KMM Date 03/24/2016					
Dominant wetland systems present PEM	Wetland Impact: See General Permit Table					
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland lie in	n the dra	ainage basin? Upper	Evaluation based on:
How many tributaries contribute to the wetland?			_Wildlife & vegetation diversity	/abunda	ance (see attached list)	Office Field Gross manual wetland delineation
Function/Value	Suita Y	abilit N		Princij Functi		completed? Y N
Groundwater Recharge/Discharge		V	2, 5, 7			
	~		5, 6, 7, 9, 11	r		
		~				
Vert Sediment/Toxicant Retention	~		1, 4, 6, 10			
Nutrient Removal	V		3, 7, 8, 9			
Production Export	V		1, 2, 7, 12			
Sediment/Shoreline Stabilization		r	3, 8, 9			
🖢 Wildlife Habitat		~	6, 8, 13			
A Recreation		~				
Educational/Scientific Value		~				
🜟 Uniqueness/Heritage		V				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		~				
Other						

\* Refer to backup list of numbered considerations.

### Sampling Point: W-AM 2

Tree Stratum (Plot size: 30'	Absolute Dominant Indicator	Dominance Test worksheet:
	<u>% Cover Species?</u> Status	Number of Dominant Species
1,		That Are OBL, FACW, or FAC: (A)
2		Tatal Number of Descionat
3		Total Number of Dominant Species Across All Strata: 2 (B)
4		
		Percent of Dominant Species
5		That Are OBL, FACW, or FAC:100 (A/B)
6		Drouglance Index workshast
7		Prevalence Index worksheet:
	0 = 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 =
		FAC species x 3 =
1		FACU species X 4 =
2		
3		UPL species x 5 =
4		Column Totals: (A) (B)
5	a	
6		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3.0 <sup>1</sup>
	= Total Cover	4 - Morphological Adaptations <sup>1</sup> (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. Microstegium vimineum	50 🖌 FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2 Phalaris arundinacea		
3. Scirpus atrovirens		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
		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.
		neight.
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
	95 = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 47.5	20% of total cover: 19	
Woody Vine Stratum (Plot size:)		Woody vine – All woody vines greater than 3.28 ft in
		height.
2		
3		
4		Hydrophytic
5		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 sl		
remarkar (module prioro numbers here or on a separate si	icci.)	

Wetland Function-Value	Evaluation	Form
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						Wetland I.D. W-C1
Total area of wetland >0.342 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No						Latitude 40.247323 Longitude -75.98263
Adjacent land use Forest, Gas ROW, Residential Distance to nearest roadway or other development 35 ft.						Prepared by: KMM Date 10/18/2016
Dominant wetland systems present_PEM			Contiguous undevel	oped buffe	er zone present no	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland lie	in the dra	iinage basin? Upper	Evaluation based on:
How many tributaries contribute to the wetland? 1			_Wildlife & vegetation diversi	ty/abunda:	nce (see attached list)	Office Field
Suitability Rationale Principal					Corps manual wetland delineation completed? Y <u>V</u> N omments	
Groundwater Recharge/Discharge	~		2, 4, 5, 7, 15	~		
	~		2, 9, 10, 13			
Fish and Shellfish Habitat		~				
Kediment/Toxicant Retention	V		1, 2, 4, 6, 10	r		
Nutrient Removal	~		4, 5, 7			
Production Export		V	1			
Sediment/Shoreline Stabilization	~		2, 3, 4, 9			
🖢 Wildlife Habitat	~		5, 6, 7, 8			
A Recreation		r				
Educational/Scientific Value		~				
📌 Uniqueness/Heritage		~	_			
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		~				
Other						

\*Refer to backup list of numbered considerations.

Sampling Point:

/EGETATION (Four Strata) – Use scientific n	ames or	plants.		Sampling Point: W-C1
Tree Stratum (Plot size: 30')		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/F
6				That Are OBL, FACW, or FAC:100% (A/E
7				Prevalence Index worksheet:
42	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,				FAC species X 3 =
2				FACU species         x 4 =           UPL species         x 5 =
3				Column Totals: (A) (B)
5.				
5				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8			· · · · · · · · · · · · · · · · · · ·	1 - Rapid Test for Hydrophytic Vegetation
9				✓ 2 - Dominance Test is >50%
		= Total Cove		<ul> <li>3 - Prevalence Index is ≤3.0<sup>1</sup></li> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supportin</li> </ul>
50% of total cover:0	20% of	total cover:	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	05		FAOW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. Juncus effusus 2. Impatiens sp.	<u>25</u> 20	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	FACW	
3. Lindera benzoin	20	- <u>v</u>	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Symplocarpus foetida	15		OBL	be present, unless disturbed or problematic.
Conoclea sensiblis	10		FACW	Definitions of Four Vegetation Strata:
6. Microstegium vimineum	10		FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) o
7. Carex sp.	5		ND	more in diameter at breast height (DBH), regardless of height.
8. Rumex crispus	5		FAC	
9. Persicaria sagittata				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
50% of held 55	110 =	Total Cove	r 22	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>55</u> <u>Woody Vine Stratum</u> (Plot size: <u>30'</u> )	20% of (	total cover:_		Woody vine – All woody vines greater than 3.28 ft in height.
1				
2		÷——-		
4			e	
5.				Hydrophytic
	0	Total Cove	r	Vegetation Present? Yes <u>/</u> No
50% of total cover: 0		otal cover:	-	
Remarks: (Include photo numbers here or on a separate sh	neet.)			
ND - Not determined				

Wetland Function-Value	<b>Evaluation</b> Form
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			1			Wetland I.D. W-B30
Total area of wetland 0.178 ac Human made? No	Latitude 40.229428 Longitude -75.956616					
Adjacent land use Agriculturel Distance to nearest roadway or other development 0 ft.						Prepared by: KMM Date 10/17/2016
Dominant wetland systems present PEM			Contiguous undevel	loped buff	er zone present no	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? No		_ Ifr	not, where does the wetland lie	e in the dra	ainage basin? Mid	Evaluation based on:
How many tributaries contribute to the wetland? 1			_Wildlife & vegetation divers	itv/abunda	nce (see attached list)	Office Field
_						Corps manual wetland delineation completed? Y <u>V</u> N
Function/Value	Suita Y	abilit N	(Reference #)*	Princi Functi	NY - 21 - 21 - 22 - 22 - 22 - 22 - 22 - 2	Comments
Foundwater Recharge/Discharge	V		2, 5, 7, 15			
	~		3, 5, 6, 8, 9, 10, 13			
		~				
🐇 Sediment/Toxicant Retention	~		1, 2, 4, 6, 7, 10, 13, 16	r		
Nutrient Removal	~		3, 4, 5, 7, 8, 10, 11, 12, 13	~		
Production Export		~	1, 7			
Sediment/Shoreline Stabilization	r		3, 4, 5, 7, 9			
🖢 Wildlife Habitat	v		5, 6, 7, 8, 13			
A Recreation		~				
Educational/Scientific Value		V				
🜟 Uniqueness/Heritage		~				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

\* Refer to backup list of numbered considerations.

VEGETATION	i (Four Strata) -	<ul> <li>Use scientific</li> </ul>	names of plants.
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Sampling Point:

W-B30

201	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				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:(A/B)
7				Prevalence Index worksheet:
	0			Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cove		OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)	20% 01	total cover:		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				Provalence Index - P/A -
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
	0	- Total Cove		3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover:0				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5' )	2076.01	total cover:		data in Remarks or on a separate sheet)
1. Typha latifolia	40	~	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Persicaria sagittata	30	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
		<u> </u>	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3, Phalaris arundinacea	30	<u> </u>	FACW	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			52	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				
	100			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: <u>50</u>		Total Cove	20	of size, and woody plants less than 3.28 ft tall.
A A A A A A A A A A A A A A A A A A A	2076 01	iotal cover:_		Woody vine - All woody vines greater than 3.28 ft in
				height.
1,				
2	<u> </u>			
3			<del>);</del> ;;	
4				Hydrophytic
5			<u></u>	Vegetation
		Total Cove	r	Present? Yes 🖌 No
50% of total cover: 0	20% of	total cover:_	0	
Remarks: (Include photo numbers here or on a separate sl	heet.)			

Wetland Function-Value	<b>Evaluation</b> Form
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	-					Wetland I.D. W-B28	
Total area of wetland 0.036 ac Human made? No	I	s wetl	and part of a wildlife corrido	r? <u>No</u>	or a "habitat island"?No	Latitude 40.228348 Longitude -75.955589	
Adjacent land use Agriculturel Distance to nearest roadway or other development 0 ft.						Prepared by: KMM Date 10/17/2016	
Dominant wetland systems present PEM			Contiguous undeve	eloped buffe	er zone present no	Wetland Impact: See General Permit Table	
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland li	ie in the dra	inage basin? <u>Mid</u>	Evaluation based on:	
How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)						Office _ Field Corps manual wetland delineation	
Function/Value	Suita Y	abilit N	ty Rationale (Reference #)*	Princip Functio	54 - 67 F 1982 (F ALE)	completed? Y <u>v</u> N	
The Groundwater Recharge/Discharge		V	2, 5, 7, 15				
Floodflow Alteration	~		3, 5, 6, 8, 9, 10, 13, 18	V			
		V					
Kediment/Toxicant Retention	v		1, 2, 4, 6, 7, 10, 13, 16	~			
Nutrient Removal	~		3, 4, 5, 7, 8, 10, 11, 12, 13	~			
Production Export		~	1, 7, 12				
Sediment/Shoreline Stabilization	V		3, 4, 5, 7, 9				
🖢 Wildlife Habitat	v		5, 6, 7, 8, 13			N:	
A Recreation		V					
Educational/Scientific Value		V					
★ Uniqueness/Heritage		V					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

\*Refer to backup list of numbered considerations.

VEGETATION (Four Strata) – Use scie	ntific names of plants.	
Tree Stratum         (Plot size:30')           1         2	Absolute Dominant Indicator <u>% Cover</u> <u>Species?</u> <u>Status</u>	Dominance Te Number of Dom That Are OBL, I
3.		Total Number o

JN (Four Strata) – I	Use scientific names of	plants.
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Sampling Point:\_

W-B28

Tran Stratum (Dist size)	30'	Absolute Dominant		Dominance Test worksheet:		
Tree Stratum (Plot size:	/			Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
2 3				Total Number of Dominant Species Across All Strata:	1	(B)
4						(11)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	100%	(A/B)
6				Prevalence Index worksheet:		
7				Total % Cover of:	Multiply by	
	<b>500</b> ( - <b>5</b>			OBL species x		
Conling/Chash Chashing (Dist.	50% of total cover: $0$	20% of total cover	-:			
Sapling/Shrub Stratum (Plot s	//			FACW species x		
1,				FAC species x		
2				FACU species x	4 =	-
3				UPL species x		
4				Column Totals: (A	)	(B)
5				Prevalence Index = B/A =		
6				Hydrophytic Vegetation Indica		_
7				1 - Rapid Test for Hydrophyt		
8				✓ 2 - Dominance Test is >50%		
9				$3$ - Prevalence Index is $\leq 3.0^{10}$		
		0 = Total Cov	ver	2		
	50% of total cover: 0	20% of total cover	: 0	4 - Morphological Adaptation		
Herb Stratum (Plot size:	)			data in Remarks or on a s	•	
1. Phalaris arundinacea		80 🖌	FACW	Problematic Hydrophytic Veç	jetation' (Expla	in)
2. Juncus effusus		15	FACW			
3. Cyperus odoratus		10	FACW	<sup>1</sup> Indicators of hydric soil and wetl be present, unless disturbed or p	and hydrology r	nust
4						
5				Definitions of Four Vegetation	Strata:	
6				Tree - Woody plants, excluding v	vines, 3 in. (7.6	cm) or
				more in diameter at breast height	: (DBH), regardl	less of
7				height.		
8				Sapling/Shrub - Woody plants,	excluding vines	, less
9				than 3 in. DBH and greater than of m) tall.	or equal to 3.28	) ft <b>(1</b>
10,			10 <u></u>			
11		105 = Total Cov		Herb – All herbaceous (non-wood of size, and woody plants less that	dy) plants, rega an 3,28 ft tall	rdless
	50% of total cover: <u>52.5</u>	20% of total cover:	; 21			
Woody Vine Stratum (Plot size		_		Woody vine – All woody vines gr height.	reater than 3.28	ft in
1				noight.		
2						
3						
4						
5	()			Hydrophytic		
		0 = Total Cov		Vegetation Present? Yes	No	
	50% of total cover: 0	0 = Total Cov 20% of total cover:				
Remarks: (Include photo numl		the second s				_
nemarks. (melabe proto name	sers here of on a separate si	ieet.)				

m
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Total area of wetland 0 0402 at Human mode? No	L	a	and most of a wildlife a swide of	N		Wetland I.D. W-B31		
Cotal area of wetland 0.0402 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No Latitude 40.229702 Longitude -75.95717								
Adjacent land use Agriculturel	Adjacent land use Agriculturel Distance to nearest roadway or other development 0 ft. Prepared by: KMM Date 10/17/2016							
Dominant wetland systems present PEM			Contiguous undevelop	ed buff	fer zone present no	Wetland Impact: See General Permit Table		
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland lie is	n the dr	ainage basin? Mid	Evaluation based on:		
How many tributaries contribute to the wetland?			_Wildlife & vegetation diversity	/abunda	ance (see attached list)	Office Field		
						Corps manual wetland delineation completed? Y V N		
Function/Value	Suita	abilit N		Princi				
	Y		2, 5, 15	runct		Comments		
Groundwater Recharge/Discharge		~	2, 3, 10					
	~		5, 6, 9					
Fish and Shellfish Habitat		~						
Kediment/Toxicant Retention	~		1, 2, 4, 6	V				
Nutrient Removal	v		3, 4, 5, 7, 8	~				
Production Export		~	1					
Sediment/Shoreline Stabilization	V		3, 4, 9					
🖢 Wildlife Habitat	V		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.

1 .....

VEGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: <u>W-B31</u>
Tree Stratum (Plot size: 30')	Absolute	Dominant	Indicator	Dominance Test worksheet:
1		<u>Species?</u>		Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2 3				Total Number of Dominant Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5 6				That Are OBL, FACW, or FAC:(A/B)
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')		-		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:
				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	0	<u> </u>	(	3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover:0		Total Cove		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
<b>F1</b>	20% 011	total cover:		data in Remarks or on a separate sheet)
- Dhalaris arundinagoa	100	~	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			(+	
2				<sup>1</sup> 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				height.
8				Conting/Church Mandu Laste surfuding sizes have
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
500 500 50		Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50 <u>Woody Vine Stratum</u> (Plot size: 30')	20% of t	iotal cover:		Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				Undrophytic
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	neet.)			

\_ \_ .

Wetland Function-Va	ue Evaluation Form
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Total area of wetland 0.344 ac Human made? No	Т	s wetl	and part of a wildlife corrido	vr? No	or a "habitat island"? No	Wetland I.D. W-B27	
Total area of wehald Thinai made:	I	5 WCLI	and part of a whome control	11 <u>110</u>	_ or a maonal island ?_ <u>NO_</u>	Latitude 40.228509 Longitude -75.955384	
Adjacent land use Agriculturel	ent land use Agriculturel Distance to nearest roadway or other development 0 ft.						
Dominant wetland systems present PEM			Contiguous undeve	loped buffe	er zone present no	Wetland Impact: See General Permit Table	
Is the wetland a separate hydraulic system? No		_ If r	ot, where does the wetland l	ie in the dra	inage basin? Mid	Evaluation based on:	
How many tributaries contribute to the wetland?			_Wildlife & vegetation divers	sity/abunda	nce (see attached list)	Office Field	
						Corps manual wetland delineation completed? Y V N	
Function/Value	Suita		y Rationale (Reference #)*	Princip	이 가슴 전 가슴가 잘 가슴		
	Y	N	2, 5, 7, 15	Function	on(s)/Value(s)	Comments	
Groundwater Recharge/Discharge		~					
	~		3, 5, 6, 8, 9, 10, 13, 18	V			
Fish and Shellfish Habitat		V					
Vert Sediment/Toxicant Retention	~		1, 2, 4, 6, 7, 10, 13, 16	r			
Nutrient Removal	V		3, 4, 5, 7, 8, 10, 11, 12, 13	~			
Production Export		V	1, 7, 12				
Sediment/Shoreline Stabilization	V		3, 4, 5, 7, 9				
🖢 Wildlife Habitat	~		5, 6, 7, 8, 13				
A Recreation		~					
Educational/Scientific Value		~					
📌 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

\* Refer to backup list of numbered considerations.

Sampling Point:

VEGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: W-E	327
Tree Stratum (Plot size: 30')		Dominant I		Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size:3U <sup>-</sup> ) 1		<u>Species?</u>	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:1	(A)
2				Total Number of Dominant	
3				Species Across All Strata: 1	(B)
4 5				Percent of Dominant Species	
5,				That Are OBL, FACW, or FAC:	(A/B)
6				Prevalence Index worksheet:	
7	0	Total Cove		Total % Cover of: Multiply by:	
50% of total cover: 0		total cover:	0	OBL species x 1 =	_
Sapling/Shrub Stratum (Plot size: 15')		<u>-</u>		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				Browalanco Indox - R/A	
6				Prevalence Index = B/A = Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
8				✓ 2 - Dominance Test is >50%	
9,				$3$ - Prevalence Index is $\leq 3.0^1$	
		Total Cove		4 - Morphological Adaptations <sup>1</sup> (Provide sup	porting
50% of total cover:0	20% of 1	total cover:_	0	data in Remarks or on a separate sheet)	porting
Herb Stratum (Plot size: 5')	80	~		Problematic Hydrophytic Vegetation <sup>1</sup> (Explai	n)
1. Phalaris arundinacea 2. Juncus effusus	15		FACW		,
3 Cyperus odoratus	10	<u> </u>	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology n	nust
			FACIN	be present, unless disturbed or problematic.	
4				Definitions of Four Vegetation Strata:	
5			÷	Tree – Woody plants, excluding vines, 3 in. (7.6 )	cm) or
67				more in diameter at breast height (DBH), regardle	ess of
7				height.	
8 9			•••••••	Sapling/Shrub – Woody plants, excluding vines,	less
10				than 3 in. DBH and greater than or equal to 3.28 m) tall.	תנו
11,					. 1
	105 _	Total Cove		Herb – All herbaceous (non-woody) plants, regar of size, and woody plants less than 3.28 ft tall.	aless
50% of total cover: <u>52.5</u>	20% of t	otal cover:	21		n :
Woody Vine Stratum (Plot size: 30')				Woody vine – All woody vines greater than 3.28 height.	it in
1					
2		<u></u>			
3,					
4				Hydrophytic	
5				Vegetation Present? Yes V No	
50% of total cover:0		Total Cover otal cover:_		Present? Yes <u>V</u> No	
Remarks: (Include photo numbers here or on a separate sh	neet.)				

						Wetland I.D. W-B21, W-B22		
Total area of wetland <u>0.85 ac.</u> Human made? <u>No</u>	Latitude 40.2932 Longitude -76.0869							
Adjacent land use Wooded Residential, gas pipeline	Adjacent land use <u>Wooded Residential</u> , gas pipeline ROW Distance to nearest roadway or other development 518 ft.							
Dominant wetland systems present PEM, PSS, PFC	)		Contiguous undevelop	oed buffe	er zone present Yes	Wetland Impact: See General Permit Table		
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland lie i	n the dra	linage basin? <u>Mid/Upper</u>	Evaluation based on:		
How many tributaries contribute to the wetland?			_Wildlife & vegetation diversity	/abunda	nce (see attached list)	Office Field Corps manual wetland delineation		
Function/Value		abilit N		Princip Functi		completed? Y <u>V</u> N omments		
Groundwater Recharge/Discharge	V		2, 5, 7, 13, 12	~				
	v		2, 5, 6					
Fish and Shellfish Habitat		~	1, 14, 17		E			
Sediment/Toxicant Retention	~		1, 6, 10, 13					
Nutrient Removal	V		8, 4, 7, 8, 9	V				
Production Export		V	1, 2, 7, 9, 12		15			
Sediment/Shoreline Stabilization		V	8, 15					
🖢 Wildlife Habitat	V		3, 4, 5, 8, 13,	~				
<b>A</b> 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-B21

001	Absolute Do	minant Ind	dicator	Dominance Test worksheet:
Tree Stratum (Plot size:30')	% Cover Sp	pecies? S	Status	Number of Dominant Species
1,				That Are OBL, FACW, or FAC:5 (A)
2				Tabel Number of Dervice of
3				Total Number of Dominant Species Across All Strata: 7 (B)
4				
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:71% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
0	= To		•	
50% of total cover:0	20% of tota	al cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' )	1.5			FACW species x 2 =
1, Rosa multiflora		<u> </u>	=ACU	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 =
				Hydrophytic Vegetation Indicators:
7			÷	1 - Rapid Test for Hydrophytic Vegetation
8				👱 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		otal Cover	~	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: <u>5</u>	20% of tota	al cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' )				
1. Microstegium vimineum	15		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Apocynum cannabinum	10	🖌 🔤 F	FACU	1
3, Dichanthelium clandestinum	10	<b>v</b>	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Carex Sp.	10	V	ND	
5. Phalaris arundinacea	10	V F	ACW	Definitions of Four Vegetation Strata:
6. Epilobium coloratum	10		ACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Persicaria sagittata	10		OBL	more in diameter at breast height (DBH), regardless of
8, Ludwigia alternifolia	5		ACW	height.
g. Typha latifolia	5			Sapling/Shrub – Woody plants, excluding vines, less
	5		OBL	than 3 in. DBH and greater than or equal to 3.28 ft (1
10. Onoclea sensibilis			ACW	m) tall.
<sub>11.</sub> Euthamia graminifolia			FAC	Herb - All herbaceous (non-woody) plants, regardless
	<u>95</u> = To	otal Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>47.5</u>	20% of tota	al cover:	19	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30')				height.
1				
2				
3				
4				
	·	e =		Hydrophytic
5	0 = To			Vegetation Present? Yes <u>V</u> No
50% of total cover:0		otal Cover		
		ii cover:	<u> </u>	
Remarks: (Include photo numbers here or on a separate sh	neet.)			
ND- Not Determined				
*Vegetation not ID'd down to the species level is	not include	d in the d	domina	ance test
Additional Herbs- Agrimonia parviflora- FACW				

Sampling Point: W-B22 PEM

Tree Stratum (Plot size: 30')	Absolute	Dominant		Dominance Test worksheet:
	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species
		<u></u>	·	That Are OBL, FACW, or FAC: (A)
2		-		Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5		-		That Are OBL, FACW, or FAC: 100% (A/B)
6				
7				Prevalence Index worksheet:
	-	= 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				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%
	•	- Total Cove		3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover:0				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Phalaris arundinacea	50	~	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Typha latifolia	10		OBL	
3. Onoclea sensibilis	10		FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Epilobium coloratum	5		FACW	be present, unless disturbed or problematic.
5. Juncus effusus	5	(		Definitions of Four Vegetation Strata:
	5	/	FACW	Tran Woody plants, evaluating visco, 2 in (7.0 cm) or
6. Carex lurida	5		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Symplocarpus foetidus			_OBL_	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		7 <u></u> 7		m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>45</u>	20% of 1	total cover:	18	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30')				height.
1				
2				
3				
4				l Ivelue - hvetie
5	<i>M</i>			Hydrophytic Vegetation
	0 _	Total Cove	r	Present? Yes <u>V</u> No
50% of total cover: 0		otal cover:_	- 1	
Remarks: (Include photo numbers here or on a separate sh	neet.)			

Sampling Point: W-B22 PSS

Tree Stratum (Plot size: 30')	Absolute Dominant		Dominance Test worksheet:
	% Cover Species?		Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: 4 (B)
4			
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
			That Are OBL, FACW, or FAC:(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, Rosa multiflora	35 🖌	FACU	FAC species x 3 =
2. Lindera benzoin	15 🖌	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			$3 - Prevalence Index is \leq 3.0^1$
0.5	50 = Total Cove		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover:25	20% of total cover:	10	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5'</u> )			
1. Phalaris arundinacea	25 🗸	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Onoclea sensibilis	15 🖌	FACW	
3. Symplocarpus foetidus	5	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4 Nasturtium officinale	5	OBL	be present, unless disturbed or problematic.
	· · · · · · · · · · · · · · · · · · ·		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			
	50 = Total Cove	r	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>25</u>			
Woody Vine Stratum (Plot size:30')			Woody vine - All woody vines greater than 3.28 ft in
			height.
1,			
2			
3			
4	·		Hydrophytic
5			Vegetation
	0 = Total Cove	r	Present? Yes No
50% of total cover: 0	20% of total cover:	0	
Remarks: (Include photo numbers here or on a separate sl	neet.)		

Sampling Point: W-B22 PFO

Tree Stratum (Plot size: 30')	Absolute Dominant In		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	<u>% Cover</u> <u>Species?</u>		Number of Dominant Species
0.7	45 🖌	FAC	That Are OBL, FACW, or FAC; (A)
2. Acer rubrum		FAC	Total Number of Dominant
3	· · · · · · · · · · · · · · · · · · ·		Species Across All Strata: 4 (B)
4			
5		·	Percent of Dominant Species 75%
			That Are OBL, FACW, or FAC: 75% (A/B)
6		<u> </u>	Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
	= Total Cover		OBL species         x1 =
50% of total cover: <u>35</u>	20% of total cover:	14	
Sapling/Shrub Stratum (Plot size: 15' )	_		FACW species x 2 =
1, Lindera benzoin	_5/	FAC	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 ≤3.0 <sup>1</sup>
	5 = Total Cover		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: <u>2.5</u>	20% of total cover:	_1	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')			
1, Rosa multiflora	5 🖌	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Rubus Sp.	2	ND	
2 Carex Sp	2	ND	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
4			Definitions of Four Vegetation Strata:
5		( <b></b> )	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6,			more in diameter at breast height (DBH), regardless of
7		,	height.
8			Conting/Chrub Moody plants auchyding vinge less
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			
	9 = Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 4.5	20% of total cover:		
Woody Vine Stratum (Plot size:)			Woody vine – All woody vines greater than 3.28 ft in
			height.
1			
2			
3		;	
4			Hydrophytic
5			Vegetation
	0 = Total Cover		Present? Yes Vo No
50% of total cover: <u>0</u>	20% of total cover:	-	
Remarks: (Include photo numbers here or on a separate sh			
ND- Not Determined	100(.)		
*Vegetation Not ID'd down to the species level is	s not included in the	domin	ance test

Wetland I.D. W-B49						
Total area of wetland 0.17 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No Latitude 40.3160 Longitude -76.0421						
Adjacent land use Commercial, gas pipeline ROW, mowed field Distance to nearest roadway or other development 200 Prepared by: C. Vileno Date 11/02/2015						
Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No					Wetland Impact: See General Permit Table	
is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Upper Evaluation based on:						
How many tributaries contribute to the wetland? 1	How many tributaries contribute to the wetland? 1Wildlife & vegetation diversity/abundance (see attached list)					
Suitability     Rationale     Principal       Function/Value     Y     N   (Reference #)* Function(s)/Value(s) Corps manual wetland delineation completed? Y						
Groundwater Recharge/Discharge	~		2, 5, 13, 12	~		
		v				
Fish and Shellfish Habitat		V				
🐇 Sediment/Toxicant Retention	~		1, 2, 4, 6	r		
Nutrient Removal	V		3, 7, 8, 9, 13	V		
Production Export	V		1, 2, 7, 12			
Sediment/Shoreline Stabilization		V	3, 8			
🖢 Wildlife Habitat		V	8, 15			
A Recreation		V				
Educational/Scientific Value		~				
📌 Uniqueness/Heritage		V				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

\* Refer to backup list of numbered considerations.

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

W-B49

Tree Stratum (Plot size: 30')		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> ) 1. <mark>Salix nigra</mark>	<u>% Cover</u> 20	Species?	<u>Status</u> OBL	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2				
3				Total Number of Dominant       Species Across All Strata:         3   (B)
4				Dereast of Demisory Species
5		-		Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				
7				Prevalence Index worksheet:
	20	= Total Cov	er	Total % Cover of:Multiply by:
50% of total cover: <u>10</u>	20% of	total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Cornus alba	70	<ul> <li>✓</li> </ul>	FACW	FAC species x 3 =
2. Rosa multiflora	10		FACU	FACU species x 4 =
3			·	UPL species x 5 =
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	00			3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of head-1 40		= Total Cove		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: <u>40</u> Herb Stratum (Plot size: 5')	20% of	total cover:		data in Remarks or on a separate sheet)
<u>Herb Stratum</u> (Plot size: <u>5</u> ) 1. Microstegium vimineum	40		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
· · · · · · · · · · · · · · · · · · ·	·	<u> </u>	FAC	
2				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				, i i i i i i i i i i i i i i i i i i i
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8		e	· · · · · · · · · · · · · · · · · · ·	Ŷ
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				
	40	Total Cove	ar .	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20		total cover:_	8	
Woody Vine Stratum (Plot size:30')				Woody vine – All woody vines greater than 3.28 ft in
1)				height.
2				
2423				
3				
4		<del></del>		Hydrophytic
5			······································	Vegetation Present? Yes <u>V</u> No
50% of total cover: 0		Total Cove		
		total cover:		
Remarks: (Include photo numbers here or on a separate sl	heet.)			
	_			

Wetland Function-	Value	Evaluation	Form
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Total area of wetland >0.154 ac Human made? No	Total area of wetland >0.154 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No Use titude 40.234103 Let titude 40.234103 Is wetland 75.06409						
Latitude 40.234103 Longitude -75.96484							
Adjacent land use Agricultural, residential	Prepared by: KMM Date 10/18/2016						
Dominant wetland systems present PEM	er zone present no	Wetland Impact: See General Permit Table					
Is the wetland a separate hydraulic system? No	_	_ If r	not, where does the wetland lie i	n the dra	inage basin? Mid	Evaluation based on:	
How many tributaries contribute to the wetland?			_Wildlife & vegetation diversity	//abunda	nce (see attached list)	Office Field Corps manual wetland delineation	
Function/Value	completed? Y <u>V</u> N comments						
Groundwater Recharge/Discharge	V		2, 4, 5, 7, 10, 15				
	~		3, 7, 8, 9, 10, 13, 15	v			
Fish and Shellfish Habitat		~					
Kediment/Toxicant Retention	v		1, 2, 4, 6, 10, 13, 14	~			
Nutrient Removal	r		4, 5, 7, 10, 12, 13, 14	~			
Production Export		~	1				
Sediment/Shoreline Stabilization	~		2, 3, 4, 5, 9				
🖢 Wildlife Habitat	v		5, 6, 7				
A Recreation		~					
Educational/Scientific Value		~					
🬟 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

Sampling Point:

W-B33

Tree Stratum (Plot size: 30')		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30, )	<u>% Cover</u>	Species?	Status	Number of Dominant Species
l				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: 100% (A/B)
6				
7				Prevalence Index worksheet:
		= Total Cove		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 =
4				Column Totals: (A) (B)
5				Denuelance Index
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
	0	Total Cove	er	3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover:0		total cover:_	-	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Persicaria pensylvanica	50	V	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Phalaris arundinacea	40	~	FACW	
3, Carex lurida	10	· · · · · · ·	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Epilobium coloratum	10	-	FACW	be present, unless disturbed or problematic.
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 m) tall.
10	·	<u> </u>		,
11	110	Total Cove		Herb – All herbaceous (non-woody) plants, regardless
50% of total cover:55	20% of I	<ul> <li>Total Cover</li> </ul>	r 22	of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30')	_ 2070 011	.otal cover		Woody vine - All woody vines greater than 3.28 ft in
1				height.
			<u> </u>	
3		<u> </u>		
4				Hydrophytic
5	0			Vegetation Present? Yes <u>/</u> No
50% of total cover: 0		Total Cove		
Remarks: (Include photo numbers here or on a separate sh		.otal cover		
ricinarias. (include proto numbers here of on a separate si	eet.)			

Wetland Function-	V	<i>'alue</i>	Ev	aluation	Form
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Total area of wetland 0 155 ac. Human mode? No.	Wetland I.D. W-B32								
Total area of wetland 0.155 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No Latitude 40.234814 Longitude -75.965223									
Adjacent land use Agricultural, residential Distance to nearest roadway or other development 0 ft. Prepared by: KMM Date 10/18/2016									
Dominant wetland systems present PEM	Wetland Impact:								
Is the wetland a separate hydraulic system? <u>No</u>		_ If r	not, where does the wetland lie i	n the dra	ainage basin? <u>Mid</u>	Evaluation based on:			
How many tributaries contribute to the wetland? 1			_Wildlife & vegetation diversity	/abunda	nce (see attached list)	Office			
Suitability Rationale Principal						Corps manual wetland delineation completed? Y / N omments			
Groundwater Recharge/Discharge	V		2, 5, 7, 10, 15						
	v		3, 9, 10, 13, 15						
Fish and Shellfish Habitat		~							
Kediment/Toxicant Retention	v		1, 2, 4, 6, 10, 13, 14	V					
Nutrient Removal	~		4, 5, 7, 10, 12, 13, 14	r					
Production Export		V	1						
Sediment/Shoreline Stabilization	~		2, 3, 4, 5, 9						
🖢 Wildlife Habitat	~		5, 6, 7						
A Recreation		V							
Educational/Scientific Value		V							
★ Uniqueness/Heritage		V							
Visual Quality/Aesthetics		~							
ES Endangered Species Habitat		r							
Other									

Sampling Point:\_\_\_\_

W-B32

Tree Stratum (Plot size:30')	Absolute % Cover	Dominant Species?		Dominance Test worksheet: Number of Dominant Species
1		( <u></u>		That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
56				That Are OBL, FACW, or FAC:66% (A/B)
6 7				Prevalence Index worksheet:
	0	= Total Cove		Total % Cover of: Multiply by:
50% 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 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
67				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
9.		·		✓ 2 - Dominance Test is >50%
	0	= Total Cove	er	3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover:0	20% of	total cover:	0	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Phalaris arundinacea	50	<u> </u>	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Persicaria pensylvanica		<u> </u>	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3. Trifolium repens	20	<u> </u>	FACU	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			<del></del> `	more in diameter at breast height (DBH), regardless of
7				height.
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
		Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover:50	20% of	total cover:_	20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30')				height.
1				
2				
4		( <u> </u>		
5.	·	) <del></del> 5)		Hydrophytic Vegetation
	0	Total Cove	r	Present? Yes <u>V</u> No
50% of total cover: 0	20% of	total cover:_	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Wetland Functio	n-Value Eva	aluation Form
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Total area of method 10 151 20 JU		.1				Wetland I.D. W-B42	
Total area of wetland 0.151 ac. Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No Latitude 40.2969 Longitude -76.0795							
Adjacent land use Wooded Residential, gas pipeline ROW, Ag field Distance to nearest roadway or other development 0 ft. Prepared by: C. Vileno Date 11/02/2015							
Dominant wetland systems present PEM       Contiguous undeveloped buffer zone present No       Wetland Impact:         See General Permit Table							
Is the wetland a separate hydraulic system? No		_ If r	ot, where does the wetland lie	in the dra	unage basin? <u>Mid</u>	Evaluation based on:	
How many tributaries contribute to the wetland?			_Wildlife & vegetation diversit	y/abunda	nce (see attached list)	Office Field Corps manual wetland delineation	
Function/Value Y N (Reference #)* Function(s)/Value(s) Comments							
Groundwater Recharge/Discharge	V		2, 4, 6, 13, 12,	~			
Floodflow Alteration		v	3, 6,				
Fish and Shellfish Habitat		~					
Kediment/Toxicant Retention	~	4	1, 2, 4, 6, 13				
Nutrient Removal	V		7, 8, 13, 15				
Production Export		~	1, 2, 7, 12				
Sediment/Shoreline Stabilization		~	3, 8, 15				
🖢 Wildlife Habitat	~		3, 5, 8, 13,	~			
A Recreation		~					
Educational/Scientific Value		~					
🛨 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

Sampling Point:\_\_\_\_

W-B42

Tree Stratum (Plot size:30')	Absolute <u>% Cover</u> 10	Dominant Species?		Dominance Test worksheet: Number of Dominant Species
2				That Are OBL, FACW, or FAC:5 (A)
3				Total Number of Dominant Species Across All Strata:5(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
7	10			
50% of total cover: 5		= Total Cove total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')		total covor		FACW species x 2 =
1. Cornus alba	5	~	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 $\leq 3.0^1$
50% of total cover: <u>2.5</u>		= Total Cove	r 1	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size:5' )	20% of	total cover:_		data in Remarks or on a separate sheet)
1. Persicaria sagittata	30	~	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Carex lurida	30	· ·	OBL	
3. Panicum rigidulum	20	V	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Verbascum thapsus	5		FACU	be present, unless disturbed or problematic.
5, Rumex crispus	5		FAC	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				Ű
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		· <u> </u>		Herb – All herbaceous (non-woody) plants, regardless
		<ul> <li>Total Cove</li> </ul>	r 40	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>45</u> Woody Vine Stratum (Plot size: <u>30'</u> )	20% of	total cover:_	18	Woody vine – All woody vines greater than 3.28 ft in
(1 lot 5/20)				height.
1		\		
2				
4		(		
5.				Hydrophytic Vegetation
	0_	Total Cove		Present? Yes No
50% of total cover: 0		total cover:	- 1	18
Remarks: (Include photo numbers here or on a separate sh	neet.)			

						Wetland I.D. W-B43		
Total area of wetland 0.049 ac. Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No Latitude 40.2997 Longitude -76.0								
Adjacent land use Forested, gas pipeline ROW	Prepared by: C. Vileno Date 11/02/2015							
Dominant wetland systems present PEM								
Is the wetland a separate hydraulic system? <u>No</u> How many tributaries contribute to the wetland? <u>0</u>	Evaluation based on: Office <u> </u>							
Function/Value	Suita Y			Princi Functi	Contraction and the state of	Comments		
Groundwater Recharge/Discharge	~		2, 4, 6, 10, 12	r				
- Floodflow Alteration		V			Wetland does not store floodwater.			
Fish and Shellfish Habitat		V						
Kediment/Toxicant Retention		V	4, 6, 13					
Nutrient Removal		V	7, 13, 15					
Production Export	v		1, 2, 12	V				
Sediment/Shoreline Stabilization		~						
🖢 Wildlife Habitat	V		3, 5, 8,					
A Recreation		V		_				
Educational/Scientific Value		V						
📩 Uniqueness/Heritage		~						
Visual Quality/Aesthetics		~						
ES Endangered Species Habitat		~						
Other								

/EGETATION (Four Strata) – I	Use scientific names of plants.
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Sampling Point:

W-B43

30/	Absolute	Dominant II	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size:30' )	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 1* (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				That Are OBL, FACW, or FAC:(A/B)
		s		Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
50% of total cover:0		Total Cove		OBL species x 1 =
New 42 (1992) 10 (1993) 10 (1993)	20% 0	total cover:_		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				Drovalance IndexR/A
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				✓ 2 - Dominance Test is >50%
	0	Total Cover		3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover:0			0	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5')	2070.011			data in Remarks or on a separate sheet)
1. Microstegium vimineum	45	V	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Carex sp.	35		ND	
		·		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3. Woodwardia virginica	10		OBL	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				height.
8		8	×	
9		0		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			``	, , , , , , , , , , , , , , , , , , ,
	90 _	Total Cover		Herb – All herbaceous (non-woody) plants, regardless
50% of total cover:45				of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:30')	20 % 01 t	otal cover:		Woody vine – All woody vines greater than 3.28 ft in
Troug vine od atam (1 for size)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		Total Cover		Present? Yes No
50% of total cover: 0	20% of t	otal cover:	0	
Remarks: (Include photo numbers here or on a separate sh	ieet.)			
ND- Not Determined				
*Vegetation Not ID'd down to the species level is	not inclu	ded in the	domina	ance test
5				

Wetland Function-Value	<b>Evaluation</b> Form
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						Wetland I.D. W-B29
Total area of wetland 0.763 ac Human made? No	Is	s wetl	and part of a wildlife corridor	? <u>No</u>	or a "habitat island"?No	Latitude 40.22886 Longitude -75.95647
Adjacent land use Agriculturel			Distance to nearest r	roadway or	other development 0 ft.	Prepared by: KMM Date 10/17/2016
Dominant wetland systems present PEM			Contiguous undeve	loped buffe	er zone present no	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? No		_ If n	not, where does the wetland li	e in the dra	inage basin? <u>Mid</u>	Evaluation based on:
How many tributaries contribute to the wetland? 1			_Wildlife & vegetation divers	sitv/abunda	nce (see attached list)	Office Field
						Corps manual wetland delineation completed? Y <u>V</u> N
Function/Value	Suita		y Rationale (Reference #)*	Princip		
	Y	N	2, 5, 7, 15	Function	on(s)/Value(s)	Comments
Groundwater Recharge/Discharge		~				
Floodflow Alteration	~		3, 5, 6, 8, 9, 10, 13, 18	~		
Fish and Shellfish Habitat		V				
Vertication	v		1, 2, 4, 6, 7, 10, 13, 16	~		
Wutrient Removal	~		3, 4, 5, 7, 8, 10, 11, 12, 13	~		
Production Export		~	1, 7, 12			
Sediment/Shoreline Stabilization	V		3, 4, 5, 7, 9			
🖢 Wildlife Habitat	V		5, 6, 7, 8, 13			
A Recreation		~				
Educational/Scientific Value		V				
🛨 Uniqueness/Heritage		~				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		~				
Other						

	30'		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 1	/				Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2					Total Number of Dominant Species Across All Strata:1 (B)
4 5			<u> </u>		Percent of Dominant Species That Are OBL, FACW, or FAC:100% (A/B
6 7		· · · · · · · · · · · · · · · · · · ·			Prevalence Index worksheet:
			= Total Cove	er	Total % Cover of:Multiply by:
	50% of total cover:0				OBL species x 1 =
Sapling/Shrub Stratum (Plot siz	ze:15')				FACW species x 2 =
l. <u></u>					FAC species x 3 =
2					FACU species x 4 =
3					UPL species x 5 =
4					Column Totals: (A) (B)
i					
ð					Prevalence Index = B/A =
1					Hydrophytic Vegetation Indicators:
3					1 - Rapid Test for Hydrophytic Vegetation
)					∠ 2 - Dominance Test is >50%
			= Total Cove	er .	$3$ - Prevalence Index is $\leq 3.0^1$
	50% of total cover: 0				4 - Morphological Adaptations <sup>1</sup> (Provide supportin
Herb Stratum (Plot size:	5')		-		data in Remarks or on a separate sheet)
1. Phalaris arundinacea		80	~	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2 Juncus effusus		15		FACW	
3. Cyperus odoratus		10	·	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1					
5					Definitions of Four Vegetation Strata:
3					Tree - Woody plants, excluding vines, 3 in. (7.6 cm) of
7					more in diameter at breast height (DBH), regardless of height.
3					
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.
1			- Total Cove		Herb – All herbaceous (non-woody) plants, regardless
	50% of total cover: 52.5		I otal Cove total cover:		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:	0.01	2070 01			Woody vine – All woody vines greater than 3.28 ft in
1	· · · · · · · · · · · · · · · · · · ·				height.
2			¥	,	
				()	
3					
4			·	÷======0	Hydrophytic
		0		·	Vegetation Present? Yes <u>/</u> No
	50% of total cover: 0		<ul> <li>Total Cove total cover:_</li> </ul>	-	
Domarka, (Includa photo purcha			IUIAI COVER		
Remarks: (Include photo numbe	ers here or on a separate st	ieet.)			

Wetland Function-Valu	e Evaluation Form
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T . 1	_					Wetland I.D. W-B44		
Total area of wetland 0.031 ac. Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No Latitude 40.304 Longitude -76.0639								
Adjacent land use Residential, mowed field (park) Distance to nearest roadway or other development 0 ft. Prepared by: C. Vileno Date 11/02/								
Dominant wetland systems present PEM								
Is the wetland a separate hydraulic system? <u>No</u>	_	Ifn	ot, where does the wetland lie	in the dra	ninage basin? Mid	Evaluation based on:		
How many tributaries contribute to the wetland?								
Suitability     Rationale     Principal       Function/Value     Y N     (Reference #)*   Function(s)/Value(s) Corps manual wetland delineation completed? Y								
Groundwater Recharge/Discharge	~		2, 5, 13, 12, 7	~				
		V						
Fish and Shellfish Habitat		V						
Kediment/Toxicant Retention	v		1, 2, 4, 6, 13	~				
Nutrient Removal		V	7, 13, 15					
Production Export	V		1, 2, 12	V				
Sediment/Shoreline Stabilization		~	3					
🖢 Wildlife Habitat		>	8					
A Recreation		~						
Educational/Scientific Value		V						
🤺 Uniqueness/Heritage		~						
Visual Quality/Aesthetics		~						
ES Endangered Species Habitat		~	5					
Other								

Sampling Point:

W-B44

	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u> )		Species?		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				That Are OBL, FACW, or FAC: 100% (A/B)
6				
7				Prevalence Index worksheet:
A	0	= Total Cove		Total % Cover of:Multiply by:
50% of total cover: 0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')		total ooron_		FACW species x 2 =
				FAC species x 3 =
1			$\longrightarrow$	
2				FACU species x 4 =
3				UPL species x 5 =
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				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		Total Cove		4 - Morphological Adaptations <sup>1</sup> (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. Phalaris arundinacea	40	~	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Leersia oryzoides	30	~	OBL	
3. Carex lurida	10		OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Persicaria sagittata	10			be present, unless disturbed or problematic.
			OBL	Definitions of Four Vegetation Strata:
5. Bidens frondosa	10		FACW	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7	-			height.
8			3 <b></b> 3	
				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
	100 =	Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of	total cover:_	20	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30')			1	height.
1				
2				
3				
4				Hydrophytic
5			;; <del>;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;</del>	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 sh	neet.)			

						Wetland I.D. W-C6	
Total area of wetland >1.80 ac. Human made? No	Latitude 40.254888 Longitude -75.989288						
Adjacent land use Commercial, gas pipeline ROW, me	Adjacent land use Commercial, gas pipeline ROW, mowed field Distance to nearest roadway or other development 0 ft. Prepared by: KMM Date 10/18/2016						
Dominant wetland systems present PEM, PSS							
Is the wetland a separate hydraulic system? No		_ If n	ot, where does the wetland lie in	the dr	ainage basin? Upper	Evaluation based on:	
How many tributaries contribute to the wetland? 3			Wildlife & vegetation diversity/a	hunda	ance (see attached list)	Office	
The many modulies contribute to the wehald.				ouna	nice (see attached list)	Corps manual wetland delineation completed? Y 🖌 N	
	Suita			rinci			
Function/Value	Y	N		uncti	on(s)/Value(s) C	omments	
Groundwater Recharge/Discharge	~		2, 4, 5, 7, 12, 13, 15				
	~		2, 5, 6, 7, 8, 9, 10, 13, 15, 16, 18	V			
		V					
🐇 Sediment/Toxicant Retention	~		1, 2, 3, 4, 5, 6, 10, 12, 16	v			
Nutrient Removal	~		3, 4, 7, 8, 9, 13				
Production Export	~		1, 2, 7, 12				
Sediment/Shoreline Stabilization	~		3, 4, 6, 7, 9, 14				
🖢 Wildlife Habitat	~		5, 6, 7, 8, 9, 13, 15, 19, 20	~			
A Recreation	~		1, 4, 5, 10, 11, 12				
Educational/Scientific Value	~		2, 3, 4, 5, 8, 10, 11, 13, 14	V			
🛨 Uniqueness/Heritage	~		7, 8, 9, 10, 11, 12, 13, 16, 24	~			
Visual Quality/Aesthetics	~		1, 3, 6, 9				
ES Endangered Species Habitat	~		2*		*Meets all three bog turtle habitat criteria		
Other		V					

#### Sampling Point: W-C6 PEM

Tree Stratum (Plot size: 30')	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> ) 1 Catalpa speciosa	CONTRACTOR AND INCOME.	Species?		Number of Dominant Species
			FAC	That Are OBL, FACW, or FAC:6 (A)
2. Acer rubrum	5		FAC	Total Number of Dominant
3				Species Across All Strata:7 (B)
4,				
5,				Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)
6		1 <u></u>	2	
7				Prevalence Index worksheet:
	15	= Total Cov		Total % Cover of:Multiply by:
50% of total cover: <u>7,5</u>		total cover		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =
1. Rosa multiflora	10	~	FACU	FAC species x 3 =
2 Salix nigra	10	V		FACU species x 4 =
			OBL	UPL species x 5 =
3				
4				Column Totals: (A) (B)
5		<u> </u>		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				✓ 2 - Dominance Test is >50%
	20	= Total Cov	er	<sup>3</sup> - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover:10				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5' )				data in Remarks or on a separate sheet)
1. Carex stricta	30	V	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Typha angustifolia	25	~		
3. Microstegium vimineum	15	~	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4 Onoclea sensibilis	10		F <u>AC</u>	be present, unless disturbed or problematic.
			F <u>ACW</u>	Definitions of Four Vegetation Strata:
5. Epilobium coloratum			F <u>ACW</u>	
6. Solidago species	10		ND	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Symplocarpus foetidus	5		<u>OBL</u>	height.
8. Scirpus cyperinus	5		OBL	
9. Phalaris arundinacea	5		FACW	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.				
	115	Total Cov	or	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <b>57.5</b>	20% of	total cover:	23	
Woody Vine Stratum (Plot size:)	2070 01			Woody vine – All woody vines greater than 3.28 ft in
				height.
1			( <del>)</del> ;	
2				
3				
4	<u> </u>		1 <del>1</del> )	Hydrophytic
5				Vegetation
		= Total Cov	_	Present? Yes No
50% of total cover:0	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			

VEGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: W-C6
Tree Stratum (Plot size: 30')		Dominant li		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> ) 1. Acer rubrum	<u>% Cover</u> 20	Species?	Status FAC	Number of Dominant Species That Are OBL, FACW, or FAC:5 (A)
2				Total Number of Dominant
3				Species Across All Strata:5(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:100% (A/B)
6				
7				Prevalence Index worksheet:
	20	= Total Cove	r	Total % Cover of: Multiply by:
50% of total cover: <u>10</u>	20% of	total cover:_		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' )				FACW species x 2 =
1. Acer rubrum	85	~	FAC	FAC species x 3 =
2, Lindera benzoin	10		FACW	FACU species x 4 =
3. Rosa mutliflora	3		FAC	UPL species x 5 =
4. Ligustrum vulgare	2	· · · · · · · · · · · · · · · · · · ·	FACU	Column Totals: (A) (B)
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 $\leq 3.0^1$
50		= Total Cover		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: <u>50</u>	20% of	total cover:	20	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' )				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. Carex stricta	25	<u> </u>	OBL	
2. Symplocarpus foetida	20	<u> </u>	OBL	1
3. Impatiens sp.	15	~	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Dryopteris sp.	5		ND	,
5. Rubus sp.	5		ND	Definitions of Four Vegetation Strata:
				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
		Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover:35	20% of I	total cover:	14	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30')				height.
1				
2				
3				
4	4			
5,				Hydrophytic Vegetation
	0_	Total Cover		Present? Yes <u>V</u> No
50% of total cover: 0		total cover:	_	
Remarks: (Include photo numbers here or on a separate sh			_	
ND- Not determined	ieet.)			
ND- Not determined				

.....

m + 1 = 0 = 1 = 0.042 m = 1 = 1 = 0.042						Wetland I.D. W-H25, W-H26	
l otal area of wetland 0.043 ac. Human made? <u>No</u>	tal area of wetland 0.043 ac. Human made? <u>No</u> Is wetland part of a wildlife corridor? <u>Yes</u> or a "habitat island"? <u>No</u>						
Adjacent land use Forested, gas pipeline ROW	acent land use Forested, gas pipeline ROW Distance to nearest roadway or other development 100 ft.						
Dominant wetland systems present PEM Is the wetland a separate hydraulic system? No		Ifr	Contiguous undevelo	Wetland Impact: See General Permit Table			
How many tributaries contribute to the wetland?			_Wildlife & vegetation diversi	Evaluation based on:         Office         Field         Corps manual wetland delineation         completed?       Y         N			
Function/Value	Suita Y	0.000	y Rationale (Reference #)*	Princip Functi	1 31.945 (1995) 11 (2003)	Comments	
Groundwater Recharge/Discharge	V		2, 5, 7, 13, 12,	~			
		~					
Fish and Shellfish Habitat		v	1, 4, 8, 14, 17				
Vert Sediment/Toxicant Retention	V		1, 2, 4, 6, 10,	~			
Nutrient Removal		V	7, 8				
Production Export	~		1, 2, 12, 10				
Sediment/Shoreline Stabilization		~	3, 6,				
🖢 Wildlife Habitat	~		3, 4, 5, 6, 8, 13	~			
A Recreation		~					
Educational/Scientific Value		~					
🔆 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

#### Sampling Point: W-H25

Tree Stratum (Plot size, 30')	Absolute	Dominant		Dominance Test worksheet:
		Species?		Number of Dominant Species
1. Acer rubrum	15		FAC	That Are OBL, FACW, or FAC:3 (A)
2,				
3				Total Number of Dominant Species Across All Strata: 4 (B)
				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 75% (A/B)
6				
7				Prevalence Index worksheet:
	15	= Total Cov		Total % Cover of: Multiply by:
50% of total action 7.5			er 🤉	OBL species x 1 =
50% of total cover: <u>7.5</u>	20% 01	total cover:		
Sapling/Shrub Stratum (Plot size: 15' )				FACW species x 2 =
<sub>1.</sub> Fagus grandifolia	10	<u> </u>	FACU	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				
7				Hydrophytic Vegetation Indicators:
			2 <del>10000</del>	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 <sup>1</sup>
	10	= Total Cov	er	
50% of total cover: 5	20% of	total cover:	2	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5' )				data in Remarks or on a separate sheet)
1. Symplocarpus foetidus	50	V	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Onoclea sensibilis	25	<u> </u>	FACW	0 Indicators of hydrig call and wattend hydrals av must
3. Microstegium vimineum	10		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must 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 m) tall.
10				
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cove	ər	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5	20% of	total cover:	17	
Woody Vine Stratum (Plot size: 15' )				Woody vine – All woody vines greater than 3.28 ft in
				height.
1		·		
2		1	<u></u> )	
3				
4				
5.				Hydrophytic Vegetation
	0			Present? Yes <u>No</u>
	-	= Total Cove		
50% of total cover: 0		total cover:		
Remarks: (Include photo numbers here or on a separate sl	heet.)			

#### Sampling Point: W-H26

Tree Stratum (Plot size) 30'	Absolute Dominant Indi		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> ) 1. Acer rubrum	<u>% Cover</u> <u>Species?</u> <u>Si</u> 15	tatus FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2		<u></u>	Total Number of Dominant
3			Species Across All Strata: (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC:75% (A/B)
6			Prevalence Index worksheet:
7	15 = Total Cover		Total % Cover of:Multiply by:
50% of total cover:7.5	20% of total cover:	3	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')			FACW species x 2 =
1. Fagus grandifolia	10 🖌 F.	ACU	FAC species x 3 =
2			FACU species x 4 =
3			UPL species x 5 =
4			Column Totals: (A) (B)
5		2	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 <sup>1</sup>
	= Total Cover	<u>,</u>	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: <u>5</u>	20% of total cover:	2	data in Remarks or on a separate sheet)
	50		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1, Symplocarpus foetidus		OBL	
2. Onoclea sensibilis		ACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3. Microstegium vimineum		-AC	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			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	85 - Total Cover		Herb - All herbaceous (non-woody) plants, regardless
50% of total cover: <b>42.5</b>		17	of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)			Woody vine – All woody vines greater than 3.28 ft in height.
1			
2			
3			
4			
5.			Hydrophytic Vegetation
	0 = Total Cover		Present? Yes <u>V</u> No
50% of total cover:0		0	
Remarks: (Include photo numbers here or on a separate sl	neet.)		

						Wetland I.D. W-C13	
otal area of wetland 0.311 ac. Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No						Latitude 40.2948 Longitude -76.0250	
Adjacent land use Hay field	djacent land use Hay field Distance to nearest roadway or other development 100 ft.						
Dominant wetland systems present PEM							
Is the wetland a separate hydraulic system? No		_ If n	ot, where does the wetland lie	e in the dra	inage basin? Upper	Evaluation based on:	
How many tributaries contribute to the wetland?	w many tributaries contribute to the wetland? OWildlife & vegetation diversity/abundance (see attached list)						
Function/Value	Suitability Rationale Principal Y N (Reference #)* Function(s)/Value(s) Cor					Corps manual wetland delineation completed? Y <u>V</u> N Comments	
Groundwater Recharge/Discharge	V		2, 5, 13, 12,	~			
Floodflow Alteration		~	5, 6, 9				
Fish and Shellfish Habitat		~					
Kediment/Toxicant Retention	r		1, 2, 4, 6				
Nutrient Removal		V	4, 5, 7, 8				
Production Export	~		1, 2, 12, 10				
Sediment/Shoreline Stabilization		~	3, 8, 12				
🖢 Wildlife Habitat	~		3, 4, 6, 8, 13				
A Recreation		V					
Educational/Scientific Value		~					
📌 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

Sampling Point:

W-C13

Tree Stratum (Plot size: 30')	Absolute Dominant Indicator	Dominance Test worksheet:
	<u>% Cover Species?</u> Status	Number of Dominant Species
1.2	·	That Are OBL, FACW, or FAC: 2 (A)
2		
3		Total Number of Dominant Species Across All Strata: 2 (B)
4		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: 100% (A/B)
6		
7		Prevalence Index worksheet:
	0 = 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 =
		FAC species x 3 =
1		
2		FACU species x 4 =
3		UPL species x 5 =
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	·······	$3$ - Prevalence Index is $\leq 3.0^{1}$
	0 = Total Cover	1
50% of total cover:0	20% of total cover:_ 0	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5' )		data in Remarks or on a separate sheet)
1. Phalaris arundinacea	70 🖌 FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2, Carex lurida	20 V OBL	
		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3, Impatiens capensis		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		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
	100 = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover:50	20% of total cover: 20	
Woody Vine Stratum (Plot size:30')		Woody vine – All woody vines greater than 3.28 ft in
Toody who stratem (Flot Size:		height.
1	······································	
2	·	
3		
4		Hydrophytic
5		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 s	neet.)	

Wetland Function-Value E	<b>Evaluation</b> Form
--------------------------	------------------------

Total area of wetland NO 207 20 How on the No.	т					Wetland I.D. W-Q80	
lotal area of wetland 20.207 ac Human made? <u>No</u>	area of wetland $\geq 0.207 \text{ ac}$ Human made? <u>No</u> Is wetland part of a wildlife corridor? <u>Yes</u> or a "habitat island"? <u>No</u>						
Adjacent land use Residential, private forested lands			Distance to nearest road	dway or	other development 70 ft.	Prepared by: KMM Date 11/23/2015	
Dominant wetland systems present PFO			Contiguous undevelop	ed buff	er zone present <u>No</u>	Wetland Impact: See General Permit Table	
Is the wetland a separate hydraulic system? No		If r	ot, where does the wetland lie in	n the dra	ainage basin? Upper	Evaluation based on:	
How many tributaries contribute to the wetland?			Wildlife & vegetation diversity	/abunda	nce (see attached list)	Office Field Corps manual wetland delineation	
Function/Value	Suita		(Reference #)*	Princij Functi		completed? Y <u>V</u> N	
Groundwater Recharge/Discharge	~		2, 5, 7, 12, 13, 15	~			
		~					
Fish and Shellfish Habitat		V					
Kediment/Toxicant Retention	~		1, 2, 4, 6, 8, 9, 10, 11, 13, 14,	~			
Nutrient Removal	~		3, 5, 7, 9, 10, 11, 12	~			
Production Export		V					
Sediment/Shoreline Stabilization		V					
🖢 Wildlife Habitat		~					
A Recreation		~					
Educational/Scientific Value		~					
🤺 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		V					
Other							

# Sampling Point: W-Q80 PFO

Trag Stratum (Plot size) 30'	Absolute		Indicator	Dominance Test worksheet:
	% Cover	Species'		Number of Dominant Species
1. Platanus occidentalis	35	·	FACW	That Are OBL, FACW, or FAC:7 (A)
2, Acer rubrum	20	~	_ FAC	Total Number of Dominant
3, Ulmus rubra	20	~	_ F <u>AC</u>	Species Across All Strata:8(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 88% (A/B)
6			- :	
7		2		Prevalence Index worksheet:
	75	= Total Co		Total % Cover of: Multiply by:
50% of total cover: 37.				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' )	2076 01	lotal cove		FACW species x 2 =
1. Ulmus rubra	25	~	EAC	FAC species x 3 =
2. Lindera benzoin			FAC	
		<u> </u>	_ F <u>AC</u>	FACU species x 4 =
3. Rosa multiflora	10		_ FACU_	UPL species x 5 =
4		-	-	Column Totals: (A) (B)
5,			·	Brovalanco Indov. – P/A
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9	·	-		2 - Dominance Test is >50%
	55	= Total Co		$-$ 3 - Prevalence Index is $\leq 3.0^1$
50% of total cover: 27.5				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size:5')	2070 01			data in Remarks or on a separate sheet)
1. Symplocarpus foetidus	30	~		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			OBL	
2. Berberis thunbergii		<u> </u>	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3. Onoclea sensibilis	20	<u> </u>	FACW	be present, unless disturbed or problematic.
4. Microstegium vimineum	10		FAC	Definitions of Four Vegetation Strata:
5. Lindera benzoin	10		F <u>AC</u>	
<sub>6.</sub> Smilax rotundifolia	10		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
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 m) tall.
10				
11	100	-		Herb – All herbaceous (non-woody) plants, regardless
500/ /	100	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover:50	20% or	total cove	r: <u>20</u>	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1		(a		
2,				
3		-	-	
4				Undrophytic
5.		2		Hydrophytic Vegetation
	0	= Total Co	ver	Present? Yes 🖌 No
50% of total cover:0		total cove	-	
Remarks: (Include photo numbers here or on a separate s	heet )			

						Wetland I.D. W-W48a	
Total area of wetland 0.019 ac. Human made? No	Latitude 40.2608 Longitude -75.9958						
Adjacent land use Wooded Residential, gas pipeline	Adjacent land use Wooded Residential, gas pipeline ROW Distance to nearest roadway or other development 518 ft.						
Dominant wetland systems present PEM	ominant wetland systems present PEM Contiguous undeveloped buffer zone present Yes						
Is the wetland a separate hydraulic system? No_	Evaluation based on:						
How many tributaries contribute to the wetland? 1	Office Field Corps manual wetland delineation						
Suitability Rationale Principal Function/Value Y N (Reference #)* Function(s)/Value(s) Co						completed? Y / N	
Groundwater Recharge/Discharge	V		2, 5, 7, 13, 12	~			
Floodflow Alteration		V					
Fish and Shellfish Habitat		V	1, 14, 17				
Kediment/Toxicant Retention		V	6, 10				
Nutrient Removal	~		8				
Production Export		~	1, 2, 7, 12				
Sediment/Shoreline Stabilization	~		8, 15				
🖢 Wildlife Habitat	V		3, 4, , 5, 8, 13,	~			
A Recreation		~					
Educational/Scientific Value		~					
📩 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		~					
ES Endangered Species Habitat		~					
Other							

# Sampling Point: <u>w48-</u>w

Tree	Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
	· · · · · · · · · · · · · · · · · · ·		opeciest	_0(atua	Number of Dominant Species 2 (A)
2					
3			-		Total Number of Dominant 2 Species Across All Strata: (B)
4					
5					Percent of Dominant Species That Are OBL, FACW, or FAC:/00 (A/B)
6				sam monade	v····· <b></b> v····· (····)
7				) 	Prevalence Index worksheet:
8					Total % Cover of: Multiply by:
				er	OBL species $\underline{\mathcal{U}}_{\mathcal{D}}$ x 1 = $\mathcal{U}_{\mathcal{D}}$
1	ng/Shrub Stratum (Plot size:)				FACW species $30 \times 2 = 60$
2					FAC species $20 \times 3 = 40$
3					FACU species x 4 =
4					UPL species () $x 5 =$
5					Column Totals: $(v)$ (A) $(k)$ (B)
6					Prevalence Index = $B/A = 1.7$
7.			<del></del>		Hydrophytic Vegetation Indicators:
8.				18-5	$\frac{1}{1}$ 1 - Rapid Test for Hydrophytic Vegetation
9.			******		2 Dominance Test is 500/
10.					$\overline{1}$ 3 - Prevalence Index is $\leq 3.0^{1}$
-	0				- 4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb S	Stratum (Plot size:)			r	data in Remarks or on a separate sheet)
1	CARex JURIDA	_ 40	X	OPC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2	Euthamoria grampifolia	20	11-51-55	FM-	, ,
3	Phalance drunding ea	30		FACH	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4					be present, unless disturbed or problematic.
j		-			Definitions of Four Vegetation Strata:
j					Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
·					more in diameter at breast height (DBH), regardless of
8					height
)					Sapling/Shrub - Woody plants, excluding vines; less
0					than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
1					
2					Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
		<u> 40</u> =	Total Cover	·	
	Vine Stratum (Plot size:)	,			Woody vine - All woody vines greater than 3.28 ft in height.
·	and the second se				neight.
·				<u> </u>	
0	I construction and including addition of the second s	· — — •			Hydrophytic
·					
					Present? Yes No
		=1	otal Cover		,

Wetland Function-V	<sup>7</sup> alue Eva	luation H	Form
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	_					Wetland I.D. W-H21	
Total area of wetland 0.05 ac. Human made? No	Latitude 40.1965 Longitude -75.9058						
Adjacent land use Forested, gas pipeline ROW	Adjacent land use Forested, gas pipeline ROW Distance to nearest roadway or other development 100 ft.						
Dominant wetland systems present PEM			Contiguous undevelop	oed bufi	fer zone present No	Wetland Impact: See General Permit Table	
Is the wetland a separate hydraulic system? No		_ If r	ot, where does the wetland lie i	n the dr	ainage basin? Mid	Evaluation based on:	
How many tributaries contribute to the wetland? 0			_Wildlife & vegetation diversity	/abund	ance (see attached list)	Office_	
Suitability Rationale Principal						Corps manual wetland delineation completed? Y <u>V</u> N	
Groundwater Recharge/Discharge	V		2, 5, 13, 12,	V			
		~			Wetland does not hold floodwater		
Fish and Shellfish Habitat		~			No fish or shellfish habitat		
Kediment/Toxicant Retention		v	4, 6				
Nutrient Removal		~	7, 8				
Production Export	v		1, 2, 12, 10				
Sediment/Shoreline Stabilization		~					
🖢 Wildlife Habitat	V		3, 4, 5, 6, 8, 13				
A Recreation		~					
Educational/Scientific Value		V					
🜟 Uniqueness/Heritage		~					
Visual Quality/Aesthetics		V					
ES Endangered Species Habitat		r					
Other							

Sampling Point: W-H21

201	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30')		Species?	<u>Status</u>	Number of Dominant Species	
1. Acer rubrum	15	<u> </u>	FAC	That Are OBL, FACW, or FAC: 3 (A)	
2					
3				Total Number of Dominant Species Across All Strata: 4 (B)	
				Species Across All Strata: 4 (B)	
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 75% (A/I	B)
6		7			ŕ
7				Prevalence Index worksheet:	
	15	= Total Cove		Total % Cover of: Multiply by:	
50% of total cover:		total cover:		OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1 Rosa multiflora	15		EACU		
		<u> </u>	FACU	FAC species x 3 =	
2				FACU species x 4 =	
3				UPL species x 5 =	
4				Column Totals: (A) (B	6)
5					
				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	_
7				1 - Rapid Test for Hydrophytic Vegetation	
8	·			✓ 2 - Dominance Test is >50%	
9	<u>.</u>			3 - Prevalence Index is $\leq 3.0^{1}$	
	15	= Total Cove	er		
50% of total cover:7.5				4 - Morphological Adaptations <sup>1</sup> (Provide supportir	ng
Herb Stratum (Plot size: 5')	_			data in Remarks or on a separate sheet)	
1. Microstegium vimineum	60	~	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2 Onoclea sensibilis	40		FACW		
			FACVV	<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
3		-		be present, unless disturbed or problematic.	
4				Definitions of Four Vegetation Strata:	
5				Bonnaons of Four Vegetation Strate.	
6				Tree Woody plants, excluding vines, 3 in. (7.6 cm) of	or
				more in diameter at breast height (DBH), regardless o	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					
•		á=0		Harb All berbacoous (non woody) plants, regardless	
	100	- Total Cove		Herb – All herbaceous (non-woody) plants, regardless	s
N		= Total Cove		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 50		= Total Cove total cover:_		of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in	
50% of total cover: <u>50</u>	20% of			of size, and woody plants less than 3.28 ft tall.	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1	20% of			of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in	
50% of total cover: <u>50</u>	20% of			of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1	20% of			of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2	20% of			of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3	20% of			of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic	
50% of total cover:50 <u>Woody Vine Stratum</u> (Plot size:15') 1233	20% of	total cover:	20 	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	
50% of total cover:50         Woody Vine Stratum (Plot size:)         1         2         3         4         5	20% of	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover:50         Woody Vine Stratum (Plot size:)         1         2         3         4         5	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	
50% of total cover: <u>50</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u> ) 1 2 3 4 5 50% of total cover: <u>0</u>	20% of      	total cover:	20 	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	

Wetland Function-	Value	Evaluation	Form
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Total area of wetland 0.626.20 How we do No.	т			0.11		Wetland I.D. W-C5
Total area of wetland 0.020 ac Human made? NO	otal area of wetland 0.626 ac Human made? <u>No</u> Is wetland part of a wildlife corridor? <u>No</u> or a "habitat island"? <u>No</u>					
Adjacent land use Agricultural, stream valley Distance to nearest roadway or other development 0 ft.						Prepared by: KMM Date 10/18/2016
Dominant wetland systems present PEM			Contiguous undevel	oped buffe	er zone present no	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? No		_ If r	ot, where does the wetland lie	in the dra	inage basin? Upper	Evaluation based on:
How many tributaries contribute to the wetland? 2			_Wildlife & vegetation diversi	itv/abunda	nce (see attached list)	Office Field
_	~ •				- , -	Corps manual wetland delineation completed? Y <u>V</u> N
Function/Value	Suita Y	_	y Rationale (Reference #)*	Princip Function		Comments
Groundwater Recharge/Discharge	~		2, 4, 5, 7, 15			
Floodflow Alteration	V		2, 3, 7, 8, 9, 10, 13, 15	v		
Fish and Shellfish Habitat		v				
Kediment/Toxicant Retention	~		1, 2, 4, 6, 10, 13, 14	~		
Nutrient Removal	v		4, 5, 7, 10, 12, 13, 14	V		
Production Export		~	1			
Sediment/Shoreline Stabilization	~		2, 3, 4, 5, 9			
🖢 Wildlife Habitat	~		5, 6, 7			
A Recreation		~				
Educational/Scientific Value		V				
🜟 Uniqueness/Heritage		V				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

VEGETATION (Four Strata) – Use scientific na	imes of	plants.		Sampling Po	oint: <u>W-</u>	C5
30'		Dominant I		Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: <u>30'</u> ) 1. Salix nigra	<u>% Cover</u> 5	Species?	<u>Status</u> OBL	Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
2				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				HIGH ALCODE, TACW, OF TAC.	0)	
7		2		Prevalence Index worksheet:		
	5 .	Total Cove	r	Total % Cover of:	Multiply by:	
50% of total cover: <u>2.5</u>				OBL species )	(1 ≃	-
Sapling/Shrub Stratum (Plot size: 15')	_	_		FACW species >	(2 =	_
1. Rosa multiflora	5	~	FAC	FAC species )	(3 =	
2				FACU species		
3				UPL species >		
				Column Totals: (		
4					· · · · · · · · · · · · · · · · · · ·	_ (0)
5				Prevalence Index = B/A =	-	-
6				Hydrophytic Vegetation Indic	ators:	
7				1 - Rapid Test for Hydrophy	ytic Vegetation	
8				✓ 2 - Dominance Test is >509		
9,				3 - Prevalence Index is ≤3.0	0 <sup>1</sup>	
		Total Cove		4 - Morphological Adaptatic		portina
50% of total cover: 2.5 Herb Stratum (Plot size: 5' )	_ 20% of	otal cover:_	<u> </u>	data in Remarks or on a	-	1
	40			Problematic Hydrophytic Ve		in)
1, Phalaris arundinacea	40	<u> </u>	FACW		gotation (Expla	,
2. Persicaria sagitatta	20	<u> </u>	OBL	<sup>1</sup> Indicators of hydric soil and we	tland bydrology r	nuct
3. Juncus effusus	20		FACW	be present, unless disturbed or	problematic.	nust
4. Scirpus atrovirens	10		OBL	Definitions of Four Vegetation	1 Strata:	
5. Solidago sp.	5		ND			
6. Impatiens sp.	5		ND	Tree – Woody plants, excluding more in diameter at breast heigh	vines, 3 in. (7.6	cm) or
7		<u></u>		height.	it (DDFI), Tegarui	633 VI
8				, i i i i i i i i i i i i i i i i i i i		
9				Sapling/Shrub – Woody plants than 3 in. DBH and greater than	, excluding vines	, less fr (1
10				m) tall.	01 04001 10 0.20	
11,						
· · · · · · · · · · · · · · · · · · ·	100 _	Total Cover	-	Herb All herbaceous (non-wo of size, and woody plants less th		rdless
50% of total cover:50	20% of t	otal cover:	20			
Woody Vine Stratum (Plot size: 30')				Woody vine – All woody vines	greater than 3.28	l ft in
1			1	height.		
2						
4			<del></del>	Hydrophytic		
5				Vegetation Present? Yes	No	
F00/ - F1 - 1		Total Cover		Present? Yes	_ No	
50% of total cover: 0		otal cover:	0			
Remarks: (Include photo numbers here or on a separate she ND- Not Determined	eet.)					

Wetland Function-Value	<b>Evaluation</b> Form
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						Wetland I.D. W-K25
Total area of wetland 0.154 ac. Human made? No	I:	s wetl	and part of a wildlife corridor	?_ <u>No</u>	or a "habitat island"?	Latitude 40.296237 Longitude -76.080629
Adjacent land use Wooded Residential, gas pipeline	ROW, J	Ag fiel	d Distance to nearest r	oadway or	other development 0 ft.	Prepared by: KMM Date 10/18/2016
Dominant wetland systems present PEM			Contiguous undeve	loped buffe	er zone present No	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? <u>No</u>		_ If n	not, where does the wetland li	e in the dra	inage basin? <u>Mid</u>	Evaluation based on:
How many tributaries contribute to the wetland? 0			_Wildlife & vegetation divers	itv/abunda	nce (see attached list)	Office Field
						Corps manual wetland delineation completed? Y <u>V</u> N
Function/Value	Suita	abilit N	y Rationale (Reference #)*	Princip		Comments
Groundwater Recharge/Discharge	~		2, 5, 12, 13		Sil(3)/ Value(3)	Comments
			3			
Floodflow Alteration		~				
Fish and Shellfish Habitat		~				
Vertical Sediment/Toxicant Retention	v		1, 2, 4, 6			
Nutrient Removal	~		4, 7			
Production Export		V	1			
Sediment/Shoreline Stabilization		~	2, 3			
🖢 Wildlife Habitat	v		5, 7, 8			
A Recreation		V				
Educational/Scientific Value		~				
📩 Uniqueness/Heritage		V				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		~				
Other						

#### Sampling Point: W-K25

Tree Stratum (Plot size: 30'	Absolute Dominant		Dominance Test worksheet:
	<u>% Cover</u> <u>Species</u> ?		Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3	. <del></del>	·	Species Across All Strata:3* (B)
4	·		Percent of Dominant Species
5,	N <u></u>		That Are OBL, FACW, or FAC: 67% (A/B)
6			
7			Prevalence Index worksheet:
	0 = Total Cov	ver	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. Rosa multiflora	15 🖌	FACU	FAC species x 3 =
2			FACU species x 4 =
3			UPL species x 5 =
4			Column Totals: (A) (B)
			X // X //
5			Prevalence Index = B/A =
6		.s. <u></u> s.	Hydrophytic Vegetation Indicators:
7			1 - Rapid Test for Hydrophytic Vegetation
8			✓ 2 - Dominance Test is >50%
9,		·	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7.5	= Total Cov		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover:	20% of total cover	3	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' )			· · ·
1. Impatiens sp.	30 🖌	ND	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Poa trivialis	25 🖌	FACW	1
3. Microstegium vimineum	25	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<sub>4.</sub> Phalaris angusta	20	FACW	· · ·
5. Rubus allegheniensis	10	FACU	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.
			neight.
8			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
FOR SHALL FE	= Total Cov	er 22	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>55</u>	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 Cov	er	Present? Yes 🖌 No
50% of total cover:0	20% of total cover:	0	
Remarks: (Include photo numbers here or on a separate sh	heet.)	1	
ND- Not determined			
*Vegetation not ID'd down to the species level n	ot included in dom	inance te	est

# Wetland Function-Value Evaluation Form

T						Wetland I.D. W-W302
Total area of wetland 0.064 ac Human made? No	I:	s wetl	and part of a wildlife corrido	r?_ <u>No</u>	or a "habitat island"? <u>No</u>	- Latitude 40.229172 Longitude -75.956714
Adjacent land use Agriculturel	_	Distance to nearest roadway or other development 0 ft.				Prepared by: KMM Date 10/17/2016
Dominant wetland systems present PEM			Contiguous undeve	eloped buffe	er zone present no	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? No		_ If r	not, where does the wetland li	ie in the dra	inage basin? Mid	_ Evaluation based on:
How many tributaries contribute to the wetland? 0			_Wildlife & vegetation divers	sity/abunda	nce (see attached list)	Office Field
						Corps manual wetland delineation completed? Y <u>V</u> N
Function/Value	Suita		y Rationale (Reference #)*	Princip	oal on(s)/Value(s)	
_	Y	N	2, 5, 15	runcu	on(s)/value(s)	Comments
Groundwater Recharge/Discharge		~				
Floodflow Alteration	~		5, 6, 9			
Fish and Shellfish Habitat		~				
🎸 Sediment/Toxicant Retention	~		1, 2, 4, 6	v		
Nutrient Removal	~		3, 4, 5, 7, 8	~		
Production Export		v	1			
Sediment/Shoreline Stabilization	v		3, 4, 9			
🖢 Wildlife Habitat	~		6, 7, 8			
A Recreation		~				
Educational/Scientific Value		v				
📩 Uniqueness/Heritage		V				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

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

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>7</u> )	% Cover	Species?	Status	Number of Dominant Species 2
1			· · · · · · · · ·	That Are OBL, FACW, or FAC:
2N/A				Total Number of Dominant
3				Species Across All Strata: (B)
4		0		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0 0 (A/B)
6				The second se
7			-	Prevalence Index worksheet:
8	-			Total % Cover of:Multiply by:
a start and the		= Total Cov	er	OBL species $35$ x1 = $35$
Sapling/Shrub Stratum (Plot size:)				FACW species $37$ x 2 = $57$
1		-		FAC species $O_{x3} = O_{x3}$
2r/A				FACU species $5$ $x 4 = 20$
3				UPL species $10 \times 5 = 50$
4			-	Column Totals:(0 0(A)(B)
5				Prevalence Index = B/A = 1.55
6				Hydrophytic Vegetation Indicators:
7,				이 가지 수 있는 것 같은 것 같
8				1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
9				$\sqrt{2}$ - Dominance Test is >50% $\sqrt{3}$ - Prevalence Index is $\leq 3.0^1$
10				
Herb Stratum (Plot size:)		= Total Cov	er	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
	10.1		0.01	data in Remarks or on a separate sheet)
1. Acorus calamus	13/1	-	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Leersia organdes		×	OBL	1
3. Echinochlon Sp	15%			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. LATTACHER MUNACHERZA		<u> </u>	FACIN	Definitions of Four Vegetation Strata:
5. Trifelium protense	51,		FACU	100 NO.
6. ELUCHASIS SN	= <u>10 %</u>			Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7. TANALAND BEFLIXMINE				more in diameter at breast height (DBH), regardless of height.
8				1-720- <b>-</b> 2000
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				mail 5 m. DBH and greater than or equal to 3.28 ft (1 m) tall.
11	-			
12	-			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
	100 =	Total Cove	er	
Woody Vine Stratum (Plot size:)				Woody vine - All woody vines greater than 3.28 ft in height.
·p/A	-			neight.
2	-			
3				
4				
5	-			Hydrophytic Vegetation
5				Present? Yes No
	=	Total Cove	er	
6 Remarks: (Include photo numbers here or on a separate	=	Total Cove	9r	

Sampling Point: W 302-Well

Wetland Function-Value Eval	uation Form
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						Wetland I.D. W-C12
Total area of wetland 0.85 ac. Human made? No	Is	s wetl	and part of a wildlife corrido	r? Yes	or a "habitat island"?	Latitude_40.2985 Longitude76.023
Adjacent land use Hay field			Distance to nearest	roadway or	other development 100 ft.	Prepared by: C. Vileno Date 11/02/2015
Dominant wetland systems present PEM			Contiguous undeve	eloped buffe	er zone present No	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? No		_ If r	ot, where does the wetland l	ie in the dra	iinage basin? Mid	Evaluation based on:
How many tributaries contribute to the wetland? 1			Wildlife & vegetation diver	sitv/ahunda	nce (see attached list)	Office Field
				sity, ao ana a		Corps manual wetland delineation completed? Y <u>V</u> N
Free et en Ateles	Suita		y Rationale	Princip		
Function/Value		N	(Reference #)*		on(s)/Value(s)	Comments
Groundwater Recharge/Discharge	~			~		
		V	5, 6, 9			
Fish and Shellfish Habitat		V				
Kediment/Toxicant Retention	~		1, 2, 4, 6, 13			
Nutrient Removal	~		3, 4, 5, 7, 8	~		
Production Export	~		1, 2, 12, 10			
Sediment/Shoreline Stabilization		V	3, 8, 12			
🖢 Wildlife Habitat	~		3, 4, 5, 8			
A Recreation		~				
Educational/Scientific Value		V				
🜟 Uniqueness/Heritage		~				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

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

W-C12

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:
<u>1100 Oddddaii</u> (1100 Si20;)	% 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				
5				Percent of Dominant Species That Are OBL, FACW, or FAC; 100% (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Cove		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				UPL species x 5 =
3				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6			<u> </u>	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				$3$ - Prevalence Index is $\leq 3.0^1$
		Total Cove	r	4 - Morphological Adaptations <sup>1</sup> (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. Persicaria sagitatta	50	~	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2, Phalaris arundinacea	20	~	FACW	
3. Carex Iurida	20	V	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Juncus effusus	20	~	FACW	
5. Symplocarpus foetida	10		OBL	Definitions of Four Vegetation Strata:
6			·	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			<u> </u>	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
	<u>   120    </u>	Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>60</u>	20% of	total cover:_	_24	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30')				height.
1				
2				
3				
4				the described of
5.				Hydrophytic Vegetation
	0	Total Cove	r	Present? Yes <u>V</u> No
50% of total cover: 0		total cover:		
Remarks: (Include photo numbers here or on a separate sh				
	100(1)			
			_	

Wetland Function-Value	<b>Evaluation</b> Form
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Total area of wetland 0.019 ac Human made? No	I	s wetl	and part of a wildlife corrido	r? No	or a "habitat island"?No	Wetland I.D. W-W301
				<u> </u>		- Latitude <u>40.200024</u> Longitude <u>-75.911689</u>
Adjacent land use Forest, Gas ROW			Distance to nearest	roadway or	other development 686 ft.	Prepared by: <u>KMM</u> Date 10/18/2016
Dominant wetland systems present PEM			Contiguous undeve	loped buffe	er zone present yes	Wetland Impact: - See General Permit Table
Is the wetland a separate hydraulic system? No		_ lf r	not, where does the wetland li	ie in the dra	inage basin? Upper	_ Evaluation based on:
How many tributaries contribute to the wetland?			_Wildlife & vegetation divers		. ,	Office <u>v</u> Field Corps manual wetland delineation completed? Y <u>v</u> N
Function/Value	Suita	abilit N	ry Rationale (Reference #)*	Princip	oal on(s)/Value(s)	
			2, 4, 5, 13, 15		on(s)/value(s)	Comments
Groundwater Recharge/Discharge	~			~		
Floodflow Alteration	~		2, 5, 7, 9			
Fish and Shellfish Habitat		~				
Sediment/Toxicant Retention	~		1, 2, 4, 6, 10			
Nutrient Removal	~		2, 3, 4, 7			
Production Export		~				
Sediment/Shoreline Stabilization	~		3, 4, 9			
🖢 Wildlife Habitat	~		4, 5, 6, 7, 8			
A Recreation		~				
Educational/Scientific Value		V				
🛨 Uniqueness/Heritage		~				
Visual Quality/Aesthetics		V				
ES Endangered Species Habitat		V				
Other						

nant Indicator       Dominance Test worksheet:         Number of Dominant Species       3         Total Number of Dominant       3         Species Across All Strata:       (A)         Percent of Dominant Species       3         That Are OBL, FACW, or FAC:       (B)         Percent of Dominant Species       (A/B)         Prevalence Index worksheet:       (A/B)         Total % Cover of:       Multiply by:         Cover       OBL species       25       x 2 = 50         FAC species       24       x 3 = 75         FACU species       x 4 =       UPL species       x 4 =         UPL species       x 5 =       (B)         Prevalence Index = B/A = 2 : 1       (B)       Prevalence Index = B/A = 2 : 1         Hydrophytic Vegetation Indicators:       1 - Rapid Test for Hydrophytic Vegetation       2 - Dominance Test is >50%         Y 3 - Prevalence Index is ≤3.01       - 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)       - Problematic Hydrophytic Vegetation (Explain)         YACW       YAC       1 - Repider soli 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
Number of Dominant Species $\chi$ $(A)$ Total Number of Dominant $\chi$ $(A)$ Species Across All Strata: $(B)$ Percent of Dominant Species $(A/B)$ That Are OBL, FACW, or FAC: $(D \circ)$ $(A/B)$ Prevalence Index worksheet: $(A/B)$ Total % Cover of:Multiply by:OBL species $\chi$ 1 =FACW species $\chi$ 2 = $5^{\circ}$ FAC species $\chi$ 3 = $\chi$ 5 =CoverFAC speciesFAC species $\chi$ 4 =UPL species $\chi$ 5 =Column Totals: $5^{\circ}$ Hydrophytic Vegetation Indicators: $1$ - Rapid Test for Hydrophytic Vegetation $\chi$ 2 - Dominance Test is >50% $4$ 3 - Prevalence Index is $\leq$ 3.01 $-$ 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet) $-$ Problematic Hydrophytic Vegetation 1 (Explain) $fACW$ $fAC$ </td
Species Across All Strata:       (B)         Percent of Dominant Species       Image: Cover of Dominant Species         That Are OBL, FACW, or FAC:       Image: Cover of Dominant Species         Total % Cover of:       Multiply by:         OBL species       X1 =         FACW species       Z5         FAC species       X2 =         FACU species       X3 =         FACU species       X4 =         UPL species       X4 =         UPL species       X5 =         Column Totals:       5%         Y = Column Totals:       5%         Hydrophytic Vegetation Indicators:       1 - Rapid Test for Hydrophytic Vegetation         Y = Obminance Test is >50%       X =         Y = Provalence Index is \$3.01       -         Y = A - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)       -         Problematic Hydrophytic Vegetation 1 (Explain)       1         Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.       -         Definitions of Four Vegetation Strata:       -         Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or       -
Percent of Dominant Species That Are OBL, FACW, or FAC: $1 \otimes \circ$ Prevalence Index worksheet: $\hline$ Total % Cover of:Multiply by:OBL species $x = x = 5^{\circ}$ FAC species $x = 5^{\circ}$ FAC speciesFACU species $2x = 5^{\circ}$ FAC species $x = 75^{\circ}$ FAC speciesFACU species $x = x = 5^{\circ}$ FAC species $x = 10^{\circ}$ (A)Prevalence index $x = 5^{\circ}$ FAC species $x = 75^{\circ}$ (A)FACU species $x = 5^{\circ}$ (A) $f^{2} = 5^{\circ}$ (B)Prevalence index = $\frac{5}{2}$ Column Totals: $5^{\circ}$ (A)Prevalence index = $\frac{5}{2}$ (A) $\frac{125}{2}$ (B)Prevalence index = $\frac{5}{2}$ (B) $\frac{1}{25}$ (B)Prevalence index = $\frac{5}{2}$ (A) $\frac{1}{25}$ (B)Prevalence index is $\frac{5}{2}$ (A) $\frac{1}{25}$ (B)Prevalence index is $\frac{5}{2}$ (A) $\frac{1}{25}$ (B)Prevalence index is $\frac{5}{2}$ (A) $\frac{1}{25}$ (B)Prevalence index is $\frac{5}{2}$ (Cover $\frac{1}{2}$ (A)Problematic Hydrophytic Vegetation (Explain) $\frac{1}{2}$ (Explain)FACW (FACW (FACW) $\frac{1}{2}$ (Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.Definitions of Four Vegetation Strata: $\frac{1}{2}$ (FA cm) or
Prevalence index worksheet:         Total % Cover of:       Multiply by:         OBL species       ×1 =         FACW species       2.5         FAC species       2.4         FACU species       ×3 =         FACU species       ×4 =         UPL species       ×5 =         Column Totals:       5         OBL species       ×5 =         Column Totals:       5         Hydrophytic Vegetation Indicators:       (B)         Prevalence Index = B/A = 2       1         Hydrophytic Vegetation Indicators:       -         1 - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%         4 3 - Prevalence Index is ≤3.01         -       -         -       4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)         -       -         -       Problematic Hydrophytic Vegetation 1 (Explain)         Indicators 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
Total % Cover of:Multiply by:CoverOBL species $x 1 =$ FACW species $Z \le x 2 = 5^{\circ}$ FAC species $Z \le x 3 = 7^{\circ}$ FACU species $x 4 =$ UPL species $x 5 =$ Column Totals: $5^{\circ}$ (A) $/2^{\circ}$ Prevalence Index = B/A = $2^{\circ}$ Hydrophytic Vegetation Indicators:1 - Rapid Test for Hydrophytic Vegetation2 - Dominance Test is >50%4 3 - Prevalence Index is $\leq 3.0^{1}$ - 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)FACW
CoverOBL species $x 1 =$ FACW species $2 \int x 2 = 5^{\circ}$ FAC species $2 \int x 3 = 7^{\circ}$ FACU species $x 4 =$ UPL species $x 5 =$ Column Totals: $5^{\circ}$ (A) $12^{\circ}$ Prevalence Index = B/A = $2^{\circ}$ Hydrophytic Vegetation Indicators:1 - Rapid Test for Hydrophytic Vegetation2 - Dominance Test is >50%4 3 - Prevalence Index is $33.0^{\circ}$ - 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)FACW
FACW species       Z       x 2 = 5 <sup>10</sup> FAC species       Z       x 3 = 75         FACU species       x 4 =         UPL species       x 5 =         Column Totals:       5 <sup>10</sup> Prevalence Index = B/A = 2 <sup>11</sup> Hydrophytic Vegetation Indicators:         1 - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%         4 3 - Prevalence Index is \$3.0 <sup>1</sup> - 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)         - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         Indicators 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
FACU species       x 4 =         UPL species       x 5 =         Column Totals:       5 (A)         Prevalence Index = B/A = 2 · ·         Hydrophytic Vegetation Indicators:         1 - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%         4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)         FACH         FACH         FACH         FACH         FACH         FACH         Cover         Mathematication of the sequence index is ≤3.0 <sup>1</sup> - 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)         - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         FACH         Hudicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         Definit
UPL speciesx 5 =Column Totals: $5^{\circ}$ (A)Prevalence Index = B/A = $2^{\circ}$ (B)Hydrophytic Vegetation Indicators:
Column Totals: <u>5</u> (A) <u>7</u> (B) Prevalence Index = B/A = 2 · · · (B) Hydrophytic Vegetation Indicators: - · · · · · · · · · · · · · · · · · · ·
Prevalence Index = B/A = 2         Hydrophytic Vegetation Indicators:         1 - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%         4 3 - Prevalence Index is \$3.0°         - 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)         - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         FACW         FACW         FACW         FAC         Definitions of Four Vegetation Strata:         Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Hydrophytic Vegetation Indicators:         1 - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%         3 - Prevalence Index is ≤3.0 <sup>1</sup> - 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)         FACH         FACH         FACH         Indicators 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
I - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%         3 - Prevalence Index is ≤3.01         - 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)         - 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)         - Problematic Hydrophytic Vegetation1 (Explain)         FACW         FAC         ORC or F         Indicators 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
Y       2 - Dominance Test is >50%         Y       3 - Prevalence Index is ≤3.01         Cover       - 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)
Y       2 - Dominance Test is >50%         Y       3 - Prevalence Index is ≤3.01         Cover       - 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)
Cover
Image: Cover       data in Remarks or on a separate sheet)         Image: FACW
FACW
FAC w       Indicators of hydric soil and wetland hydrology must         orcear       be present, unless disturbed or problematic.         orcear       Definitions of Four Vegetation Strata:         Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
FAC       Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         OFF       Definitions of Four Vegetation Strata:         Tree       Woody plants, excluding vines, 3 in. (7.6 cm) or
Definitions of Four Vegetation Strata:           Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
more in diameter at breast height (DBH), regardless of height.
neight.
Sapling/Shrub – Woody plants, excluding vines, less
mail 3 m. DBH and greater than or equal to 3.28 ft (1
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Cover Woody vine – All woody vines greater than 3.28 ft in height.
Vegetation /
Present? Yes No
Cover

US Army Corps of Engineers

Eastern Mountains and Pledmont - Version 2.0

Wetland Function-Value	<b>Evaluation</b> Form
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Total area of wetland 0.047 ac Human made? No	I	wetl	and part of a wildlife corridor?		or a "habitat island"?	Wetland I.D. W-C2
Total act of wetand <u>ate of</u> Human made: <u>NO</u>	1	s weti	and part of a whente corridor?		OF a madital Island"?	Latitude 40.246375 Longitude -75.982208
Adjacent land use Forest, Gas ROW, Residential		_	Distance to nearest ro	oadway oi	other development 15 ft.	Prepared by: KMM Date 10/18/2016
Dominant wetland systems present PEM			Contiguous undevelo	oped buff	er zone present no	Wetland Impact: See General Permit Table
Is the wetland a separate hydraulic system? No		_ If n	not, where does the wetland lie	in the dra	ainage basin? Upper	Evaluation based on:
How many tributaries contribute to the wetland?			Wildlife & vegetation diversit	ty/abunda	nce (see attached list)	Office Field Corps manual wetland delineation
Function/Value	Suita		y Rationale (Reference #)*	Princij Functi		completed? Y / N
Groundwater Recharge/Discharge	~		2, 4, 5, 7, 15	~		
	~		2, 9, 10, 13			
Fish and Shellfish Habitat		~				
Vertice Sediment/Toxicant Retention	~		1, 2, 4, 6, 10	~		
Nutrient Removal	~		4, 5, 7			
Production Export		V	1			
Sediment/Shoreline Stabilization	~		2, 3, 4, 9			
🖢 Wildlife Habitat	~		5, 6, 7, 8			
A Recreation		r				
Educational/Scientific Value		~				
🛨 Uniqueness/Heritage		~				
Visual Quality/Aesthetics		~				
ES Endangered Species Habitat		~				
Other						

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

\* Refer to backup list of numbered considerations.

# VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point:

W-C2

201	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:5 (A)
2				
3				Total Number of Dominant Species Across All Strata:5* (B)
4				(B)
5	-			Percent of Dominant Species
5	-			That Are OBL, FACW, or FAC:100% (A/B)
6	<u> </u>			Durandaria Indonesia
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 Lindera benzoin	15	~	FACW	FAC species x 3 =
Built	5		FAC	FACU species x 4 =
		· · · · · · · · · · · · · · · · · · ·	FAC	
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Denvelages in 1 - Dia
6				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
7	·			1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		= Total Cove	r	
50% of total cover: <u>10</u>	20% of	total cover:_		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Symplocarpus foetida	30	V	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Glyceria sp.	30	~	ND	
3. Impatiens capensis	20	<u> </u>	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Rumex crispus				be present, unless disturbed or problematic.
1020	20	<u> </u>	FAC	Definitions of Four Vegetation Strata:
5,				, and the second s
6				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				neight.
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
	100 🛓	Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% of	total cover:	20	
Woody Vine Stratum (Plot size:30')		_		Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0 _	Total Cover	-	Present? Yes <u>V</u> No
50% of total cover: 0		total cover:		
Remarks: (Include photo numbers here or on a separate sh				
ND- Not determined	ieet.)			
ND- Not determined				
*Vegetation not ID'd down to species level not in	cluded in	dominand	ce test.	
			_	

# Attachment B

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	Unique Functions and Values (for only "Good" or "Excellent")
A20A	PEM	Washington	Sediment/Toxicant Retention	x	Poor	N/A
SZ1	PEM	Washington	None	x	Poor	N/A
SZ2	PEM	Washington	None	x	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
120	I LIVI	waanington	Sediment/Toxicant Retention, Nutrient Removal	^	1 001	N/A
W12	PEM	Washington		x	Poor	
W13	PEM	Washington	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	x	Fair	N/A
W14	PEM	Washington	Sediment/Toxicant Retention	x	Poor	N/A
W204	PEM	Washington	None	X	Poor	N/A N/A
W37	PEM	Washington	Nutrient Removal Sediment/Toxicant Retention	X	Poor	
W42	PEM	Washington	Sediment/Toxicant Retention	х	Poor	N/A
W43	PEM	Washington	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal		Fair	N/A
W44	PEM	Washington	Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline stabilization		Fair	N/A
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	x	Fair	N/A
W62	PEM	Allegheny	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and	x	Poor	N/A
W63	PEM	Allegheny	Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal	x	Poor	N/A
W05	FLIVI	Allegheny	ocument roxeant retention, ruthent removal	*	P 001	1074
BB77	PEM	Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal		Poor	N/A
BB80	PEM/PSS	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient		Fair	N/A
	PEM		Removal Sediment/Toxicant Retention, Nutrient Removal	v		N/A
CS1 CS3	PEM	Westmoreland Westmoreland	Sediment/Toxicant Retention, Nutrient Removal	x	Poor Poor	N/A N/A
M67	PEM	Westmoreland	None	~	Poor	N/A
M69	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
M71			Sediment/Toxicant Retention, Export Production, Nutrient Removal			N/A
	PEM/PSS	Westmoreland			Fair	
M72	PEM PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal	x x	Poor	N/A N/A
M73 M75	PEM/PFO	Westmoreland	Floodflow Histeration, Sediment/Toxican Retention, Floodflow Floodflow Histeration, Sediment/Toxican Retention, Floodflow Alteration, Nutrient Removal, Sediment/Shoreline stabilization	x	Poor 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	x	Poor	N/A
N28	PEM/PFO	Westmoreland	Removal 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	Х	Poor	N/A
N76	PEM	Westmoreland	Sediment/ Toxicant Retention, Nutrient Removal	X	Poor	N/A
N78	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention Sediment/ Toxicant Retention, and Nutrient Removal	X	Poor	N/A N/A
N79 N80	PEM PEM	Westmoreland Westmoreland	Sediment/ Toxicant Retention, and Nutrient Removal Nutrient Removal	X X	Poor Poor	N/A N/A
N80 N81	PEM	Westmoreland	None	X	Poor	N/A N/A
N82	PEM/PSS	Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A
045	PEM/PFO	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Fair	N/A
P13	PEM	Westmoreland	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	x	Good	Provides buffer and is riparian to UNT of Boatyard Run
P14	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention,	x	Fair	N/A Wetland is buffered by forested habitat, provides buffer and
P15	PEM/PFO	Westmoreland	and Nutrient Removal	x	Good	is riparian to UNT of Boatyard Run, landscape support present (provides downstream benefits, part of larger contiguous habitat), adjacent land use natural
P16 P17	PEM	Westmoreland	Sediment/ Toxicant Retention, and Nutrient Removal None	x	Poor	N/A N/A
P17 P18	PEM PEM	Westmoreland Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor Poor	N/A N/A
P20	PEM	Westmoreland	Sediment/ Toxicant Retention, Nutrient Removal	x	Poor	N/A
P22	PEM	Westmoreland	Sediment/ Toxicant Retention	x	Poor	N/A
P25	PEM/PFO	Westmoreland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Good	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	x	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
P27	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Floodflow Alteration, Nutrient Removal, Sediment/Shoreline stabilization	x	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
P28	PEM	Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A

P29 P30 P33 P33 P34 P35 P7 Q4	PEM	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	Unique Functions and Values (for only "Good" or "Excellent")
P33 P34 P35 P7		Westmoreland	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A
P34 P35 P7	PEM	Westmoreland		X	Poor	N/A
P35 P7	PEM/PFO	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Good	HQ watershed, large aerial exten (1-1 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)
P7	PEM	Westmoreland	None	Х	Poor	N/A
	PEM	Westmoreland	None	X	Poor	N/A
	PEM PEM	Westmoreland Westmoreland	Sediment/Toxicant Retention Groundwater Recharge/Discharge	X X	Poor Poor	N/A N/A
			Sediment/Toxicant Retention,Groundwater Recharge/Discharge			N/A
Q6 Q69	PEM/PFO PEM, PSS, PFO	Westmoreland	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal, Production Export, Wildlife Habitat	x	Poor 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
Q7	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	x	Poor	habitat and corridor. N/A
<u> </u>	. 2	rootinorolana	Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	~	1 001	Large aerial extent (>1 ac in ROW), buffer to several UNTs
Q70	PFO/PEM	Westmoreland	Nutrient Removal, Production Export, Wildlife Habitat		Good	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 N/A
SZ6	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	Poor	IN/A
SZ7	PEM	Westmoreland	Nutrient Removal	X	Poor	N/A
W48	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline stabilization	х	Fair	N/A
W49	PEM. PFO	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal,	x	Good	N/A
W52	PEM	Westmoreland	Sediment/Shoreline stabilization None	x	Poor	N/A
W53	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal,	x	Good	N/A
W55	PEM		Sediment/Shoreline stabilization None	x	Poor	N/A
W54 W56	PEM	Westmoreland Westmoreland	Sediment/Toxicant Retention, Nutrient Removal	X	Poor	N/A N/A
W58	PEM	Westmoreland	None	X	Poor	N/A
W60	PEM	Westmoreland	Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline stabilization	х	Poor	N/A
W61	PSS	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal, Wildlife Habitat	x	Fair	N/A
W64	PEM	Westmoreland	Nutrient Removal	Х	Poor	N/A
W65	PEM	Westmoreland	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and	x	Good	N/A
W68	PEM	Westmoreland	Nutrient Removal, Wildlife Habitat Sediment/Toxicant Retention, Nutrient Removal	x	Poor	N/A
W69	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
W70	PEM	Westmoreland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	х	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 J53	PEM PEM	Indiana	None Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	x	Poor Fair	N/A N/A
N34	PEM, PFO	Indiana	Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Wildlife Habitat	x	Good	N/A
N35	PSS	Indiana	Sediment/Toxicant Retention and Nutrient Removal		Poor	N/A
N37	PEM	Indiana	None	X	Poor	N/A
N38	PEM, PSS	Indiana	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	x	Fair	N/A
N39	PEM	Indiana	Groundwater Recharge/ Discharge	х	Poor	N/A
N45	PEM	Indiana	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention		Poor	N/A
	PEM	Indiana	Sediment/ Toxicant Retention	х	Poor	N/A
N47	PEM	Indiana	Sediment/ Toxicant Retention Sediment/ Toxicant Retention	x	Poor	N/A N/A
N49	PEM PEM	Indiana Indiana	None	X X	Poor Poor	N/A N/A
N49 N50	PEM	Indiana	Sediment/Toxicant Retention and Nutrient Removal	x	Poor	N/A
N49		Indiana	Sediment/Toxicant Retention and Nutrient Removal	x	Poor	N/A
N49 N50 N52	PEM	Indiana	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention		Poor	N/A
N49 N50 N52 N53	PEM		Croundwater Reshares / Dischares Ordina (/T. 1. 1.D. 1. 1			N1/A
N49 N50 N52 N53 N54 N55 N55 N56	PEM PEM	Indiana	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention,	x	Poor	N/A N/A
N49 N50 N52 N53 N54 N55 N56 N57	PEM PEM PEM, PSS	Indiana	Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, Nutrient Removal	x	Poor	N/A
N49 N50 N52 N53 N54 N55 N55 N56	PEM PEM	Indiana	Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention,		-	
N49 N50 N52 N53 N54 N55 N56 N57	PEM PEM PEM, PSS	Indiana	Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention	x	Poor	N/A N/A
N49 N50 N52 N53 N54 N55 N56 N57 N60	PEM PEM PEM, PSS PEM	Indiana Indiana Indiana	Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, Nutrient Removal Sediment/ Toxicant Retention Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention None	x x	Poor Poor	N/A N/A N/A N/A
N49 N50 N52 N53 N54 N55 N56 N57 N60 N61	PEM PEM, PSS PEM PEM	Indiana Indiana Indiana Indiana	Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, Nutrient Removal Sediment/ Toxicant Retention Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention None Sediment/Toxicant Retention, Nutrient Removal, and Export Removal	x x x	Poor Poor Poor	N/A N/A N/A N/A N/A
N49 N50 N52 N53 N54 N55 N56 N57 N60 N61 N69	PEM PEM, PSS PEM PEM PEM	Indiana Indiana Indiana Indiana Indiana	Nutrient Removal Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, Nutrient Removal Sediment/ Toxicant Retention Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention None	x x x	Poor Poor Poor Poor	N/A N/A N/A N/A

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	Unique Functions and Values (for only "Good" or "Excellent")
057	PEM	Indiana	None	X	Poor	N/A
058	PEM	Indiana	Sediment/Toxicant Retention and Nutrient Removal	x	Poor	N/A N/A
O59	PEM	Indiana	Groundwater Recharge/Discharge		Poor	N/A
O60	PEM	Indiana	Groundwater Recharge/ Discharge, Sediment/ Toxicant Retention, Nutrient Removal	x	Poor	N/A
O61	PEM	Indiana	Sediment/ Toxicant Retention	x	Poor	N/A
O62	PEM	Indiana	Sediment/ Toxicant Retention	X	Poor	N/A
O68	PEM	Indiana	None	х	Poor	N/A
070	PEM. PFO	Indiana	Groundwater Recharge/Discharge, Floodflow Alteration,		Fair	N/A
			Sediment/Toxicant Retention	X		N/A
071	PEM	Indiana	None Sediment/Toxicant Retention and Nutrient Removal	x	Poor	N/A N/A
072	PEM	Indiana	Groundwater Recharge/Discharge, Floodflow Alteration,	X	Poor	Large aerial extent (>1 ac in ROW), buffer to UNT to
077	PEM, PSS	Indiana	Sediment/Toxicant Retention, Nutrient Removal, Wildlife Habitat	x	Good	Bucklick Creek, landscape support present (provides downstream benefits, part of larger contiguous habitat)
P1	PEM	Indiana	None	X	Poor	N/A
P2	PEM/PSS	Indiana	Sediment/Toxicant Retention and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	poor	N/A N/A
Pond-N6	PUB	Indiana		Х	Fair	IV/A
BB141	PEM	Cambria	None		Poor	N/A
55446	PEM, PSS	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
BB142 BB144	PEM, PSS	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
	PEM	Cambria	None		Poor	N/A
BB145 BB146	PEM	Cambria	None		Poor	N/A N/A
20140			Groundwater Recharge/Discharge, Sediment/Toxicant Retention,			N/A N/A
BB147	PEM, PSS	Cambria	Nutrient Removal		Fair	
BB148	PEM	Cambria	Sediment/Toxicant Retention		Poor	N/A
BB67	PEM, PSS, PFO	Cambria	Sediment/Toxicant Retention	х	Poor	N/A
BB89	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
CC12	PEM	Cambria	None		Poor	N/A
CC12	PEM	Cambria	None		Poor	N/A
	PEM, PFO		Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Fair	N/A
CC15		Cambria				
CC16	PEM	Cambria	Sediment/Toxicant Retention	х	Poor	N/A
CC18	PEM	Cambria	None	v	Poor	N/A
CC19	PEM	Cambria	Sediment/Toxicant Retention None	X	Poor	N/A N/A
<u>CC2</u>	PEM PEM	Cambria	Sediment/Toxicant Retention		Poor Poor	N/A N/A
CC20		Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,			N/A N/A
K28	PEM	Cambria	Nutrient Removal	х	Fair	10/3
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
	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
L64	PEM, PFO	Combrio	Sediment/Toxicant Retention		Poor	N/A
L65	PEM, PFO	Cambria Cambria	None	x	Poor	N/A N/A
L66 M60	PEM, PSS	Cambria	Sediment/Toxicant Retention	x	Poor	N/A
Moo			Groundwater Recharge/Discharge, Sediment/Toxicant Retention,			N/A
M61	PEM, PSS PEM, PFO	Cambria	Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Fair Poor	N/A
<u>N1</u>	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor	N/A
N10	PEM, PFO, PUB	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor	N/A
N11	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor	N/A
N12	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor	N/A
N14	PEM, PSS, PFO	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Good	Large aerial extent (>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	x	Poor	N/A
N17	PEM, PSS, PFO	Cambria	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), floodplain/large buffer to North Branch Little Conemaugh River, landscape support present (provides downstream benefits, is part of larger contiguous habitat), buffered by forested habitat
N18 N2	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Poor	N/A
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
	PEM, PSS	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	Х	Poor	N/A
N26 N27	PEM	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	х	Poor	N/A

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	Unique Functions and Values (for only "Good" or "Excellent")
N31	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor	N/A
	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
N5 N6	PEM	Cambria	Groundwater Recharge/Discharge		Poor	N/A
NO			Groundwater Recharge/Discharge, Sediment/Toxicant Retention			N/A
N8	PEM	Cambria		x	Poor	
NO	PEM, PFO	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	x	Fair	N/A
N9 01	PEM, PSS	Cambria	Nutrient Removal None	x	Poor	N/A
010	PEM	Cambria	Groundwater Recharge/Discharge	x	Poor	N/A
012	PEM	Cambria	Sediment/Toxicant Retention	X	Poor	N/A
015	PEM	Cambria	None		Poor	N/A
	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Fair	N/A
017	PEM, PSS	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Good	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 natura
02	PEM	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A
021	PEM	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A
023		Gambha	Sediment/Toxicant Retention	~		N/A
024	PEM	Cambria			Poor	
O25	PEM	Cambria	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor	N/A
027	PEM PEM, PFO	Cambria Cambria	Sediment/Toxicant Retention, and Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Poor Excellent	N/A 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 natura
O35	PSS	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal		Fair	N/A
04	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor	N/A
05	PEM	Cambria	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	x	Fair	N/A
06	PEM	Cambria	None	x	Poor	N/A
08	PEM	Cambria	Sediment/Toxicant Retention	Х	Poor	N/A
	PEM	Cambria	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	х	Poor	N/A
09	PEM		None	x	Poor	N/A
Q49 Q50	PEM	Cambria Cambria	None	X	Poor	N/A N/A
Q51	PEM	Cambria	None	x	Poor	N/A
Q65	PEM	Cambria	None		Poor	N/A
					_	
BB159	PEM PEM	Blair Blair	Sediment/Toxicant Retention, Nutrient Removal None		Poor	N/A N/A
BB59 L42	PEM	Blair	Groundwater Recharge/Discharge	x	Poor Poor	N/A N/A
		Diali	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and			N/A
			Nutrient Removal	x	Fair	
L43	PEM	Blair				
L44	PEM	Blair	Nutrient Removal	х	Poor	N/A
L44 L59	PEM PEM	Blair Blair	Sediment/Toxicant Retention, Nutrient Removal	X X	Poor	N/A
L44 L59 Q54	PEM PEM PEM	Blair Blair Blair	Sediment/Toxicant Retention, Nutrient Removal None		Poor Poor	N/A N/A
L44 L59 Q54 Q56	PEM PEM PEM PEM	Blair Blair Blair Blair	Sediment/Toxicant Retention, Nutrient Removal None None		Poor Poor Poor	N/A N/A N/A
L44 L59 Q54	PEM PEM PEM	Blair Blair Blair	Sediment/Toxicant Retention, Nutrient Removal None		Poor Poor	N/A N/A
L44 L59 Q54 Q56	PEM PEM PEM PEM	Blair Blair Blair Blair	Sediment/Toxicant Retention, Nutrient Removal None None None Sediment/Toxicant Retention		Poor Poor Poor	N/A N/A N/A
L44 L59 Q54 Q56 Q58	PEM PEM PEM PEM PEM, PSS, PFO PEM	Blair Blair Blair Blair Blair Blair	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal		Poor Poor Poor Poor	N/A N/A N/A N/A N/A N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28	PEM PEM PEM PEM PEM PEM, PSS, PFO PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention	X	Poor Poor Poor Poor Fair Poor	N/A N/A N/A N/A N/A N/A N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63	PEM PEM PEM PEM PEM PEM, PSS, PFO PEM PEM PEM	Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention None	X	Poor Poor Poor Poor Fair Poor Poor	N/A N/A N/A N/A N/A N/A N/A N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention	X	Poor Poor Poor Poor Fair Poor Poor Poor Poor	N/A N/A N/A N/A N/A N/A N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65 K66	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention None None Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor Poor Poor Poor Fair Poor Poor Poor Fair	N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention None None	X	Poor Poor Poor Poor Fair Poor Poor Poor Poor	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65 K66	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention Sediment/Toxicant Retention None Rone Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Poor Poor Poor Poor Fair Poor Poor Poor Fair	N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65 K65 K66 K67	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention Sediment/Toxicant Retention None Groundwater Recharge/Discharge, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Poor Poor Poor Poor Fair Poor Poor Fair Fair Fair	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65 K66 K66 K67	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention None Rone Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Poor Poor Poor Poor Fair Poor Poor Fair Fair Good	N/A     Large aerial extent (>1 ac on and off-ROW), landscape     Creek, downstream benefits, part of larger contiguous     habitat), larger wetland system buffered by forested land     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), larger wetland system buffered by forested land     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
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65 K66 K67 K68 K69 K70 K72	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention None None Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal None	x	Poor Poor Poor Fair Poor Poor Fair Fair Good Good Good	N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K66 K66 K67 K68 K69 K70 K72 L10	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention None Groundwater Recharge/Discharge, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal None None	x	Poor Poor Poor Fair Poor Poor Fair Fair Good Good Good Poor Poor	N/A     N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K65 K66 K67 K68 K69 K70 K72 L10 L11	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention Sediment/Toxicant Retention None None Groundwater Recharge/Discharge, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal None None None Sediment/Toxicant Retention, Nutrient Removal	x	Poor Poor Poor Poor Fair Poor Poor Fair Fair Good Good Good Poor Poor Poor	N/A           Large aerial extent (>1 at on and off-ROW), landscape           support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habitat), provides wildlife corridor           Large aerial extent (>1 at on and off-ROW), landscape           support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habitat), provides wildlife corridor           N/A         N/A           N/A         N/A
L44 L59 Q54 Q58 Q58 BB127 CC27 CC27 CC28 K63 K65 K66 K67 K68 K69 K70 K70 K72 L10 L11 L12	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal None None None Sediment/Toxicant Retention, Nutrient Removal Sedimen	x	Poor Poor Poor Poor Poor Poor Poor Fair Fair Good Good Good Poor Poor Poor Poor Poor Poor Poor	N/A           A           A           A           A           A           A           A           A           A           A           A           A           A           A           A           A           A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K66 K67 K68 K67 K68 K69 K70 K72 L10 L11 L11 L12 L13	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal None Sediment/Toxicant Retention, Nutrient Removal	x	Poor Poor Poor Fair Poor Poor Fair Fair Good Good Good Poor Poor Poor Poor Poor Poor Poor P	N/A       Large aerial extent (>1 ac on and off-ROW), landscape       support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habital), provides wildlife corridor       Large aerial extent (>1 ac on and off-ROW), landscape       support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habital), provides wildlife corridor       Large aerial extent (>1 ac on and off-ROW), landscape       support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habital), provides wildlife corridor       N/A     N/A       N/A     N/A       N/A     N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K66 K66 K67 K68 K69 K70 K72 L10 L11 L12 L13 L14	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Poor Poor Poor Poor Fair Poor Poor Fair Fair Good Good Good Poor Poor Poor Poor Poor Poor Poor P	N/A         Large aerial extent (>1 at c on and off-ROW), landscape         support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habitat), provides wildlife corridor         Large aerial extent (>1 at c on and off-ROW), landscape         support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habitat), provides wildlife corridor         N/A       N/A         N/A       N/A         N/A       N/A         N/A       N/A         N/A       N/A
L44 L59 Q54 Q56 Q58 BB127 CC27 CC28 K63 K66 K67 K68 K67 K68 K69 K70 K72 L10 L11 L11 L12 L13	PEM PEM PEM PEM PEM PEM PEM PEM PEM PEM	Blair Blair Blair Blair Blair Blair Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon	Sediment/Toxicant Retention, Nutrient Removal None None Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal None Sediment/Toxicant Retention, Nutrient Removal	x	Poor Poor Poor Fair Poor Poor Fair Fair Good Good Good Poor Poor Poor Poor Poor Poor Poor P	N/A       Large aerial extent (>1 ac on and off-ROW), landscape       support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habital), provides wildlife corridor       Large aerial extent (>1 ac on and off-ROW), landscape       support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habital), provides wildlife corridor       Large aerial extent (>1 ac on and off-ROW), landscape       support present (provides large buffer to Blacklog Creek, downstream benefits, part of larger contiguous habital), provides wildlife corridor       N/A     N/A       N/A     N/A       N/A     N/A

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	Unique Functions and Values (for only "Good" or "Excellent")
L18	PEM	Huntingdon	None	х	Poor	N/A
L20	PEM	Huntingdon	None	x	Poor	N/A
L21 L24/L25	PEM PEM	Huntingdon Huntingdon	None Groundwater Recharge/Discharge	X	Poor Poor	N/A N/A
L24/L25	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Good	IN/A Large aerial extent (>1 ac or 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	X	Poor	N/A
L29	PEM	Huntingdon	Sediment/Toxicant Retention	x	Poor	N/A
L31	PEM	Huntingdon	Sediment/Toxicant Retention		Poor	N/A N/A
L32	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	х	Fair	N/A
L33a [L33]	PEM	Huntingdon	Sediment/Toxicant Retention		Poor	
L36	PSS	Huntingdon	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
L5	PEM	Huntingdon	None	x	Poor	N/A
L6	PEM	Huntingdon	None	X	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	X	Poor	N/A
M10 M12	PEM PEM	Huntingdon Huntingdon	Floodflow Alteration, Sediment/Toxicant Retention Sediment/Toxicant Retention, Nutrient Removal	x	Poor Poor	N/A N/A
		-	Groundwater Recharge/Discharge, Sediment/Toxicant Retention.			Provides buffer to Hares Valley Creek, landscape support
M13	PEM	Huntingdon	Nutrient Removal, Sediment/Shoreline Stabilization	x	Good	present (provides downstream benefits)
M15	PEM	Huntingdon	Sediment/Toxicant Retention, Nutrient Removal	X	Poor	N/A
M17	PEM	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	х	Fair	N/A
M2	PEM	Huntingdon	Floodflow Alteration, Sediment/Toxicant Retention	х	Poor	N/A
M3	PEM, PSS	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration,	x	Fair	N/A
M6	PEM	Huntingdon	Sediment/Toxicant Retention None	x	Poor	N/A
		-	Groundwater Recharge/Discharge, Floodflow Alteration,	x		N/A
M7	PEM	Huntingdon	Sediment/Toxicant Retention	X	Fair	
M8	PEM	Huntingdon	None	x	Poor	N/A
МЭ	PEM	Huntingdon	Sediment/Toxicant Retention	x	Poor	N/A
Pond-l4	PUB	Huntingdon	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal, Wildlife Habitat	x	Good	Deepwater habitat provides opportunity for downstream 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	NA
Y12	PEM	Huntingdon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
Y13	PEM	Huntingdon	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	x	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	x	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
¥4	PFO	Huntingdon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	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
¥7	PEM, PFO	Huntingdon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	x	Fair	N/A
Y9	PFO	Huntingdon	Nutrient Removal Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	x	Fair	N/A
19	110	Tunanguon	Wildlife Habitat	^	i dii	
K58	PEM	Juniata	Sediment/Toxicant Retention, Nutrient Removal	X	Poor	N/A
K59	PEM	Juniata	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	x	Fair	N/A
K60	PFO	Juniate	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	x	Fair	N/A
NOU	PFU	Juniata	Nutrient Removal	^	Fair	

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	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
K50 W36d	PEM PEM	Perry Perry	Sediment/Toxicant Retention	x	Poor Poor	N/A N/A
W36u	PEW	Pelly	Recreation	~	FUUI	IN/A
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 Retention, Nutrient Removal	х	Fair	N/A
126	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal	х	Poor	N/A
127	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal	x	Poor	N/A
136	PEM, PFO	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Sediment/Shoreline Stabilization	x	Good	Large aerial extent (>1 ac), provides buffer to Conodoguinet Creek, landscape support present (provides downstream
139	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Good	Provides buffer to UNT to Conodoguinet Creek, landscape support present (provides downstream benefits, contiguous with other riparian areas along UNT to Conodoguinet Creek)
141	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
143	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
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		Poor	N/A
148	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
149	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Fair	N/A
152	PEM	Cumberland	Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration,	х	Poor	N/A HQ watershed, headwater of UNT to Opossum Creek,
153	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	x	Good	landscape support present (provides downstream benefits)
154	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention Sediment/Toxicant Retention	x	Fair	N/A N/A
155	PEM	Cumberland		x	Poor	
156 158	PEM PEM	Cumberland Cumberland	None None	x	Poor Poor	N/A N/A
160	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
161	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	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	x	Fair	
164	PEM	Cumberland	Sediment/Toxicant Retention Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	x	Poor	N/A N/A
J20	PEM	Cumberland	Removal	x	Fair	
J21	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient	x	Fair	N/A N/A
J22	PEM	Cumberland	Removal	x	Fair	
J23	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A N/A
J24 J25	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient None	x	Fair Poor	N/A N/A
J25	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, Sediment/Toxicant Retention	х	Fair	N/A
J32	PEM	Cumberland	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Fair	N/A
J35	PEM	Cumberland	Groundwater Recharge/Discharge, Floodflow Alteration, Fish and Shellfish Habitat, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	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	x	Poor	N/A

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	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	x	Poor	N/A
K1	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Fair	N/A
K11	PEM	Cumberland	Sediment/Toxicant Retention	x	Poor	N/A
K12	PEM	Cumberland	None	x	Poor	N/A
K13	PEM	Cumberland	None	х	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	x	Poor	N/A
К2	PEM	Cumberland	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient		Fair	N/A N/A
КЗ	PEM	Cumberland	Removal	x	Fair	N/A
K41	PEM	Cumberland	None		Poor	N/A
K44	PEM, PFO	Cumberland	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 buffer to two UNTs 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	PEM	Cumberland	Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	N/A
K7	PEM	Cumberland	None	x	Poor	N/A
K9 Band 12	PEM	Cumberland	None	x	Poor	N/A N/A
Pond-J3	PUB	Cumberland	None Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient		Poor	N/A N/A
Pond-J4 W14e	PUB PEM	Cumberland Cumberland	Floodriow Alteration, Sediment/Loxicant Retention, and Nutrient Removal None	x	Fair Poor	N/A N/A
W14e	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 PEM	Cumberland	None Sediment/Toxicant Retention	x	Poor	N/A N/A
W33d	PEM	Cumberland	Sediment/Toxicant Retention	X	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	Х	Poor	N/A
BB21	PEM	York	Sediment/Toxicant Retention	X	Poor	N/A
H50	PEM	York	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
H51	PEM, PFO	York	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal Sediment/Toxicant Retention, Nutrient Removal	x	Good	Large aerial extent (>1 ac on and off-ROW), potential bog turtle habitar, provides buffer to UNT to Susquehanan River, buffered by adjacent forested area, landscape support present (part of larger contiguous habitat that is contiguous with the Susquehanna River) N/A
120	PEM PEM	York York	None	x x	Poor Poor	N/A N/A
122	PEM	York	None	x	POOI	N/A
			Groundwater Recharge/Discharge, Sediment/Toxicant Retention			N/A
J63 W3c	PFO PEM	York York	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor Poor	N/A
A16	PEM	Dauphin	Sediment/Toxicant Retention	X	Poor	N/A
A17 A18	PEM	Dauphin Dauphin	Sediment/Toxicant Retention Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	Poor Good	N/A 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	x	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	x	Fair	N/A
B55	PEM	Dauphin	None	x	Poor	N/A
B55	PEM	Dauphin	Floodflow Alteration and Sediment/Toxicant Retention	x	Poor	N/A
B57	PEM	Dauphin	Floodflow Alteration and Sediment/Toxicant Retention	x	Poor	N/A
B58	PEM, PFO	Dauphin	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	x	Poor	N/A
B60	PEM	Dauphin	Sediment/Toxicant Retention, Nutrient Removal	x	Poor	N/A
		Dauphin	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 continuous habitat. provides downstream benefits) Large aerial extent (>1 ac with off-ROW wetlands), provides
B61	PEM, PFO				•	and a short (r . do mar on now wellands), provides
B61 B64	PEM, PFO PFO	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	Good	buffer to UNT to Lisa Lake, landscape support present (provides downstream benefits)
B64 B76	PFO PSS	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x x	Good	(provides downstream benefits) Provides buffer to UNT to Lisa Lake, landscape support present (provides downstream benefits), adjacent land use intensity low (residential). buffered by surrounding forested
B64 B76 BB36	PFO PSS PEM	Dauphin Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal None	x	Good Poor	(provides downstream benefits) Provides buffer to UNT to Lisa Lake, landscape support present (provides downstream benefits), adjacent land use intensity low (residential) buffared by surrounding forested N/A
B64 B76	PFO PSS	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Good	(provides downstream benefits) Provides buffer to UNT to Lisa Lake, landscape support present (provides downstream benefits), adjacent land use intensity low (residential). buffered by surrounding forested

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	Unique Functions and Values (for only "Good" or "Excellent")
C27	PEM, PSS	Dauphin	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
C28	PEM	Dauphin	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
CC22	PEM	Dauphin	None	x	Poor	N/A
J47	PEM, PFO	Dauphin	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	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 S2	PEM PEM, PFO	Dauphin Dauphin	None Sediment/Toxicant Retention, Nutrient Removal	x	Poor Fair	N/A N/A
A1	PEM	Lebanon	None	x	Poor	N/A
A11	PEM	Lebanon	Groundwater Recharge/Discharge, Floodflow Alteration,	x	Good	Potential bog turtle habitat, riparian to Beck Creek - provides
A13	PEM	Lebanon	Sediment/Toxicant Retention, Nutrient Removal None	x	Poor	buffer N/A
A2	PEM	Lebanon	None	х	Poor	N/A
A3 A6	PEM PEM	Lebanon Lebanon	None None	x	Poor Poor	N/A N/A
A9	PEM	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
B66	PEM	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention,	x	Fair	N/A
BB154	PEM	Lebanon	Nutrient Removal None	x	Poor	N/A
C16	PEM, PFO	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	x	Fair	N/A
C17	PEM	Lebanon	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	x	Poor	N/A
H13	PEM, PSS, PFO	Lebanon	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	x	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	x	Excellent	On PGC State Game Land, potential bog turtle habitat, tag 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,		Fair	N/A
H28	PEM	Lancaster	Sediment/Toxicant Retention, Nutrient Removal 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
J54 W8c	PFO PEM	Lancaster Lancaster	None		Good Poor	
	-			x		wildlife corridor to forested areas to south and southeast N/A Nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga Rive landscape support present, buffer present, creates buffer tr East Branch Conestoga River, adjacent land use intensity low (forested and school)
W8c	PEM	Lancaster	None Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Sediment/Toxicant Retention, and Nutrient Removal	x	Poor	wildlife corridor to forested areas to south and southeast N/A Nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga Rivi landscape support present, buffer present, creates buffer to East Branch Conestoga River, adjacent land use intensity low (forested and school) N/A
W8c A37	PEM	Lancaster Berks	None Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Poor Good	wildlife corridor to forested areas to south and southeast N/A Nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga Rive landscape support present, buffer present, creates buffer tr East Branch Conestoga River, adjacent land use intensity low (forested and school) N/A Potential bog turtle habitat, landscape support present,
W8c A37 A45	PEM PEM PEM	Lancaster Berks Berks	None Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Sediment/Toxicant Retention, and Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x	Poor Good Poor	wildlife corridor to forested areas to south and southeast N/A Nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga Rive landscape support present, buffer present, creates buffer tr East Branch Conestoga River, adjacent land use intensity low (forested and school) N/A Potential bog turtle habitat, landscape support present, buffer present, adjacent land use intensity low (forested and residential) N/A
W8c A37 A45 A49	PEM PEM PEM PEM	Lancaster Berks Berks Berks	None           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	x x	Poor Good Poor Good	wildlife corridor to forested areas to south and southeast N/A Nutrient removal prior to discharge to UNT to East Branch Conestoga which flows to nutrient impaired Conestoga Rive landscape support present, buffer present, creates buffer te East Branch Conestoga River, adjacent land use intensity low (forested and school) N/A Potential bog turtle habitat, landscape support present, buffer present, adjacent land use intensity low (forested and residentia) N/A 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)
W8c A37 A45 A49 B16	PEM PEM PEM PEM PEM	Lancaster Berks Berks Berks Berks	None Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Sediment/Toxicant Retention, and Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal Groundwater Recharge/Discharge, Floodflow Alteration,	x x x	Poor Good Poor Good Fair	wildlife corridor to forested areas to south and southeast         N/A         Nutrient removal prior to discharge to UNT to East Branch         Conestoga which flows to nutrient impaired Conestoga Rive         Landscape support present, buffer present, creates buffer to         East Branch Conestoga River, adjacent land use intensity         low (forested and school)         N/A         Potential bog turtle habitat, landscape support present, adjacent land use intensity low (forested and school)         N/A         Large aerial extent (>1 ac with off-ROW wetland), potential bog turtle habitat, landscape support present (partice habitat, landscape support present (partice habitat, landscape support present (partice)         N/A         Large aerial extent (>1 ac with off-ROW wetland), potential bog turtle habitat, landscape support present (partice)
W8c A37 A45 A49 B16 B18 B40 B48	PEM PEM PEM PEM PEM PEM PEM	Lancaster Berks	None           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal           Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal	x x x x x x x	Poor Good Poor Good Fair Good Fair Poor	wildlife corridor to forested areas to south and southeast         N/A         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)         N/A         Potential bog turtle habitat, landscape support present, buffer present, adjacent land use intensity low (forested and residential)         N/A         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)         N/A         N/A
W8c A37 A45 A49 B16 B18 B40 B48 BA10	PEM PEM PEM PEM PEM PEM PEM PEM PEM	Lancaster Berks	None           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal	x x x x x x x x x	Poor Good Poor Good Fair Good Fair Poor Poor	wildlife corridor to forested areas to south and southeast         N/A         Nutrient removal prior to discharge to UNT to East Branch         Conestoga which flows to nutrient impaired Conestoga Rive         Landscape support present, buffer present, creates buffer to         East Branch Conestoga River, adjacent land use intensity         low (forested and school)         N/A         Potential bog turtle habitat, landscape support present, adjacent land use intensity low (forested an residential)         N/A         Large aerial extent (>1 ac with off-ROW wetland), potential og turtle habitat, landscape support present (adjacent to and benefits UNT to Little Cocalico Creek, part of larger surrounding extensive habitat)         N/A         N/A         N/A         N/A         N/A
W8c A37 A45 A49 B16 B18 B40 B48	PEM PEM PEM PEM PEM PEM PEM	Lancaster Berks	None           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal           Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal	x x x x x x x	Poor Good Poor Good Fair Good Fair Poor	wildlife corridor to forested areas to south and southeast         N/A         Nutrient removal prior to discharge to UNT to East Branch         Conestoga which flows to nutrient impaired Conestoga Rive         Landscape support present, buffer present, creates buffer to         East Branch Conestoga River, adjacent land use intensity         low (forested and school)         N/A         Potential bog turtle habitat, landscape support present,         buffer present, adjacent land use intensity low (forested and residential)         N/A         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)         N/A         Conestoga River, adjacc
W8c A37 A45 A49 B16 B18 B18 B40 B48 BA10 H23	PEM PEM PEM PEM PEM PEM PEM PEM PEM	Lancaster Berks Be	None           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal           Sediment/Toxicant Retention, and Nutrient Removal           None           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal           None           Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x x x x x x x x x x x x	Poor Good Poor Good Fair Good Fair Poor Poor Poor	wildlife corridor to forested areas to south and southeast         N/A         Nutrient removal prior to discharge to UNT to East Branch         Conestoga which flows to nutrient impaired Conestoga Rive         landscape support present, buffer present, creates buffer to         East Branch Conestoga River, adjacent land use intensity         low (forested and school)         N/A         Potential bog turtle habitat, landscape support present, buffer present, adjacent land use intensity low (forested and residential)         N/A         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)         N/A         N/A         N/A         Large aerial extent (>1 ac), nutrient renoval prior to discharge to UNT to East Branch Conestoga Avich flows to nutrient impaired Conestoga River, landscape support present, buffer present, creates buffer to East Branch

Wetland	Cowardin <sup>1</sup>	County	Provided Principal Functions <sup>2</sup>	Within Existing ROW	Assessed Quality <sup>3</sup>	Unique Functions and Values (for only "Good" or "Excellent")
B19	PEM	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	x	Fair	N/A
B71	PFO	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Production Export	x	Good	Large aerial extent (>1 ac on and off-ROW), buffers UNT to Valley Creek, provides benefits downstream to Valley Cree 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,	x	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	x	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 large 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	x	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	х	Poor	N/A
Q75	PFO	Chester	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	x	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	x	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	x	Good	Buffers UNT to Marsh Creek, landscape support present (upstream of DCNR State Park - Marsh Creek - provides downstream benefits, part of larger contiguous habitat)
			Sediment/Toxicant Retention			N/A
BA5	PFO	Delaware			Poor	
BA6	PFO	Delaware	Sediment/Toxicant Retention, Nutrient Removal		Poor	N/A
C21	PFO	Delaware	Wildlife Habitat	x	Poor	N/A
H41	PEM, PSS	Delaware	Sediment/Toxicant Retention	х	Poor	N/A
11	PEM, PSS	Delaware	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Production Export	x	Good	N/A
116	PEM, PFO	Delaware	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	x	Fair	N/A
	PEM	Delaware	Sediment/Toxicant Retention, Nutrient Removal	x	Poor	N/A

Towardin classification only included for impacted portion of the wetland.
 <sup>2</sup>Wetland functions were determined using the Highway Method.
 <sup>3</sup>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
 **X** Part or all of the assessed wetland [complex] is located within an existing [maintained] right-of-way.

Generalized Assessment of Quality <sup>3</sup>	
Excellent	Many to All Functions and Values
Good	Several to Many Functions and Values
Fair	Few to Several 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	
In NRCS easement	
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	