Appendix 14-2

Wetland Functions and Values Assessment

Highest standards

RIVERSIDE SOLAR, LLC

Matter No. 21-00752

Towns of Lyme and Brownville

Jefferson County, NY

Appendix 14-2

Wetland Functions and Values Assessment

September 2021

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1.0 Introduction and Purpose

This assessment report has been prepared by TRC on behalf of Riverside Solar Facility, LLC (a wholly owned, indirect subsidiary of AES Corporation (AES)). The report provides a functions and values assessment of the freshwater wetland resources currently present on the 1,168 acre Riverside Solar Facility (Facility Site), within the Towns of Lyme and Brownville, Jefferson County, New York. This Assessment provides a pre-construction baseline for wetlands on Site that may or may not be impacted by construction and/or operation of a proposed 100 megawatt (MW) solar-powered wholesale energy generating facility with associated infrastructure (the Facility).

Wetlands that are deemed Waters of the United States (WOTUS) are regulated by the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act of 1972 (CWA). Originating in 1987, *The Highway Methodology Workbook* (the Workbook), was created by the USACE New England District to integrate highway planning, design, and development with the requirements of USACE permit regulations, the National Environmental Policy Act (NEPA), and the Federal Highway Administration (FHWA) funding approvals (USACE, 1993). A memorandum of agreement between the Environmental Protection Agency (EPA) and USACE, dated February 7, 1990, was appended to the Workbook, recognizing a stepwise process of avoidance, minimization, and compensation of adverse impacts to an established set of wetland functions and values. Subsequently, *Wetlands Functions and Values: A Descriptive Approach*, was created by the USACE New England District as a supplement to the Workbook (the Supplement). Within the Supplement, a “Descriptive Approach” is presented as a method that any Facility, outside the scope of highway development, could adopt to characterize wetland resources necessary for Section 404 permit requirements.

Efforts to utilize best professional judgment to interpret functions and values are often unorganized, unpredictable, and legally difficult to defend and document (USACE, 1999). In response, the USACE developed a format in the Supplement to collect and display this information, and to describe the functions and values assessment of wetlands in a measurable and un-biased perspective.

In contrast, New York State does not yet have its own wetland functional assessment methodology intended to aid in a regulatory review of Facility impacts. Nor does New York State endorse any specific methodology. However, a survey of New York State Department of

Environmental Conservation (NYSDEC) wetland biologists reveals the USACE Highway Methodology to be the most commonly used wetland functional assessment technique for Facilities requiring NYSDEC permits (Bliss, 2016). Importantly, the functions and values reviewed by the Supplement are compatible with the wetland benefits outlined in the Environmental Conservation Law at Article 24, the Freshwater Wetlands Act. For these reasons, TRC elects to rely heavily upon the USACE Highway Methodology outlined in the Supplement as a means of providing a wetlands functions and values assessment.

Riverside Solar, LLC contracted TRC to survey, identify, and document all wetlands within the Facility Site. Within the 1,168 acres of leased private lands within the Facility Site, TRC delineated 23 freshwater wetlands, totaling approximately 104 acres. This Assessment is intended to aid in determining the wetland functions and values that may be impacted and/or altered due to the Facility's construction and operation.

The functions and values of wetlands are the roles that a wetland provides to its surrounding environment, often to the benefit of human society. Functions and values are a result of specific biological, chemical, and physical characteristics within the wetland, and many complex relationships between the wetland and its watershed, local environment, and inhabitants and dependents, including the public. This wetland functions and values assessment is used to document wetland features based on their presence and level of significance relative to providing these many roles. Further review of the functions and values attributed to each wetland allows for an assessment of which ones may be regarded as principal, or more relevant, to a given wetland. Doing so helps to ensure that wetlands receive proper protection through well planned wetland impact avoidance, minimization, and mitigation.

The 13 functions and values that are considered by the USACE Supplement are described below in Sections 3.0 and 4.0. The list includes eight functions and five values.

As noted above, these functions and values equate well to the benefits of concern within the applicable New York State Environmental Conservation Law. These functions and values, together with the working suite of USACE Supplement descriptors, have been used to provide an objective representation of the wetland resources associated with the Facility.

2.0 Assessment Methodology

This wetland functions and values assessment was developed based on the *Wetlands Functions and Values: A Descriptive Approach*, described in the supplement to *The Highway Methodology Workbook* (the Supplement) by the New England Division of the USACE (1999). This method incorporates wetland science and best professional judgement in data collection toward a qualitative description of the physical and biological characteristics of the wetlands. In so doing, it identifies the functions and values exhibited and, very importantly, the bases for associated conclusions. The approach addresses the limitations of wetland assessments based on numerical weightings, rankings, and/or averaging of dissimilar wetland functions (USACE 1999). As part of this method, the evaluator accounted for many predetermined "Qualifiers" that are utilized as indicators or descriptors of functions and values. Based on the descriptions of qualifiers outlined in the Supplement, TRC developed a spreadsheet (Table 1) that displays these qualifiers. When attributed to a wetland, these qualifiers, help to identify the functions and values thought to be provided by the wetland. Considerations included observed vegetation conditions, hydrologic conditions, size, adjacent area conditions, and the availability of public access, among several other characteristics documented either in the field or remotely, which are strategically defined to allow each wetland's functions and values to be evaluated.

Functions and values were evaluated for all wetlands on Site during the 2020 growing season. Data on qualifiers of functions and values were documented at each wetland where vegetation, soils, hydrological data, location, and geographic nature were also collected as part of a formal delineation. All 23 wetlands delineated within the Facility Site were entered into Table 2 with the various wetland qualifiers identified if and as applicable to each wetland. This accounting of observed qualifiers was cross-referenced to the predetermined Qualifier Assignment Table (Table 1). The functions and values provided by each wetland were thus determined based on the predetermined qualifiers observed in the field or ascertained remotely. From these, Principal Functions and Values were selected and recorded as evidenced by volume, perceived strength, and significance of associated qualifiers.

Wetlands functions and values recognized under Article 24 of the Environmental Conservation Law and Regulations are similar to those described by the Supplement. The Functions and values as outlined in the Freshwater Wetlands Act are as follows:

1. Flood and storm control by the hydrologic absorption and storage capacity of freshwater wetlands;
2. Wildlife habitat by providing breeding, nesting, and feeding grounds and cover for many forms of wildlife, wildfowl, and shorebirds, including migratory wildfowl and species such as the bald eagle and osprey;
3. Protection of subsurface water resources and provision for valuable watersheds and recharging ground water supplies;
4. Recreation by providing areas for hunting, fishing, boating, hiking, bird watching, photography, camping and other uses;
5. Pollution treatment by serving as biological and chemical oxidation basins;
6. Erosion control by serving as sedimentation areas and filtering basins, absorbing silt and organic matter, and protecting channels and harbors;
7. Education and scientific research by providing readily accessible outdoor bio-physical laboratories, living classrooms, and vast training and education resources;
8. Open space and aesthetic appreciation by providing often the only remaining open areas along crowded river fronts and coastal Great Lakes regions; and
9. Sources of nutrients in freshwater food cycles and nursery grounds and sanctuaries for freshwater fish.

3.0 Wetland Functions

Wetland functions are the properties or processes of a wetland ecosystem that aid in promoting an equilibrium in the wetland and surrounding environment. Wetland functions relate to the ecological significance of wetland properties without regard to subjective human values. The eight functions attributed to wetlands by the Supplement are defined as follows:

1. **Flood-flow Alteration -** The effectiveness of the wetland to reduce flood damage by containing and desynchronizing floodwaters for an extended period following heavy precipitation and runoff events. Wetlands that occur higher in a watershed reduce flooding of downstream waterbodies through ponding water and diffusing or diverting flow velocities. Wetlands that occur lower in the watershed may contain the ability to store high volumes of water through direct interactions with the local floodplain or contain large areas of porous surface soils with the ability to become heavily saturated and still maintain integrity during flood-flow events. If a wetland is situated in the riparian zone along a waterbody and contains dense vegetation, it can attenuate the severity of increased flow regimes by dissipating flow velocity during flooding events.
2. **Groundwater Recharge/Discharge -** The potential for a wetland to act as a source of groundwater recharge and/or discharge. Recharge describes the potential for the wetland to contribute water to an underlying aquifer. Discharge relates to the potential for the wetland to act as a source of groundwater transfer to the surface (i.e., springs and hillside seeps).
3. **Sediment/Pollutant Retention -** The ability to reduce or prevent the degradation of water quality. This function relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens based on its geomorphic position, connectivity, soil thickness, and other physical characteristics. The retention of sediments, toxicants, or pathogens that may be carried by surface water runoff within the watershed reduces or prevents the degradation of water quality and is a function shared by many wetland features.
4. **Fish and Shellfish Habitat -** The ability to contain or influence suitable habitats for fish and shellfish. For a wetland to contain fish and/or shellfish habitat, the wetland must be associated with a fish/shellfish bearing water. Wetlands providing fish and shellfish habitat are typically associated with perennial streams or large bodies of standing water.

These waterbodies must contain appropriate levels of nutrient production, habitat complexity, and flow regimes to support the lifecycles of various fish and/or shellfish species.

5. **Sediment/Shoreline Stabilization -** The ability to effectively stabilize streambanks and shorelines against erosion.
6. **Production (Nutrient) Export -** The ability to produce food or usable products for all organisms, including humans. To perform this function, a wetland must contain a level of high productivity. Wetlands that exhibit this function have an abundance of wildlife habitat and are ecologically rich. Many trophic levels support a higher level of production within the system and, therefore, an increased level of production export.
7. **Nutrient Removal/Retention/Transformation -** The ability to prevent excess nutrients from entering aquifers or surface waters by trapping nutrients in runoff water from surrounding uplands or contiguous wetlands, and by processing these nutrients into other forms or trophic levels. Wetlands remove excess nutrients carried by sediments through absorbing them into soils with high organic matter or transforming these nutrients through nitrification and denitrification as a result of the alternating oxic and anoxic water conditions caused by wetland hydrology.
8. **Wildlife Habitat -** The effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and their periphery. Resident and migrating species are considered along with the potential for any state or federally listed species occurring within the target wetland. The presence of wildlife habitat can be inferred by looking at the characteristics of a wetland including the ecological community present, dominant vegetation, and surrounding habitat availability. Wetlands often support large invertebrate populations which provide a food source for birds, bats, and other wildlife. Inundation and open water found in some wetlands can provide aquatic breeding habitat for amphibians as well. Many plant species commonly found in wetlands may be used by birds and mammals as a food source.

4.0 Wetland Values

Values are the societal benefits resulting from one or more of the functions and the physical characteristics associated with a wetland. The five values defined by the Supplement and adopted for use in this assessment, including short descriptions of each value, are described below.

1. **Recreation -** The effectiveness of the wetland to provide, or assist in the establishment of, recreational opportunities such as boating, fishing, hunting, and other leisurely pursuits.
2. **Education/Scientific Value -** The effectiveness of the wetland as a site for public education or as a location for scientific research.
3. **Uniqueness/Heritage -** The ability to contain or demonstrate a singular or rare quality. Such qualities may include the presence of archaeological sites; an unusual aesthetic quality; historical events that took place at the wetland; or unique plants, animals, or geologic features located within, or supported by, the wetland.
4. **Visual Quality/Aesthetics -** The ability to provide pleasing or unique visual and aesthetic qualities.
5. **Threatened or Endangered Species Habitat -** The effectiveness of the wetland to specifically support threatened or endangered species.

5.0 Results

The assignment of qualifiers, which when attributed to a given wetland, identified the functions and values thought to be provided by the wetlands identified within the Facility Site (Table 1). The principal functions and values of each delineated wetland are based on those which stand out as having the most qualifiers and most substantive qualifiers deemed applicable (Table 2). The USACE identifies principle functions and values as those that are most important to the wetland and the community as a whole.

5.1 Groundwater Recharge/Discharge

All wetlands within the Facility Site were found to exhibit groundwater recharge/discharge. This conclusion is due in part by the relative fluidity and connectivity of wetlands and waterbodies through surface or groundwater flows and the fundamental interactions that occur between wetlands and aquifers. The wetlands were observed to have characteristics such as being associated with a watercourse, ponded water, signs of springs or seeps, fine or organic soils, located in a concave depression or containing a gradual gradient, water marks, and deep surface soil layers. These characteristics indicate that the water level changes periodically or seasonally within the wetland due to potential discharge/recharge events, which the wetland assists in the continuance of surface water flows for groundwater recharge, or that physical wetland attributes allow for groundwater recharge/discharge to occur on-site at variable rates.

5.2 Flood-flow Alteration

All wetlands within the Facility Site were found to promote flood-flow alteration or attenuation. The delineated wetlands were noted to have a combination of features including ponded water, water marks, dense vegetative cover, association with a waterbody, deep surface soil layers, fine-grained or organic soils, large areas relative to other wetlands in the local watershed and occurring in a concave landform or on a gentle gradient. These characteristics contribute to the ability of a wetland to reduce stormwater flow velocities, divert and diffuse stormwater flows, and store excess water.

5.3 Fish and Shellfish Habitat

Three wetlands within the Facility Site were designated as having the function of supporting fish/shellfish habitat. These wetlands were associated with perennial streams or large open waterbodies that were determined to function as fish/shellfish habitat. Delineated wetlands were

also included as contributing to potential fish/shellfish habitat if they contained intermittent tributaries and/or ponded wetland Sites that were sufficiently close to a perennial waterbody as to provide seasonal fish habitat or potential refugia within confluence Sites.

5.4 Sediment/Toxicant/Pathogen Retention

All wetlands in the Facility Site were noted to contain sediment/toxicant/pathogen retention abilities. These wetlands were determined to have some combination of thick layers of organic soils, dense vegetation, a landscape position on concave landforms or gentle gradients, and/or Sites of deep open water capable of trapping sediment/toxicant/pathogens and allowing them to settle out of the water column. Wetlands that provide flood-flow alteration were also considered to exhibit the function of sediment/toxicant/pathogen retention. Increased flow regimes caused by flooding events carry increased sediment loads. These increased sediment loads are in turn deposited in wetlands that provide the function of flood flow attenuation by disrupting increased flow regimes.

5.5 Nutrient Removal/Retention/Transformation

All wetlands within the Facility Site perform a nutrient removal/retention/transformation function. Wetlands within the Facility Site that support nutrient removal/retention/transformation contain characteristics such as inundation or deep water habitats, association with a watercourse, concave topography or gentle gradients, large size compared to other wetlands in the Site, thick layers of fine-grained or organic soils, and dense vegetative cover. Large portions of the Facility Site are active agricultural land. Wetlands that exhibit the nutrient removal, retention, and transformation function are important in helping reduce the input of excess nutrients generated by this agriculture to downstream watercourses. Excess nutrients in a watershed are associated with increased productivity levels of aquatic plant life, eutrophication events, and lowered dissolved oxygen levels throughout the water column. Such instances may lower water quality, alter aquatic habitat, and adversely impact fish and other aquatic species.

5.6 Production Export

Fourteen wetlands within the Facility Site exhibit the function of production export. Wetlands in the Facility Site with this function contain relatively high ecological richness and a high structural diversity through the presence of multiple vegetative cover types. Wetlands that are seasonally or perpetually inundated, serve as habitats for amphibians, reptiles, freshwater fish, aquatic

invertebrates, and as breeding areas for insects. These species are consumed by higher trophic levels, including birds, bats and various mammals.

5.7 Sediment/Shoreline Stabilization

Nine wetlands within the Facility Site exhibit the function of sediment/shoreline stabilization. Wetlands in the Facility Site were considered to function in stabilizing the sediment and banks of a waterbody if they created a buffer zone adjacent to a waterbody that acts to absorb and/or diffuse high flow velocities during flood events, thus preventing the erosion of shoreline or transport of excess sediment.

5.8 Wildlife Habitat

Within the Facility Site, 14 of the identified wetlands exhibited sufficient qualifiers to support the function as wildlife habitat. Wildlife or evidence of wildlife was observed during field surveys in many of the wetlands. White-tailed deer (*Odocoileus virginianus*), eastern gray squirrel (*Sciurus carolinensis*), various birds, green frogs (*Lithobates clamitans*), and several other species of mammals, reptiles, amphibians, and various invertebrates were seen within wetlands located throughout the Facility Site during field surveys. Evidence of wildlife observed in wetlands also includes tracks, scat, burrows, scrapes, and chews. Wetlands in the Facility Site that support wildlife habitat have some combination of characteristics including association with a watercourse, dense vegetative coverage, multiple cover types, limited wetland fragmentation, deep open water Sites, and ecological richness.

5.9 Recreation

A total of ten wetlands in the Facility Site are considered suitable for recreation. Although they are located on private land without available public access, hunting on private lands is very prevalent within the Facility Site as evidenced by deer stands, duck blinds located in wetlands and the surrounding area throughout the Facility Site. Additionally, there are deep open water areas within wetlands in the Facility Site that may support fishing, another popular recreational activity on private land.

5.10 Educational/Scientific Value

The wetlands in the Facility Site do not provide direct educational value, as they are located on private land without available or safe public access, parking, or facilities. Additionally, none were

determined to have significant scientific value as there are no attributed relevant qualifiers, such as rare or significant wetland community types within the Facility Site.

5.11 Uniqueness/Heritage

None of the wetlands within the Facility Site have been determined to contain a uniqueness/heritage value.

5.12 Visual Quality/Aesthetics

A total of nine wetlands in the Facility Site were found to exhibit visual quality/aesthetics values. Although they lack a primary publicly-accessible viewing location, they are visible to local land owners. Qualifiers within a wetland that support a value of visual quality/aesthetics include an associated watercourse and a sizeable wetland complex.

5.13 Threatened or Endangered Species Habitat

Correspondence with the New York Natural Heritage Program (NYNHP) indicated there was a potential for the presence of State-threatened Henslow's sparrow (*Ammodramus henslowii*), upland sandpiper (*Bartramia longicauda*), bald eagle (*Haliaeetus leucocephalus*) and northern long-eared bat (*Myotis septentrionalis*); as well as State-endangered short-eared owl (*Asio flammeus*) and Indiana bat (*Myotis sodalis*) in the Facility vicinity. Also, review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system indicated there was potential for the presence of the Federally-endangered Indiana bat and Federally-threatened northern long-eared bat in the Facility vicinity.

Table 1. Qualifier Assignment Table

	Wetland Functions								Wetland Values				
Qualifiers	Groundwater Recharge or Discharge	Flood Flow Alteration	Fish or Shellfish Habitat	Sediment, Toxicant, Pathogen Retention	Nutrient Removal, Retention, Transformation	Production Export	Sediment, Shoreline Stabilization	Wildlife Habitat	Recreation	Educational or Scientific Value	Uniqueness and Heritage	Visual Quality and Aesthetics	Threatened or Endangered Species Habitat
Associated with Watercourse	X	X		X	X	X	X	X	X			X	
Signs of Springs/Seeps	X												
Concave Landform or Gentle Gradient		X		X	X								
Deep Surface Soil Layer (16"+)		X		X	X								
Dense Vegetative Coverage		X		X	X	X		X					
Sizeable Wetland		X			X				X			X	
Deep Open Water Area	X	X	X	X	X	X		X	X				
Fish/Shellfish Present			X			X		X	X				
Ecologically Rich					X	X		X					
Fine-grained or Organic Soils Present	X	X		X	X								
No to Low Wetland Fragmentation								X					
Threatened/Endangered Present or Habitat Present								X		X	X		X
Multiple Cover Types					X	X		X					

Table 2. Functions and Values of Delineated Wetlands

Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-BTF-2	No	No	Yes	Yes	Low	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention;** Production Export; Wildlife Habitat	
W-BTF-3	No	No	Yes	Yes	Low	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**; Production Export; Wildlife Habitat	

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Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-BTF-5	Yes	No	Yes	Yes	Medium	Large	Yes	No	No	Yes	Medium	No	No	Yes	Groundwater Recharge/Discharge; **Flood Flow Alteration**; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**; Fish or Shellfish Habitat; Sediment/Shoreline Stabilization; Production Export; Wildlife Habitat	**Recreation; Visual Quality and Aesthetics**
W-BTF-6	No	No	Yes	Yes	High	Large	No	No	No	Yes	Low	No	No	Yes	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; Wildlife Habitat; **Sediment, Toxicant, Pathogen Retention**; Production Export	

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Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-BTF-7	No	No	Yes	Yes	Medium	Medium	Yes	No	No	Yes	High	No	No	Yes	Groundwater Recharge/Discharge; Flood Flow Alteration; **Nutrient Removal/ Retention/Transformation**; Wildlife Habitat; Fish or Shellfish Habitat; **Sediment, Toxicant, Pathogen Retention**; Production Export	Recreation
W-BTF-8	No	No	Yes	Yes	Low	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**; Production Export; Wildlife Habitat	

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Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-BTF-9	Yes	No	Yes	No	Low	Medium	No	No	No	Yes	Medium	No	No	No	Groundwater Recharge/Discharge; **Flood Flow Alteration**; Nutrient Removal/ Retention/Transformation; Wildlife Habitat; Sediment, Toxicant, Pathogen Retention; Production Export; Sediment/Shoreline Stabilization;	Recreation; Visual Quality and Aesthetics
W-BTF-10	Yes	No	Yes	Yes	Low	Small	No	Yes	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; **Flood Flow Alteration**; Nutrient Removal/ Retention/Transformation; Wildlife Habitat; Sediment, Toxicant, Pathogen Retention; Production Export; Sediment/Shoreline Stabilization;	Recreation; Visual Quality and Aesthetics

Table 2. Functions and Values of Delineated Wetlands

Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-BTF-11	Yes	No	Yes	Yes	Low	Large	No	No	No	Yes	Medium	No	No	No	Groundwater Recharge/Discharge; **Flood Flow Alteration**; Nutrient Removal/ Retention/Transformation; Wildlife Habitat; Sediment, Toxicant, Pathogen Retention; Production Export; Sediment/Shoreline Stabilization;	Recreation; Visual Quality and Aesthetics
W-BTF-12	No	No	Yes	No	Medium	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**;	
W-JJB-2	No	No	Yes	Yes	Medium	Small	No	No	No	No	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**;	

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Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-NSD-1	Yes	No	Yes	Yes	Medium	Large	Yes	No	No	Yes	Low	No	No	Yes	Groundwater Recharge/Discharge; **Flood Flow Alteration**; **Nutrient Removal/ Retention/Transformation**; **Sediment, Toxicant, Pathogen Retention**; Fish or Shellfish Habitat; Sediment, Shoreline Stabilization; Production Export; Wildlife Habitat	**Recreation; Visual Quality and Aesthetics**
W-NSD-2	No	No	Yes	Yes	High	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**	

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Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-NSD-3	Yes	No	Yes	Yes	High	Large	No	No	No	Yes	Medium	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; X; Sediment, Shoreline Stabilization; Production Export; Wildlife Habitat	**Recreation; Visual Quality and Aesthetics**
W-NSD-4	No	No	Yes	Yes	High	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; Wildlife Habitat; **Sediment, Toxicant, Pathogen Retention**; Production Export	
W-NSD-5	No	No	Yes	Yes	High	Medium	No	No	No	Yes	Medium	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; Wildlife Habitat; **Sediment, Toxicant, Pathogen Retention**; Production Export	

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Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-NSD-6	No	No	Yes	Yes	High	Medium	No	No	No	Yes	Medium	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; Wildlife Habitat; **Sediment, Toxicant, Pathogen Retention**; Production Export	
W-NSD-7	No	No	Yes	Yes	Medium	Medium	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**; Production Export; Wildlife Habitat	
W-NSD-9	No	No	Yes	Yes	Low	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**; Production Export; Wildlife Habitat	

Table 2. Functions and Values of Delineated Wetlands

Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-NSD-10	No	No	Yes	Yes	Low	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**; Production Export; Wildlife Habitat	
W-NSD-11	Yes	No	Yes	Yes	Medium	Medium	No	No	No	Yes	Medium	No	No	Yes	Groundwater Recharge/Discharge; **Flood Flow Alteration**; **Nutrient Removal/ Retention/Transformation**; **Sediment, Toxicant, Pathogen Retention**; Sediment, Shoreline Stabilization; Production Export; Wildlife Habitat	Recreation; Visual Quality and Aesthetics

Table 2. Functions and Values of Delineated Wetlands

Wetland Name	Associated with Watercourse	Signs of Springs /Seeps	Concave Landform or Gentle Gradient	Deep Surface Soil Layer (16"+)	Vegetative Cover Density (High, Medium, Low)	Wetland Size (Small, Medium, Large)	Deep Open Water Area (3'+)	Fish or Shellfish Present in Associated Stream	Ecologically Rich	Fine-grained or Organic Soils Present	Wetland Fragmentation (High, Medium, Low)	Publicly Accessible	Threatened or Endangered Species Present or Habitat Present	Multiple Cover types	Attributed Functions[1]	Attributed Values[1]
W-NSD-12	Yes	No	Yes	Yes	Low	Small	No	No	No	Yes	High	No	No	No	Groundwater Recharge/Discharge; Flood Flow Alteration; Nutrient Removal/ Retention/Transformation; **Sediment, Toxicant, Pathogen Retention**; Sediment, Shoreline Stabilization; Production Export; Wildlife Habitat	Recreation; Visual Quality and Aesthetics
W-NSD-13	Yes	No	Yes	Yes	Medium	Medium	No	No	No	Yes	Medium	No	No	Yes	Groundwater Recharge/Discharge; **Flood Flow Alteration**; **Nutrient Removal/ Retention/Transformation** ; **Sediment, Toxicant, Pathogen Retention**; Sediment, Shoreline Stabilization; Production Export; Wildlife Habitat	Recreation; Visual Quality and Aesthetics

[1]Functions and values in bold represent the principal functions and values of each wetland.

6.0 Conclusions

Wetlands delineated within the Facility Site displayed multiple functions based on their specific characteristics. Each of the wetlands identified within the Facility Site were determined to have the ability to provide the functions of groundwater recharge/discharge, flood-flow alteration, sediment/toxicant/pathogen retention, production export, wildlife habitat, and nutrient removal/retention/transformation. Other functions displayed within wetlands delineated within the Facility Site include:

- Sediment/Shoreline Stabilization (9 wetlands)
- Fish and Shellfish Habitat (3 wetlands)

Values were found to occur in most, but not all wetlands within the Facility Site, based on this assessment. None of the values looked at in this assessment were found to occur within all wetlands in the Facility Site. No wetlands observed within the Facility Site currently have Educational or Scientific, or Uniqueness and Heritage Values, the values that were found to occur include:

- Recreation (10 Wetlands)
- Visual Quality and Aesthetics (9 Wetlands)

Assessing a specific wetland's functions and values is needed to determine the overall effects an impact or alteration may have on a wetland feature. Those functions and values deemed to be principal provide the greatest insight to that effort. Ultimately, such a measurement aids in establishing the appropriate level of mitigation after impacts to a wetland occur. As such, this functions and values assessment will be utilized during the impact analysis and mitigation planning efforts for the Facility, wherein functions and values identified as principal shall receive greater focus.

7.0 References

Bliss, Kevin. 2016. NYSWF Wetland Functional Assessment Workshop [PowerPoint Slides]. Retrieved from http://www.wetlandsforum.org/NYSWFWetlandAssessmentOctober13WorkshopIntro.pdf Accessed April 2021.

U.S. Army Corps of Engineers (USACE). 1993. *The Highway Methodology Workbook*. U.S. Army Corps of Engineers, New England Division. NEDEP-360-1-30. 30 pp.

USACE. 1999. *The Highway Methodology Workbook Supplement. Wetland Functions and Values: A Descriptive Approach*. U.S. Army Corps of Engineers, New England Division. NAEEP-360-1-30a. 32 pp.

Attachment A. Wetland Functions and Values Forms

Wetland Function-Value Evaluation Form

Total area of wetland 0.17 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 200'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-2

Latitude 44.080 Longitude -76.069

Prepared by: ND Date 923/2021

Wetland Impact:
Type Veg Clearing Area 0.13

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	7, 14		Opportunity assumed to be present, wetland within an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Bordered by shrubland
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.14 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 200'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-3

Latitude 44.081 Longitude -76.066

Prepared by: ND Date 9/23/2021

Wetland Impact:
Type Veg Clearing Area 0.001

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	7, 14		Opportunity assumed to be present, wetland within an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Bordered by shrubland
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 46.85 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 250'

Dominant wetland systems present PEM, PUB, PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-5

Latitude 44.073 Longitude -76.068

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type Access Road Area 0.27 ac

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18	X	Depressions allow for storm water storage
Fish and Shellfish Habitat	Y	4, 7, 14, 16, 17		Associated stream able to support fish populations
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland, connected to a slow moving stream
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 12, 14		Connected to a stream with nutrients
Sediment/Shoreline Stabilization	Y	3, 4, 6, 7, 12, 13, 15		Low flow velocity in the stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y	6, 12	X	No opportunity but it has the value
Educational/Scientific Value	N			No opportunity but it has the value
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y	2, 5, 8,12	X	Close proximity to a road
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 14.61 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture/Forest Distance to nearest roadway or other development 300'

Dominant wetland systems present PEM, PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-6

Latitude 44.068 Longitude -76.060

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 1.51 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture/Shrubland Distance to nearest roadway or other development 300'

Dominant wetland systems present PEM, PUB Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-7

Latitude 44.069 Longitude -76.062

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	Y	1, 2		Deep water aquatic habitat
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11	X	Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y	6		No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.13 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture/Shrubland Distance to nearest roadway or other development 300'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-8

Latitude 44.068 Longitude -76.062

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11	X	Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2.51 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 150'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-9

Latitude 44.062 Longitude -76.088

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type Fence Area 0.001 ac

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18	X	Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16		Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y			No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y			Close proximity to a road
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 1.44 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 150'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-10

Latitude 44.061 Longitude -76.083

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18	X	Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16		Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y			No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y			Close proximity to a road
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 12.58 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture/Shrubland Distance to nearest roadway or other development 350'

Dominant wetland systems present PEM/PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-10

Latitude 44.053 Longitude -76.119

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18	X	Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16		Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y			No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y			Close proximity to a road
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.46 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 200'

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-BF-12

Latitude 44.058 Longitude -76.100

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type Fence Area 0.003 ac

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	7, 14		Opportunity assumed to be present, wetland within an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 1.72 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 100'

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-JJB-2

Latitude 44.069 Longitude -76.114

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	7, 14		Opportunity assumed to be present, wetland within an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2.09 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture/Shrubland/Forest Distance to nearest roadway or other development 500'

Dominant wetland systems present PEM/PFO/PUB Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-1

Latitude 44.069 Longitude -76.114

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18	X	Depressions allow for storm water storage
Fish and Shellfish Habitat	Y	3, 4, 5, 6, 7, 10, 14, 16, 17		Good aquatic habitat present
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11	X	Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y		X	No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y		X	No opportunity but it has the value
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.03 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 500'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-2

Latitude 44.067 Longitude -76.114

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	7, 14		Opportunity assumed to be present, wetland within an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Animal tracks present
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 8.82 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 500'

Dominant wetland systems present PSS/PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-3

Latitude 44.066 Longitude -76.112

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type n/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y			No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y			No opportunity but it has the value
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.40 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 500'

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-4

Latitude 44.062 Longitude -76.117

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	7, 14		Opportunity assumed to be present, wetland within an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Animal tracks present
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 1.96 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 500'

Dominant wetland systems present PSS/PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-5

Latitude 44.060 Longitude -76.113

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland within an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Animal tracks present
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.30 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 500'

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-6

Latitude 44.062 Longitude -76.113

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type Array Area Area 0.08

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Good amphibian habitat
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 3.69 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 400'

Dominant wetland systems present PSS/PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-7

Latitude 44.060 Longitude -76.105

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Good amphibian habitat
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.09 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 400'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-9

Latitude 44.064 Longitude -76.099

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Good amphibian habitat
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.71 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 400'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-10

Latitude 44.066 Longitude -76.096

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5		Porous soils allow for recharge
Floodflow Alteration	Y	3, 5, 6, 9, 10, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1, 3, 4, 5, 11, 13, 19, 20		Good amphibian habitat
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2.47 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 500'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-11

Latitude 44.064 Longitude -76.092

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type Culvert Area 0.002 ac

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18	X	Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y			No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y			No opportunity but it has the value
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.23 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 500'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-12

Latitude 44.063 Longitude -76.089

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y			No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y			No opportunity but it has the value
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 1.31 ac Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Agriculture Distance to nearest roadway or other development 200'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NSD-13

Latitude 44.063 Longitude -76.089

Prepared by: ND Date 9/22/2021

Wetland Impact:
Type N/A Area N/A

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 7, 10, 12		Porous soils allow for recharge
Floodflow Alteration	Y	1,3, 5, 6, 9, 10, 13, 14, 18		Depressions allow for storm water storage
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 6, 10, 16	X	Potential to retain toxicants from nearby farmland
Nutrient Removal	Y	1, 3, 4, 7, 8, 9, 10, 11		Potential exists due to proximity to farmland
Production Export	Y	4, 7, 14		Opportunity assumed to be present, wetland near an agricultural field
Sediment/Shoreline Stabilization	Y	3, 4, 7, 15		Connected to a slow moving stream
Wildlife Habitat	Y	1, 3, 4, 5, 8, 11, 13, 19, 20, 21		Good amphibian habitat
Recreation	Y			No opportunity but it has the value
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	Y			Close proximity to a road
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.