APPENDIX G

Highway Methodology Wetland Function-Value Evaluation Forms

Hydrogeomorphic Assessment of Wet Hardwood Flats on Mineral Soils

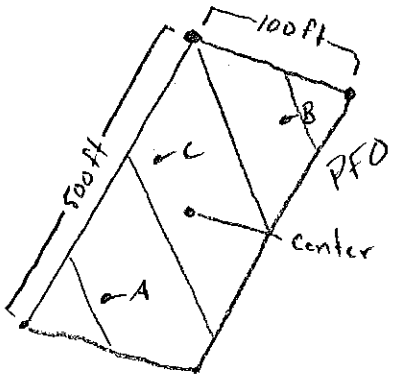
Site # SB-Ref Site Name HRCS Functional Assessment Date 3/10/2016

Time(Start & Finish) 10:30am-11:30am Crew Sean Wender, Branson Mauck

Lat/Long: 37.06304, -76.4291 AA shape: circle or (rectangle) or entire wetland polygon (circle)

AA moved from original location? Yes or (No) (circle one) If Yes, reason

Assessment Area Sketch



Stability of AA (check one)	
X	Healthy & Stable
	Deteriorating/Fragmenting
	Severe deterioration/fragmentation

Soils

Depth of organic layer (cm): 10

Comments on soil sample:

Function 1: Habitat Characteristic

Variable: Woody Debris (V_{WD}) DBH in CM

Sub-plot A	64.3	58.2	54.3
Sub-plot B	66.4	75.4	40.9
Sub-plot C	55.5	55.7	49
	Mean:	57.7	

Subindex Score: 1.00

Variable: Food Plants (V_{FOOD})

Number of species*: 17

* Number produced from species in V_{FOAI}

* Food list species provided in HGM Manual

Subindex Score: 1.00

Variable: Natural landcover with 200m ($V_{NATURAL}$)

% Natural:	78.8

Subindex Score: 0.985

Variable: Tree Density ($V_{DENSITY}$)

Sub-plot A	9
Sub-plot B	5
Sub-plot C	9
Mean:	8

Subindex Score: 1.00

Habitat Functional Capacity Formula

$(V_{WD} + V_{FOOD} + V_{NATURAL} + V_{DENSITY})/4 =$ **0.996**

Function 2: Plant Community Characteristic

Species:	A	B	C	V_{CANOPY}
Acer rubrum	✓	✓	✓	• •
Agrostis stolonifera		✓		
Aralia spinosa		✓		
Chasmanthium laxum			✓	
Clethra alnifolia			✓	
Fraxinus pennsylvanica			✓	
Ilex opaca			✓	
Juncus effusus		✓		
Liquidambar styraciflua	✓	✓	✓	• •
Magnolia virginiana	✓			
Pinus taeda	✓			• •
Pyrola americana		✓		·
Quercus alba				•
Quercus michauxii	✓			•
Quercus pagoda				
Quercus phellos				
Quercus prinus				
Sambucus canadensis		✓		
Smilax rotundifolia		✓	✓	
Symplocos tinctoria	✓			
Tipularia discolor		✓		
Vaccinium corymbosum	✓		✓	
Viburnum nudum				

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **43.9**

* Adjusted FQI value determined by entering species list into FQAI Calculator at the Mid-Atlantic Wetlands Workgroup website: http://mawwg.psu.edu/tools/fqai.asp

Subindex Score: 1.00

Variable: Canopy Tree Composition (V_{CANOPY})

Relative Dominance	Subindex
No canopy trees	0.0
>50% pine	0.0
>50% hardwoods, >25% pine, <1% oak	0.2
>50% hardwoods, <25% pine, <1% oak	0.3
>50% hardwoods, >25% pine, 1-10% oak	0.5
>50% hardwoods, <25% pine, 1-10% oak	0.7
>50% hardwoods, >25% pine, >10% oak	0.8
>50% hardwoods, <25% pine, >10% oak	1.0

Variable: Hardwood Regeneration (V_{REGEN}) %

Sub-plot **A** = 0

Sub-plot B = 0

Sub-plot C = 0

Mean = 0.00

Subindex Score: 0.00

Variable:Non-native Invasive PlantS ($V_{INVASIVE}$) %

Sub-plot A = 0

Sub-plot B = 0

Sub-plot C = 0

Mean = 0.0

Subindex Score: 1.00

Plant Community Functional Capacity Formula

$FCI = (V_{FQAI} + V_{CANOPY} + V_{REGEN} + V_{INVASIVE})/4$

FCI = 0.70

Function 3: Water Level Regime Characteristic

Variable: Anthropogenic Drainage (V_{DRAIN})

% Impacted: 0

V_{DRAIN} = 1.0

Variable: Percent Fill in WAA (V_{FILL})

% Fill: 10

V_{FILL} = 0.75

Variable: Natural Landcover with 200m ($V_{NATURAL}$)*

*$V_{NATURAL}$ value given in Function 1.

Subindex Score: 0.985

Water Regime Functional Capacity Formula

$FCI = (V_{NATURAL} + V_{DRAIN} + V_{FILL})/3$

FCI = 0.91

Function 4: Carbon Cycling Processes Characteristic

Variable: Woody Debris (V_{WD})*

*V_{WD} value given in Function 1.

Subindex Score: 1.00

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **43.9**

Subindex Score: 1.00

Variable: Herbaceous Cover (V_{HERB}) %

Sub-plot A = 10

Sub-plot B = 25

Sub-plot C = 30

Mean = 21.67

Subindex Score: 1.00

Carbon Cycling Processes Functional Capacity Formula

$(V_{WD} + V_{FQAI} + V_{HERB}$ + Water Level Regime Functional Capacity Score)/4

FCI = 0.98

Photograph 1: H SB-Ref North

Photograph 2: H SB-Ref East

Photograph 3: H SB-Ref South

Photograph 4: H SB-Ref West

Photograph 5: H SB-Ref A

Photograph 6: H SB-Ref B

Photograph 7: H SB-Ref C

Hydrogeomorphic Assessment of Wet Hardwood Flats on Mineral Soils

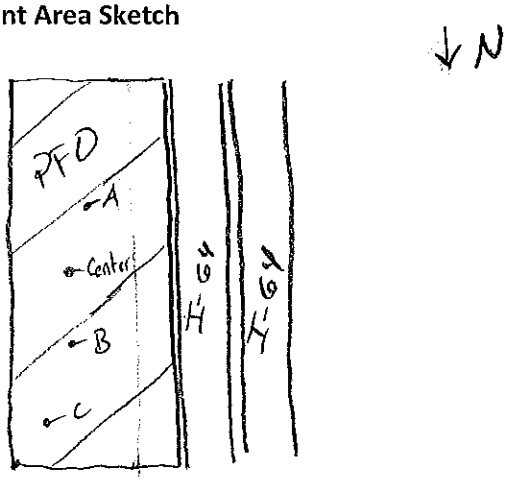
Site # H92 Site Name HRCS Functional Assessment Date 1/27/2016

Time(Start & Finish) 10:00am, 11:30 am Crew S. Wender, B. Mauck, J. Mann, B. Connors

Lat/Long: 36°52'49.52"N, 76°25'53.06"W AA shape: circle or rectangle or entire wetland polygon (circle)

AA moved from original location? Yes or No (circle one) If Yes, reason

Assessment Area Sketch



Stability of AA (check one)	
X	Healthy & Stable
	Deteriorating/Fragmenting
	Severe deterioration/fragmentation

Soils

Depth of organic layer (cm): 6

Comments on soil sample:

Function 1: Habitat Characteristic

Variable: Woody Debris (V_{WD}) DBH in CM

Sub-plot A	45.72	45.72	40.64
Sub-plot B	55.88	53.34	53.34
Sub-plot C	45.72	30.48	27.94
	Mean:	44.3	

Subindex Score: 1.00

Variable: Food Plants (V_{FOOD})

Number of species*: 16

* Number produced from species in V_{FQAI}

* Food list species provided in HGM Manual

Subindex Score: 1.0

Variable: Natural landcover with 200m ($V_{NATURAL}$)

% Natural:	67.3

Subindex Score: 0.841

Variable: Tree Density ($V_{DENSITY}$)

Sub-plot A	10
Sub-plot B	9
Sub-plot C	5
Mean:	8

Subindex Score: 1.0

Habitat Functional Capacity Formula

$(V_{WD} + V_{FOOD} + V_{NATURAL} + V_{DENSITY})/4 =$ **0.96**

Function 2: Plant Community Characteristic

Species:	A	B	C	V_{CANOPY}
Acer rubrum	✓	✓	✓	
Arundinaria tecta	✓	✓	✓	
Clethra alnifolia		✓	✓	
Fagus grandifolia	✓			
Kalmia latifolia		✓	✓	
Liquidambar styraciflua	✓	✓	✓	
Magnolia virginiana	✓			
Morella cerifera	✓			
Nyssa sylvatica		✓	✓	
Oxydendrum arboreum			✓	
Pinus taeda	✓			
Quercus alba	✓	✓	✓	
Quercus falcata			✓	
Quercus nigra	✓	✓		
Quercus phellos	✓	✓		
Quercus rubra	✓			
Smilax rotundifolia		✓	✓	
Symplocos tinctoria	✓	✓	✓	
Vaccinium corymbosum	✓	✓		

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **46.5**

* Adjusted FQI value determined by entering species list into FQAI Calculator at the Mid-Atlantic Wetlands Workgroup website: http://mawwg.psu.edu/tools/fqai.asp

Subindex Score: 1.00

Variable: Canopy Tree Composition (V_{CANOPY})

Relative Dominance	Subindex
No canopy trees	0.0
>50% pine	0.0
>50% hardwoods, >25% pine, <1% oak	0.2
>50% hardwoods, <25% pine, <1% oak	0.3
>50% hardwoods, >25% pine, 1-10% oak	0.5
>50% hardwoods, <25% pine, 1-10% oak	0.7
>50% hardwoods, >25% pine, >10% oak	0.8
>50% hardwoods, <25% pine, >10% oak	1.0

Variable: Hardwood Regeneration (V_{REGEN}) %

Sub-plot A = 5
Sub-plot B = 0
Sub-plot C = 0
Mean = 1.67

Subindex Score: 0.555

Variable:Non-native Invasive PlantS ($V_{INVASIVE}$) %

Sub-plot A = 0
Sub-plot B = 0
Sub-plot C = 0
Mean = 0.0

Subindex Score: 1.00

Plant Community Functional Capacity Formula

$FCI = (V_{FQAI} + V_{CANOPY} + V_{REGEN} + V_{INVASIVE})/4$

FCI = 0.89

Function 3: Water Level Regime Characteristic

Variable: Anthropogenic Drainage (V_{DRAIN})

% Impacted: 5

V_{DRAIN} = 0.95

Variable: Percent Fill in WAA (V_{FILL})

% Fill: 5

V_{FILL} = 1.0

Variable: Natural Landcover with 200m ($V_{NATURAL}$)*

*$V_{NATURAL}$ value given in Function 1.

Subindex Score: 0.841

Water Regime Functional Capacity Formula

$FCI = (V_{NATURAL} + V_{DRAIN} + V_{FILL})/3$

FCI = 0.93

Function 4: Carbon Cycling Processes Characteristic

Variable: Woody Debris (V_{WD})*

*V_{WD} value given in Function 1.

Subindex Score: 1.00

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **46.5**

Subindex Score: 1.00

Variable: Herbaceous Cover (V_{HERB}) %

Sub-plot **A** = 40

Sub-plot B = 65

Sub-plot C = 55

Mean = 53.33

Subindex Score: 0.89

Carbon Cycling Processes Functional Capacity Formula

$(V_{WD} + V_{FQAI} + V_{HERB}$ + Water Level Regime Functional Capacity Score)/4

FCI = 0.96

Photograph 1: H92 North

Photograph 2: H92 East

Photograph 3: H92 South

Photograph 4: H92 West

Photograph 5: H92A

Photograph 6: H92B

Photograph 7: H92C

Hydrogeomorphic Assessment of Wet Hardwood Flats on Mineral Soils

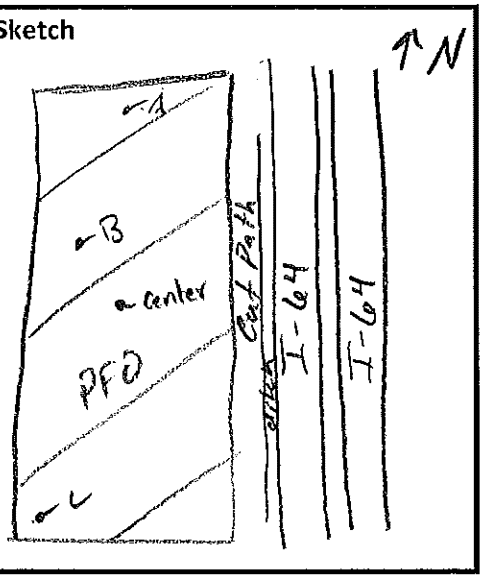
Site # H103 Site Name HRCS Functional Assessment Date 1/27/2016

Time(Start & Finish) 12:30 pm, 1:30 pm Crew S. Wender, B. Mauck, J. Mann, S. Kupiec

Lat/Long: 36°49'47.45"N, 76°26'2.96"W AA shape: circle or (rectangle) or entire wetland polygon (circle)

AA moved from original location? Yes or (No) (circle one) If Yes, reason

Assessment Area Sketch



Stability of AA (check one)	
	Healthy & Stable
X	Deteriorating/Fragmenting
	Severe deterioration/fragmentation

Soils

Depth of organic layer (cm): 7

Comments on soil sample:

Function 1: Habitat Characteristic

Variable: Woody Debris (V_{WD}) DBH in CM

Sub-plot A	48.26	40.64	35.56
Sub-plot B	60.96	30.48	30.48
Sub-plot C	43.18	55.88	43.12
Mean:	43.2		

Subindex Score: 1.00

Variable: Food Plants (V_{FOOD})

Number of species*: 18

* Number produced from species in V_{FQAI}

* Food list species provided in HGM Manual

Subindex Score: 1.00

Variable: Natural landcover with 200m ($V_{NATURAL}$)

% Natural:	58

Subindex Score: 0.73

Variable: Tree Density ($V_{DENSITY}$)

Sub-plot A	9
Sub-plot B	10
Sub-plot C	12
Mean:	10

Subindex Score: 1.00

Habitat Functional Capacity Formula

$(V_{WD} + V_{FOOD} + V_{NATURAL} + V_{DENSITY})/4 =$ **0.93**

Function 2: Plant Community Characteristic

Species:	A	B	C	V_{CANOPY}
Acer rubrum	✓	✓	✓	• • •
Arundinaria tecta	✓	✓	✓	
Clethra alnifolia				
Fagus grandifolia				
Ilex opaca	✓			
Kalmia latifolia				
Liquidambar styraciflua	✓	✓	✓	•
Liriodendron tulipifera				• •
Magnolia virginiana	✓	✓		
Nyssa sylvatica		✓	✓	•
Oxydendrum arboreum				
Pinus taeda	✓	✓	✓	☒ • •
Quercus alba			✓	
Quercus falcata				
Quercus nigra		✓		
Quercus palustris		✓		
Quercus phellos				
Smilax rotundifolia	✓	✓		
Symplocos tinctoria	✓		✓	
Vaccinium corymbosum	✓			

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **45.3**

* Adjusted FQI value determined by entering species list into FQAI Calculator at the Mid-Atlantic Wetlands Workgroup website: http://mawwg.psu.edu/tools/fqai.asp

Subindex Score: 1.00

Variable: Canopy Tree Composition (V_{CANOPY})

Relative Dominance	Subindex
No canopy trees	0.0
>50% pine	0.0
>50% hardwoods, >25% pine, <1% oak	0.2
>50% hardwoods, <25% pine, <1% oak	0.3
>50% hardwoods, >25% pine, 1-10% oak	0.5
>50% hardwoods, <25% pine, 1-10% oak	0.7
>50% hardwoods, >25% pine, >10% oak	0.8
>50% hardwoods, <25% pine, >10% oak	1.0

Variable: Hardwood Regeneration (V_{REGEN}) %

Sub-plot A = 0

Sub-plot B = 0

Sub-plot C = 0

Mean = 0

Subindex Score: 0.00

Variable:Non-native Invasive PlantS ($V_{INVASIVE}$) %

Sub-plot A = 0

Sub-plot B = 0

Sub-plot C = 0

Mean = 0.0

Subindex Score: 1.00

Plant Community Functional Capacity Formula

$FCI = (V_{FQAI} + V_{CANOPY} + V_{REGEN} + V_{INVASIVE})/4$

FCI = 0.50

Function 3: Water Level Regime Characteristic

Variable: Anthropogenic Drainage (V_{DRAIN})

% Impacted: 0.0

V_{DRAIN} = 1.0

Variable: Percent Fill in WAA (V_{FILL})

% Fill: 5

V_{FILL} = 1.0

Variable: Natural Landcover with 200m ($V_{NATURAL}$)*

*$V_{NATURAL}$ value given in Function 1.

Subindex Score: 0.73

Water Regime Functional Capacity Formula

$FCI = (V_{NATURAL} + V_{DRAIN} + V_{FILL})/3$

FCI = 0.91

Function 4: Carbon Cycling Processes Characteristic

Variable: Woody Debris (V_{WD})*

*V_{WD} value given in Function 1.

Subindex Score: 1.00

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **45.3**

Subindex Score: 1.00

Variable: Herbaceous Cover (V_{HERB}) %

Sub-plot A = 50

Sub-plot B = 40

Sub-plot C = 50

Mean = 46.67

Subindex Score: 0.779

Carbon Cycling Processes Functional Capacity Formula

$(V_{WD} + V_{FQAI} + V_{HERB}$ + Water Level Regime Functional Capacity Score)/4

FCI = **0.922**

Photograph 1: H103 North

Photograph 2: H103 East

Photograph 3: H103 South

Photograph 4: H103 West

Photograph 5: H103A

Photograph 6: H103B

Photograph 7: H103C

Hydrogeomorphic Assessment of Wet Hardwood Flats on Mineral Soils

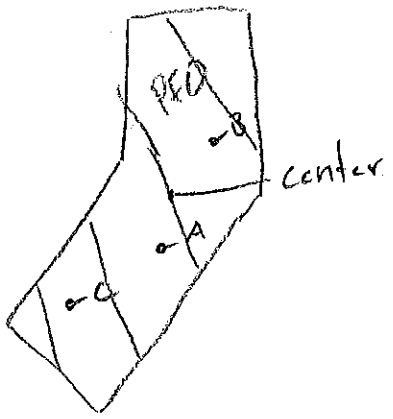
Site # H112 Site Name HRCS Functional Assessment Date 1/27/2016

Time(Start & Finish) 4:00 pm - 5:00 pm Crew SW, JM, BM, BC

Lat/Long: 36°47'4.82"N, 76°25'38.76"W AA shape: circle or rectangle or entire wetland polygon (circle)

AA moved from original location? Yes or No (circle one) If Yes, reason

Assessment Area Sketch



Stability of AA (check one)	
X	Healthy & Stable
	Deteriorating/Fragmenting
	Severe deterioration/fragmentation

Soils

Depth of organic layer (cm): 3.75

Comments on soil sample:

Function 1: Habitat Characteristic

Variable: Woody Debris (V_{WD}) DBH in CM

Sub-plot A	35.56	17.78	17.78
Sub-plot B	48.26	25.4	30.48
Sub-plot C	96.52	55.88	48.26
	Mean:	41.8	

Subindex Score: 1.00

Variable: Food Plants (V_{FOOD})

Number of species*: 12

* Number produced from species in V_{FQAI}
* Food list species provided in HGM Manual

Subindex Score: 1.00

Variable: Natural landcover with 200m ($V_{NATURAL}$)

% Natural:	70

Subindex Score: 0.88

Variable: Tree Density ($V_{DENSITY}$)

Sub-plot A	5
Sub-plot B	9
Sub-plot C	9
Mean:	8

Subindex Score: 1.00

Habitat Functional Capacity Formula

$(V_{WD} + V_{FOOD} + V_{NATURAL} + V_{DENSITY})/4 =$ **0.97**

Function 2: Plant Community Characteristic

Species:	A	B	C	V_{CANOPY}
Acer rubrum	✓	✓	✓	
Arundinaria tecta		✓	✓	
Asimina triloba	✓	✓	✓	
Carpinus caroliniana		✓	✓	
Fraxinus pennsylvanica	✓			
Ilex opaca		✓	✓	
Ligustrum sinense	✓	✓	✓	
Liquidambar styraciflua	✓	✓	✓	
Lonicera japonica	✓		✓	
Magnolia virginiana		✓		
Nyssa sylvatica				
Quercus nigra			✓	
Smilax rotundifolia	✓	✓	✓	
Toxicodendron radicans		✓		
Ulmus americana		✓	✓	
Viburnum nudum			✓	

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **31.9**

* Adjusted FQI value determined by entering species list into FQAI Calculator at the Mid-Atlantic Wetlands Workgroup website: http://mawwg.psu.edu/tools/fqai.asp

Subindex Score: 0.38

Variable: Canopy Tree Composition (V_{CANOPY})

Relative Dominance	Subindex
No canopy trees	0.0
>50% pine	0.0
>50% hardwoods, >25% pine, <1% oak	0.2
>50% hardwoods, <25% pine, <1% oak	0.3
>50% hardwoods, >25% pine, 1-10% oak	0.5
>50% hardwoods, <25% pine, 1-10% oak	0.7
>50% hardwoods, >25% pine, >10% oak	0.8
>50% hardwoods, <25% pine, >10% oak	1.0

Variable: Hardwood Regeneration (V_{REGEN}) %

Sub-plot A = 0

Sub-plot B = 0

Sub-plot C = 0

Mean = 0

Subindex Score: 0.00

Variable:Non-native Invasive PlantS ($V_{INVASIVE}$) %

Sub-plot A = 10

Sub-plot B = 15

Sub-plot C = 5

Mean = 10.0

Subindex Score: 0.0

Plant Community Functional Capacity Formula

$FCI = (V_{FQAI} + V_{CANOPY} + V_{REGEN} + V_{INVASIVE})/4$

FCI = 0.17

Function 3: Water Level Regime Characteristic

Variable: Anthropogenic Drainage (V_{DRAIN})

% Impacted: 0.0

V_{DRAIN} = 1.0

Variable: Percent Fill in WAA (V_{FILL})

% Fill: 10

V_{FILL} = 0.75

Variable: Natural Landcover with 200m ($V_{NATURAL}$)*

*$V_{NATURAL}$ value given in Function 1.

Subindex Score: 0.88

Water Regime Functional Capacity Formula

$FCI = (V_{NATURAL} + V_{DRAIN} + V_{FILL})/3$

FCI = 0.88

Function 4: Carbon Cycling Processes Characteristic

Variable: Woody Debris (V_{WD})*

*V_{WD} value given in Function 1.

Subindex Score: 1.00

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **31.9**

Subindex Score: 0.38

Variable: Herbaceous Cover (V_{HERB}) %

Sub-plot A = 30

Sub-plot B = 35

Sub-plot C = 15

Mean = 26.67

Subindex Score: 1.00

Carbon Cycling Processes Functional Capacity Formula

$(V_{WD} + V_{FQAI} + V_{HERB}$ + Water Level Regime Functional Capacity Score)/4

FCI = 0.814

Photograph 1: H112 North

Photograph 2: H112 East

Photograph 3: H112 South

Photograph 4: H112 West

Photograph 5: H112A

Photograph 6: H112B

Photograph 7: H112C

Hydrogeomorphic Assessment of Wet Hardwood Flats on Mineral Soils

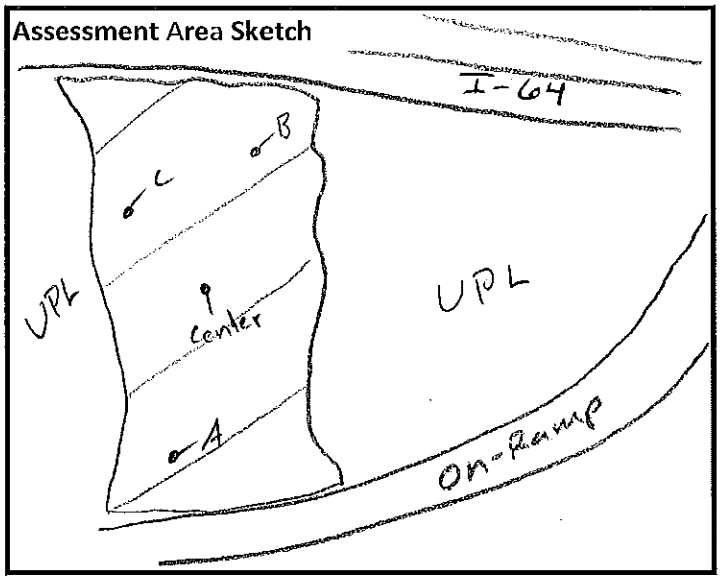
Site # H112-1 Site Name HRCS Functional Assessment Date 1/27/2016

Time(Start & Finish) 8:00 am - 9:30 am Crew SW, BM, JM, BC

Lat/Long: 36°47'7.94"N; 76°25'33.80"W AA shape: circle or rectangle or entire wetland polygon (circle)

AA moved from original location? Yes or (No) (circle one) If Yes, reason _____

Assessment Area Sketch



Stability of AA (check one)	
X	Healthy & Stable
	Deteriorating/Fragmenting
	Severe deterioration/fragmentation

Soils

Depth of organic layer (cm): 1

Comments on soil sample:

Function 1: Habitat Characteristic

Variable: Woody Debris (V_{WD}) DBH in CM

Sub-plot A	35.56	45.72	50.8
Sub-plot B	58.42	35.56	40.64
Sub-plot C	63.5	60.96	43.18
Mean:	48.3		

Subindex Score: 1.00

Variable: Food Plants (V_{FOOD})

Number of species*: 14

* Number produced from species in V_{FQAI}

* Food list species provided in HGM Manual

Subindex Score: 1.00

Variable: Natural landcover with 200m ($V_{NATURAL}$)

% Natural:	77.7

Subindex Score: 0.97

Variable: Tree Density ($V_{DENSITY}$)

Sub-plot A	7
Sub-plot B	10
Sub-plot C	11
Mean:	9

Subindex Score: 1.00

Habitat Functional Capacity Formula

$(V_{WD} + V_{FOOD} + V_{NATURAL} + V_{DENSITY})/4 =$ **0.99**

Function 2: Plant Community Characteristic

Species:	A	B	C	V_{CANOPY}
Acer rubrum	✓	✓	✓	
Arundinaria tecta	✓	✓	✓	
Carpinus caroliniana		✓		
Cinna arundinacea			✓	
Fraxinus pennsylvanica				
Ligustrum sinense	✓	✓	✓	
Liquidambar styraciflua	✓	✓	✓	
Liriodendron tulipifera		✓		
Lonicera japonica	✓	✓	✓	
Magnolia virginiana	✓	✓	✓	
Nyssa aquatica	✓	✓	✓	
Quercus laurifolia	✓	✓		
Quercus nigra		✓		
Quercus phellos		✓		
Smilax rotundifolia			✓	
Toxicodendron radicans			✓	
Ulmus americana			✓	

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **35.9**

* Adjusted FQI value determined by entering species list into FQAI Calculator at the Mid-Atlantic Wetlands Workgroup website: http://mawwg.psu.edu/tools/fqai.asp

Subindex Score: 1.00

Variable: Canopy Tree Composition (V_{CANOPY})

Relative Dominance	Subindex
No canopy trees	0.0
>50% pine	0.0
>50% hardwoods, >25% pine, <1% oak	0.2
>50% hardwoods, <25% pine, <1% oak	0.3
>50% hardwoods, >25% pine, 1-10% oak	0.5
>50% hardwoods, <25% pine, 1-10% oak	0.7
>50% hardwoods, >25% pine, >10% oak	0.8
>50% hardwoods, <25% pine, >10% oak	1.0

Variable: Hardwood Regeneration (V_{REGEN}) %

Sub-plot A = 0

Sub-plot B = 2

Sub-plot C = 0

Mean = 0.67

Subindex Score: 0.22

Variable:Non-native Invasive PlantS ($V_{INVASIVE}$) %

Sub-plot A = 35

Sub-plot B = 10

Sub-plot C = 15

Mean = 20.0

Subindex Score: 0.0

Plant Community Functional Capacity Formula

$FCI = (V_{FQAI} + V_{CANOPY} + V_{REGEN} + V_{INVASIVE})/4$

FCI = 0.38

Function 3: Water Level Regime Characteristic

Variable: Anthropogenic Drainage (V_{DRAIN})

% Impacted: 0

V_{DRAIN} = 1.0

Variable: Percent Fill in WAA (V_{FILL})

% Fill: 10

V_{FILL} = 0.75

Variable: Natural Landcover with 200m ($V_{NATURAL}$)*

*$V_{NATURAL}$ value given in Function 1.

Subindex Score: 1.0

Water Regime Functional Capacity Formula

$FCI = (V_{NATURAL} + V_{DRAIN} + V_{FILL})/3$

FCI = 0.91

Function 4: Carbon Cycling Processes Characteristic

Variable: Woody Debris (V_{WD})*

*V_{WD} value given in Function 1.

Subindex Score: 1.00

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **35.9**

Subindex Score: 1.00

Variable: Herbaceous Cover (V_{HERB}) %

Sub-plot A = 45

Sub-plot B = 35

Sub-plot C = 35

Mean = 38.33

Subindex Score: 1.00

Carbon Cycling Processes Functional Capacity Formula

(V_{WD} + V_{FQAI} + V_{HERB} + Water Level Regime Functional Capacity Score)/4

FCI = 0.98

Photograph 1: H112-1 North

Photograph 2: H112-1 East

Photograph 3: H112-1 South

Photograph 4: H112-1 West

Photograph 5: H112-1A

Photograph 6: H112-1B

Photograph 7: H112-1C

Hydrogeomorphic Assessment of Wet Hardwood Flats on Mineral Soils

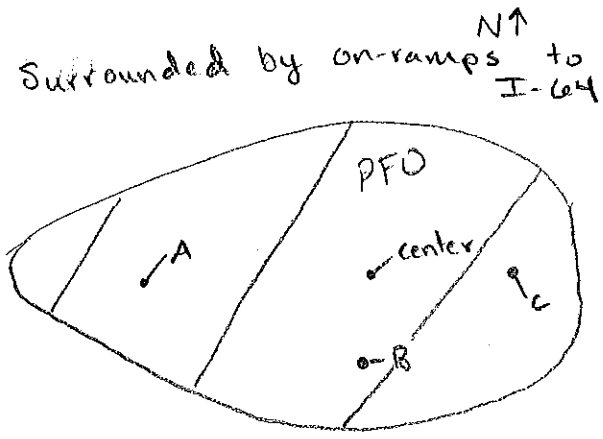
Site # H114 Site Name HRCS Functional Assessment Date 1/27/2016

Time(Start & Finish) 3:00 pm, 4:00 pm Crew Sean Wender, B. Mauck, J. Mann, B. Conners

Lat/Long: 36°47'12.43"N; 76°25'13.43"W AA shape: circle or rectangle or entire wetland polygon (circle)

AA moved from original location? Yes or No (circle one) If Yes, reason

Assessment Area Sketch



Stability of AA (check one)	
X	Healthy & Stable
	Deteriorating/Fragmenting
	Severe deterioration/fragmentation

Soils

Depth of organic layer (cm): 1

Comments on soil sample:

Function 1: Habitat Characteristic

Variable: Woody Debris (V_{WD}) DBH in CM			
Sub-plot A	35.56	35.56	30.48
Sub-plot B	45.72	43.18	30.48
Sub-plot C	55.88	35.56	35.56
Mean:	38.7		

Subindex Score: 0.967

Variable: Food Plants (V_{FOOD})
Number of species*: 14
* Number produced from species in V_{FQAI}
* Food list species provided in HGM Manual

Subindex Score: 1.00

Variable: Natural landcover with 200m ($V_{NATURAL}$)	
% Natural:	51

Subindex Score: 0.638

Variable: Tree Density ($V_{DENSITY}$)	
Sub-plot A	8
Sub-plot B	14
Sub-plot C	12
Mean:	11

Subindex Score: 1.00

Habitat Functional Capacity Formula	
$(V_{WD} + V_{FOOD} + V_{NATURAL} + V_{DENSITY})/4 =$	**0.90**

Function 2: Plant Community Characteristic

Species:	A	B	C	V_{CANOPY}
Acer rubrum	✓	✓	✓	•
Juniperus virginiana	✓			
Liquidambar styraciflua	✓	✓	✓	•
Lonicera japonica	✓	✓	✓	
Morella cerifera	✓	✓	✓	
Nyssa sylvatica	✓	✓	✓	
Pinus taeda	✓	✓	✓	□
Platanus occidentalis		✓		
Quercus laurifolia				
Quercus nigra	✓	✓	✓	
Quercus phellos		✓		
Smilax glauca				
Toxicodendron radicans	✓	✓	✓	
Ulmus americana				•
Vaccinium corymbosum	✓			

Variable: Floristic Quality Assessment Index (V_{FQAI})

Adjusted FQI Value*= **33.3**

* Adjusted FQI value determined by entering species list into FQAI Calculator at the Mid-Atlantic Wetlands Workgroup website: http://mawwg.psu.edu/tools/fqai.asp

Subindex Score: 0.66

Variable: Canopy Tree Composition (V_{CANOPY})

Relative Dominance	Subindex
No canopy trees	0.0
>50% pine	0.0
>50% hardwoods, >25% pine, <1% oak	0.2
>50% hardwoods, <25% pine, <1% oak	0.3
>50% hardwoods, >25% pine, 1-10% oak	0.5
>50% hardwoods, <25% pine, 1-10% oak	0.7
>50% hardwoods, >25% pine, >10% oak	0.8
>50% hardwoods, <25% pine, >10% oak	1.0

Variable: Hardwood Regeneration (V_{REGEN}) %

Sub-plot A = 2
Sub-plot B = 5
Sub-plot C = 5
Mean = 4

Subindex Score: 1.00

Variable:Non-native Invasive PlantS ($V_{INVASIVE}$) %

Sub-plot A = 5
Sub-plot B = 2
Sub-plot C = 1
Mean = 2.7

Subindex Score: 0.0

Plant Community Functional Capacity Formula

$FCI = (V_{FQAI} + V_{CANOPY} + V_{REGEN} + V_{INVASIVE})/4$

FCI = 0.47

Function 3: Water Level Regime Characteristic

Variable: Anthropogenic Drainage (V_{DRAIN})	
% Impacted:	0.0
V_{DRAIN} =	1.0

Variable: Percent Fill in WAA (V_{FILL})	
% Fill:	5
V_{FILL} =	0.75

Variable: Natural Landcover with 200m ($V_{NATURAL}$)*

*$V_{NATURAL}$ value given in Function 1.

Subindex Score: 0.64

Water Regime Functional Capacity Formula

FCI = $(V_{NATURAL} + V_{DRAIN} + V_{FILL})/3$

FCI = 0.80

Function 4: Carbon Cycling Processes Characteristic

Variable: Woody Debris (V_{WD})*

*V_{WD} value given in Function 1.

Subindex Score: 0.967

Variable: Herbaceous Cover (V_{HERB}) %		
Sub-plot A =	10	
Sub-plot B =	25	
Sub-plot C =	25	
	Mean =	20

Subindex Score: 1.0

Variable: Floristic Quality Assessment Index (V_{FQAI})	
Adjusted FQI Value*=	**33.3**

Subindex Score: 0.66

Carbon Cycling Processes Functional Capacity Formula

($V_{WD} + V_{FQAI} + V_{HERB}$ + Water Level Regime Functional Capacity Score)/4

FCI = 0.86

Photograph 1: H114 North

Photograph 2: H114 East

Photograph 3: H114 South

Photograph 4: H114 West

Photograph 5: H114 A

Photograph 6: H114 B

Photograph 7: H114 C

Mid-Atlantic Tidal Wetland Rapid Assessment Method V3.0

Site # BC-Ref Site Name HRCS Tidal Reference Date 3/09/16

Time of Start& Finish 2:00 3:30 Crew Sean Wender; Branson Mauck

Watershed Bennett's Creek Sub-Watershed _____

lat/long 36.51009, -76.29067 AA shape: circle or rectangle or entire wetland polygon (circle)

AA moved from original location? Yes or (No) (circle one) If yes, reason _____

Classification: (circle one)	(Reference) or Assessment (circle one)
Marine Tidal Fringe (Fringing Estuarine Tidal Fringe) Expansive Estuarine Tidal Fringe Back Barrier Estuarine Tidal Fringe	(Natural) Re-establishment, establishment Enhancement, Impoundment (circle one)

What best describes the tidal stage over the course of the time spent in the field? (circle one)
Note: It is recommended that the assessment be conducted at low tide.

Tide Stage

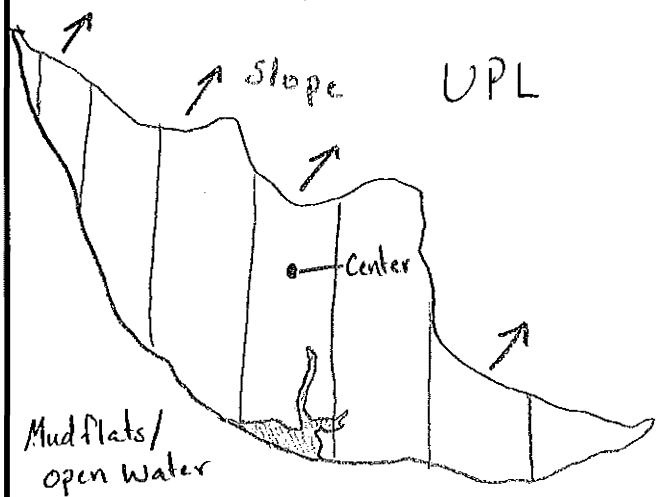
H <----------M----------> L

5 4 3 (2) 1

Range of Photo Identification Numbers:

Stressor Photo Description:

Assessment Area Sketch



low marsh or high marsh (circle one)
Distance to Upland 0 **meters**
Distance to Open Water 0 **meters**

Stability of AA (check one)
✓ Healthy & Stable
___ Beginning to deteriorate and/or some fragmentation
___ Severe deterioration and/or substantial fragmentation

Soils
Depth of organic layer (cm): > 18 cm
Comments on soil sample:
10YR 3/2 Muck

Salinity _____ ppt

Vegetation Communities and Features

enter midpoint for each species/combination present using the cover class chart below

15.5 Spartina alterniflora	___ Phragmites australis	___ root mat
88.5 Spartina patens	___ pannes, pools, creeks	___ unvegetated, mud or sand
___ Spart. alterniflora/Spart. cynosuroides	___ open water	___ unhealthy marsh- SWD, deterioration
___ Spartina patens-Distichlis spicata	___ ditches	___ other 1 _____

Cover Classes	MidPt	Cover Classes	MidPt	Cover Classes	MidPt
0	0	6-25%	15.5	76-99%	88.5
<1%	0.5	26-50%	38	100%	100
1-5%	2.5	51-75%	63		

Comments:

Qualitative Disturbance Rating						
1	(2)	3	4	5	6	(circle one)
Low <----------Disturbace----------> High						

Assessment Complete: (Yes) No (circle one)

Mid-Atlantic Tidal Wetland Rapid Assessment Method V.3.0

Site # BC-Ref Date 3/09/16

Attribute 1: Buffer/Landscape (All W/in 250m)

B1. Percent of Assessment Area Perimeter with 5m-Buffer

Record Estimated Percent 97 %	
Alternative States(not including open-water areas)	**Rating (circle one)**
Buffer is 100% of AA perimeter.	12
Buffer is 75-99% of AA perimeter.	(9)
Buffer is 50-74% of AA perimeter.	6
Buffer is <50% of AA perimeter.	3

B2. Average Buffer Width (max 250m)

Line	Buffer Width (m)
A	30
B	20
C	
D	4.30
E	46.8
F	53
G	40
H	25

Average Buffer Width 28.3

Alternative States	Rating (circle one)
Average buffer width 190-250m	12
Average buffer width 130-189m	9
Average buffer width 65-129m	6
Average buffer width 0-64m	(3)

B3. Surrounding Development between AA edge and 250m

Estimate Development 21 %

Alternative States	Rating (circle one)
0% development	12
>0-5% development	9
>5-15% development	6
>15% development	(3)

B4. 250m Landscape Condition

Alternative States	Rating (circle one)
AA's surrounding landscape is comprised of only native vegetation, has undisturbed soils, and there is no evidence of human disturbance.	12
AA's surrounding landscape is dominated by native vegetation, has undisturbed soils, and there is to little or no evidence of human visitation.	9
AA's surrounding landscape is characterized by an intermediate mix of native and non-native vegetation, and/or a moderate degree of soil disturbance/compaction, and/or there is evidence of moderate human visitation.	(6)
AA's surrounding landscape is characterized by barren ground and/or dominated by invasive species and/or highly compacted or otherwise disturbed soils, and/or there is evidence of very intensive human visitation.	3

B5. Barriers to Landward Migration

% Perimeter Obstructed 100 %

Dist. From Center of AA 78 m

Alternative States	Rating (circle one)
Absent: no barriers	12
Low: <10% of perimeter obstructed	9
Moderate: 10-25% of perimeter obstructed	6
High: 26-100% of perimeter obstructed	(3)

Shoreline Test Metrics (comlete at low tide along open water shoreline)

S1: Shoreline Erosion

	Erosion Rating (1, 0, -1)
Transect #1	
Transect #2	
Transect #3	
Transect #4	
Transect #5	
Average:	

S2: Shoreline Alteration

	Shoreline altered or
Transect #1	
Transect #2	
Transect #3	
Transect #4	
Transect #5	
Average:	

Coorindates of Transects		
#1		
#2		
#3		
#4		
#5		

Attribute 2: Hydrology

H1. Ditching/Draining (AA only)

Alternative States	Rating (circle one)
No Ditching	(12)
Low Ditching	9
Moderate Ditching	6
Severe Ditching	3

H2. Fill & Fragmentation (AA only)

Alternative States	Rating (circle one)
No fill or fragmentation	(12)
Low fill or fragmentation	9
Moderate fill or fragmentation	6
Severe fill or fragmentation	3
Estimate amount of fill 0 % of AA	
Dimensions of Fill Pile _____	

H3. Diking & Tidal Restriction (250m)

Description of restriction: _____

Alternative States	Rating (circle one)
Absent: no restriction, free flow, normal range	(12)
Low: restriction presumed (<10% of normal range)	9
Moderate restriction (10-25% normal range)	6
High (26-100 of normal range)	3

H4. Point Sources (250m)

Alternative States	Rating (circle one)
Absent: no discharge	12
Low: one small discharge from a natural area	9
Moderate: one discharge from a developed area or two discharges from a natural area	(6)
High: ≥ 2 discharges from a developed area or ≥ 3 from a natural area	3

Attribute 3: Habitat (All W/in AA)

used a 15.5 pound fence post driver instead of an 18 pound slide hammer

HAB1. Bearing Capacity (Hummocks)

	Mark Depth (cm)							
	Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8
Water Depth (cm)	1	1	—	0.5	1	1	1	1
Initial capacity	7	5	4	2	2	4	4	2
Blow 1	29	10	13	3	4	5.5	7	5
Blow 2	38	13	21	4	6	6	10	6
Blow 3	45.5	17	27	4	8	7	14	8
Blow 4	50+	20	32	5	10	8	19	10
Blow 5 (Final)	—	23	35	5	13	9	26	12
Final - Initial	>50	18	31	3	11	5	22	10

AVG= 18.9

* % of AA in hollows x hollows average (HAB1) = ✓

% of AA in hummocks x hummocks avg (HAB1b)= ✓

Sum of two weighted averages = ✓

Av. of Final - Initial for the 8 Sub-plots	Rating (circle one)
≤ 1.8	12
1.9-4.0	9
4.1-6.2	6
> 6.2	(3)

Average Final-Initial = 18.9 cm

HAB2. Horizontal Vegetative Obstruction

Sub-plot	1	3	5	7
0.25m	10	0	0	10
0.50m	10	1	10	10
0.75m	10	4	10	10
Sum	30	5	20	30
Veg. type	SPPA	SPPA	SPPA	SPPA

Average of 4 Sub-plots 21.25

Average of 4 Sub-plot totals	Rating
< 7	12
< 12 ≥ 7	9
<22 ≥ 12	6
≥22	(3)

AA = 8000m² 5% of AA = 400m² = 20mx20m 400m² = 11.3m radius circle

Buffer = 274,750m² 5% of Buffer = 13,737m² = 117m x 117m

HAB1b. Bearing Capacity (Unvegetated Hollows) if applicable*

	Mark Depth (cm)							
	Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8
Water depth (cm)								
Initial capacity								
Blow 1								
Blow 2								
Blow 3								
Blow 4								
Blow 5								
Final - Initial								

AVG= –

HAB3-5. Plant Community Worksheet

Floating or Aquatic Spp	Invasive? Y/N	Co-dom?	Short spp <0.3m	Invasive?	Co-dom?

Medium spp 0.3-0.75m	Invasive?	Co-dom?	Tall spp 0.75-1.5m	Invasive?	Co-dom?
Spartina patens	N	Y	Spartina alt.	N	Y
			Narrowleaf cat.	N	Y

Very Tall spp >1.5m	Invasive?	Co-dom?		
			(A) # of Plant Layers	
			(B) Total # of Native co-dominant species for all layers combined	3
			(C) Total # of Invasive co-dominant species for all layers combined	0
			(D) % of Invasive co-dominant species for all layers combined C/(B+C)	0
			(E) % Invasive cover in AA	

HAB3. # of Plant Layers (A)

Alternative States	Rating (circle one)
4-5 layers	12
2-3 layers	(9)
1 layer	6
0 layer	3

HAB4. % Co-Dominant Invasive Species (D)

Alternative States	Rating (circle one)
0-15%	(12)
16-30%	9
31-45%	6
46-100%	3

HAB5. % Invasive Cover in AA (E)

Alternative States	Rating (circle one)
0%	(12)
>0-25%	9
26-50%	6
>50%	3

COMMENTS:

Mid-Atlantic Tidal Wetland Rapid Assessment Method V.3.0

Site Number: BC-Ref **Site Name:** HRCS Tidal Reference **Date:** 3/09/16

Attributes and Metrics		Scores	Comments
Buffer/Landscape	**Raw #**		
B1. % of AA Perimeter with 5m Buffer	9		
B2. Average Buffer Width	3		
B3. Surrounded Developed	3		
B4. 250 Landscape Condition	6		
B5. Barriers to Landward Migration	3		
((((∑(B1,B2,B3,B4,B5))/60)*100)-25)/75)*100 = **Buffer Attribute Score**		Score 20.0	
Hydrology	**Raw #**		
H1. Ditching & Draining	12		
H2. Fill & Fragmentation	12		
H3. Diking/Restriction	12		
H4. Point Sources	6		
((((∑(H1,H2,H3,H4))/48)*100)-25)/75)*100 = **Hydrology Attribute Score**		Score 83.3	
Habitat	**Raw #**		
HAB1. Bearing Capacity	3		
HAB2. Horizontal Vegetative Obstruction	3		
HAB3. Number of Plant Layers	9		
HAB4. Percent Co-dominant Invasive Species	12		
HAB5. Percent Invasives	12		
((((∑(HAB1,HAB2,HAB3,HAB4,HAB5))/60)*100)-25)/75)*100 = **Habitat Attribute Score**		Score 53.3	

((Buf/Land + Hydrology + Habitat Attribute Scores)/3)= Final Score

Final Score = 52.2

Photograph 1: T BC-Ref North

Photograph 2: T BC-Ref East

Photograph 3: T BC-Ref South

Photograph 4: T BC-Ref West

Photograph 5: T BC-Ref Overview

Mid-Atlantic Tidal Wetland Rapid Assessment Method V3.0

Site # T107 Site Name HRCS Tidal 107 Date 1/28/16

Time of Start& Finish 4:20 5:30 Crew S. Wender, J. Mann, B. Mauck, B. Conners

Watershed Bailey Creek Sub-Watershed _____

lat/long 36.485144, -76.255407 AA shape: circle or rectangle or (entire wetland polygon (circle)

AA moved from original location? Yes or (No) (circle one) If yes, reason _____

Classification: (circle one)	Reference or (Assessment) (circle one)
Marine Tidal Fringe (Fringing Estuarine Tidal Fringe) Expansive Estuarine Tidal Fringe Back Barrier Estuarine Tidal Fringe	(Natural), Re-establishment, establishment Enhancement, Impoundment (circle one)

What best describes the tidal stage over the course of the time spent in the field? (circle one)
Note: It is recommended that the assessment be conducted at low tide.

Tide Stage

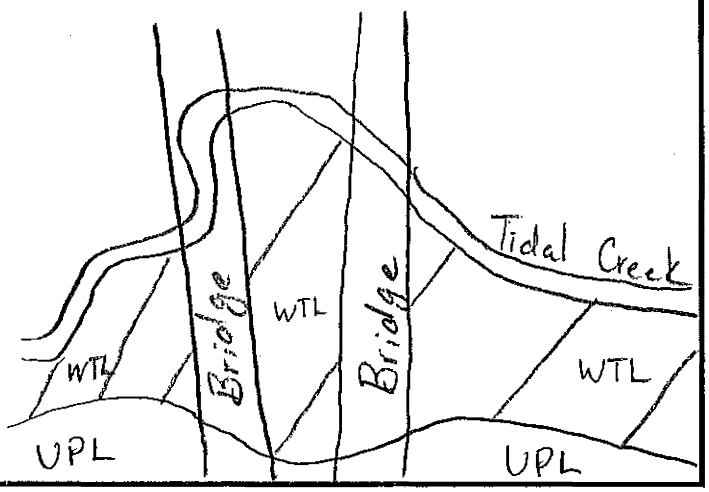
H <----------M----------> L

5 4 (3) 2 1

Range of Photo Identification Numbers:

Stressor Photo Description:

Assessment Area Sketch



(low) marsh or high marsh (circle one)
Distance to Upland 0 **meters**
Distance to Open Water 0 **meters**

Stability of AA (check one)
___ Healthy & Stable
✓ Beginning to deteriorate and/or some fragmentation
___ Severe deterioration and/or substantial fragmentation

Soils
Depth of organic layer (cm): > 18 cm
Comments on soil sample:
Muck

Salinity _____ **ppt**

Vegetation Communities and Features

enter midpoint for each species/combination present using the cover class chart below

0	Spartina alterniflora	88.5	Phragmites australis	88.5	root mat
0	Spartina patens	0	pannes, pools, creeks	15.5	unvegetated, mud or sand
15.5	Spart. alterniflora/Spart. cynosuroides	0	open water	0	unhealthy marsh- SWD, deterioration
0	Spartina patens-Distichlis spicata	0	ditches	0	other 1 _____

Cover Classes	MidPt	Cover Classes	MidPt	Cover Classes	MidPt
0	0	6-25%	15.5	76-99%	88.5
<1%	0.5	26-50%	38	100%	100
1-5%	2.5	51-75%	63		

Comments:

Qualitative Disturbance Rating						
1	2	3	(4)	5	6	(circle one)
Low <----------Disturbance----------> High						

Assessment Complete: (Yes) No (circle one)

Mid-Atlantic Tidal Wetland Rapid Assessment Method V.3.0

Site # T107 Date 1/28/16

Attribute 1: Buffer/Landscape (All W/in 250m)

B1. Percent of Assessment Area Perimeter with 5m-Buffer

Record Estimated Percent 95 %	
Alternative States(not including open-water areas)	**Rating (circle one)**
Buffer is 100% of AA perimeter.	12
Buffer is 75-99% of AA perimeter.	(9)
Buffer is 50-74% of AA perimeter.	6
Buffer is <50% of AA perimeter.	3

B2. Average Buffer Width (max 250m)

Line	Buffer Width (m)
A	132
B	160
C	154
D	0
E	250
F	92
G	151
H	9

Average Buffer Width 118.5

Alternative States	Rating (circle one)
Average buffer width 190-250m	12
Average buffer width 130-189m	9
Average buffer width 65-129m	(6)
Average buffer width 0-64m	3

B3. Surrounding Development between AA edge and 250m

Estimate Development 47 %	
Alternative States	**Rating (circle one)**
0% development	12
>0-5% development	9
>5-15% development	6
>15% development	(3)

B4. 250m Landscape Condition

Alternative States	Rating (circle one)
AA's surrounding landscape is comprised of only native vegetation, has undisturbed soils, and there is no evidence of human disturbance.	12
AA's surrounding landscape is dominated by native vegetation, has undisturbed soils, and there is to little or no evidence of human visitation.	9
AA's surrounding landscape is characterized by an intermediate mix of native and non-native vegetation, and/or a moderate degree of soil disturbance/compaction, and/or there is evidence of moderate human visitation.	6
AA's surrounding landscape is characterized by barren ground and/or dominated by invasive species and/or highly compacted or otherwise disturbed soils, and/or there is evidence of very intensive human visitation.	(3)

B5. Barriers to Landward Migration

% Perimeter Obstructed 48 %

Dist. From Center of AA 35 m

Alternative States	Rating (circle one)
Absent: no barriers	12
Low: <10% of perimeter obstructed	9
Moderate: 10-25% of perimeter obstructed	6
High: 26-100% of perimeter obstructed	(3)

Shoreline Test Metrics (comlete at low tide along open water shoreline)

S1: Shoreline Erosion

	Erosion Rating (1, 0, -1)
Transect #1	
Transect #2	
Transect #3	
Transect #4	
Transect #5	
Average:	

S2: Shoreline Alteration

	Shoreline altered or
Transect #1	
Transect #2	
Transect #3	
Transect #4	
Transect #5	
Average:	

Coorindates of Transects		
#1		
#2		
#3		
#4		
#5		

Attribute 2: Hydrology

H1. Ditching/Draining (AA only)

Alternative States	Rating (circle one)
No Ditching	(12)
Low Ditching	9
Moderate Ditching	6
Severe Ditching	3

H2. Fill & Fragmentation (AA only)

Alternative States	Rating (circle one)
No fill or fragmentation	12
Low fill or fragmentation	(9)
Moderate fill or fragmentation	6
Severe fill or fragmentation	3

Estimate amount of fill 5 % of AA

Dimensions of Fill Pile /

H3. Diking & Tidal Restriction (250m)

Description of restriction: Road / Bridge

Alternative States	Rating (circle one)
Absent: no restriction, free flow, normal range	12
Low: restriction presumed (<10% of normal range)	(9)
Moderate restriction (10-25% normal range)	6
High (26-100 of normal range)	3

H4. Point Sources (250m)

Alternative States	Rating (circle one)
Absent: no discharge	12
Low: one small discharge from a natural area	9
Moderate: one discharge from a developed area or two discharges from a natural area	(6)
High: ≥ 2 discharges from a developed area or ≥ 3 from a natural area	3

Attribute 3: Habitat (All W/in AA)

HAB1. Bearing Capacity (Hummocks)

used a 15.5 pound fence post driver instead of an 18 pound slide hammer

	Mark Depth (cm)							
	Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8
Water Depth (cm)	0	0	0	0	0	0	0	0
Initial capacity	3.0	4.0	2.0	2.5	2.0	9.5	2.0	1.0
Blow 1	5.0	5.5	4.5	6.5	5.0	14.0	5.0	3.5
Blow 2	9.0	9.0	6.5	7.0	8.0	17.0	6.5	5.0
Blow 3	16.0	12.0	8.0	8.0	9.0	20.0	7.5	5.5
Blow 4	22.0	15.5	9.5	8.5	10.0	22.0	8.0	6.0
Blow 5 (Final)	28.0	17.0	11.0	9.0	11.0	25.0	9.0	7.0
Final - Initial	25.0	13.0	9.0	6.5	9.0	15.5	7.0	6.0

AVG= 11.38

* % of AA in hollows x hollows average (HAB1) = /

% of AA in hummocks x hummocks avg (HAB1b)= /

Sum of two weighted averages = /

Av. of Final - Initial for the 8 Sub-plots	Rating (circle one)
≤ 1.8	12
1.9-4.0	9
4.1-6.2	6
> 6.2	(3)

Average Final-Initial = 11.38 cm

HAB2. Horizontal Vegetative Obstruction

Sub-plot	1	3	5	7
0.25m	0	2	0	0
0.50m	0	3	0	0
0.75m	0	4	0	0
Sum	0	9	0	0
Veg. type	Phrag.	Phrag.	Phrag.	Phrag.

Average of 4 Sub-plots _____

Average of 4 Sub-plot totals	Rating
< 7	12
< 12 ≥ 7	9
<22 ≥ 12	6
≥22	3

AA = 8000m² 5% of AA = 400m² = 20mx20m 400m² = 11.3m radius circle

Buffer = 274,750m² 5% of Buffer = 13,737m² = 117m x 117m

HAB1b. Bearing Capacity (Unvegetated Hollows) if applicable*

	Mark Depth (cm)							
	Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8
Water depth (cm)								
Initial capacity								
Blow 1								
Blow 2								
Blow 3								
Blow 4								
Blow 5								
Final - Initial								

AVG= –

HAB3-5. Plant Community Worksheet

Floating or Aquatic Spp	Invasive? Y/N	Co-dom?	Short spp <0.3m	Invasive?	Co-dom?

Medium spp 0.3-0.75m	Invasive?	Co-dom?	Tall spp 0.75-1.5m	Invasive?	Co-dom?

Very Tall spp >1.5m	Invasive?	Co-dom?		
			(A) # of Plant Layers	1
Phrag. Aus.	Y	Y	(B) Total # of Native co-dominant species for all layers combined	1
Spartina Cyn.	N	Y	(C) Total # of Invasive co-dominant species for all layers combined	1
			(D) % of Invasive co-dominant species for all layers combined C/(B+C)	50%
			(E) % Invasive cover in AA	85%

HAB3. # of Plant Layers (A)

Alternative States	Rating (circle one)
4-5 layers	12
2-3 layers	9
1 layer	(6)
0 layer	3

HAB4. % Co-Dominant Invasive Species (D)

Alternative States	Rating (circle one)
0-15%	12
16-30%	9
31-45%	6
46-100%	(3)

HAB5. % Invasive Cover in AA (E)

Alternative States	Rating (circle one)
0%	12
>0-25%	9
26-50%	6
>50%	(3)

COMMENTS:

Mid-Atlantic Tidal Wetland Rapid Assessment Method V.3.0

Site Number: T107 **Site Name:** HRCS Tidal 107 **Date:** 1/28/16

Attributes and Metrics		Scores	Comments
Buffer/Landscape	**Raw #**		
B1. % of AA Perimeter with 5m Buffer	9		
B2. Average Buffer Width	6		
B3. Surrounded Developed	3		
B4. 250 Landscape Condition	3		
B5. Barriers to Landward Migration	3		
((((∑(B1,B2,B3,B4,B5))/60)*100)-25)/75)*100 = **Buffer Attribute Score**		Score 20	
Hydrology	**Raw #**		
H1. Ditching & Draining	12		
H2. Fill & Fragmentation	9		
H3. Diking/Restriction	9		
H4. Point Sources	6		
((((∑(H1,H2,H3,H4))/48)*100)-25)/75)*100 = **Hydrology Attribute Score**		Score 66.7	
Habitat	**Raw #**		
HAB1. Bearing Capacity	3		
HAB2. Horizontal Vegetative Obstruction	12		
HAB3. Number of Plant Layers	6		
HAB4. Percent Co-dominant Invasive Species	3		
HAB5. Percent Invasives	3		
((((∑(HAB1,HAB2,HAB3,HAB4,HAB5))/60)*100)-25)/75)*100 = **Habitat Attribute Score**		Score 26.7	

((Buf/Land + Hydrology + Habitat Attribute Scores)/3)= Final Score **Final Score = 37.8**

Wetland Function-Value Evaluation Form

Total area of wetland 0.05 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Institutional/School Distance to nearest roadway or other development 400 feet

Dominant wetland systems present PEM, PFO, PSS Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-1

Latitude 36.79161 Longitude -76.41579

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

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	4, 5, 7, 8, 13, 15		
Floodflow Alteration	Y	3, 5, 13, 16		
Fish and Shellfish Habitat	Y	10, 11, 15, 17		
Sediment/Toxicant Retention	Y	1, 2, 4, 8, 9, 10, 14	☑	Wetland has the potential to filter sediments/toxicants before they reach tidal waters.
Nutrient Removal	Y	3, 4, 6, 9, 10		
Production Export	Y	1, 2, 4, 10, 12		
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 6, 9		
Wildlife Habitat	Y	1, 3, 5, 6, 7, 8, 17		
Recreation	Y	11, 12		Wetland is easily accessible and has potential to function as educational/scientific area near school.
Educational/Scientific Value	Y	4, 8, 9, 10, 12, 13, 14		Wetland is easily accessible and has potential to function as educational/scientific area near school.
Uniqueness/Heritage	Y	4, 5, 8, 9, 10, 11, 12, 13, 15, 17, 19, 22	☑	Multiple wetland classes present, is easily accessible, and has potential to function as educational/scientific area near school.
Visual Quality/Aesthetics	Y	1, 2, 3, 4, 6, 9, 11, 12	☑	Multiple wetland classes present, is easily accessible, and has potential to function as educational/scientific area near school.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Pale Dock	*Rumex altissimuss*
Switch Cane	*Arundinaria tecta*
Horse Briar	*Smilax rotundifolia*
Red Maple	*Acer rubrum*
Sweet Gum	*Liquidambar stryaciflua*

Wetland Function-Value Evaluation Form

Total area of wetland 0.73 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Institutional/School Distance to nearest roadway or other development 175 feet

Dominant wetland systems present E2EM Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-2

Latitude 36.79028 Longitude -76.41311

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

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	4, 5, 8, 13, 15		
Floodflow Alteration	Y	3, 5, 7, 13, 16, 18		
Fish and Shellfish Habitat	Y	1, 4		Marine functions used
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9, 14, 15, 16		
Nutrient Removal	Y	3, 4, 5 6, 8, 9, 10		
Production Export	Y	1, 2, 4, 7, 10, 11, 12, 13		
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 6, 7, 9, 12, 13, 15	☑	Wetland vegetation is dense to stabilize shoreline
Wildlife Habitat	Y	1, 3, 5, 6, 7, 8, 11, 17, 19		
Recreation	Y	11, 12		Wetland is easily accessible and has potential to function as educational/scientific area near school.
Educational/Scientific Value	Y	4, 8, 9, 10, 12, 13, 14		Wetland is easily accessible and has potential to function as educational/scientific area near school.
Uniqueness/Heritage	Y	4, 5, 8, 9, 10, 11, 12, 13, 15, 17, 19, 22	☑	Multiple wetland classes present, is easily accessible, and has potential to function as educational/scientific area near school.
Visual Quality/Aesthetics	Y	1, 2, 3, 4, 6, 9, 11, 12	☑	Multiple wetland classes present, is easily accessible, and has potential to function as educational/scientific area near school.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Big Cordgrass	*Spartina cynosuroides*

Wetland Function-Value Evaluation Form

Total area of wetland 1.97 AC Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Undeveloped Distance to nearest roadway or other development 175 feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-3

Latitude 36.7878 Longitude -76.42767

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

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	4, 5, 7, 8, 13, 15		
Floodflow Alteration	Y	2, 3, 5, 6, 9, 10, 13, 16, 18	☑	Wetland would effectively, temporarily store floodwaters.
Fish and Shellfish Habitat	Y	1, 2, 4, 8, 14, 17		
Sediment/Toxicant Retention	Y	4, 7, 8, 9, 10, 14, 16		
Nutrient Removal	Y	3, 6, 10, 12		
Production Export	Y	1, 2, 4, 10, 12, 13		
Sediment/Shoreline Stabilization	Y	1, 2, 7, 9		
Wildlife Habitat	Y	1, 3, 4, 5, 6, 7, 8, 11, 17, 19, 20, 21	☑	Wetland is unfragmented, and contiguous, and potential for high amphibian population.
Recreation	Y	5, 7, 12		
Educational/Scientific Value	Y	4, 5, 8, 9, 10, 13, 14		
Uniqueness/Heritage	Y	5, 7, 8, 9, 10, 11, 16, 17, 18, 19, 22	☑	Cypress forest present.
Visual Quality/Aesthetics	Y	3, 6, 8, 9, 11, 12		
ES Endangered Species Habitat	Y			Potential habitat for the canebrake rattlesnake.
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

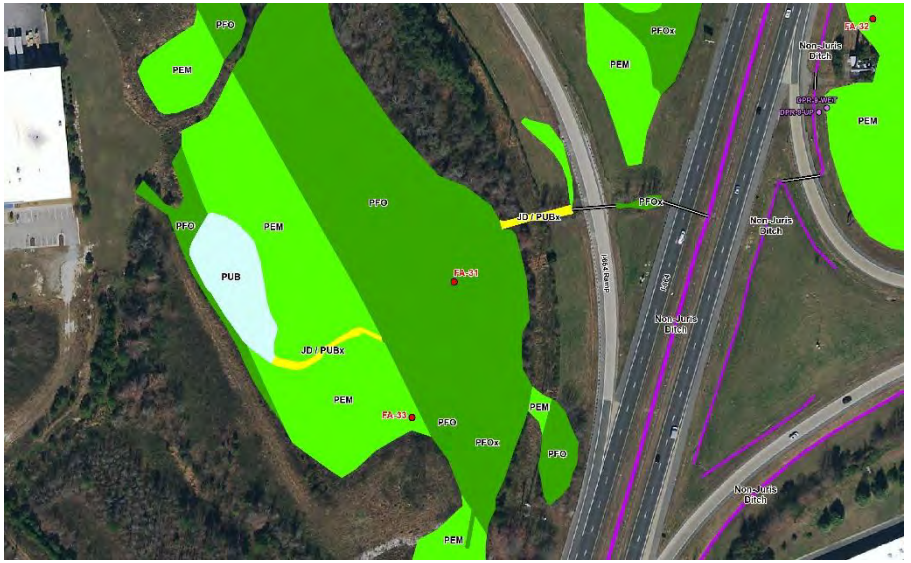
Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Sweet Gum	*Liquidambar stryaciflua*
Black Gum	*Nyssa sylvatica*
Bald Cypress	*Taxodium distichum*
Common Wood Reedgrass	*Cinna arundinacea*

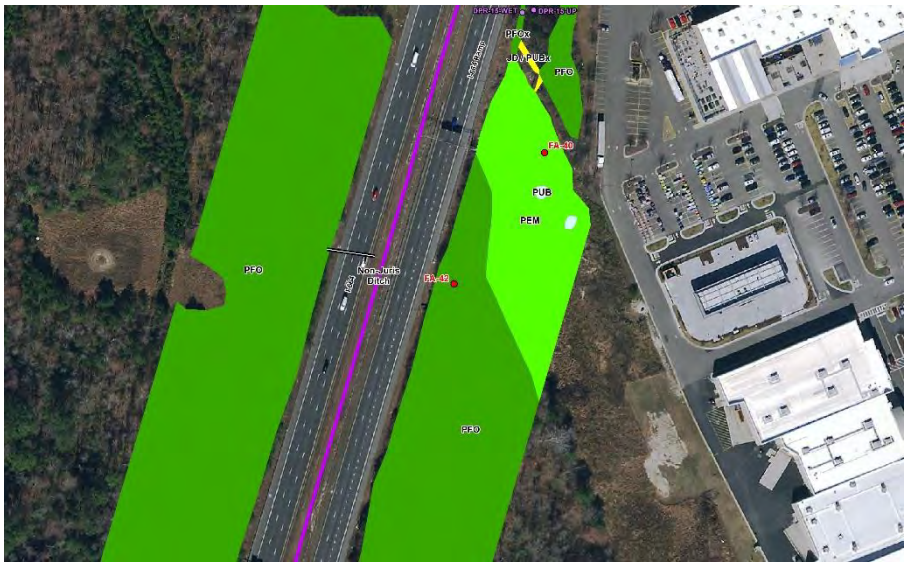
Additional Delineated Wetlands Similar in Function/Value

FA-6		
FA-22		

Additional Delineated Wetlands Similar in Function/Value

FA-31		
FA-37		

Additional Delineated Wetlands Similar in Function/Value

FA-42		
FA-48		

Additional Delineated Wetlands Similar in Function/Value

FA-64		
FA-95		

Wetland Function-Value Evaluation Form

Total area of wetland 1.97 AC Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Undeveloped Distance to nearest roadway or other development 175 feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-4

Latitude 36.78875 Longitude -76.43175

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

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	4, 5, 8, 13, 15		
Floodflow Alteration	Y	3, 5, 6, 7, 9, 16, 18		
Fish and Shellfish Habitat	Y	1, 4, 8, 17		
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9, 14, 15, 16	☑	Wetland has the potential to filter sediments/toxicants before they reach tidal waters.
Nutrient Removal	Y	3, 6, 10, 12		
Production Export	Y	1, 2, 4, 7, 10, 12		
Sediment/Shoreline Stabilization	Y	1, 2, 7, 9		
Wildlife Habitat	Y	1, 3, 4, 5, 6, 7, 8, 11, 17, 19, 20, 21	☑	Wetland is unfragmented, and contiguous, and potential for high amphibian population.
Recreation	Y	5, 7, 12		
Educational/Scientific Value	Y	4, 5, 8, 9, 10, 13, 14		
Uniqueness/Heritage	Y	5, 7, 8, 9, 10, 11, 16, 17, 19	☑	Black Gum forest present
Visual Quality/Aesthetics	Y	3, 6, 8, 9, 11, 12		
ES Endangered Species Habitat	Y			Potential habitat for the canebrake rattlesnake.
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Black Gum	*Nyssa sylvatica*
Switch Cane	*Arundinaria tecta*
Cinnamon Fern	*Osmundastrum cinnamomeum*

Wetland Function-Value Evaluation Form

Total area of wetland 48.3 AC Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Undeveloped Distance to nearest roadway or other development 1,600 feet

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-5

Latitude 36.78675 Longitude -76.43238

Prepared by: SH Date 11/9/2020

Wetland Impact:
Type Area

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	4, 5, 8, 13		
Floodflow Alteration	Y	2, 3, 5, 6, 9, 10, 18	☑	Wetland would effectively, temporarily store floodwaters.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9		
Nutrient Removal	Y	3, 9, 10		
Production Export	Y	1, 2, 4, 12, 13		
Sediment/Shoreline Stabilization	Y	1, 2		
Wildlife Habitat	Y	1, 3, 4, 5, 6, 7, 8, 17, 19, 20, 21	☑	Wetland is unfragmented, and contiguous, and potential for high amphibian population.
Recreation	Y	5, 12		
Educational/Scientific Value	Y	4, 5, 8, 9, 10, 13, 14		
Uniqueness/Heritage	Y	8, 9, 10, 16, 17, 19		
Visual Quality/Aesthetics	Y	3, 6, 8, 9, 11, 12		
ES Endangered Species Habitat	Y			Potential habitat for the canebrake rattlesnake.
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Loblolly Pine	*Pinus taeda*
Sweet Gum	*Liquidambar stryaciflua*
Dog Fennel	*Eupatorium capillifolium*
Slender Spikegrass	*Chasmantium laxum*
Japanese Stiltgrass	*Microstegium vimineum*

Wetland Function-Value Evaluation Form

Total area of wetland 0.47 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 112 feet

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? Upper

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

Wetland I.D. FA-7

Latitude 36.80322 Longitude -76.42915

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

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	4, 5, 8, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 18		
Fish and Shellfish Habitat	N			Wetland is not associated with a watercourse.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 8, 9, 10	☑	Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	N	7		
Sediment/Shoreline Stabilization	Y	3, 5, 12, 15		
Wildlife Habitat	N	13, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 12, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	Y	1, 12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also wetland data sheet DPN-21-WET

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Small Carp Grass	*Arthraxon hispidus*
Low Spike Sedge	*Kyllinga pumila*
Golden Crown Grass	*Paspalum dilatatum*
Lamp Rush	*Juncus effusus*
Marsh Bristle Grass	*Setaria parviflora*
Pointed Broom Sedge	*Carex scoparia*

Wetland Function-Value Evaluation Form

Total area of wetland 1.68 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 120 feet

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? Upper

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

Wetland I.D. FA-9

Latitude 36.80177 Longitude -76.4301

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

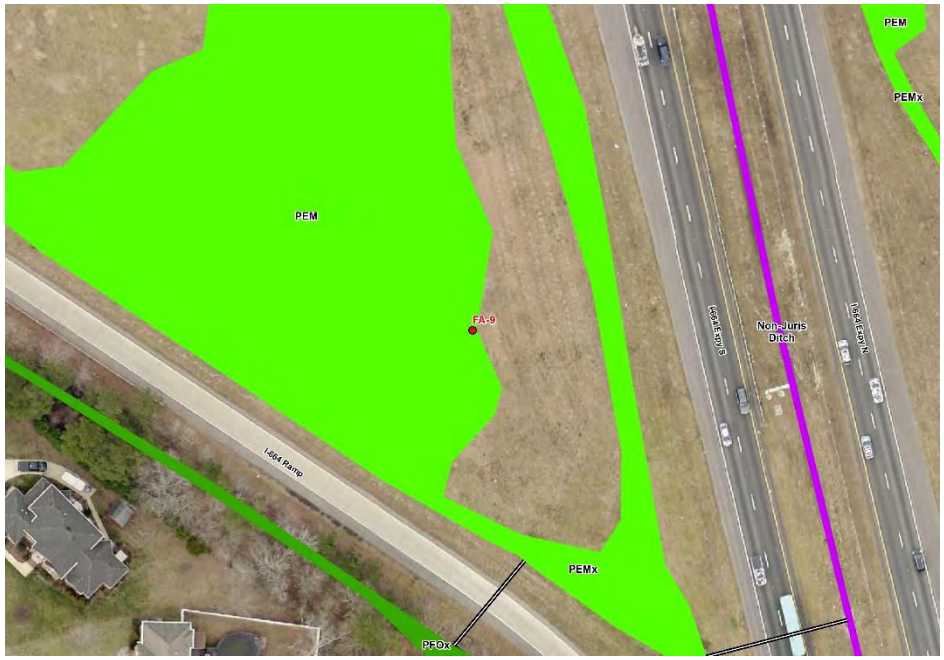
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 8, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 18		
Fish and Shellfish Habitat	N			Wetland is not associated with a watercourse.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 8, 9, 10	☑	Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	N	7		
Sediment/Shoreline Stabilization	Y	3, 5, 12, 15		
Wildlife Habitat	N	13, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 12, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	1, 12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Small Carp Grass	*Arthraxon hispidus*
Low Spike Sedge	*Kyllinga pumila*
Lamp Rush	*Juncus effuses*
Virginia Buttonweed	*Diodia virginiana*



Wetland Function-Value Evaluation Form

Total area of wetland 0.05 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 35 feet

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? Upper

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

Wetland I.D. FA-13

Latitude 36.81764 Longitude -76.43464

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

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	4, 5		
Floodflow Alteration	Y	2, 3, 4, 5		
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 10	☑	Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	N			
Sediment/Shoreline Stabilization	N	3, 4, 5		
Wildlife Habitat	N	19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	1, 4, 12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Common rush	*Juncus effusus*
Wax myrtle	*Morella cerifera*
Sweet gum	*Liquidambar stryaciflua*
Common cattail	*Typha latifolia*

Wetland Function-Value Evaluation Form

Total area of wetland 0.38 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 80 feet

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? Upper

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

Wetland I.D. FA-14

Latitude 36.81814 Longitude -76.43285

Prepared by: TRC Date 11/10/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

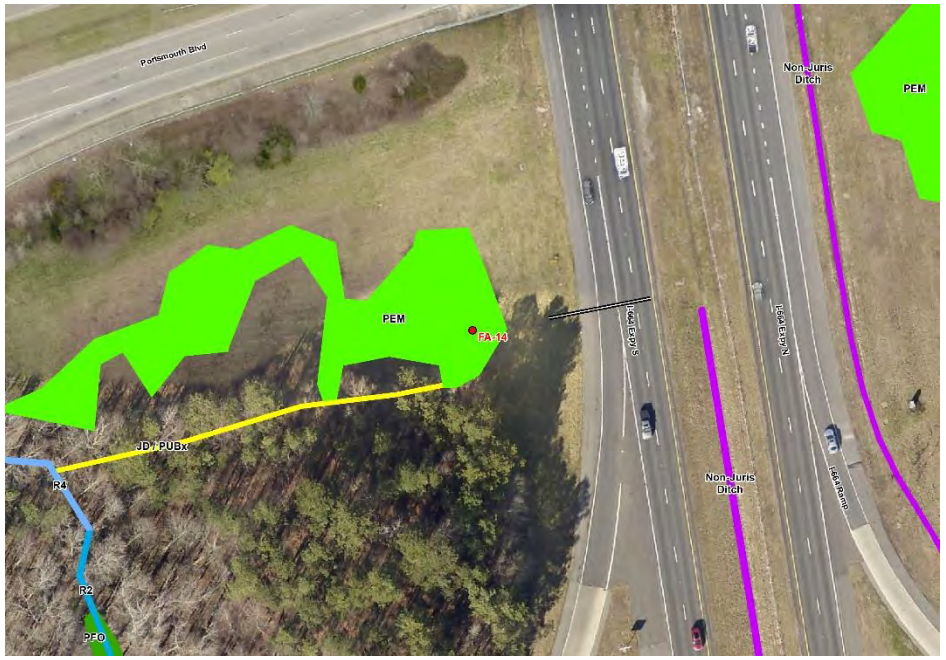
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5		
Floodflow Alteration	Y	2, 3, 4, 5, 18		
Fish and Shellfish Habitat	N			Wetland is not associated with a watercourse.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 8, 9, 10	☑	Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	N	7		
Sediment/Shoreline Stabilization	Y	3, 5, 12, 15		
Wildlife Habitat	N	13, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Small Carp Grass	*Arthraxon hispidus*
Low Spike Sedge	*Kyllinga pumila*
Virginia Buttonweed	*Diodia virginiana*
Poverty Rush	*Juncus tenuis*



Wetland Function-Value Evaluation Form

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

Adjacent land use Transportation Distance to nearest roadway or other development 40 feet

Dominant wetland systems present PEM-IWMEV Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? N/A

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

Wetland I.D. FA-15

Latitude 36.82076 Longitude -76.43327

Prepared by: TRC Date 11/10/2020

Wetland Impact:
Type Area

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	4, 5		
Floodflow Alteration	Y	2, 3, 4, 5, 9, 18	☑	Wetland has the potential to receive water from surrounding uplands.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 8, 9, 10		
Production Export	N	7		
Sediment/Shoreline Stabilization	Y	3, 5, 12, 15		
Wildlife Habitat	N	13, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Low Spike Sedge	*Kyllinga pumila*
Common Rush	*Juncus effusus*
Virginia Buttonweed	*Diodia virginiana*

Wetland Function-Value Evaluation Form

Total area of wetland 4.95 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? Yes

Adjacent land use Transportation Distance to nearest roadway or other development 15 feet

Dominant wetland systems present 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? Upper

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

Wetland I.D. FA-16

Latitude 36.82044 Longitude -76.43388

Prepared by: TRC Date 11/10/2020

Wetland Impact:
Type Area

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	4, 5, 8, 10, 15		
Floodflow Alteration	Y	1, 2, 3, 4, 5, 6, 9, 13, 18	☑	Wetland would effectively, temporarily store runoff from surrounding roadways.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9		
Nutrient Removal	Y	1, 3, 4, 6, 8, 10		
Production Export	Y	1, 2, 8, 10, 12, 13		
Sediment/Shoreline Stabilization	N	14		
Wildlife Habitat	Y	6, 8, 11, 13, 15, 19, 21	☑	Wetland may serve as a habitat island for species located within interstate loop.
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		
Visual Quality/Aesthetics	N	3		
ES Endangered Species Habitat	N			
Other				

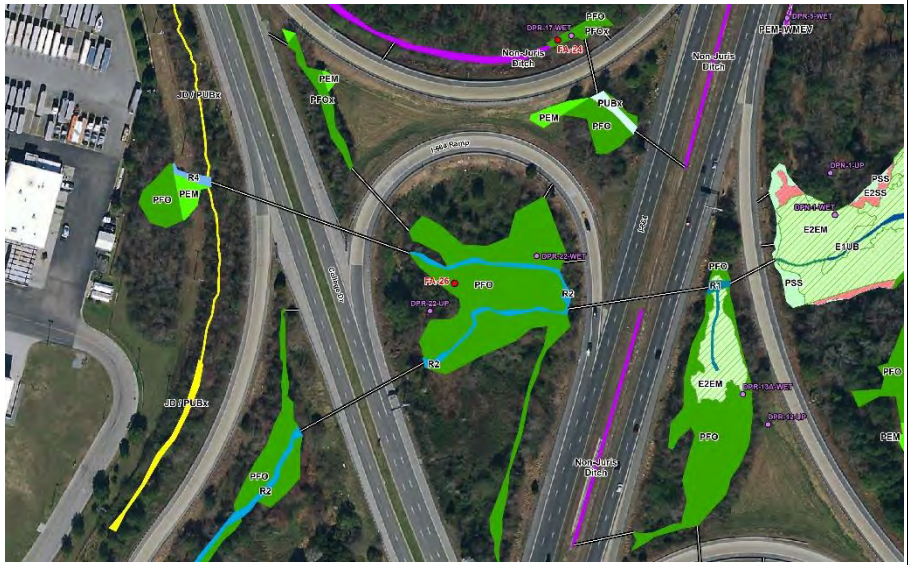
Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also wetland data sheet DPC-33-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Sweet Gum	*Liquidambar stryaciflua*
Loblolly Pine	*Pinus taeda*
Ironwood	*Carpinus caroliniana*

Additional Delineated Wetlands Similar in Function/Value

FA-21		
FA-26		

Wetland Function-Value Evaluation Form

Total area of wetland 0.33 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation, Industrial Distance to nearest roadway or other development 85 feet

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? Upper

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

Wetland I.D. FA-17

Latitude 36.84432 Longitude -76.43301

Prepared by: TRC Date 11/10/2020

Wetland Impact:
Type Area

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	4, 5, 8, 15		
Floodflow Alteration	Y	3, 4, 5, 6, 7, 9, 15	☑	Wetland has the potential to absorb runoff from surrounding uplands.
Fish and Shellfish Habitat	N			Fish and shellfish habitat are not present in wetland.
Sediment/Toxicant Retention	Y	4		
Nutrient Removal	Y	3, 5, 8, 9, 10	☑	Wetland has the potential to remove nutrient runoff from surrounding uplands.
Production Export	Y	2, 7		
Sediment/Shoreline Stabilization	Y	5, 15		
Wildlife Habitat	Y	13, 19		
Recreation	N	12		
Educational/Scientific Value	N	9		
Uniqueness/Heritage	Y	8, 9, 13, 17		
Visual Quality/Aesthetics	Y	3, 12		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Small Carp Grass	*Arthraxon hispidus*
Low Spike Sedge	*Kyllinga pumila*
Golden Crown Grass	*Paspalum dilatatum*
Lamp Rush	*Juncus effusus*
Marsh Bristle Grass	*Setaria parviflora*
Pointed Broom Sedge	*Carex scoparia*

Additional Delineated Wetlands Similar in Function/Value

FA-63

Wetland Function-Value Evaluation Form

Total area of wetland 7.22 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Undeveloped and residential. Distance to nearest roadway or other development 54 feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-19

Latitude 36.78637 Longitude -76.39258

Prepared by: TRC Date 11/24/2020

Wetland Impact:
Type Area

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, 8, 10, 13, 15		
Floodflow Alteration	Y	1, 2, 5, 6, 7, 9, 18		
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	4, 5, 7, 8		
Nutrient Removal	Y	1, 3, 6, 8, 11		
Production Export	Y	1, 2, 4, 7, 8		
Sediment/Shoreline Stabilization	Y	2, 14		
Wildlife Habitat	Y	1, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 19, 21	☑	Wetland is unfragmented, and contiguous, and potential for avian habitat.
Recreation	Y	4, 5, 7, 11, 12		
Educational/Scientific Value	Y	2, 4, 5, 8, 9, 10, 13, 14	☑	Wetland has potential to serve as education site of owner access is granted.
Uniqueness/Heritage	Y	8, 10, 16, 17, 19		
Visual Quality/Aesthetics	Y	3, 5, 6, 8, 9, 11, 12	☑	Wetland has potential to serve as education site of owner access is granted.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation datasheet DPN-12-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Sweet Gum	*Liquidambar stryaciflua*
Loblolly Pine	*Pinus taeda*
Switch Cane	*Arundinaria tecta*

Wetland Function-Value Evaluation Form

Total area of wetland 0.01 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 55 feet

Dominant wetland systems present PEMx 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? Upper

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

Wetland I.D. FA-28

Latitude 36.88694 Longitude -76.42986

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

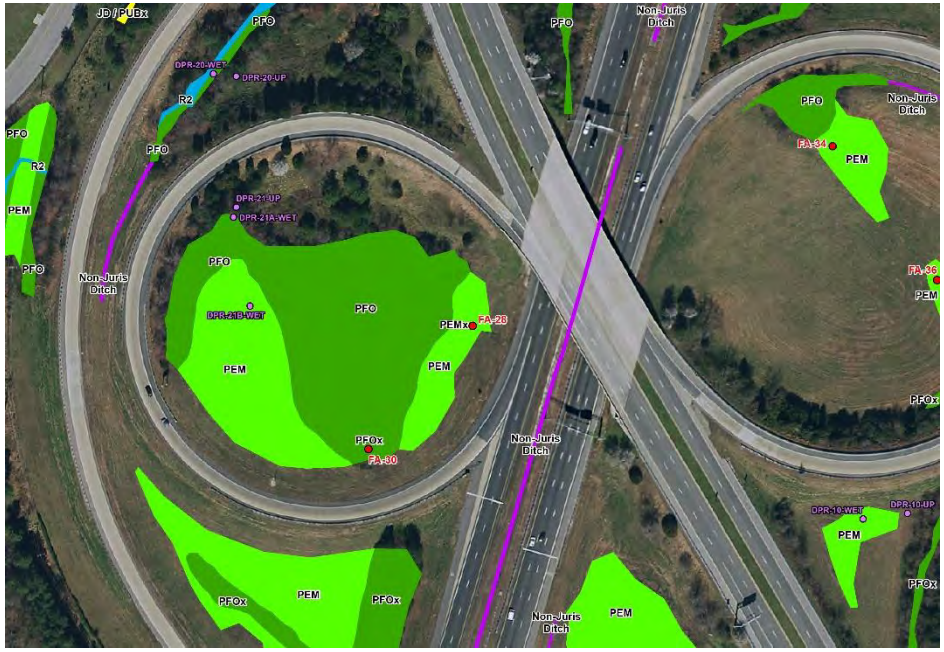
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 8, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 9, 18		
Fish and Shellfish Habitat	N			Wetland is not associated with a watercourse.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 8, 9, 10	☑	Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	N	7		
Sediment/Shoreline Stabilization	Y	3, 5, 12, 15		
Wildlife Habitat	N	7, 13, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 12, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	1, 12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Common Reed	*Phragmites australis*
Virginia Buttonweed	*Diodia virginiana*



Wetland Function-Value Evaluation Form

Total area of wetland 0.88 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? Yes

Adjacent land use Transportation Distance to nearest roadway or other development 31 feet

Dominant wetland systems present 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? Upper

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

Wetland I.D. FA-30

Latitude 36.88649 Longitude -76.43036

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

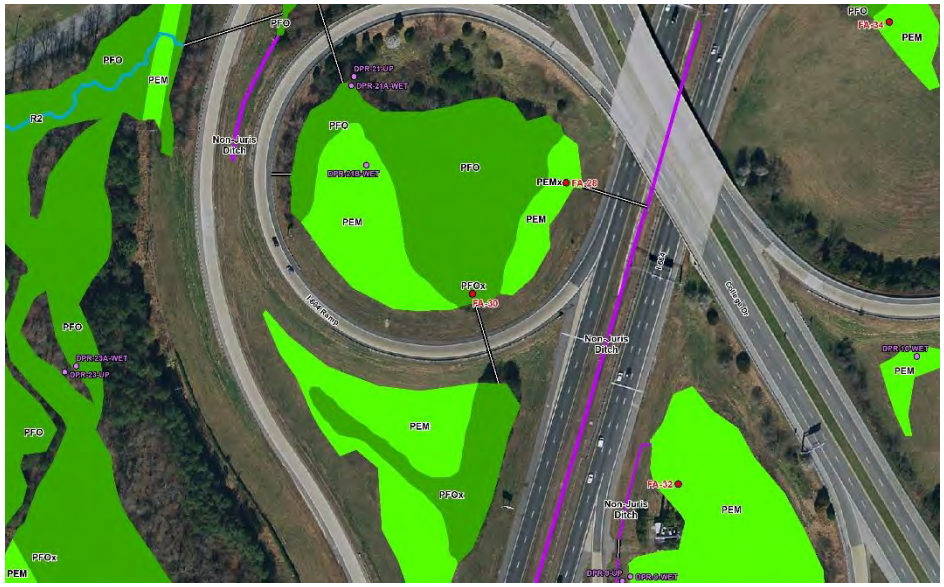
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 8, 15		
Floodflow Alteration	Y	1, 2, 4, 5, 6, 7, 8, 9, 15, 18	☑	Wetland has potential to store runoff from surrounding roadways.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 4, 5, 7		
Nutrient Removal	Y	1, 3, 4, 7, 8, 10, 11		
Production Export	Y	1, 2, 4, 7, 8		
Sediment/Shoreline Stabilization	N	2, 14		
Wildlife Habitat	Y	8, 9, 13, 14, 15, 16, 19, 21	☑	Wetland has potential for avian habitat within interstate loop and rail line.
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	3, 12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation datasheet DPN-12-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Wax Myrtle	*Morella cerifera*



Wetland Function-Value Evaluation Form

Total area of wetland 0.16 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 100 feet

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? Upper

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

Wetland I.D. FA-35

Latitude 36.8884 Longitude -76.42704

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

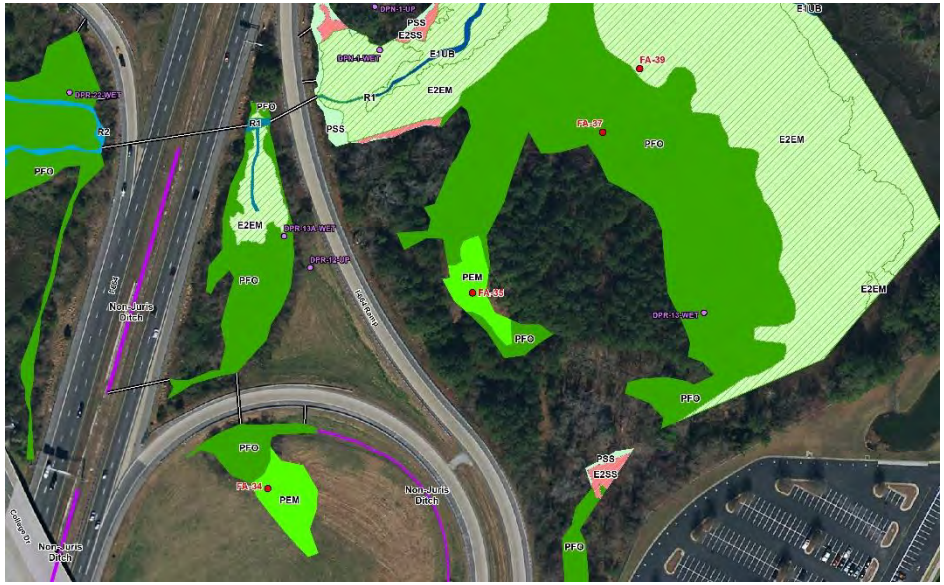
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5		
Floodflow Alteration	Y	2, 3, 5, 9, 18		
Fish and Shellfish Habitat	N			Fish and shellfish habitat are not present in wetland.
Sediment/Toxicant Retention	Y	4, 9		
Nutrient Removal	Y	3, 8, 9, 10, 11		
Production Export	Y	7, 12		
Sediment/Shoreline Stabilization	Y	2, 5, 15		
Wildlife Habitat	Y	3, 6, 7, 13, 14, 19	☑	Wetland has the potential to provide habitat.
Recreation	Y	2, 4		
Educational/Scientific Value	N	14		
Uniqueness/Heritage	Y	12, 13, 16, 17, 19		
Visual Quality/Aesthetics	Y	1, 3, 4, 5, 6, 7, 8, 12	☑	Wetland has a visual quality and is relatively undisturbed.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Wrinkle-leaf Goldenrod	*Solidago rugosa*
Japanese Stilt Grass	*Microstegium vimineum*
Common Rush	*Juncus effuses*
Sweet Gum	*Liquidambar stryaciflua*



Wetland Function-Value Evaluation Form

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

Adjacent land use Transportation, Institutional Distance to nearest roadway or other development 25 feet

Dominant wetland systems present JD/PUBx 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? Middle

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

Wetland I.D. FA-38

Latitude 36.8857 Longitude -76.42737

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

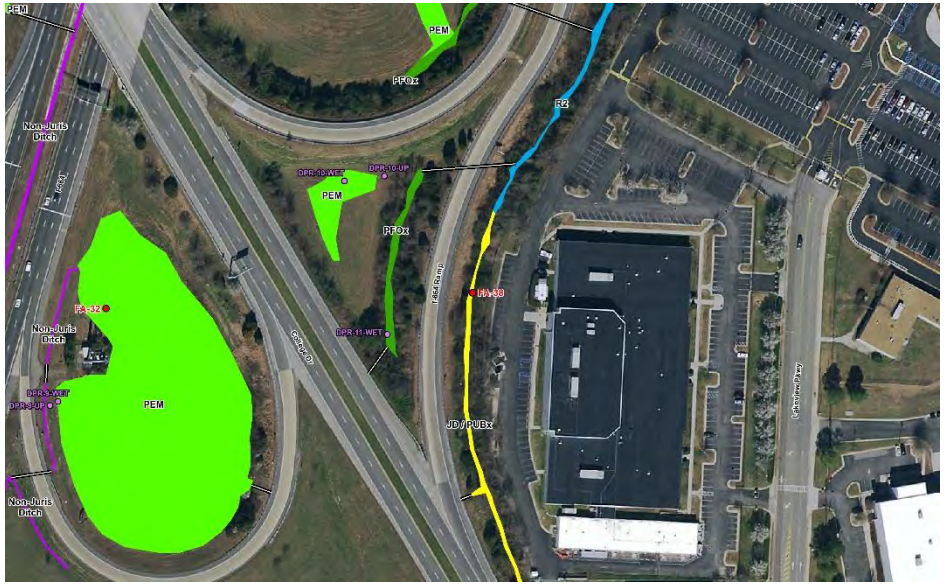
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	3, 4, 5, 7, 9	☑	Wetland has the potential to receive water from surrounding uplands and roadway.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 8, 9, 10	☑	
Production Export	Y	7, 10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 14		
Wildlife Habitat	Y	6, 7, 13, 19, 20	☑	
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Chinese Privet	*Ligustrum sinense*
Japanese Honeysuckle	*Lonicera japonica*



Wetland Function-Value Evaluation Form

Total area of wetland 3.37 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation/Governmental Distance to nearest roadway or other development 140 feet

Dominant wetland systems present E2EM Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-39

Latitude 36.88933 Longitude -76.42613

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

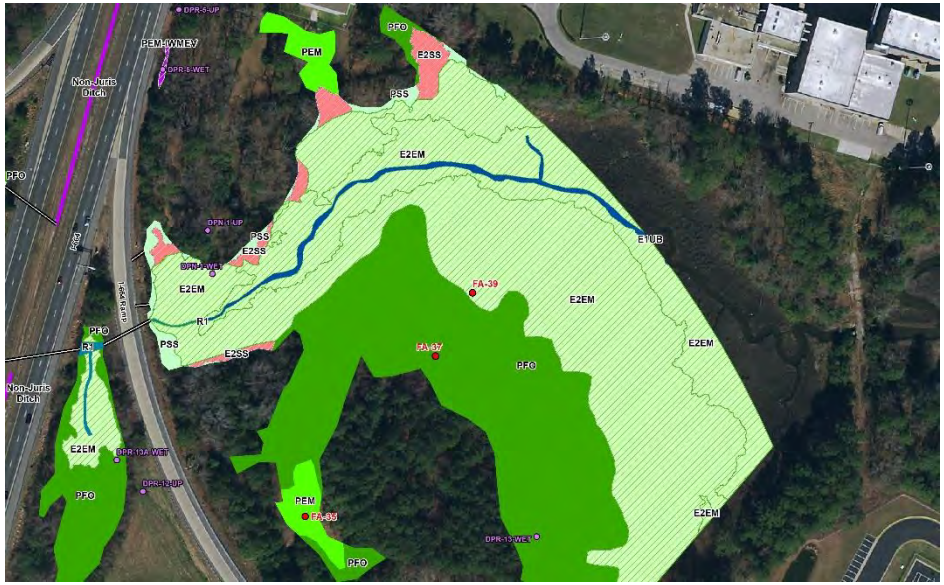
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 8, 13, 15		
Floodflow Alteration	Y	3, 4, 5, 7, 9, 13, 18		
Fish and Shellfish Habitat	Y	1, 4		Marine functions used
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9, 14, 15, 16		
Nutrient Removal	Y	1, 3, 4, 5, 6, 8, 9, 10, 12		
Production Export	Y	1, 2, 4, 7, 10, 11, 12, 13		
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 6, 7, 9, 12, 13, 15	☑	Wetland vegetation is dense to stabilize shoreline.
Wildlife Habitat	Y	1, 3, 5, 6, 7, 8, 11, 13, 17, 19	☑	Wetland has the potential to provide habitat for species.
Recreation	N	12		Wetland is not easily accessible as access is restricted from most sides.
Educational/Scientific Value	N	4, 9, 10, 13, 14		Wetland is not easily accessible as access is restricted from most sides.
Uniqueness/Heritage	Y	4, 5, 7, 8, 10, 12, 13, 17, 19, 22	☑	Multiple wetland classes present.
Visual Quality/Aesthetics	Y	1, 2, 3, 6, 11, 12		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

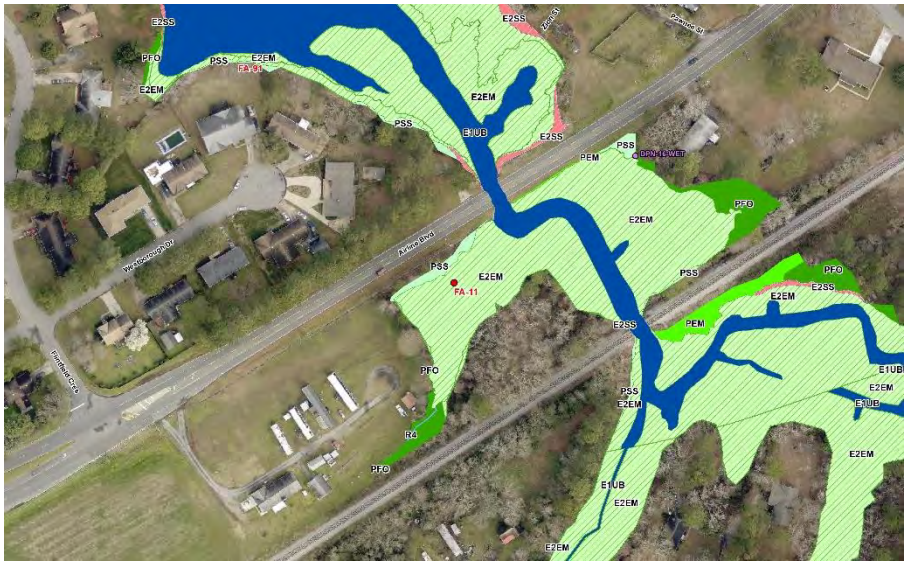
* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Wax Myrtle	*Morella cerifera*
Switch cane	*Arundinaria tecta*
Common Reed	*Phragmites australis*



Additional Delineated Wetland Similar in Function/Value

FA-11		

Wetland Function-Value Evaluation Form

Total area of wetland 0.19 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation, Commercial Distance to nearest roadway or other development 33 feet

Dominant wetland systems present JD/PUBx 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? Upper

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

Wetland I.D. FA-44

Latitude 36.87373 Longitude -76.43384

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

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	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadway.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 10		
Production Export	Y	10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 14		
Wildlife Habitat	Y	6, 19, 20		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Wax Myrtle	*Morella cerifera*
Japanese Stilt Grass	*Microstegium vimineum*
Sweet Gum	*Liquidambar stryaciflua*
Black Willow	*Salix nigra*

Wetland Function-Value Evaluation Form

Total area of wetland 0.28 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 30 feet

Dominant wetland systems present PFOx 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? Upper

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

Wetland I.D. FA-49

Latitude 36.86669 Longitude -76.43418

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

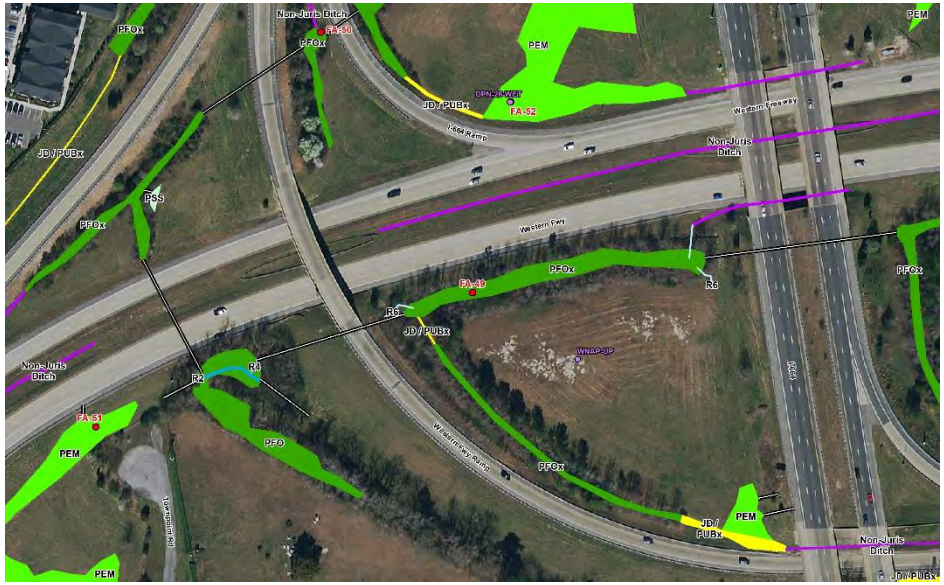
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 10, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadways.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 10		
Production Export	N	10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 8, 12, 14		
Wildlife Habitat	N	19, 20		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Loblolly Pine	*Pinus taeda*
Sweet Gum	*Liquidambar stryaciflua*
Wax Myrtle	*Morella cerifera*



Wetland Function-Value Evaluation Form

Total area of wetland 0.26 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 52 feet

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin?

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

Wetland I.D. FA-54

Latitude 36.86912 Longitude -76.43356

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

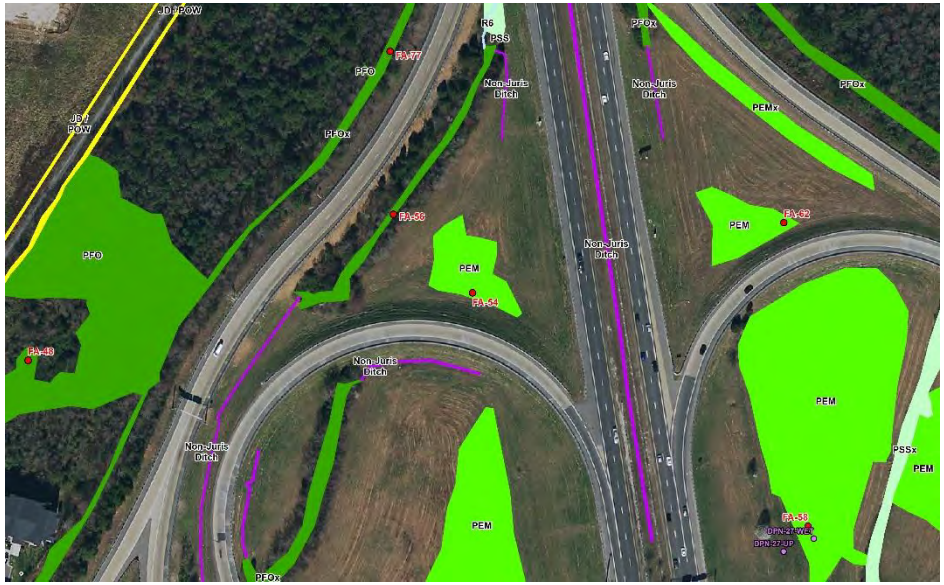
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 8, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	
Fish and Shellfish Habitat	N			Wetland is not associated with a watercourse.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 9, 10	☑	Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	N			
Sediment/Shoreline Stabilization	Y	3, 5		
Wildlife Habitat	N	19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

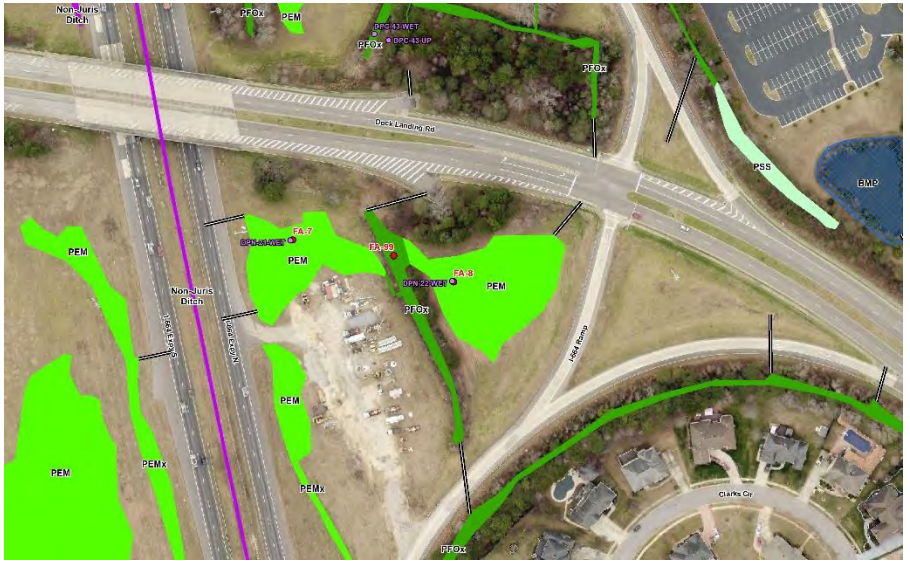
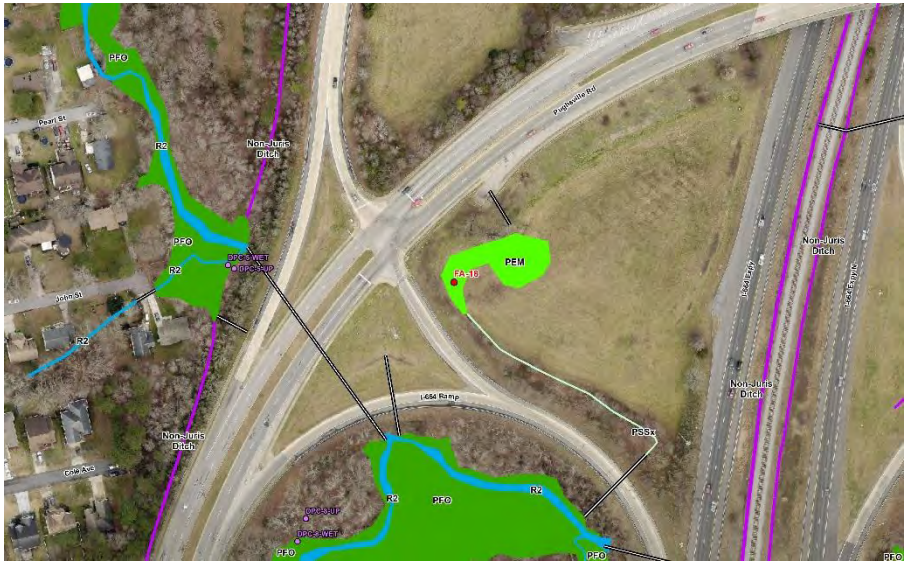
* Refer to backup list of numbered considerations.

Species List

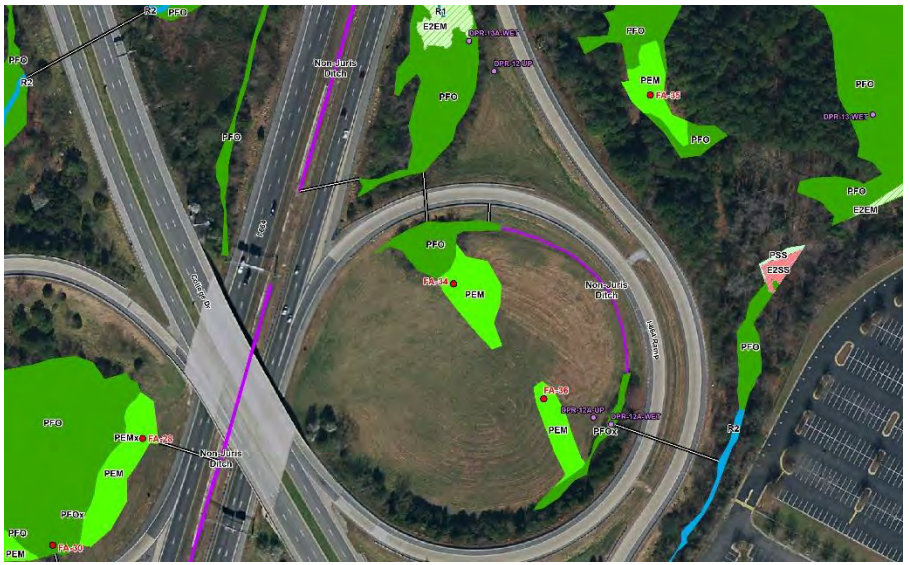
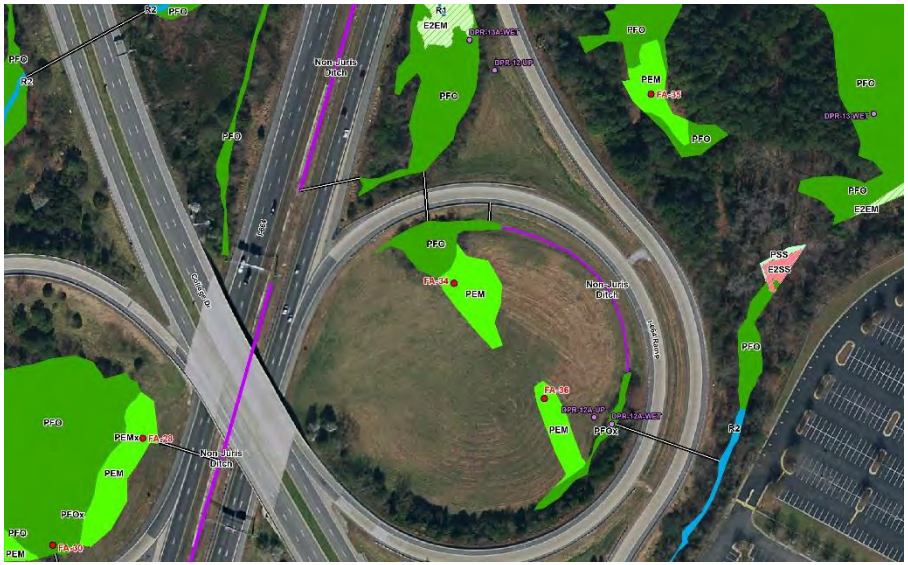
Common Name	Scientific Name
Low Spike Sedge	*Kyllinga pumila*
Poverty Rush	*Juncus tenius*
Dallis Grass	*Paspalum dilatatum*



Additional Delineated Wetlands Similar in Function/Value

FA-8		
FA-18		

Additional Delineated Wetlands Similar in Function/Value

FA-34		
FA-36		

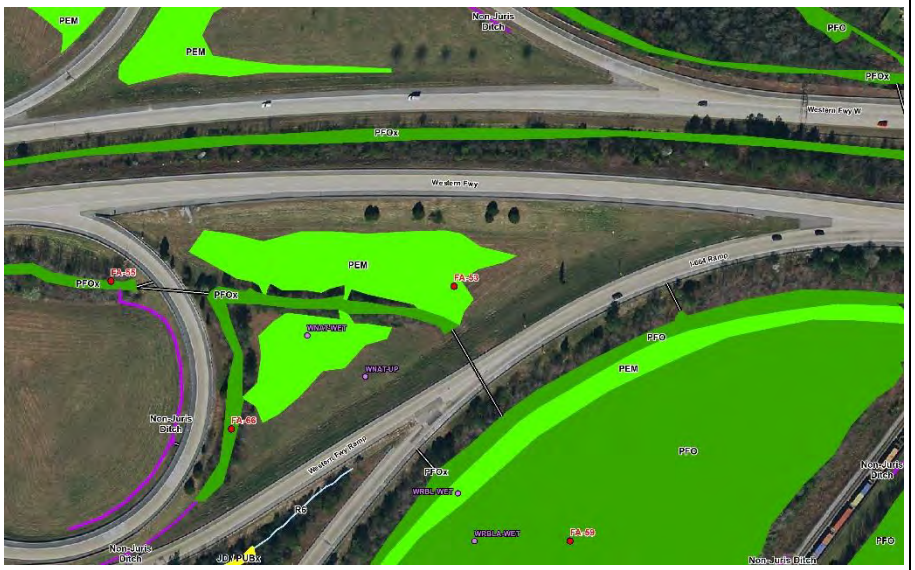
Additional Delineated Wetlands Similar in Function/Value

FA-46		
FA-51		

Additional Delineated Wetlands Similar in Function/Value

FA-52

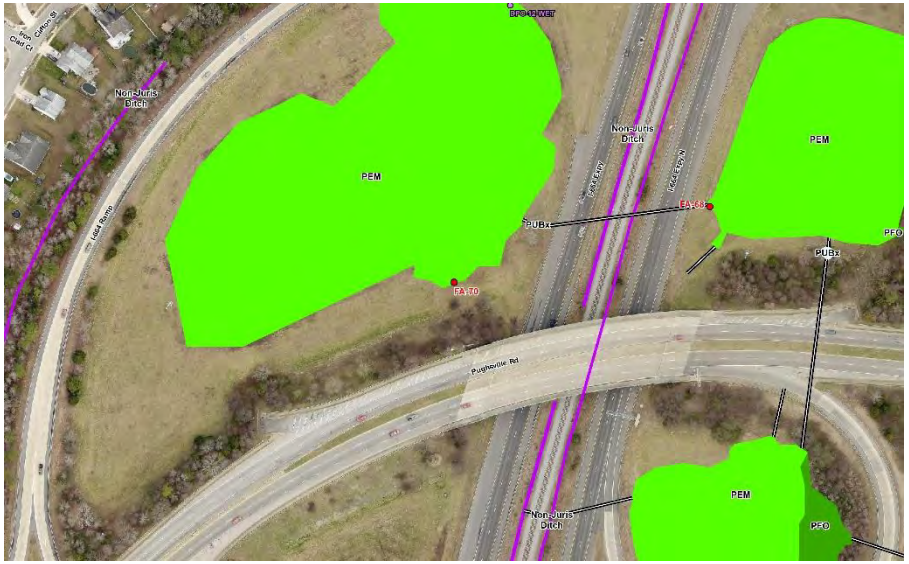
FA-53



Additional Delineated Wetlands Similar in Function/Value

FA-58		
FA-60		

Additional Delineated Wetlands Similar in Function/Value

FA-62		
FA-70		

Additional Delineated Wetlands Similar in Function/Value

FA-93		
FA-96		

Wetland Function-Value Evaluation Form

Total area of wetland 0.26 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 30 feet

Dominant wetland systems present PFOx 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? Upper

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

Wetland I.D. FA-55

Latitude 36.86692 Longitude -76.43081

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

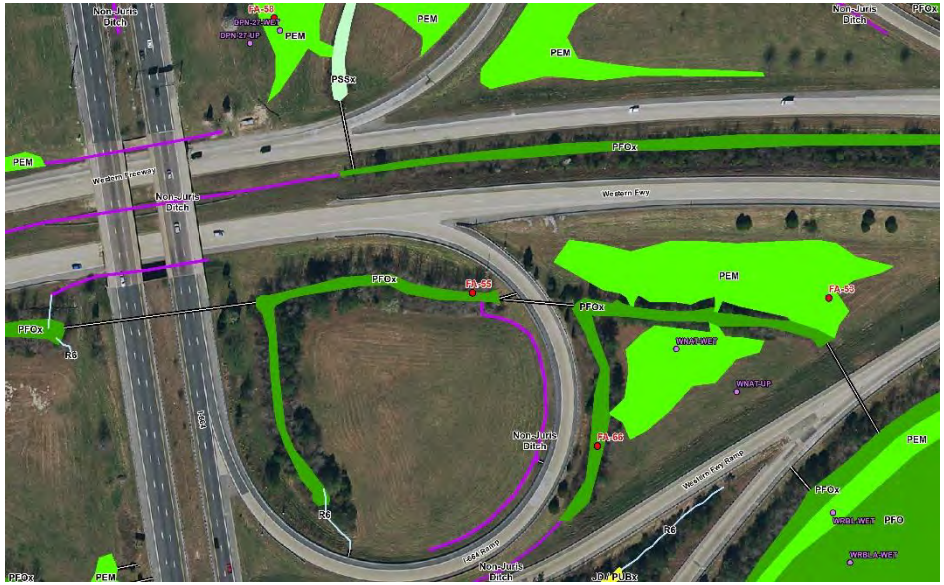
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 10, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadways.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 10		
Production Export	N	10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 8, 12, 14	☑	
Wildlife Habitat	N	19, 20		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

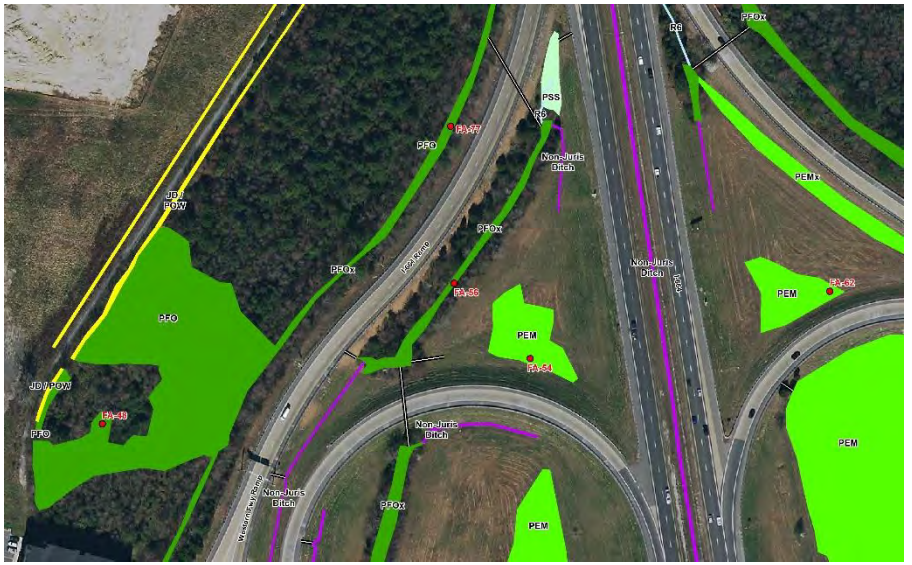
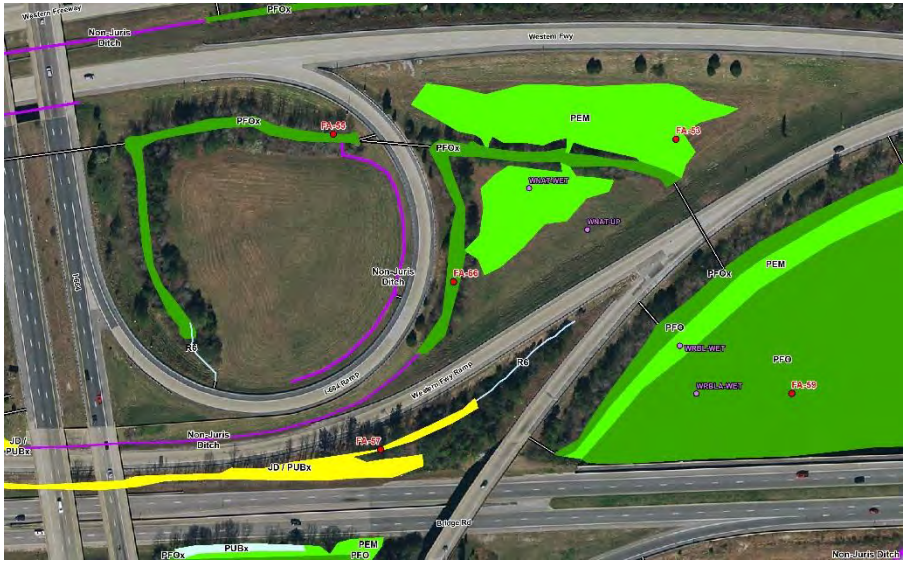
* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Black Willow	*Salix nigra*
Sweet Gum	*Liquidambar stryaciflua*
Slender Wood Oats	*Chasmanthium laxum*



Additional Delineated Wetlands Similar in Function/Value

FA-56		
FA-66		

Wetland Function-Value Evaluation Form

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

Adjacent land use Transportation Distance to nearest roadway or other development 17 feet

Dominant wetland systems present JD/PUBx 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? Upper

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

Wetland I.D. FA-57

Latitude 36.86551 Longitude -76.43059

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

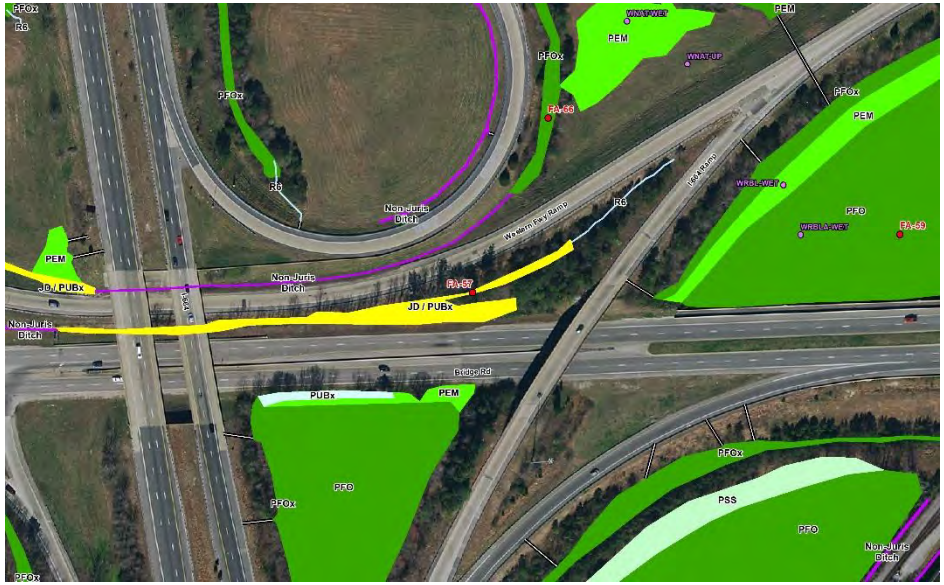
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadway.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 10		
Production Export	Y	10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 14		
Wildlife Habitat	N	19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Wax Myrtle	*Morella cerifera*
American Holly	*Ilex opaca*
Loblolly Pine	*Pinus taeda*



Wetland Function-Value Evaluation Form

Total area of wetland 4.92 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? Yes

Adjacent land use Transportation Distance to nearest roadway or other development 15 feet

Dominant wetland systems present 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? Upper

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

Wetland I.D. FA-59

Latitude 36.88649 Longitude -76.43036

Prepared by: TRC Date 11/13/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

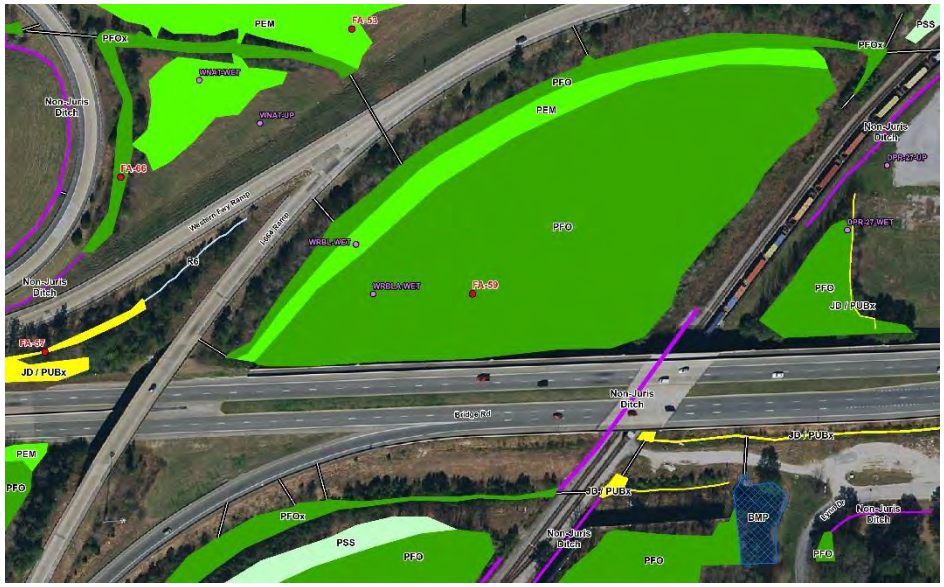
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	5, 8, 15		
Floodflow Alteration	Y	1, 2, 3, 4, 5, 6, 7, 8, 9, 15, 18	☑	Wetland has potential to store runoff from surrounding roadways and rail line.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 4, 5, 7, 8		
Nutrient Removal	Y	1, 4, 7, 8, 10, 11		
Production Export	Y	1, 2, 4, 7, 8, 10		
Sediment/Shoreline Stabilization	N	2, 14		
Wildlife Habitat	Y	6, 8, 9, 13, 14, 15, 19, 21	☑	Wetland has potential for avian habitat within interstate loop.
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	3, 12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation datasheet DPN-12-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Black Gum	*Nyssa sylvatica*
Black Willow	*Salix nigra*
Switch Cane	*Arundinaria tecta*



Wetland Function-Value Evaluation Form

Total area of wetland 2.56 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation and residential Distance to nearest roadway or other development 45 feet

Dominant wetland systems present 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? Upper

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

Wetland I.D. FA-65

Latitude 36.85222 Longitude -76.43078

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

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	4, 5, 8, 15		
Floodflow Alteration	Y	3, 4, 5, 6, 7, 9, 18	☑	Wetland has the potential to store water from overland sheet flow.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8		
Nutrient Removal	Y	4, 8, 10		
Production Export	Y	1, 2, 7		
Sediment/Shoreline Stabilization	Y	2, 14		
Wildlife Habitat	Y	1, 8, 13, 19, 21		Wetland has the potential to provide avian habitat.
Recreation	Y	11, 12		
Educational/Scientific Value	Y	9, 10, 13		
Uniqueness/Heritage	Y	1, 8, 10, 16, 17, 19	☑	Wetland has the potential to serve as an education site with owner permission being granted.
Visual Quality/Aesthetics	Y	3, 6, 9		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation datasheet DPC-37-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Black Gum	*Nyssa sylvatica*
Loblolly Pine	*Pinus taeda*
Switch Cane	*Arundinaria tecta*

Wetland Function-Value Evaluation Form

Total area of wetland 2.19 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 35 feet

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? Upper

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

Wetland I.D. FA-68

Latitude 36.84926 Longitude -76.43242

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

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	4, 5, 7, 8, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 6, 7, 9, 15		
Fish and Shellfish Habitat	N			Fish and shellfish habitat are not present in wetland.
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 12, 13, 14, 15, 16	☑	Wetland has the potential to remove sediment in runoff from surrounding roadways.
Nutrient Removal	Y	3, 4, 5, 6, 8, 9, 10, 12, 13	☑	Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	Y	2, 7, 10, 13		
Sediment/Shoreline Stabilization	Y	3, 4, 5, 15		
Wildlife Habitat	Y	6, 13, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 13, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	2, 12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

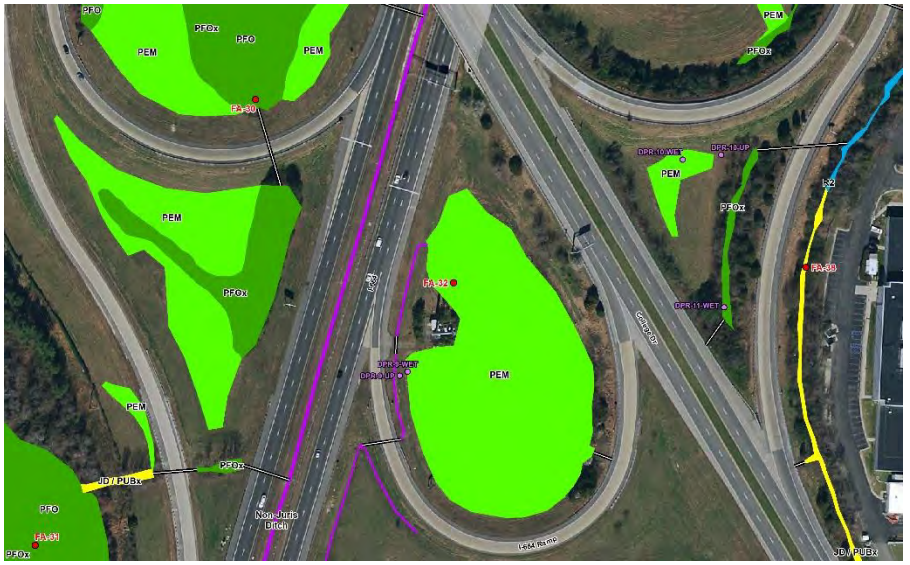
Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Common Reed	*Phragmites australis*

Additional Delineated Wetlands Similar in Function/Value

FA-32		
FA-81		

Wetland Function-Value Evaluation Form

Total area of wetland 0.21 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation and forested Distance to nearest roadway or other development 15 feet

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? Upper

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

Wetland I.D. FA-72

Latitude 36.8428 Longitude -76.43322

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

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	4, 5, 8, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 6, 7, 9	☑	Wetland has the potential to store runoff from surrounding easement and rail line area.
Fish and Shellfish Habitat	N			Fish and shellfish habitat are not present in wetland.
Sediment/Toxicant Retention	Y	4		
Nutrient Removal	Y	3, 9, 10		
Production Export	N			
Sediment/Shoreline Stabilization	Y	5, 15		
Wildlife Habitat	Y	6, 19		
Recreation	Y	4, 11, 12		
Educational/Scientific Value	Y	9, 10		
Uniqueness/Heritage	Y	8, 13, 17, 19		
Visual Quality/Aesthetics	Y	2, 9, 12		
ES Endangered Species Habitat	N			
Other				

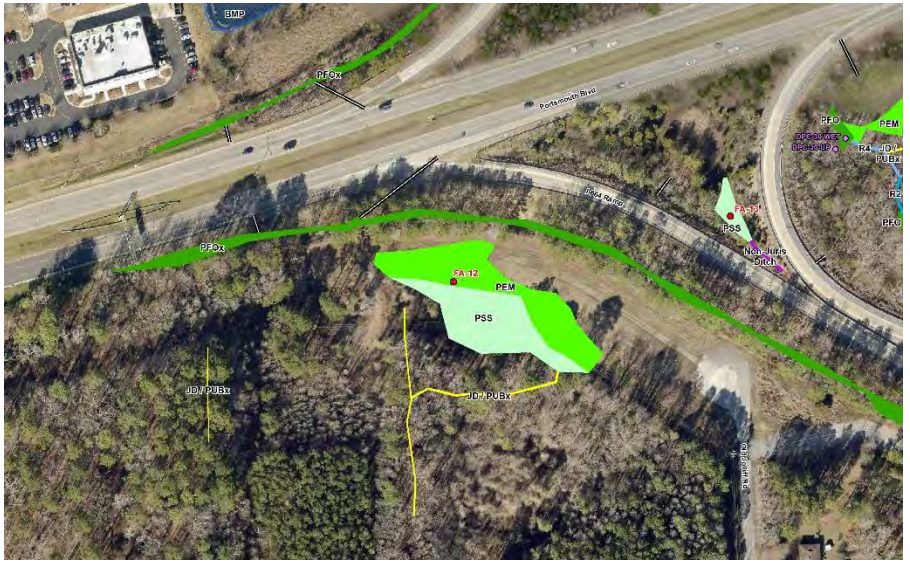
Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Small Carp Grass	*Arthraxon hispidus*
Japanese Stilt Grass	*Microstegium vimineum*
Poverty Rush	*Juncus tenius*

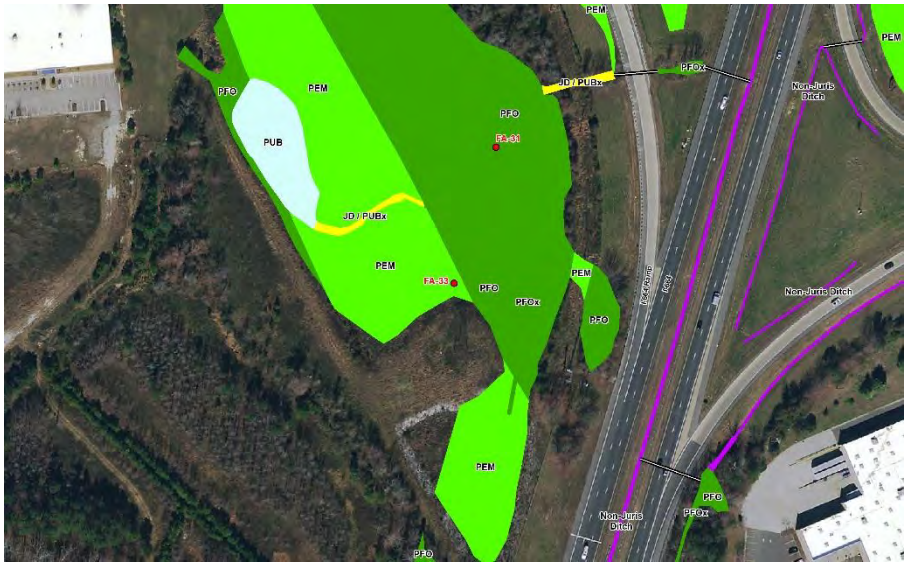
Additional Delineated Wetlands in Easements Similar in Function/Value

FA-12		
FA-20		

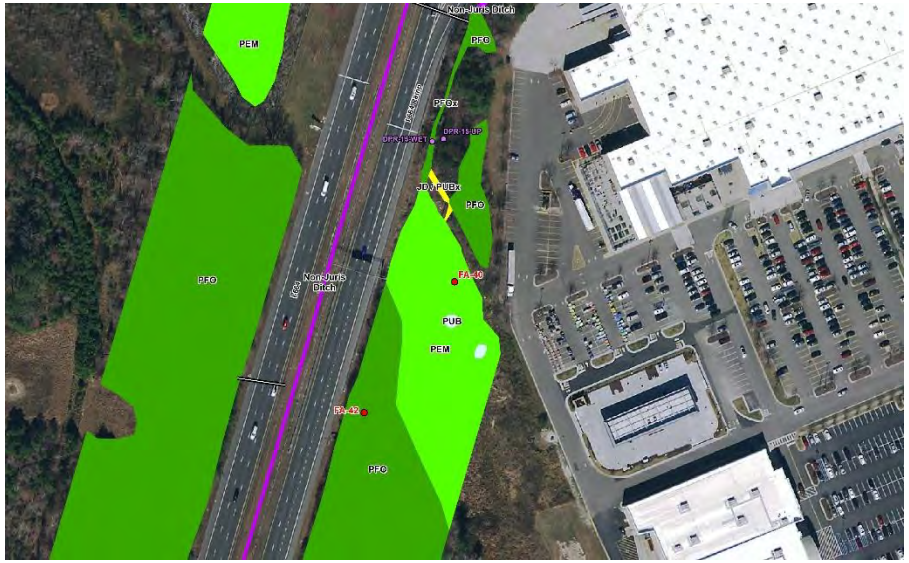
Additional Delineated Wetlands in Easements Similar in Function/Value

FA-27

FA-33



Additional Delineated Wetlands in Easements Similar in Function/Value

FA-40		
FA-92		

Wetland Function-Value Evaluation Form

Total area of wetland 0.44 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 30 feet

Dominant wetland systems present PFOx 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? Upper

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

Wetland I.D. FA-73

Latitude 36.84217 Longitude -76.43393

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

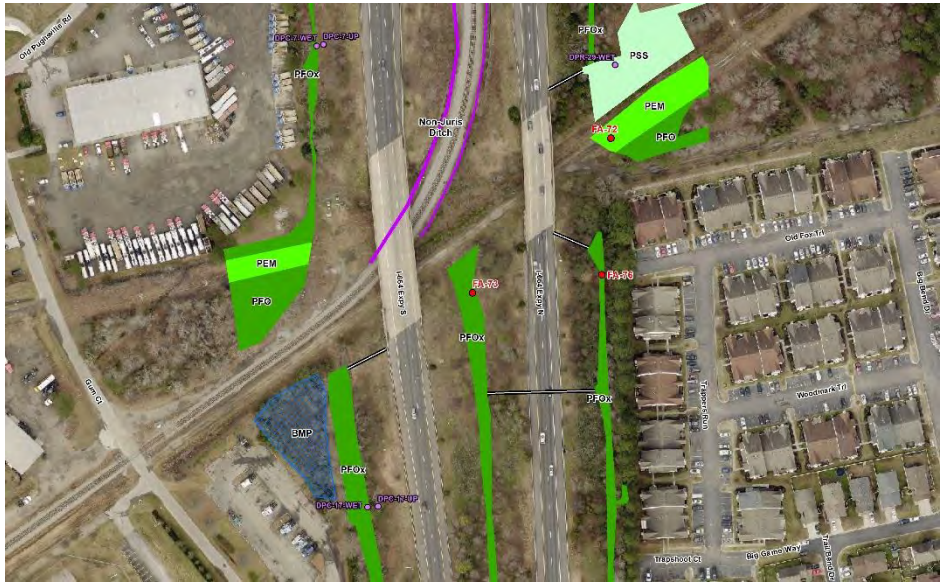
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadways.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 8, 10		
Production Export	Y	7, 10, 12, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 12, 14		
Wildlife Habitat	Y	13, 15, 19, 20		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

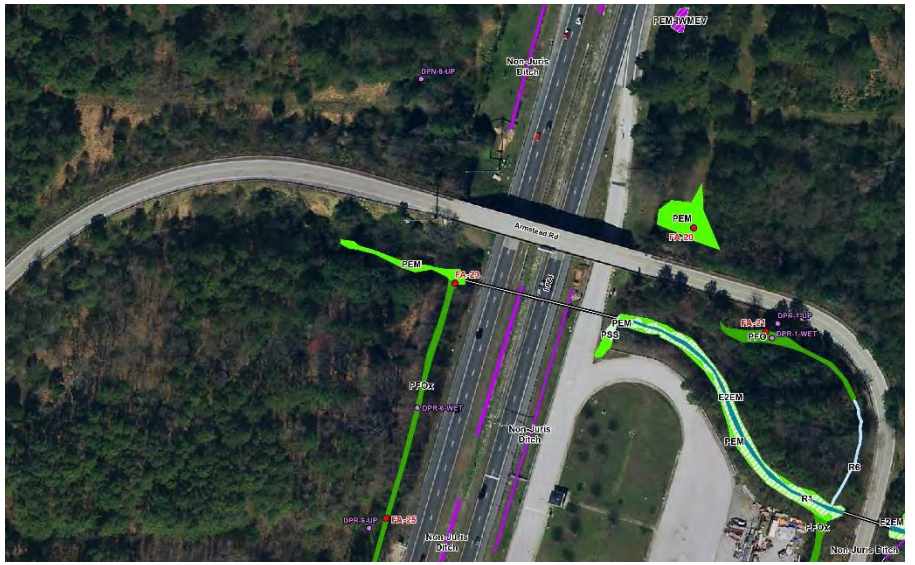
* Refer to backup list of numbered considerations.

Species List

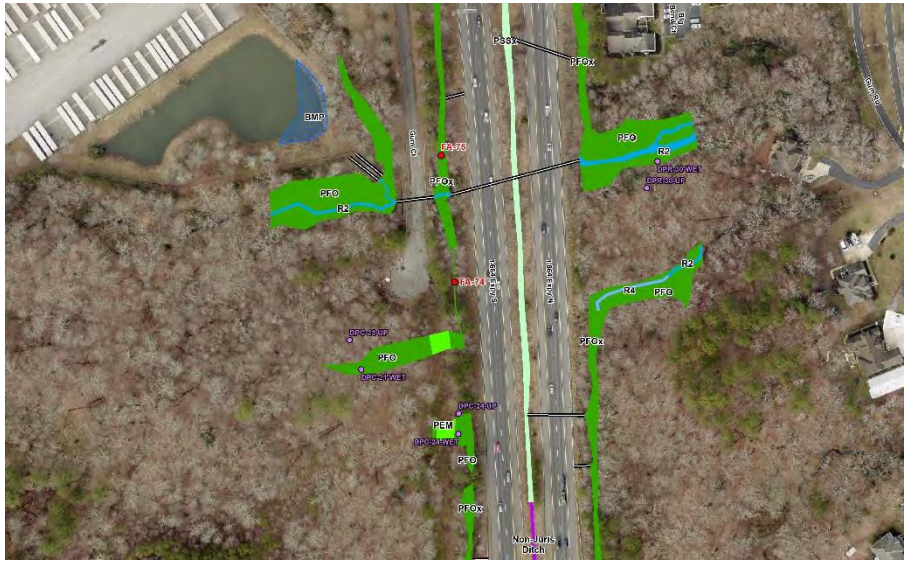
Common Name	Scientific Name
Red Maple	*Acer rubrum*
Black Willow	*Salix nigra*
Common Cattail	*Typha latifolia*
Wrinkle-leaf Goldenrod	*Solidago rugosa*
Japanese Stilt Grass	*Microstegium vimineum*



Additional Delineated Wetlands Similar in Function/Value

FA-23		
FA-25		

Additional Delineated Wetlands Similar in Function/Value

FA-47		
FA-74		

Additional Delineated Wetlands Similar in Function/Value

FA-76		

Wetland Function-Value Evaluation Form

Total area of wetland 0.73 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 30 feet

Dominant wetland systems present PFOx 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? Upper

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

Wetland I.D. FA-75

Latitude 36.83683 Longitude -76.43404

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

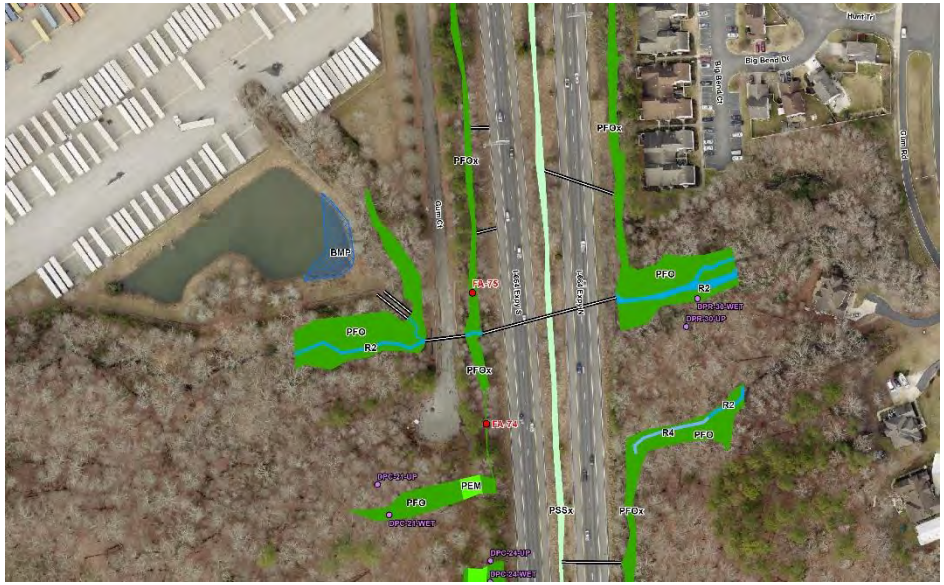
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadways.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 8, 10		
Production Export	Y	7, 10, 12, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 12, 14		
Wildlife Habitat	Y	13, 15, 19, 20		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Black Willow	*Salix nigra*
Sweet Gum	*Liquidambar stryaciflua*
Chinese Privet	*Ligustrum sinense*
Wax Myrtle	*Morella cerifera*
Loblolly Pine	*Pinus taeda*
Japanese Honeysuckle	*Lonicera japonica*



Wetland Function-Value Evaluation Form

Total area of wetland 0.81 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation, Undeveloped Distance to nearest roadway or other development 58 feet

Dominant wetland systems present PFOx 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? Upper

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

Wetland I.D. FA-79

Latitude 36.8246 Longitude -76.43275

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

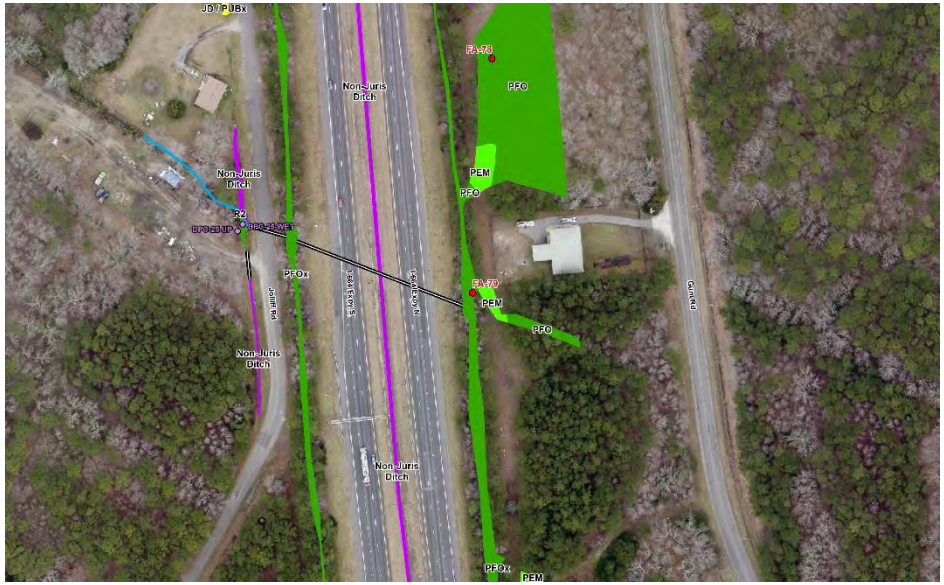
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadway.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 8, 10		
Production Export	Y	10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 14		
Wildlife Habitat	N	7, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	8, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

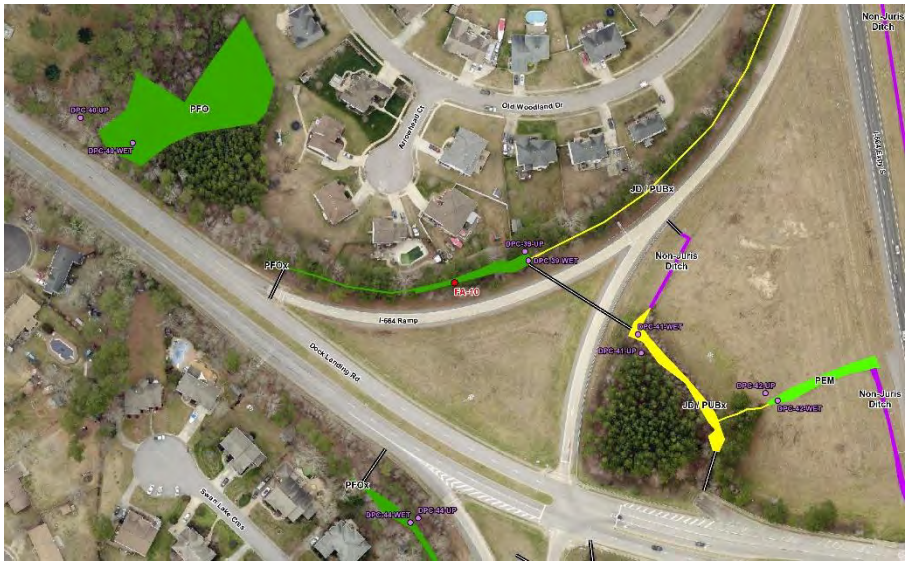
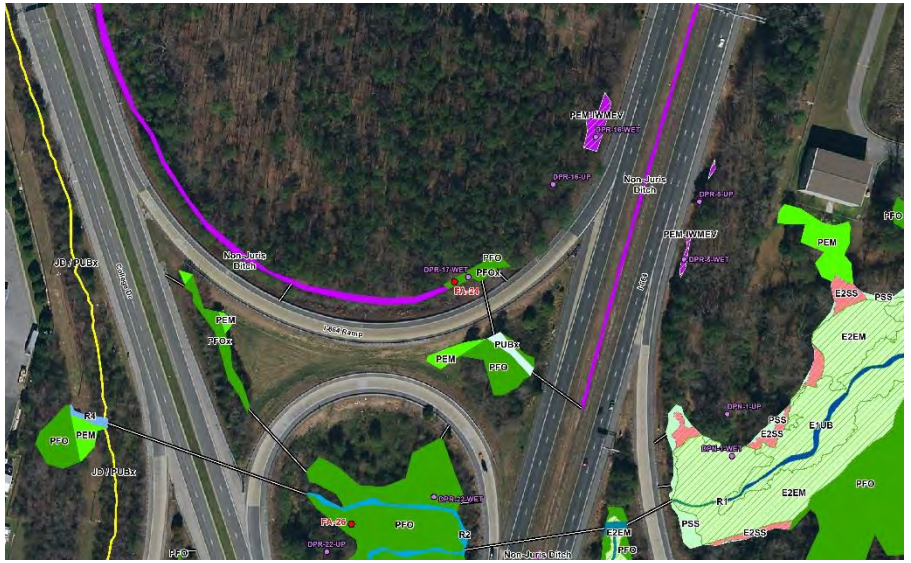
* Refer to backup list of numbered considerations.

Species List

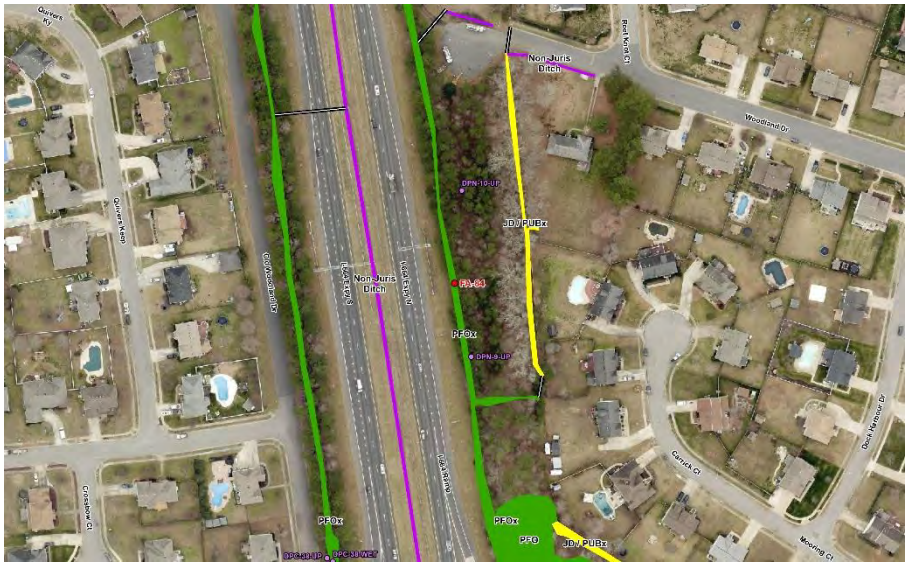
Common Name	Scientific Name
Small Carp Grass	*Arthraxon hispidus*
Low Spike Sedge	*Kyllinga pumila*
Lamp Rush	*Juncus effuses*
Virginia Buttonweed	*Diodia virginiana*



Additional Delineated Wetlands Similar in Function/Value

FA-10		
FA-24		

Additional Delineated Wetlands Similar in Function/Value

FA-84		

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 Transportation and undeveloped Distance to nearest roadway or other development 60 feet

Dominant wetland systems present 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? Lower

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

Wetland I.D. FA-82

Latitude 36.81514 Longitude -76.43122

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

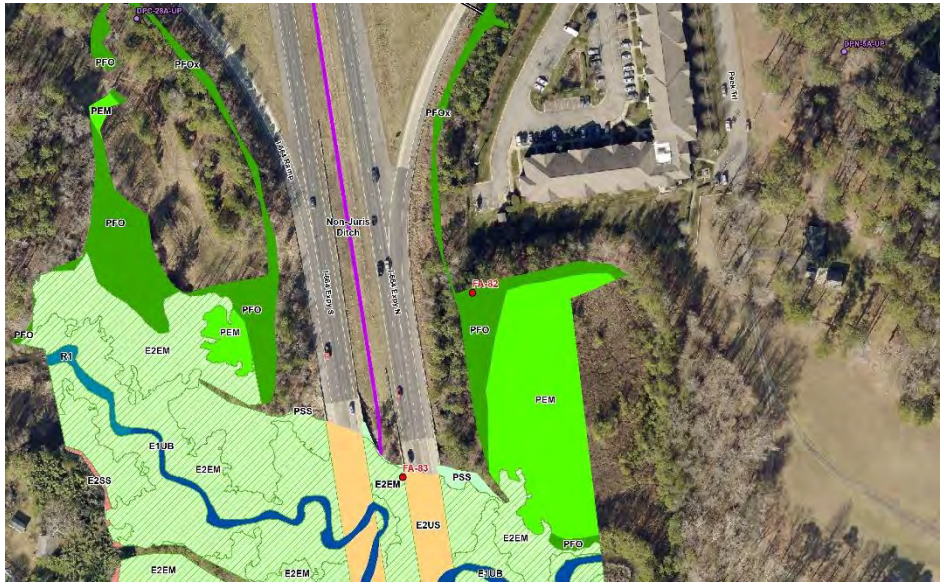
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 8, 15		
Floodflow Alteration	Y	3, 4, 5, 6, 7, 9, 13, 18		
Fish and Shellfish Habitat	N			PFO wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9, 10, 11, 14, 15, 16	☑	Wetland has the potential to remove and store sediment from upslope roadway.
Nutrient Removal	Y	3, 4, 5, 6, 7, 8, 10, 11, 12	☑	Wetland has the potential to remove nutrients from upslope roadway.
Production Export	Y	1, 2, 7, 9, 10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 15		
Wildlife Habitat	Y	1, 3, 6, 8, 11, 13, 19, 21		Wetland has the potential to provide wildlife habitat.
Recreation	N	12		
Educational/Scientific Value	Y	2, 3, 9, 10, 13		
Uniqueness/Heritage	Y	1, 8, 10, 12, 13, 16, 17, 19		Wetland has the potential to serve as an educational site with owner permission being granted.
Visual Quality/Aesthetics	Y	1, 2, 3, 6, 9		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Wax Myrtle	*Morella cerifera*
Black Willow	*Salix nira*
Switch Cane	*Arundinaria tecta*



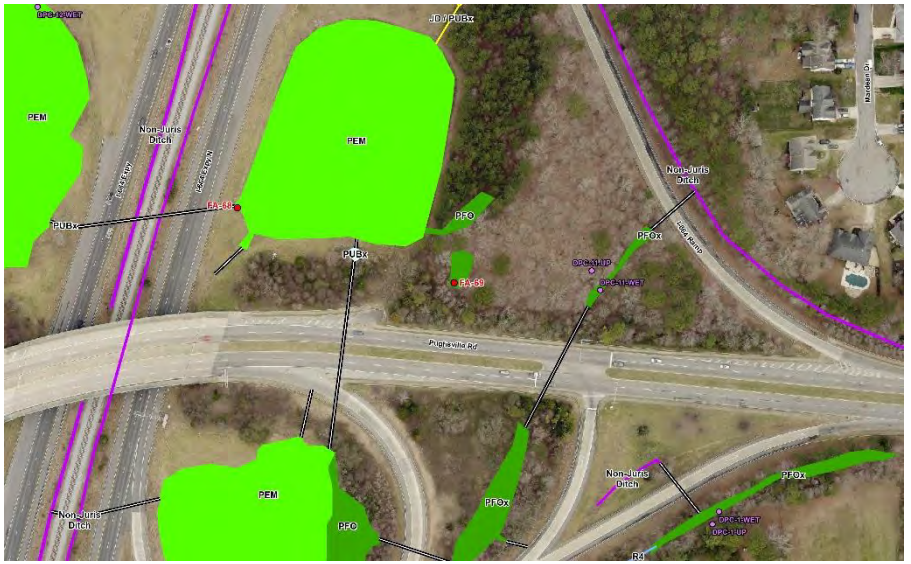
Additional Delineated Wetlands Similar in Function/Value

FA-29		
FA-41		

Additional Delineated Wetlands Similar in Function/Value

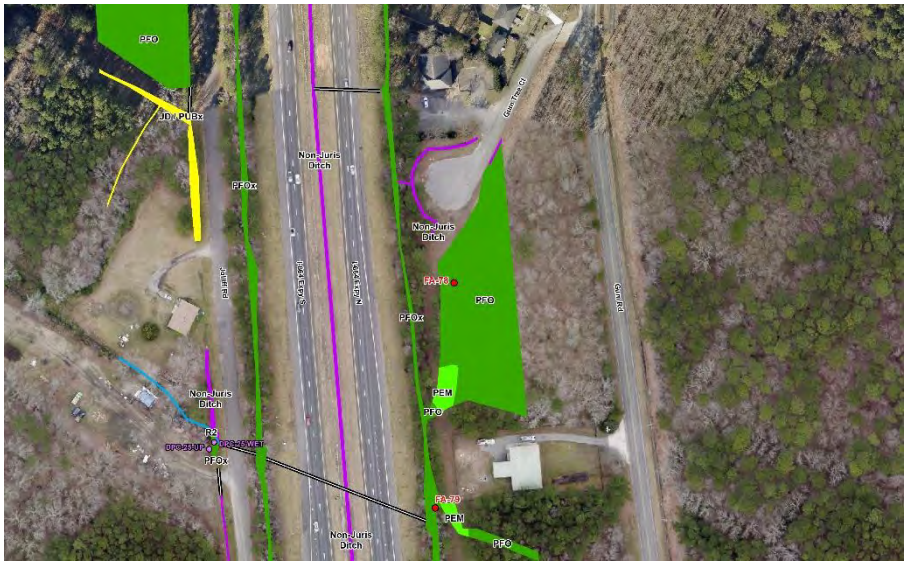
FA-43		
FA-67		

Additional Delineated Wetlands Similar in Function/Value

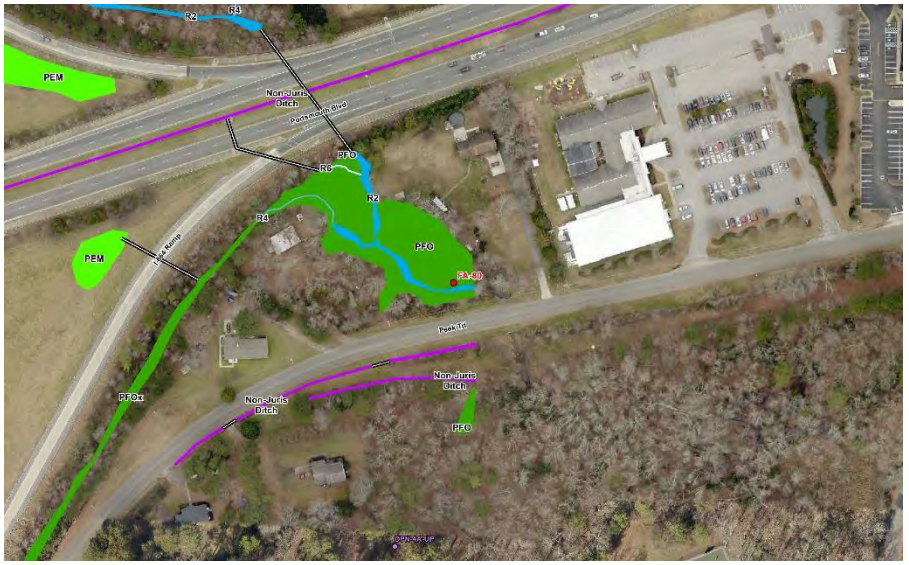
FA-69		
FA-71		

Additional Delineated Wetlands Similar in Function/Value

FA-78



FA-80



Wetland Function-Value Evaluation Form

Total area of wetland 0.29 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation Distance to nearest roadway or other development 5 feet

Dominant wetland systems present E2EM Contiguous undeveloped buffer zone present Yes

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

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

Wetland I.D. FA-83

Latitude 36.81437 Longitude -76.43161

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

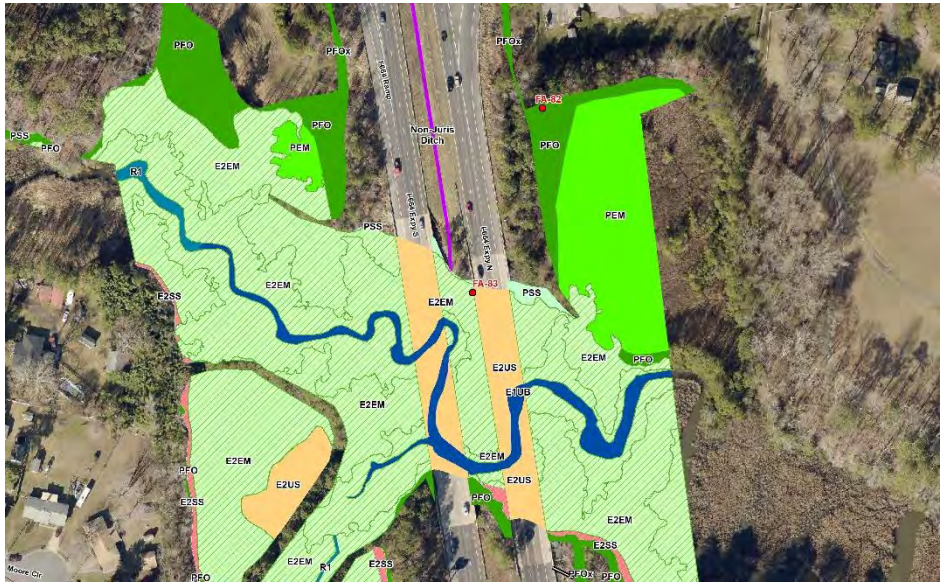
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 8, 13, 15		
Floodflow Alteration	Y	3, 4, 5, 7, 9, 13, 18		
Fish and Shellfish Habitat	Y	1, 4		Marine functions used
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9, 14, 15, 16		
Nutrient Removal	Y	1, 3, 4, 5, 6, 8, 9, 10, 12		
Production Export	Y	1, 2, 4, 7, 10, 11, 12, 13		
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 6, 7, 9, 12, 13, 15	☑	Wetland vegetation is dense to stabilize shoreline.
Wildlife Habitat	Y	1, 3, 5, 6, 7, 8, 11, 13, 17, 19	☑	Wetland has the potential to provide habitat for species.
Recreation	N	12		Wetland is not easily accessible as access is restricted from all sides.
Educational/Scientific Value	N	4, 14		Wetland is not easily accessible as access is restricted from all sides.
Uniqueness/Heritage	Y	4, 5, 7, 12, 13, 17, 19, 22	☑	Multiple wetland classes present.
Visual Quality/Aesthetics	Y	1, 2, 3, 6, 12		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Common Reed	*Phragmites australis*
Switch Cane	*Arundinaria tecta*



Wetland Function-Value Evaluation Form

Total area of wetland 0.01 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation, Residential Distance to nearest roadway or other development 50 feet

Dominant wetland systems present JD/PUBx 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? Upper

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

Wetland I.D. FA-85

Latitude 36.80677 Longitude -76.4297

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

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	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadway.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4		
Production Export	Y	10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4		
Wildlife Habitat	N			
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Sweet Gum	*Liquidambar stryaciflua*
Black Gum	*Nyssa sylvatica*

Wetland Function-Value Evaluation Form

Total area of wetland 2.73 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation and residential Distance to nearest roadway or other development 65 feet

Dominant wetland systems present 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? Upper

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

Wetland I.D. FA-86

Latitude 36.80658 Longitude -76.42941

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

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	4, 5, 8, 15		
Floodflow Alteration	Y	3, 4, 5, 6, 7, 9, 18	☑	Wetland has the potential to store water from overland sheet flow.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 4, 7		
Nutrient Removal	Y	3, 4, 7, 10, 11		
Production Export	N	2		
Sediment/Shoreline Stabilization	N	2		
Wildlife Habitat	Y	1, 19, 21		Wetland has the potential to provide avian habitat.
Recreation	Y	11, 12		
Educational/Scientific Value	Y	9, 10, 13		
Uniqueness/Heritage	Y	1, 8, 10, 16, 17, 19	☑	Wetland has the potential to serve as an education site with owner permission being granted.
Visual Quality/Aesthetics	Y	6, 9		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation datasheet DPN-11-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Sweet Gum	*Liquidambar stryaciflua*
Switch Cane	*Arundinaria tecta*
Japanese Stilt Grass	*Microstegium vimineum*
Muscadine Grape	*Vitis rotundifolia*

Additional Delineated Wetland Similar in Function/Value

FA-61		

Wetland Function-Value Evaluation Form

Total area of wetland 1.91 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Institutional and undeveloped Distance to nearest roadway or other development 15 feet

Dominant wetland systems present 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? Upper

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

Wetland I.D. FA-87

Latitude 36.80419 Longitude -76.42484

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

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	4, 5, 8, 15		
Floodflow Alteration	Y	3, 4, 5, 6, 7, 9, 18	☑	Wetland has the potential to store water from overland sheet flow and from nearby roadway and parking area.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	4, 7		
Nutrient Removal	Y	1, 3, 7, 8, 10, 11		
Production Export	Y	2, 7, 8		
Sediment/Shoreline Stabilization	N	2, 14		
Wildlife Habitat	Y	1, 5, 7, 8, 13, 15, 19, 20, 21	☑	Wetland has the potential to provide habitat.
Recreation	Y	2, 4, 5, 11, 12		
Educational/Scientific Value	Y	2, 4, 5, 9, 10, 13		Wetland has the potential to serve as an education site with owner permission being granted.
Uniqueness/Heritage	Y	8, 10, 16, 17, 19		Wetland has the potential to serve as an education site with owner permission being granted.
Visual Quality/Aesthetics	Y	3, 6, 8, 9		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation datasheet DPN-11-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Red Maple	*Acer rubrum*
Black Gum	*Nyssa sylvatica*
Loblolly Pine	*Pinus taeda*
Switch Cane	*Arundinaria tecta*
Slender Wood Oats	*Chasmanthium laxum*

Wetland Function-Value Evaluation Form

Total area of wetland 0.35 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation/Residential Distance to nearest roadway or other development 10 feet

Dominant wetland systems present E2EM 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? Lower

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

Wetland I.D. FA-88

Latitude 36.79947 Longitude -76.4317

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

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	4, 5, 8, 13, 15		
Floodflow Alteration	Y	3, 4, 5, 7, 9, 13, 18		
Fish and Shellfish Habitat	Y	1, 4		Marine functions used
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9, 14, 15, 16		
Nutrient Removal	Y	3, 4, 5, 6, 7, 8, 9, 10, 11, 12	☑	Wetland vegetation is dense to trap sediment and nutrients.
Production Export	Y	1, 2, 4, 7, 10, 11, 12, 13		
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 6, 7, 9, 12, 13, 15	☑	Wetland vegetation is dense to stabilize shoreline.
Wildlife Habitat	Y	1, 3, 5, 6, 7, 8, 11, 13, 17, 19	☑	Wetland has the potential to provide habitat for species.
Recreation	Y	8, 12		Wetland is easily accessible from Old Dock Landing Road.
Educational/Scientific Value	Y	2, 9, 10, 14		Wetland is easily accessible from Old Dock Landing Road.
Uniqueness/Heritage	Y	5, 7, 8, 12, 13, 14, 17, 19		
Visual Quality/Aesthetics	Y	1, 2, 6, 9, 12		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Common Reed	*Phragmites australis*

Wetland Function-Value Evaluation Form

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

Adjacent land use Transportation Distance to nearest roadway or other development 280 feet

Dominant wetland systems present PEM-IWMEV Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? N/A

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

Wetland I.D. FA-89

Latitude 36.80275 Longitude -76.43085

Prepared by: TRC Date 11/24/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

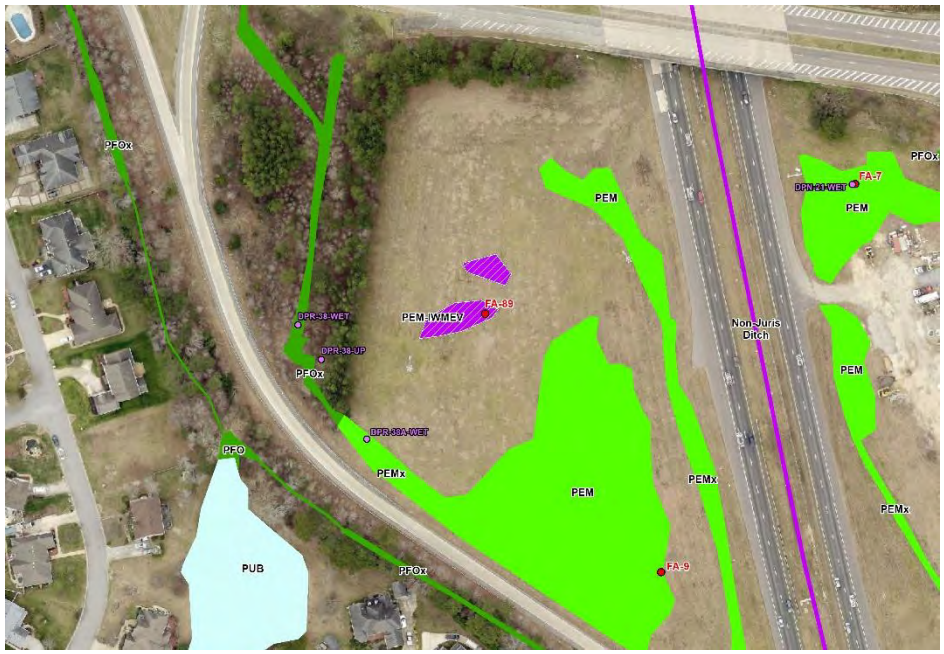
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5		
Floodflow Alteration	Y	2, 3, 4, 5, 9, 18	☑	Wetland has the potential to receive water from surrounding uplands.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 8, 9, 10		
Production Export	N	7		
Sediment/Shoreline Stabilization	Y	3, 5, 12, 15		
Wildlife Habitat	N	13, 19		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	1, 17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	12		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Small Carp Grass	*Arthraxon hispidus*
Low Spike Sedge	*Kyllinga pumila*
Poverty Rush	*Juncus tenius*
Virginia Buttonweed	*Diodia virginiana*



Wetland Function-Value Evaluation Form

Total area of wetland 0.11 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 590 feet

Dominant wetland systems present E2SS 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? Middle

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

Wetland I.D. FA-90

Latitude 36.79525 Longitude -76.42422

Prepared by: TRC Date 11/24/2020

Wetland Impact:
Type Area

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	4, 5, 8, 13, 15		
Floodflow Alteration	Y	3, 5, 7, 13, 18		
Fish and Shellfish Habitat	N	1		Marine functions used
Sediment/Toxicant Retention	Y	4, 7, 9, 14, 15, 16	☑	Wetland vegetation is dense to trap sediment and toxicants.
Nutrient Removal	Y	3, 7, 8, 9, 10, 11, 12	☑	Wetland vegetation is dense to trap sediment and nutrients.
Production Export	Y	1, 2, 7, 10, 11, 13		
Sediment/Shoreline Stabilization	Y	1, 2, 6, 7, 12, 13, 15	☑	Wetland vegetation is dense to stabilize shoreline.
Wildlife Habitat	Y	1, 3, 4, 5, 6, 7, 8, 11, 13, 19		
Recreation	N	4, 7, 12		Wetland is on private property and not easily accessed.
Educational/Scientific Value	Y	2, 8, 9, 10, 13, 14		Wetland is on private property and not easily accessed.
Uniqueness/Heritage	Y	5, 7, 8, 9, 10, 12, 13, 16, 17, 19		Wetland is on private property and not easily accessed.
Visual Quality/Aesthetics	Y	1, 2, 3, 5, 6, 7, 9, 11		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation datasheet for DPR-49-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Wax Myrtle	*Morella cerifera*
Common Reed	*Phragmites australis*

Wetland Function-Value Evaluation Form

Total area of wetland 0.01 AC Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Residential Distance to nearest roadway or other development 60 feet

Dominant wetland systems present E2EM 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? Lower

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

Wetland I.D. FA-91

Latitude 36.79947 Longitude -76.4317

Prepared by: TRC Date 11/19/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

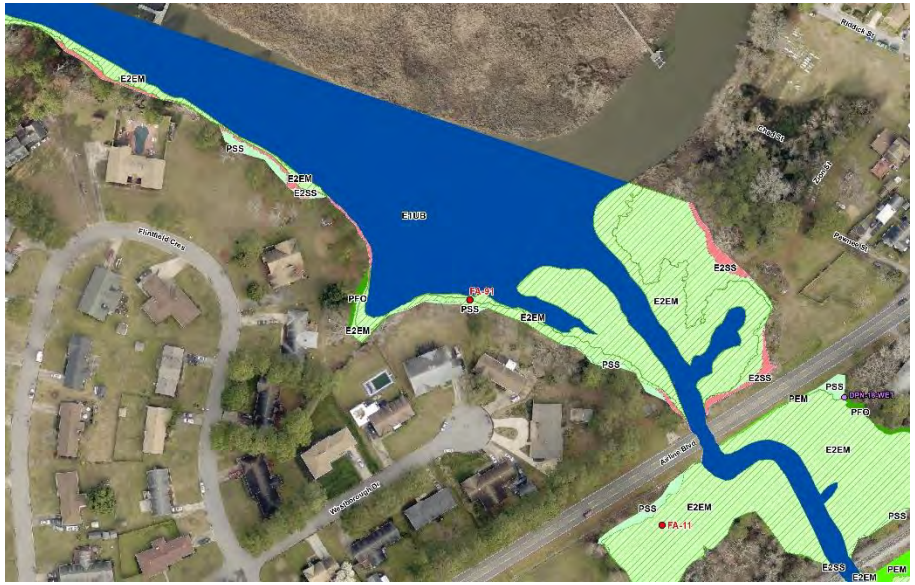
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 8, 13, 15		
Floodflow Alteration	Y	3, 5, 7, 9, 13		
Fish and Shellfish Habitat	Y	1, 4		Marine functions used
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8, 9, 14, 15, 16	☑	Wetland vegetation is dense to trap sediment and toxicants.
Nutrient Removal	Y	3, 4, 5, 6, 7, 8, 9, 10, 11, 12	☑	Wetland vegetation is dense to trap sediment and nutrients.
Production Export	Y	1, 2, 4, 7, 10, 11, 12, 13		
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 6, 7, 9, 10, 11, 12, 13, 15	☑	Wetland vegetation is dense to stabilize shoreline.
Wildlife Habitat	Y	6, 7, 8, 11, 13, 17, 19		
Recreation	N	2, 8, 9, 12		Wetland is on private property and not easily accessed.
Educational/Scientific Value	N	9, 10, 14		Wetland is on private property and not easily accessed.
Uniqueness/Heritage	Y	5, 8, 12, 13, 14, 17, 19		Wetland is on private property and not easily accessed.
Visual Quality/Aesthetics	Y	1, 2, 3, 6, 9, 12		
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Big Cordgrass	*Spartina cynosuroides*
Common Reed	*Phragmites australis*



Wetland Function-Value Evaluation Form

Total area of wetland 0.04 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Industrial Distance to nearest roadway or other development 5 feet

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? Upper

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

Wetland I.D. FA-94

Latitude 36.78201 Longitude -76.41868

Prepared by: TRC Date 11/24/2020

Wetland Impact:
Type Area

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	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 15	☑	
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 10		Wetland has the potential to remove nutrient runoff from surrounding roadways.
Production Export	N			
Sediment/Shoreline Stabilization	Y	1, 3, 4		
Wildlife Habitat	N	19		
Recreation	N			Wetland is on private property, with industrial activity and no public access.
Educational/Scientific Value	N			Wetland is on private property, with industrial activity and no public access.
Uniqueness/Heritage	N	17		Wetland is on private property, with industrial activity and no public access.
Visual Quality/Aesthetics	N	6, 12		Wetland is on private property, with industrial activity and no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.
See also delineation data sheet DPC-52-WET.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Black willow	*Salix nigra*
Common cattail	*Typha latifolia*
Japanese stilt grass	*Microstegium vimineum*
Common rush	*Juncus effuses*
Woolgrass	*Scirpus cyperinus*

Wetland Function-Value Evaluation Form

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

Adjacent land use Transportation Distance to nearest roadway or other development 58 feet

Dominant wetland systems present PFOx 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? Upper

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

Wetland I.D. FA-99

Latitude 36.80314 Longitude -76.4286

Prepared by: TRC Date 11/9/2020

Wetland Impact:
Type Area

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

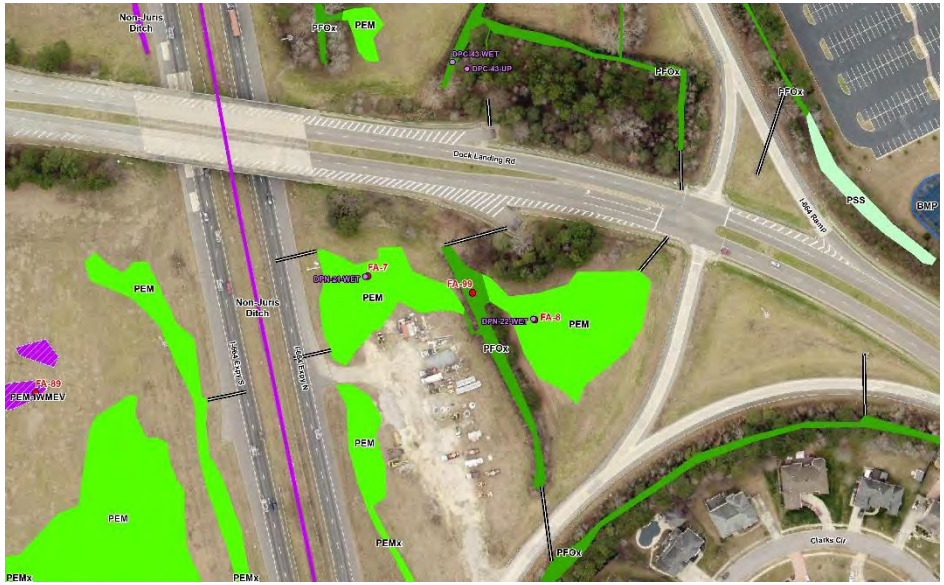
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadway.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2		
Nutrient Removal	Y	3, 4, 5, 8, 9, 10	☑	
Production Export	Y	10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 14		
Wildlife Habitat	N	7, 19, 20		
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

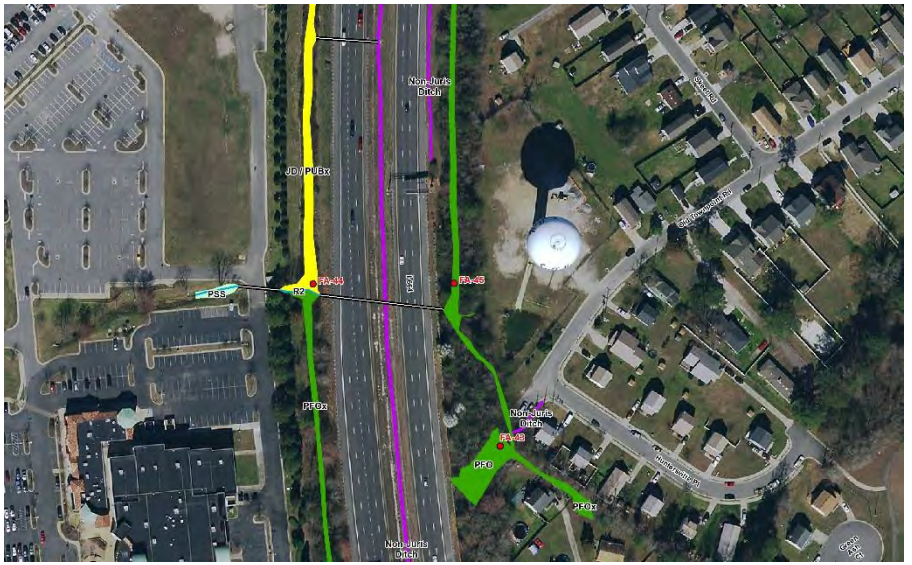
* Refer to backup list of numbered considerations.

Species List

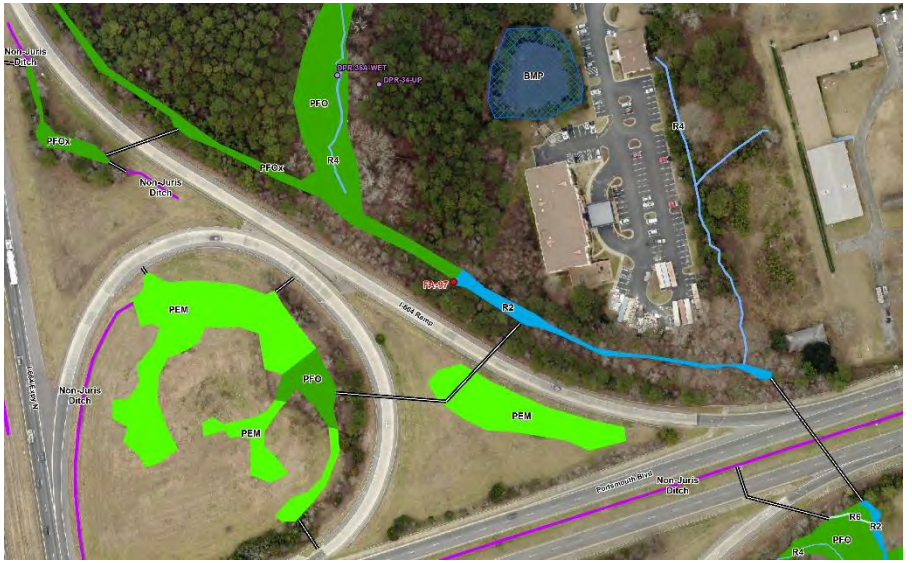
Common Name	Scientific Name
Red Maple	*Acer rubrum*
Wax Myrtle	*Morella cerifera*
Common Rush	*Juncus effusus*



Additional Delineated Wetlands Similar in Function/Value

FA-45		
FA-50		

Additional Delineated Wetlands Similar in Function/Value

FA-77		
FA-97		

Additional Delineated Wetlands Similar in Function/Value

FA-98

Wetland Function-Value Evaluation Form

Total area of wetland 0.81 AC Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Transportation, Residential Distance to nearest roadway or other development 12 feet

Dominant wetland systems present BMP 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? Upper

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

Wetland I.D. FA-100

Latitude 36.86871 Longitude -76.41425

Prepared by: TRC Date 11/24/2020

Wetland Impact:
Type Area

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	4, 5, 15		
Floodflow Alteration	Y	2, 3, 4, 5, 6, 7, 9, 15	☑	Wetland has the potential to receive water from surrounding uplands and roadway.
Fish and Shellfish Habitat	N			Wetland does not provide fish or shellfish habitat.
Sediment/Toxicant Retention	Y	1, 2, 3		
Nutrient Removal	Y	3, 4, 9, 11		
Production Export	Y	7, 10, 13		
Sediment/Shoreline Stabilization	Y	2, 3, 4, 15		
Wildlife Habitat	N			
Recreation	N			Wetland is within road right-of-way, with no public access.
Educational/Scientific Value	N	14		Wetland is within road right-of-way, with no public access.
Uniqueness/Heritage	N	17		Wetland is within road right-of-way, with no public access.
Visual Quality/Aesthetics	N	6		Wetland is within road right-of-way, with no public access.
ES Endangered Species Habitat	N			
Other				

Notes: See WOUS Delineation Map included with NRTR and EIS for wetland location.

* Refer to backup list of numbered considerations.

Species List

Common Name	Scientific Name
Poverty Rush	*Juncus tenuis*
Lamp Rush	*Juncus effuses*
Sedge	*Carex sp.*
Japanese Stilt Grass	*Microstegium vimineum*

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? Altered Is wetland part of a wildlife corridor? no or a "habitat island"? yes

Adjacent land use Transportation Distance to nearest roadway or other development Adjacent

Dominant wetland systems present 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?_____

How many tributaries contribute to the wetland? varies

Wetland I.D. FA1

Latitude multiple locations Longitude_____

Prepared by: SMW Date 11/6/18

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	8,9,10,13,15		Seasonal hydrology
Floodflow Alteration	Y	3,4,5,6,7,9,15,18	Y	Receive runoff from roadways
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1,2,3,4,5,7,8	Y	
Nutrient Removal	Y	3,4,6,7,8,9,10,11	Y	
Production Export	Y	1,2,4,7,10,11,12,13		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	8,10,13,14,15,18,19,20		Lower quality due to fragmentation and risk of mortality from vehicles
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes: Functions and values for this form representative of wetland areas within interchanges

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? altered Is wetland part of a wildlife corridor? Poor or a "habitat island"? some

Adjacent land use Transportation, Residential, Industrial Distance to nearest roadway or other development adjacent

Dominant wetland systems present 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?_____

How many tributaries contribute to the wetland? varies

Wetland I.D. FA2

Latitude multiple locations Longitude_____

Prepared by: SMW Date 11/6/18

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	8,15	Y	Some ditches intercept groundwater table
Floodflow Alteration	Y	3,4,5,6,7,9,15,18	Y	Larger ditches have ability to retain water for longer periods
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1,2,3,4,5		
Nutrient Removal	Y	4,5,6,7		
Production Export	Y	2,10,11,13		Ditches transport some material from wetlands in interchanges
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7		Where features occur within narrow remnant forest could provide a corridor for some species
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes: Functions and value on this form represent linear wetlands and ditches along roadways * Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

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

Adjacent land use Transportation, Elizabeth River, Forest Distance to nearest roadway or other development adjacent

Dominant wetland systems present PFO, PSS, PEM Contiguous undeveloped buffer zone present partially

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? Floodplain

How many tributaries contribute to the wetland? 1

Wetland I.D. FA3

Latitude 36°47'43.53"N Longitude 76°25'45.72"W

Prepared by: SMW Date 11/6/18

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	7,8,9,13,15	Y	
Floodflow Alteration	Y	1,5,6,7,8,9,13,15,18	Y	Captures runoff from road
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1,2,3,4,5,7,10,12,13,15,16	Y	Wetland retains water for long periods and is densely vegetated.
Nutrient Removal	Y	1,2,3,4,5,7,8,9,10,11,12,13,14	Y	
Production Export	Y	1,2,4,5,7,8,9,10,11,12,13	Y	
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1,3,5,7,8,9,10,13,14,15,16,17,18,19,20,21	Y	Diverse community
Recreation	Y	5,7,12		
Educational/Scientific Value	Y	1,2		
Uniqueness/Heritage	Y	4,12,13,19,22,27		
Visual Quality/Aesthetics	Y	1,2,3,6,7		
ES Endangered Species Habitat	Y	1		Suitable canebrake rattlesnake habitat and northern long-eared bat habitat.
Other				

Notes: VDOT wetland mitigation area.

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland _____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Residential, School Distance to nearest roadway or other development Varies

Dominant wetland systems present PFO, E2EM, E1UB Contiguous undeveloped buffer zone present generally yes

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

How many tributaries contribute to the wetland? Multiple

Wetland I.D. FA4

Latitude multiple locations Longitude _____

Prepared by: SMW Date 11/6/18

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	4,7,8,15		
Floodflow Alteration	Y	2,3,4,5,7,8,9,10,13,18	Y	
Fish and Shellfish Habitat	Y	1		
Sediment/Toxicant Retention	Y	1,2,3,8,13,15,16	Y	Dense emergent wetland vegetation present along watercourse
Nutrient Removal	Y	2,3,4,5,6,9,11,12,14	Y	Dense emergent wetland vegetation present along watercourse
Production Export	Y	1,2,4,6,7,10,11,13		
Sediment/Shoreline Stabilization	Y	1,3,5,7,12,15	Y	Dense emergent wetland vegetation present along watercourse
Wildlife Habitat	Y	6,7,8,9,10,14		
Recreation	N	2,3,5,8,9,10,14		
Educational/Scientific Value	Y	2,3,5,8,9,10,14		Wetlands located within and adjacent to Jolliff Middle School property
Uniqueness/Heritage	Y	4,5,8,9,19,22,27		
Visual Quality/Aesthetics	Y	6		
ES Endangered Species Habitat	N			
Other				

Notes: Represents multiple palustrine/estuarine tributaries to Elizabeth River north of Jolliff Road.

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Transportation, Mitigation Area, Forest Distance to nearest roadway or other development Crossed by I664

Dominant wetland systems present E2EM, E1UB Contiguous undeveloped buffer zone present Partial

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

How many tributaries contribute to the wetland? multiple

Wetland I.D. FA5

Latitude 36°47'53.58"N Longitude 76°25'41.07"W

Prepared by: SMW Date 11/6/18

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	N	7,8,13,15		
Floodflow Alteration	Y	5,8,9,11,14,17,18	Y	
Fish and Shellfish Habitat	Y	1,2,4		Condemned Shellfish Area Number 056-007
Sediment/Toxicant Retention	Y	1,2,4,7,8,10,16	Y	Dense emergent vegetation along watercourse
Nutrient Removal	Y	2,3,4,5,6,7,8,9,11	Y	Dense emergent vegetation along watercourse
Production Export	Y	1,2,4,5,6,7		
Sediment/Shoreline Stabilization	Y	1,2,3,7,9,12,13,15	Y	Dense emergent vegetation along watercourse
Wildlife Habitat	Y	5,6,7,8,9,11,13,17		Evidence of wildlife utilizing area as corridor to access both sides of I-664
Recreation	N	5,7,9		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	Y	4,5,7,22,27		Some areas of dominant phragmites and disturbed areas beneath highway
Visual Quality/Aesthetics	Y	6,8		
ES Endangered Species Habitat	N			
Other:				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Transportation, Forest, Industrial Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PFO, PSS, 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?_____

How many tributaries contribute to the wetland? ~3 in study area

Wetland I.D. FA6

Latitude 36°46'58.76"N Longitude 76°25'59.36"W

Prepared by: SMW Date 11/6/18

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	8,13,15	Y	
Floodflow Alteration	Y	1,5,6,7,8,9,11,13,15,18	Y	
Fish and Shellfish Habitat	N	1,2		
Sediment/Toxicant Retention	Y	1,2,4,5,7,8		
Nutrient Removal	Y	1,3,4,5,7,8,9,10,11		
Production Export	Y	1,2,3,4,5,7,8,11,12,13	Y	Recently logged timber
Sediment/Shoreline Stabilization	N	2,3,4		
Wildlife Habitat	Y	6,7,8,9,10,13,14,15,16,17,18,19,20,21,22	Y	Regenerative community provides habitat diversity.
Recreation	Y	5,12		
Educational/Scientific Value	N	1,5,14		
Uniqueness/Heritage	Y	4,27		Black bears observed within habitat area
Visual Quality/Aesthetics	N	1		
ES Endangered Species Habitat	Y	1		Recent clearing reduces overall quality for canebrake rattlesnake and NLEB
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland _____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Industrial, Transportation, Forest Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PFO, R3 Contiguous undeveloped buffer zone present yes to south

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

How many tributaries contribute to the wetland? 1

Wetland I.D. FA7

Latitude 36°46'50.86"N Longitude 76°25'30.16"W

Prepared by: SMW Date 11/6/18

Wetland Impact:
Type n/a Area n/a

Evaluation based on:
Office x Field _____

Corps manual wetland delineation completed? Y x N x

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	8,9,13,15	Y	
Floodflow Alteration	Y	1,5,6,7,8,9,11,13,15,18	Y	
Fish and Shellfish Habitat	Y	1,2		
Sediment/Toxicant Retention	Y	1,2,4,5,7,8		
Nutrient Removal	Y	1,3,4,5,7,8,9,10,11		
Production Export	Y	1,2,3,4,5,7,8,10,11,12,13,14	Y	
Sediment/Shoreline Stabilization	N	2,3,4		
Wildlife Habitat	Y	6,7,8,9,10,13,14,15,16,17,18,19,20,21	Y	Diverse habitat
Recreation	Y	3,5,12		
Educational/Scientific Value	N	5,14		
Uniqueness/Heritage	Y	27		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	Y	1	Y	Suitable canebrake rattlesnake and northern long-eared bat habitat
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Transportation, Residential, Forest Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PFO, R3 Contiguous undeveloped buffer zone present partial

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

How many tributaries contribute to the wetland? 2

Wetland I.D. FA8

Latitude 36°47'16.20"N Longitude 76°25'39.60"W

Prepared by: SMW Date 11/6/18

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	7,8,13,15	Y	
Floodflow Alteration	Y	5,6,7,8,9,10,11,13,15,18	Y	Stream well connected with floodplain
Fish and Shellfish Habitat	Y	1,2,4,14,17		
Sediment/Toxicant Retention	Y	1,2,4,5,7,8,9,10,11,12,13,14,15,16	Y	
Nutrient Removal	Y	1,3,4,5,6,7,8,9,10,11		
Production Export	Y	1,2,3,4,5,7,8,10,11,12,13	Y	
Sediment/Shoreline Stabilization	Y	2,3,4,6,7,9,12,13		
Wildlife Habitat	Y	6,7,8,9,10,11,13,18,19,20,21,22	Y	
Recreation	Y	5,7,12		
Educational/Scientific Value	N	4,5,14		
Uniqueness/Heritage	Y	4,5,27	Y	Intact cypress tupelo swamp
Visual Quality/Aesthetics	N	1		
ES Endangered Species Habitat	Y	1		Suitable potential roosts for NLEB - within suitable canebrake rattlesnake habitat
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Transportation, Residential Distance to nearest roadway or other development Intersected

Dominant wetland systems present PFO, E2EM, E1UB - Goose Creek 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?_____

How many tributaries contribute to the wetland? ~4

Wetland I.D. FA9

Latitude 36°47'15.37"N Longitude 76°24'20.19"W

Prepared by: SMW Date 11/6/18

Wetland Impact:
Type n/a Area n/a

Evaluation based on:
Office x Field_____

Corps manual wetland delineation completed? Y x N x

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	7,8,13,15		Palustrine fringes provide some discharge
Floodflow Alteration	Y	4,5,8,9,10	Y	
Fish and Shellfish Habitat	Y	1,4		
Sediment/Toxicant Retention	Y	1,2,3,4,7,8,9,10,11,15,16	Y	Dense emergent vegetation along watercourse
Nutrient Removal	Y	2,3,4,5,6,7,8,9,10,11,13,14	Y	Dense emergent vegetation along watercourse
Production Export	Y	1,2,5,7,8,10,11,13		
Sediment/Shoreline Stabilization	Y	1,4,7,9,12,13,15	Y	Dense emergent vegetation along watercourse
Wildlife Habitat	Y	1,6,9,11,12,18,19,20		
Recreation	N	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	Y	4,5,6,7		
Visual Quality/Aesthetics	Y	6,8		Observable from road
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Industrial, Transportation Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PFO, PSS, R3 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?_____

How many tributaries contribute to the wetland? ~4

Wetland I.D. FA10

Latitude 36°47'6.67"N Longitude 76°24'0.30"W

Prepared by: SMW Date 11/6/18

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	7,8,9,13,15	Y	
Floodflow Alteration	Y	2,5,7,8,9,10,11,13,15,18	Y	Some areas well connected to wetland floodplain
Fish and Shellfish Habitat	Y	2,4,8,10,14		
Sediment/Toxicant Retention	Y	1,2,3,4,5,7,8,10,11,12,16	Y	Water is detained in scrub shrub wetlands before entering culvert
Nutrient Removal	Y	3,4,5,6,7,8,9,10,11,13,14	Y	
Production Export	Y	1,2,5,7,8,10,11,12,13		
Sediment/Shoreline Stabilization	Y	1,2,3,4,6,7,9,14		
Wildlife Habitat	Y	6,7,8,9,10,15,17,18,19,20,21		
Recreation	Y	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	N	7		
Visual Quality/Aesthetics	N	6,8		
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Forest, Residential, Transportation Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PFO, PUB, 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?_____

How many tributaries contribute to the wetland? 0

Wetland I.D. FA11

Latitude 36°47'15.68"N Longitude 76°23'36.46"W

Prepared by: SMW Date 11/6/18

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	8,13,15	Y	
Floodflow Alteration	Y	1,4,5,6,7,8,9,10,11,15,18	Y	
Fish and Shellfish Habitat	N	2		
Sediment/Toxicant Retention	Y	1,2,4,5,7		
Nutrient Removal	Y	1,3,4,7,8,9,10,11		
Production Export	Y	1,2,3,4,5,7,8,12,14		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5,7,8,10,13,14,17,18,19,20,21,22		
Recreation	Y	3,4,5,12		Hunting trails present within wetland
Educational/Scientific Value	Y	1,5		
Uniqueness/Heritage	N	19,27		
Visual Quality/Aesthetics	Y	1,8		
ES Endangered Species Habitat	Y	1		Suitable canebrake rattlesnake and NLEB habitat but overall habitat fragmented on all sides
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland_____ Human made? altered Is wetland part of a wildlife corridor? no or a "habitat island"? yes

Adjacent land use Transportation, Residential, Industrial Distance to nearest roadway or other development Adjacent

Dominant wetland systems present 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?_____

How many tributaries contribute to the wetland? 0

Wetland I.D. FA12

Latitude 36°47'37.69"N Longitude 76°23'33.10"W

Prepared by: SMW Date 11/6/18

Wetland Impact:
Type n/a Area n/a

Evaluation based on:
Office x Field_____

Corps manual wetland delineation completed? Y x N x

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	8,13		
Floodflow Alteration	Y	4,5,6,8,9,18	Y	Receives runoff from railroad and rail yard
Fish and Shellfish Habitat	N	2		
Sediment/Toxicant Retention	Y	1,2,4,7	Y	May retain toxicants from railroad and railyard
Nutrient Removal	Y	3,4,7,8,9,10,11	Y	
Production Export	N	1,2,7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	8,13		Low quality - surrounded on all sides by development
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N			
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes: Wetland area viewed from adjacent properties - no access was provided.

* Refer to backup list of numbered considerations.