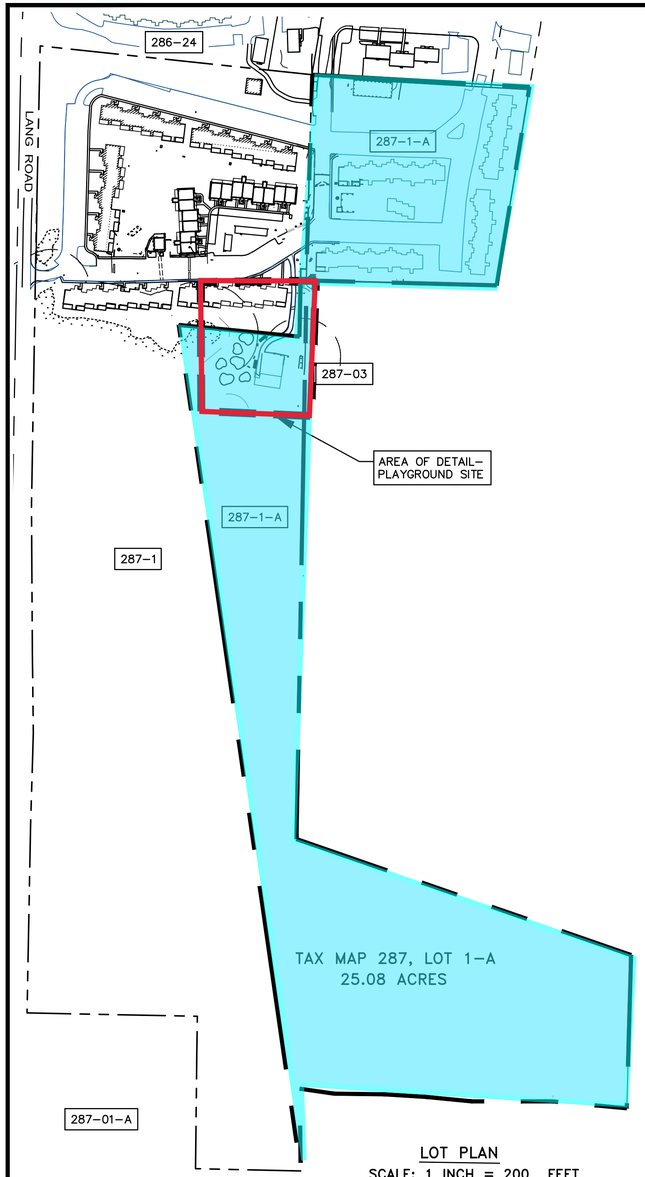
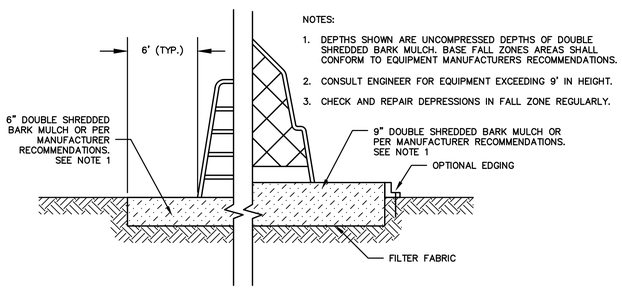


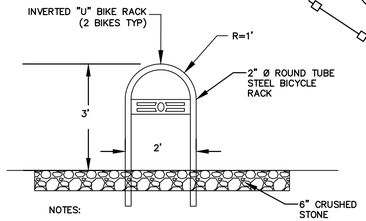
LOT PLAN
SCALE: 1 INCH = 200 FEET



NOTES:

1. DEPTHS SHOWN ARE UNCOMPRESSED DEPTHS OF DOUBLE SHREDDED BARK MULCH. BASE FALL ZONES AREAS SHALL CONFORM TO EQUIPMENT MANUFACTURERS RECOMMENDATIONS.
2. CONSULT ENGINEER FOR EQUIPMENT EXCEEDING 9' IN HEIGHT.
3. CHECK AND REPAIR DEPRESSIONS IN FALL ZONE REGULARLY.

PLAYGROUND EQUIPMENT FALL ZONE NOT TO SCALE



NOTES:

1. INSTALL BICYCLE RACK IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. DETAIL DEPICTS IN-GROUND MOUNT..
3. PROVIDE SEVEN BIKE RACKS FOR 2 BICYCLES AND A MINIMUM OF 1.5 FEET TO EDGE OF PAD.
4. OWNER MAY SUBSTITUTE RACK FOR A SIMILAR STYLE.

BICYCLE RACK DETAIL NOT TO SCALE

AREA OF DETAIL PLAN
SCALE: 1 INCH = 20 FEET

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)

CHAIRMAN DATE

WETLANDS IMPACT TABLE

DIRECT IMPACT TO WETLANDS = 0 SF

IMPACT TO WETLANDS BUFFER = 5,300 SF

NOTES:

1. A WETLANDS CONDITIONAL USE PERMIT WAS GRANTED ON AUGUST 15, 2019 (AND EXTENDED IN AUGUST OF 2020) TO ALLOW 500 SQUARE FEET OF IMPACT IN THE INLAND WETLAND BUFFER ZONE FOR THE REPLACEMENT OF AN EXISTING 18" CORRUGATED METAL PIPE. REMOVAL OF THE DEBRIS PILE IS A CONDITION OF THE PERMIT.

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

COPY D. BELDEN No. 14236 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
3/24/21

ISSUED FOR:
PLANNING BOARD APPROVAL

ISSUE DATE:
MARCH 24, 2021

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	DMM	03/24/21

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4787.2_PB APPROVAL_110119.DWG

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER OF RECORD:
ARBOR VIEW & THE PINES LLC.
C/O FOREST PROPERTIES MGMT
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT INC.
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS PLAYGOUND
TAX MAP 287, LOT 01-A
145 LANG ROAD
PORTSMOUTH, NH

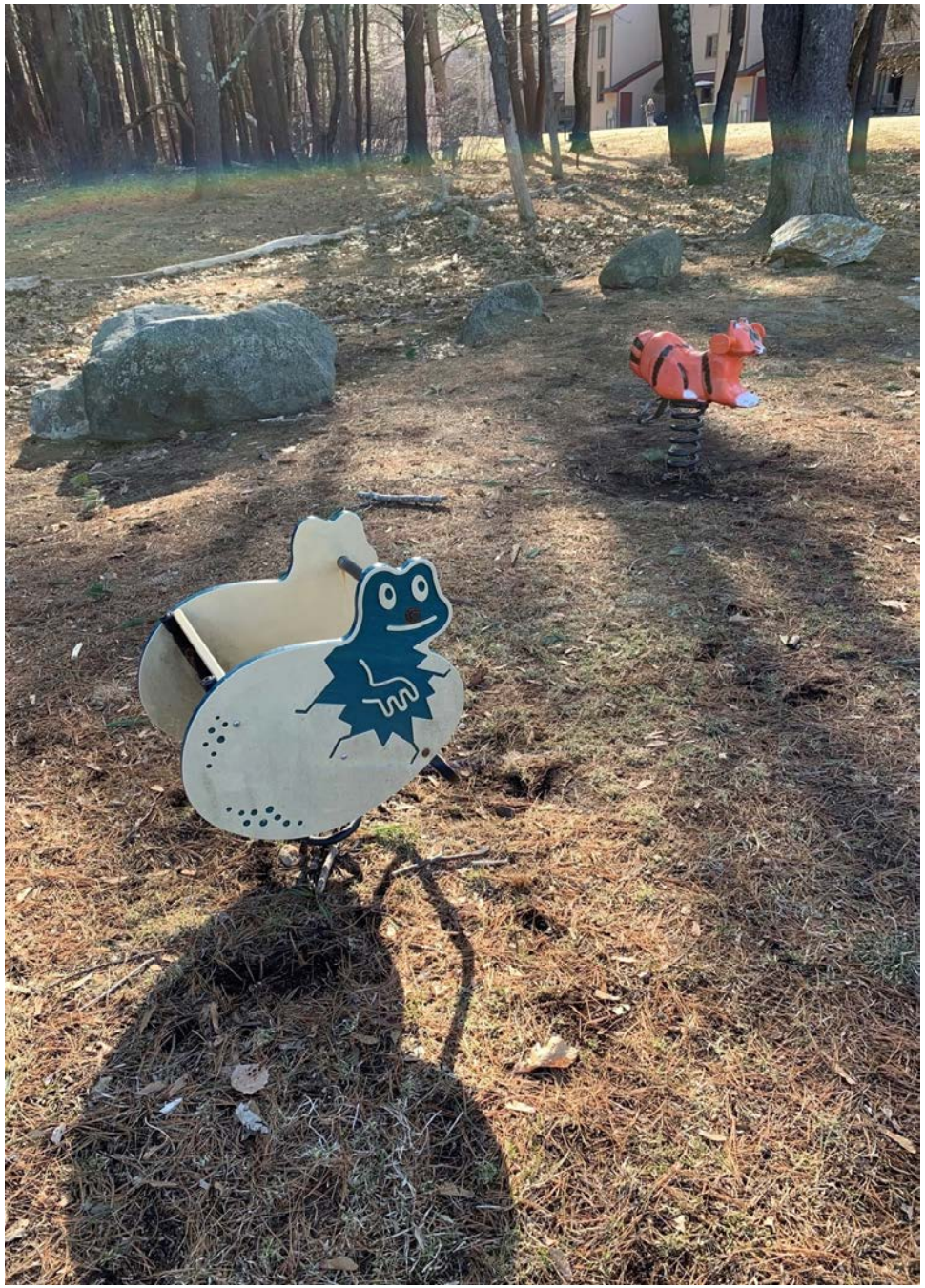
TITLE:
CONDITIONAL USE WETLANDS PLAN

SHEET NUMBER:
CUP-1

P4787.2

Existing Playground Equipment

- salvage and reuse if possible



New Location for Playground Equipment - Existing lawn and debris piles (to be removed)


Playground
Equipment


Remove
Debris Piles

Michael Cuomo, Soil Scientist
6 York Pond Road, York, Maine 03909
207 363 4532
mcuomosoil@gmail.com

15 April 2019

Cory Belden, P.E.
Altus Engineering, Inc.
133 Court Street
Portsmouth, NH 03801-4413

Dear Mr. Belden;

This letter is in reference to the Arbor View Apartments property, located at 145 Lang Road in Portsmouth, NH. On 1 and 2 April 2019 I conducted a partial wetland delineation on this property. Here was no snow on the ground when this work was done.

Portsmouth Zoning defines wetlands as follows:
"An area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include, but are not limited to, swamps, marshes, bogs, vernal pools, and similar areas. The following are specifically included in the definition of wetland:

Created wetland

An area that has been transformed from upland to wetland where the upland was not created by human activity such as by filling or water diversion.

Inland wetland

A wetland that is not subject to periodic inundation of tidal waters.

Tidal wetland

A wetland whose vegetation, hydrology, or soils are influenced by periodic inundation of tidal waters."

The wetlands identified in this work include the local, State, and Federally regulated wetlands. The wetland-upland boundaries were marked with sequentially numbered blue flags.

Flags A1 to A26 are east of the existing development. This is a large wetland and only that segment nearest the existing development was flagged.

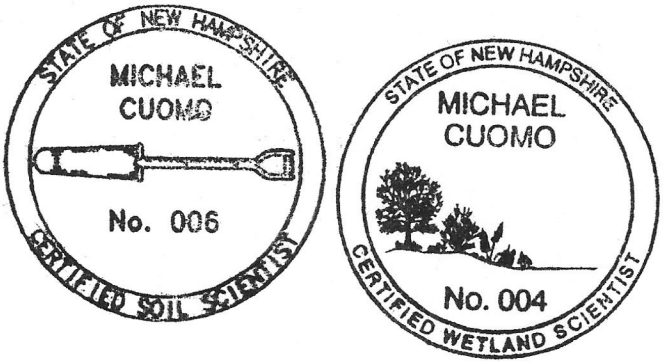
Flags B1 to B4 identify a small wetland in the approximate center of the developed area.

Flags C1 to C8 identify a portion of a small wetland near the driveway off Lang Road. The entire wetland could not be delineated on April 2 as snow had been plowed into the wetland and that snow pile had yet to melt.

Please call if you have questions regarding this work.

Sincerely,

Michael Cuomo
NH Wetland Scientist #4
NH Soil Scientist #6



Copy to: Chris Salter, James Verra and Associates

Michael Cuomo, Soil Scientist
6 York Pond Road, York, Maine 03909
207 363 4532
mcuomosoil@gmail.com

3 June 2019

Cory D. Belden, PE
Altus Engineering, Inc.
133 Court St.
Portsmouth, NH 03801

Dear Mr. Belden;

This letter is in reference to the proposed replacement of the storm drain along the eastern property line at Arbor View Apartments in Portsmouth, NH. As part of the Conditional Use Permit application Altus Engineering is preparing, the City requires a functional evaluation of wetland buffer impacts using *The Highway Methodology Workbook Supplement – Wetland Functions and Values: A Descriptive Approach*, NAEEP-360-1-30a, US Army Corps of Engineers, New England Division, September 1999, as amended. In this report, the document is referred to as the "Highway Method".

PROJECT

The existing corrugated metal storm drain pipe is rotted and will be replaced with an HDPE pipe at the same location, alignment, and grade as the existing one. The new pipe will end a couple feet short of where the existing pipe ends. The channel bottom will remain undisturbed, except what is required to install the new pipe in the same location. The installation trench has to be a minimum of 3 ft wide, but for impact

assessment purposes it is assumed a 5 foot wide impact area for the 100 linear feet of the buffer (500 sf of impact). This impact is entirely within the wetland buffer.

SCOPE

The existing and proposed storm drain discharges into a rip rap lined swale which becomes a man-made ditch that discharges east into Prime Wetland #2. The Highway Method is intended to evaluate the entire wetland and buffer. This focus is too broad, as the wetland is greater than 200 acres in size, extends onto multiple properties, and is part of the Berry's Brook watershed extending into Rye. The evaluation of wetland functions for this report focused on the wetland within 200 feet of the storm drain outfall, except where the predictor questions in the Highway Method specifically referenced the entire wetland.

WETLAND CLASSIFICATION, VEGETATION, and SOILS

Using the *Classification of Wetlands and Deepwater Habitats of the United States*, developed by Cowardin and others, this wetland is labeled a 'PFO1'. This indicates the core of the wetland is a forested freshwater swamp dominated by deciduous trees.

Dominant trees in this forested wetland are red maple (*Acer rubrum*), white pine (*Pinus strobis*), and apple (*Malus sp.*). Dominant shrubs are smooth winterberry holly (*Ilex verticilatta*), common buckthorn (*Rhamnus frangula*), and high-bush blueberry (*Vaccinium corymbosum*). Dominant forbs are spotted touch-me-not (*Impatiens capensis*), sensitive fern (*Onoclea sensibilis*), and poison ivy (*Toxicodendron radicans*).

The soils in the wetland are poorly drained medium textured

glacial till over a restrictive layer of firm silt loam in the substrate. This is the Squamscott soil series. The soil is typically saturated to the surface for less than 9 months of the average year.

HIGHWAY METHOD

The wetland and buffer were evaluated using the Highway Method on 3 June 2019 by Michael Cuomo, NH Wetland Scientist #4. The field results are presented on the worksheets attached at the rear of this report.

The Highway Method was developed to rapidly evaluate and compare a series of wetlands, primarily for the purpose of selecting the highway corridor with the least wetland impact from among alternative routes. For the purpose of this work, it provides an evaluation framework for drawing attention to the most important functions the wetland serves. For more detail, the numerical rationales can be read from the field worksheet and referenced to the predictor questions in the published document (http://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf). The Highway Method does not produce a numerical score. It provides guidance and a framework for the professional judgment of the evaluator, who selects which functions occur and determines the Principal Function(s).

SUMMARY OF RESULTS

The Principal Functions served by the wetland are Floodflow Alteration and Sediment/Toxicant Retention.

Floodflow Alteration is defined in the Highway Method as "...the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following

precipitation events and the gradual release of flood waters. It adds to the stability of the wetland ecological system or it's buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas." The wetland performs this function well because of it's location relative to developed areas and infrastructure, and the wetland's soil type, topography, and dense vegetation. All of these physical characteristics act to slow the release of water from the wetland to downstream surface waters during periods of excessive rainfall or rapid snow melt.

Sediment/Toxicant Retention is defined in the Highway Method as a function which "…reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens ..." This wetland trap sediments and pollutants well because of the soil type, dense vegetation, topography, and it's landscape position.

The wetland also performs the following functions: Nutrient Removal, Production Export, Wildlife Habitat, and Uniqueness/ Heritage (as part of Berry's Brook watershed).

The wetland does not perform the following functions to any measurable degree: Fish and Shellfish Habitat, Groundwater Recharge/Discharge, Shoreline Stabilization, Recreation, and Educational Scientific Value. Endangered Species Habitat was not investigated for this report

There are limitations to the health and productivity of the wetland system resulting from the historic development in parts of the wetland and surrounding watershed. Untreated storm runoff enters the wetland from existing development. There has been

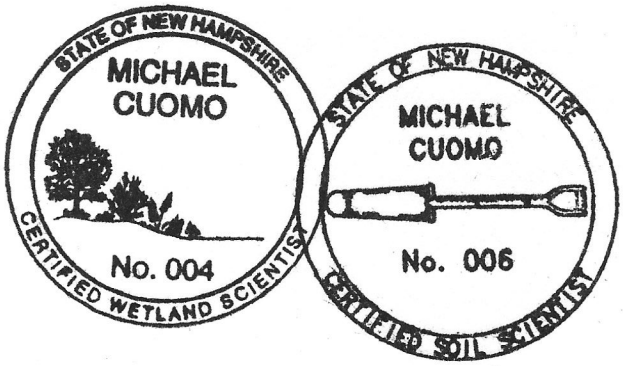
filling of the wetland by previous development. As is now typical, invasive plants are numerous and widespread in both the wetland and the watershed.

No direct wetland impact is proposed. The proposed 500 square feet of buffer impact is necessary and unavoidable to correct a failed storm drain.

Sincerely,

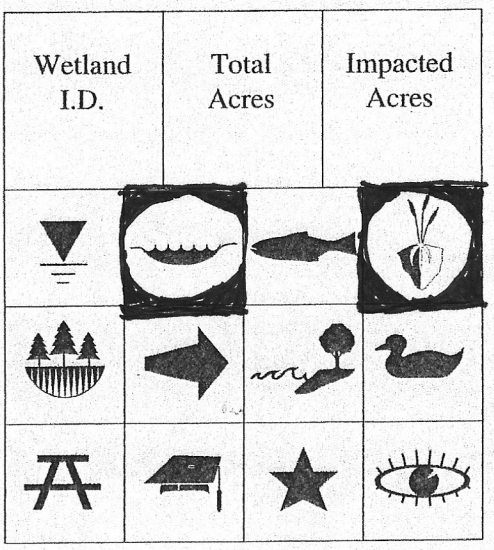
Michael Cuomo

Michael Cuomo
NH Certified Wetland Scientist #4
NH Certified Soil Scientist #6

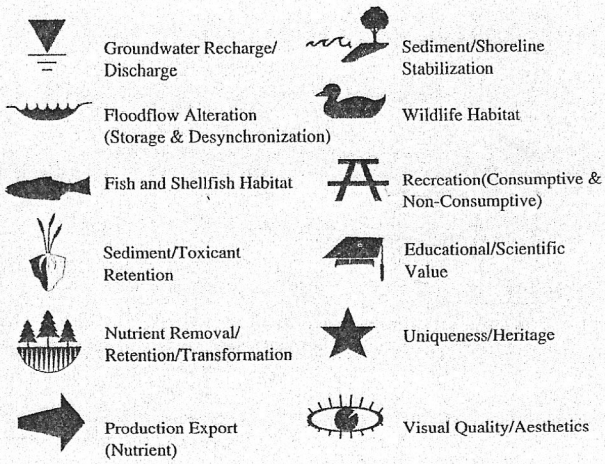


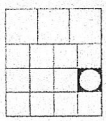
Graphical Representation of Wetland Functions and Values

ARBORVIEW APARTMENTS
PORTSMOUTH, NH



Symbols Key





Indicates Principal Function or Value

This graphical summary of wetland characteristics was developed as a tool to help construct an annotated map of functions and values for project analysis. Based on the findings reported on a data collection form, an icon box is prepared for each wetland investigated during Phase II of the Highway Methodology. The Endangered Species value may be added when present.

WETLAND FUNCTION-VALUE ASSESSMENT

WETLAND I.D. _____

PROJECT NAME: ARBORVIEW APTS

PROJECT LOCATION: LONG RD. PORTSMOUTH PREPARED BY: MC DATE: 3 JUN 19

TOTAL APPROXIMATE AREA OF WETLAND: ±200 IS WETLAND PART OF A WILDLIFE CORRIDOR? Y OR A "HABITAT ISLAND"? N

ADJACENT LAND USE? HIGH DENS. RES/CONSERV. MAN MADE? N DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT 2100 ft

DOMINANT WETLAND SYSTEMS PRESENT: PFO1 CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT? N

IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? N IF NOT, WHERE DOES THE WETLAND LIE IN THE DRAINAGE BASIN? UPPER

OF TRIBUTARIES INTO THE WETLAND? UNKNOWN AQUATIC DIVERSITY/ABUNDANCE MOD. VEGETATIVE DIVERSITY/ABUNDANCE MOD.

WILDLIFE DIVERSITY/ABUNDANCE MOD. ANTICIPATED IMPACTS BUFFER ONLY WETLAND AREA IMPACTED: NONE

TREES	SHRUBS	HERBS	~~WILDLIFE~~ SOIL	COMMENTS
ACER RUBRUM PINUS STROBUS MALUS SP. (APPLE)	ILEX VERTICILLATA RHAMNUS FRANGULA VACCINIUM CORYMBOSUM	IMPATIENS CAPENSIS ~~ONOCLEA~~ ONOCLEA SENSIBILIS TOXICODENDRON RADICANS	MINERAL SOIL NEAR PROPOSED WORK AREA, DEEPER ORGANIC SOILS ±200FT AWAY	INVASIVES WIDESPREAD AT EDGE OF EXISTING DEVELOPMENT EXISTING DITCH AT CULVERT/DRAIN OUTFALL EXTENDS ±200FT INTO WETLAND

Wetland Function-Value Evaluation Form

Total area of wetland ±200 Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use HIGH DENSITY RES / CONSERVATION Distance to nearest roadway or other development <100 FT

Dominant wetland systems present PFO1 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? UNKNOWN Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D._____

Latitude_____ Longitude_____

Prepared by:_____ Date_____

Wetland Impact:
Type_____ Area_____

Evaluation based on:
Office_____ Field_____

Corps manual wetland delineation completed? Y_____ N_____

Function/Value	Occurence Y	Occurence N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge		N	6.7.		LIMITED
Floodflow Alteration	Y		2.4.5.6.9.18	X	~~SIGNIFICANT~~ SIGNIFICANT.
Fish and Shellfish Habitat		N	1.		Not applicable
Sediment/Toxicant Retention	Y		1.2.3.4.5.7.8.14-16	X	IMPORTANT DUE TO LANDSCAPE POSITION
Nutrient Removal	Y		3.4.6.7.8.10.		SIGNIFICANT
Production Export	Y		1.2.4.7		MODERATE
Sediment/Shoreline Stabilization		N			Not APPLICABLE
Wildlife Habitat	Y		6.8.11.13.19.		SIGNIFICANT FOR PERMANENT
Recreation	~~N~~	N			LIMITED ACCESS - PRIVATE PROPERTY
Educational Scientific Value		N	5.14		" " " "
Uniqueness/Heritage	Y		5.27.		BERRY'S BROOK WATERSHED
Visual Quality/Aesthetics		N			VERY LOW
ES Endangered Species Habitat			UNKNOWN		UNKNOWN
Other					

Notes:

* Refer to back up list of numbered considerations.