



# DIVERSIFIED WETLAND SERVICES

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## WETLAND REPORT FOR PROPOSED SINGLE RESIDENTIAL LOT Parcel 21/52/7 – Wopowog Road East Hampton, Connecticut June 11, 2019

### Introduction & Wetland Description

The project entails the development of a single residential lot on an approximately 38 acre forested and agricultural parcel located west of Wopowog Road and an existing residential lot, in East Hampton, CT. The property has an existing pond and a series of existing dirt roads to access the various agricultural fields and buildings.

On April 10, 2018, I conducted an investigation of the soils at the project site in the vicinity of an existing dirt access road, north of a small pond, and field delineated the limits of one wetland/watercourse area at the property with a total of 20 flags attached to trees and shrubs. The methodologies and legal definitions utilized for the soils and inland wetland and watercourses investigations performed at the project site are described in Attachment A of this report. The soils at the site were consistent with the upland mapping units of Woodbridge fine sandy loam complex (#46) and Canton and Charlton fine sandy loam complex (#62) and the wetland mapping unit of Ridgebury, Leicester and Whitman soils (#3).

The wetland area was a narrow, forested swamp associated with a southerly flowing, intermittent watercourse that discharged directly into a small pond. The wetland and watercourse were bisected by an existing dirt roadway with a 12" diameter culvert. Although the wetland corridor was narrow and watercourse was small, it provides the principal functions of *Groundwater Discharge/Recharge, Floodflow Alteration, Production Export* and *Wildlife Habitat*. The downstream ponded section of stream provides the additional principal functions of *Fish and Shellfish Habitat, Sediment/Toxicant Retention* and *Recreation*.

As a reference, I performed a functions and values assessment of the inland wetland and watercourses at the project site using the methodology outlined in the documents entitled "*The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach*," dated November 1995 and prepared by the US Army Corps of Engineers New England Div. (<http://www.nae.usace.army.mil/reg/Pubs/hwsplmnt.pdf>). This methodology allows an individual to evaluate thirteen potential functions and values of a site specific wetland system.

The thirteen potential wetland functions and values include: Groundwater Recharge/Discharge, Floodflow Alteration, Fish and Shellfish Habitat, Sediment/Toxicant Retention, Nutrient Removal, Production Export, Sediment/Shoreline Stabilization, Wildlife Habitat, Recreation, Educational Scientific Value, Uniqueness/Heritage, Visual Quality/Aesthetics, and Endangered Species Habitat.

### **Wetlands Impact Assessment**

To assess impacts to inland wetlands and watercourses, I reviewed the site plans entitled "Wetland Crossing Improvement Plan, Parcel: 21/52/7 – Wopowog Road – East Hampton, Connecticut, Prepared for Heather & Daryl Aresco" dated May 22, 2019 and prepared by Dutch & Associates. The plan shows the proposed improvement to the existing 12" culvert crossing of the wetland and intermittent watercourse. The plan proposes to widen and raise the existing roadway to facilitate the construction of a 12' wide residential driveway with underground utilities. For the widened, 2:1 sloped, roadway embankment, the existing culvert will remain a 12" diameter pipe, but will be increased in length from 10' to approximately 20'. To protect the stream from erosion, modified riprap pads will extend 5' on each culvert outlet. I estimate that the total footprint of the driveway crossing within the wetlands and watercourse is approximately 720 square feet (approximately 24' long x 30' wide). The driveway crossing is proposed to be constructed during a period of low flow, with erosion and sedimentation controls installed on both the upstream and downstream sides of the crossing.

It is my professional opinion that the improved driveway crossing will not have a significant impact on the long-term quality and functions of the wetland area and intermittent watercourse for the following reasons:

1. The improved driveway is proposed in the same location as the existing wetland and watercourse crossing, minimizing impacts;
2. The construction is proposed to be performed during a period of low flow and utilizing adequate erosion and sedimentation controls, which will minimize temporary impacts to the wetland and watercourse;
3. The diameter of the culvert crossing (12") is remaining the same with the improved driveway, so the watercourse flow and function should remain the same;
4. The total wetland/watercourse impact of approximately 720 square feet (or 0.017 acres) is a very minor encroachment/loss; and
4. There will be no changes to the wetland and watercourse habitats beyond the improved wetland driveway crossing.

Respectfully Submitted:

Brian Golembiewski

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Registered Soil Scientist – Wetland Scientist

## **ATTACHMENT A INVESTIGATION METHODOLOGIES & LEGAL DEFINITIONS**

### **Soils Mapping**

A second order soil survey was conducted at the project site in accordance with the principles and practices noted in the publication *Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18*. Observed soils were classified using the publication *Soil Taxonomy: A Basic System of Soil Classification for Making and Interpreting Soil Surveys. 1999. Soil Conservation Service. U.S. Department of Agriculture Handbook No. 436. 2nd edition*. Soil map units identified in the field correspond to those listed in the *Web Soil Survey Version 2.3, 2011. U.S. Department of Agriculture*.

### **Inland Wetlands and Watercourses Determinations**

The inland wetlands and watercourses at the project site were identified using the definitions found in the Inland Wetlands and Watercourses Act (CGS Sec. 22a-38):

"Wetlands" means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service of the United States Department of Agriculture; and

"Watercourses" means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. Intermittent watercourses shall be delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation.

Inland wetlands and watercourses identified at the project site were described using the wetland classification system developed in *Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.*

