

SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.

Wetland Delineations Ecological Studies Site Assessments Project Planning Soil Testing

January 28, 2019

ATTN: Ariel Martinez
Martinez Couch & Associates, LLC
1084 Cromwell Avenue, Suite 2-A
Rocky Hill, CT 06067

**Re: Wetlands Delineation Report
Bayberry Lane Bridge (No. 04969) over Aspetuck River,
Westport, CT
SS&ES Job No. 2019-2-CT-WES**

Dear Mr. Martinez:

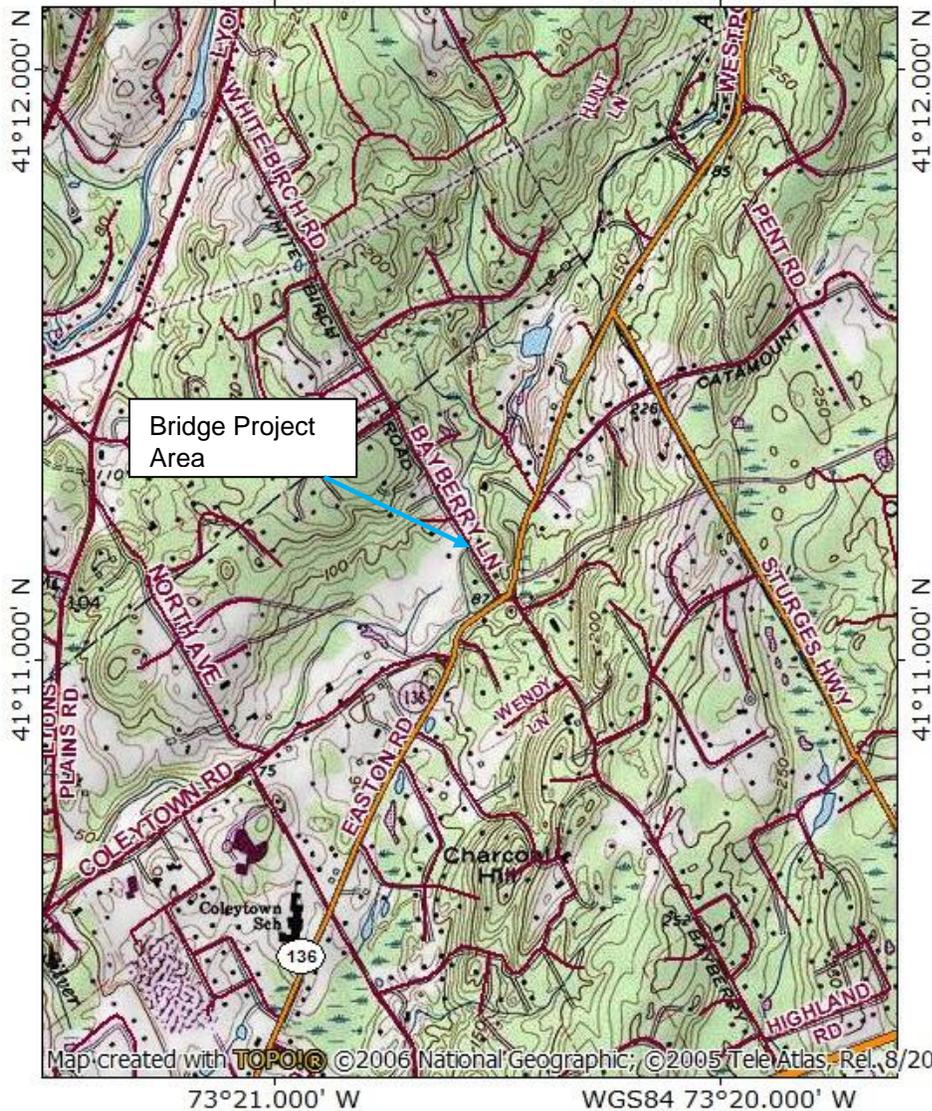
In accordance with your request, Scott D. Stevens, Soil Scientist and Jennifer L. Beno, Biologist/Wetland Scientist, with Soil Science And Environmental Services, Inc. (SSES) inspected the Bayberry Lane bridge over Aspetuck River project area on January 9, 2019. The purpose of the inspection was to identify regulated wetlands and waters and ordinary high water in the vicinity of the bridge project area. The project site is situated in the northeastern portion of Westport (Figure 1).

Regulated waters and wetlands present in and near the project area include Aspetuck River and associated CT inland wetlands and Federal wetlands. Definitions of waters and wetlands that are regulated by the State of Connecticut and Federal Government are presented in Appendix I. Rivers and streams are regulated by the State of CT as watercourses, according to the Inland Wetlands and Watercourses Act. Rivers and streams are regulated by the Federal Government as "Waters of the U.S." Wetlands are defined differently by the State of CT and the Federal Government. CT Inland Wetlands are defined by soil types that are either poorly drained, very poorly drained, floodplain or alluvial. Federal Wetlands consist of areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

TOPO! map printed on 01/10/19 from "Untitled.tpo"

73°21.000' W

WGS84 73°20.000' W



SOIL SCIENCE and ENVIRONMENTAL SERVICES, INC.

U.S.G.S. Topography Map
Bayberry Lane Bridge (No. 04969)
over Aspetchuck River,
Westport, CT

Date 1/10/19

Figure No. 1

A spade and auger were used to dig test holes for soils identification during the investigations. The vegetation communities and any physical indicators of hydrology in the project area were also examined. The limits of the CT inland wetlands and the Federal wetlands were determined to differ within the limits of the project area. The CT inland wetland boundaries were delineated with consecutively numbered pink survey tapes while Federal wetland boundaries were delineated with consecutively numbered orange survey tapes. Sketch maps of the delineated wetland boundaries are included as Figures 2 and 3.

CONNECTICUT INLAND WETLANDS & SOIL TYPES

CT inland wetlands were delineated within the Bayberry Lane bridge over Aspetuck River project area. See Figure 2.

The wetland soils within the project area include:

13 Walpole sandy loam (Aeric Endoaquepts)- This is a deep, poorly drained, friable, coarse-loamy textured soil that developed over sandy and gravelly, glacial outwash. Outwash soils occur in valleys, outwash plains and terraces.

103 Rippowam fine sandy loam (Aeric Fluvaquepts) – This is a deep, poorly drained, friable, coarse-loamy textured soil that formed in alluvial sediments principally derived from schist, gneiss and granite. Rippowam soils occur in nearly level floodplains and along rivers and streams which are subject to frequent flooding.

109 Fluvaquepts-Udifuvents This soil map unit consists of well drained to very poorly drained, nearly level soils that formed in very recent alluvium deposited by rivers and streams. The soils are occasionally to frequently flooded, which often results in stream scouring, lateral erosion and shifting of soil from place to place. Soil characteristics, such as texture and stoniness, are usually highly variable within short distances.

The non-wetland soils within the project area include:

21 Ninigret and Tisbury soils (Aquic Dystrudepts) – These are deep, moderately well drained, friable, coarse-loamy and loamy textured soils that developed over sandy and gravelly, glacial outwash derived from schist, gneiss and granite. Outwash soils occur in valleys, outwash plains and terraces.

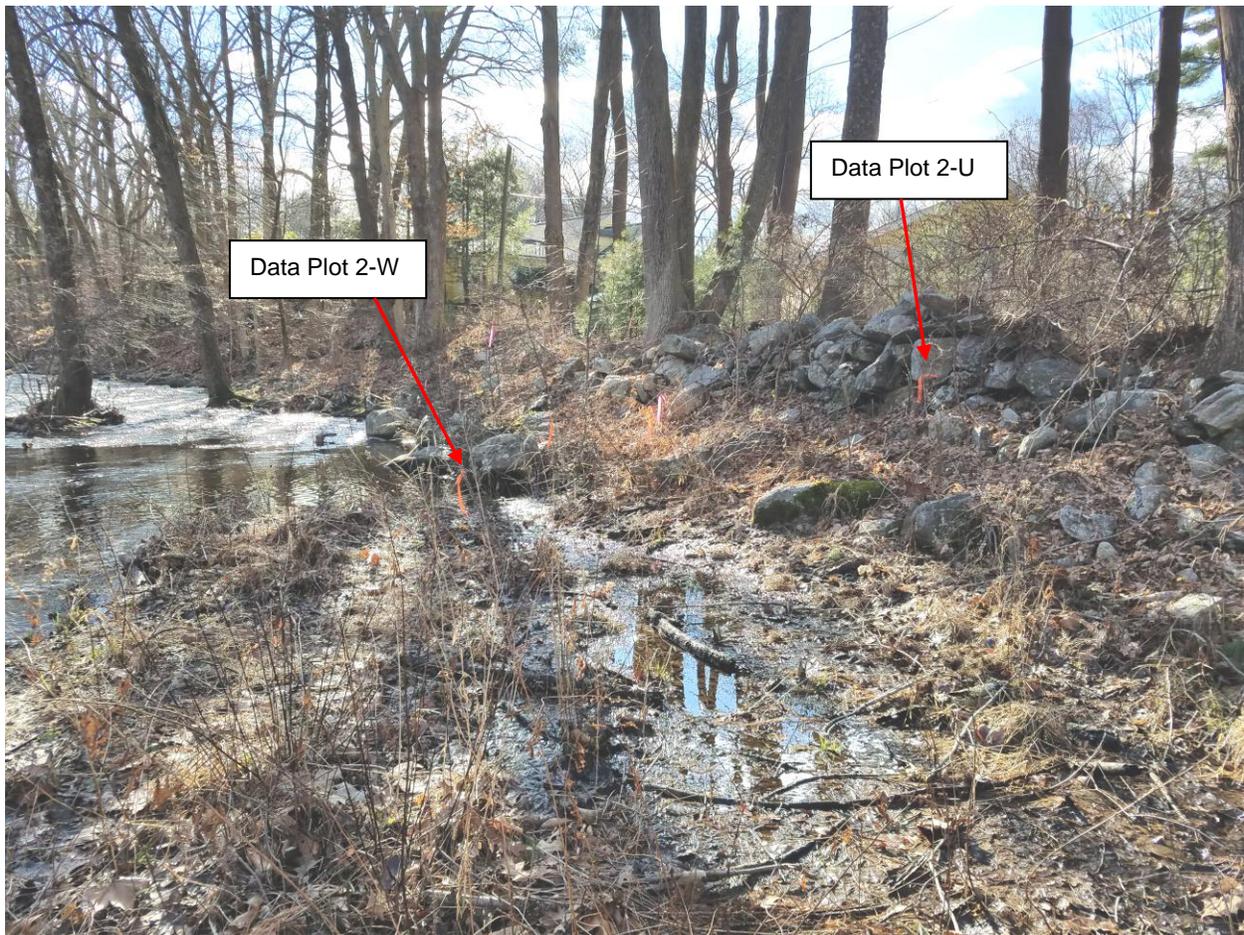
29 Agawam fine sandy loam (Typic Dystrudepts) – This is a deep, well drained, friable, coarse-loamy textured soil that developed over sandy and gravelly, glacial outwash derived principally from schist, gneiss and granite. Outwash soils occur in valleys, outwash plains and terraces.

306 Udorthents-Urban land complex This map unit consists of extensive areas where soils have been disturbed from land development along with large areas of impervious surfaces associated with streets, parking lots, buildings and other structures.

308 Udorthents, smoothed This is a well drained to moderately well drained soil area that has had two or more feet of the original soil surface altered by filling, excavation or grading activities. Udorthents, smoothed soils commonly occur on leveled land and fill landforms.

FEDERAL WETLANDS

Federal wetlands were delineated within the project area. The Federal wetland boundaries differ from the CT wetland boundaries within the bridge project area. See Figure 3. The Federal wetlands in the Bayberry Lane bridge over Aspetuck River project area are dominated by a wooded swamp community. One data transect with two Federal wetland data plots was established (Data Plots 2-W and 2-U). The approximate location of the data plots within the transect is shown in Figure 3. The information gathered from each data plot was recorded on Federal Wetland Data Sheets. These sheets are included at the end of this report.



Federal Data Plots 2-W and 2-U (1/9/19).



Figure No. 3 – Sketch of Federal Wetland Boundaries (approximate)

ORDINARY HIGH WATER MARK IDENTIFICATION

The lateral limits of U.S. Army Corps jurisdiction for non-tidal rivers, streams and water bodies extends to the ordinary high water mark (OHW), in the absence of adjacent wetlands. The Corps defines the term "ordinary high water mark" as the following: "means the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." 33 CFR 328.3(e). The Corps recommends that whenever possible the investigator should consider the former indicators along with a number of others, that include: wracking; vegetation matted down, bent or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; beds and banks; water staining; and change in plant community.

The above-listed indicators were utilized during the January 9, 2019 investigation to determine the ordinary high water (OHW) along Aspetuck River within the Bayberry Lane bridge project area. Orange survey tapes were tied onto plant material within the bridge project area in order to identify the OHW elevation. The knot of the tied survey tape marks the OHW elevation. A sketch showing locations of the OHW boundary survey tapes is presented in Figure 4.

Respectfully submitted,

SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.



Scott D. Stevens
Registered Professional Soil Scientist



Jennifer L. Beno
Biologist/Wetland Scientist

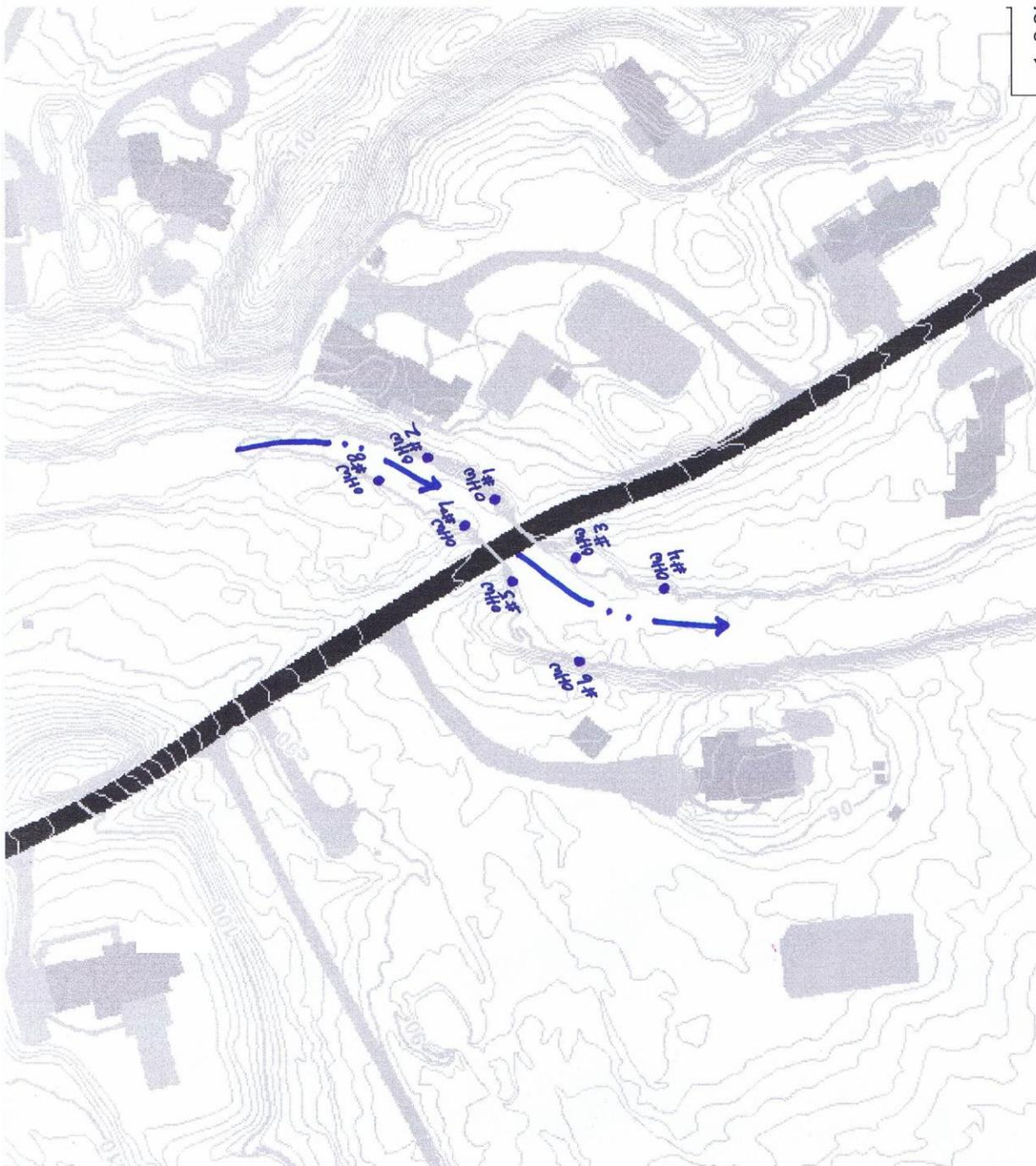


Figure No. 4 – Sketch of Ordinary High Water Flag Locations (approximate)

APPENDIX I

REGULATED WATERS AND WETLANDS BY THE STATE OF CT AND FEDERAL GOVERNMENT

I. State of Connecticut

Wetlands and watercourses are regulated in the State of Connecticut by the Connecticut General Statutes, Chapter 440, sections 22a-28 to 22a-45. These Statutes are divided into the Inland Wetlands and Watercourses Act (sections 22a-36 to 22a-45) and the Tidal Wetlands Act (sections 22a-28 to 22a-35). Definitions of the resources are provided in the statutes.

Inland Wetlands, "means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consist 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" section 22a-38(15).

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 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" section 22a-38(16).

Tidal Wetlands are defined as "those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some but not necessarily all, of the following:" (includes plant list) section 22a-29(2).

II. Federal Government

The Federal Government regulates waters and wetlands in accordance with the Code of Federal Regulations, Title 33, Parts 320 through 330 (33 CFR parts 320 to 330). Regulated areas include navigable waters; interstate waters; tributaries to navigable and interstate waters, including adjacent wetlands; and certain other waters and wetlands of the U.S. The United States Army Corps of Engineers has been authorized to regulate these waters and wetlands by Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Definitions of wetlands and watercourses that are regulated by the Corps are found in Parts 328 and 329 of the Code.

Waters of the United States as defined in Part 328 means, " (1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U.S. under the definition; (5) tributaries of waters identified in 1 thru 4; (6) territorial seas; and (7) wetlands adjacent to waters that were identified in 1 thru 6. Waters of the United States do not include prior converted cropland" (33 CFR Part 328.3 (a)).

Wetlands are a subset of waters of the United States and are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33CFR Part 328.3(b)). The 1987 U.S. Corps of Engineers Delineation Manual and the Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (dated July 2008) provide information and procedures for conducting Federal Wetland delineation. The methodology established by the Federal Government uses a three parameter approach utilizing hydrologic indicators, hydrophytic vegetation and hydric soils for identifying Federal Wetlands.

Navigable waters of the United States as defined in Part 329 mean "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce" (33CFR Part 329.2).