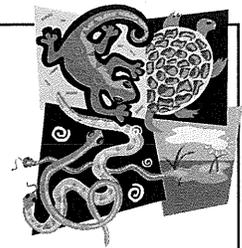


Connecticut Ecosystems LLC

- Wetland Delineation • Wetland & Aquatic Evaluation • Mitigation
- Natural Resource Inventory • Permit Assistance • Expert Testimony



ON-SITE SOIL INVESTIGATION REPORT

Project Name & Location

91 & 93 Meadowbrook Lane

Mansfield, CT

CE Job No.: 14-27

Field Investigation Date(s): 12/8/2014

Field Investigation Method(s):

Spade & Auger

Backhoe & Test Pits

Report Prepared For:

Development Solutions, LLC

33 East Town Street

Norwich, CT 06360

Field Conditions:

Weather: Sunny 40° F

Recent Precipitation: average

Soil Moisture: average

Snow Depth: ---

Frost Depth: ---

Purpose of Investigation:

Wetland Delineation/Flagging

Sketch Wetland Boundaries on Base Map (No Flagging)

High Intensity Soil Mapping by Soil Scientist

Medium Intensity Soil Mapping from SCS Soil Survey Maps

Wetland Boundary Marker Series: CE 1-1→1-34

Intermittent Watercourse Marker Series: ---

Wetland Notes:

- **Type(s):** Deciduous wooded swamp
- **Hydroperiod(s):** Seasonally saturated
- **Soil Parent Material(s):** Glacial till
- **Drainage Class(es):** Poorly drained
- **Slope:** Gentle

38 Westland Avenue • West Hartford, CT 06107

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**CONNECTICUT ECOSYSTEMS LLC
ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)**

**Project Name & Location: 91 & 93 Meadowbrook Lane Mansfield, CT
Project #: 14-27**

SOIL MAP UNITS

Soil symbols used below and on the accompanying Wetland Sketch Map correspond to those in the National Cooperative Soil Survey.

WETLAND SOIL SERIES

Ridgebury, Leicester and Whitman Complex (3)

This complex consists of poorly drained Ridgebury and Leicester soils, and very poorly drained Whitman soils, described separately below. The complex consists of about 35 percent Ridgebury soils, 30 percent Leicester soils, 20 percent Whitman soils, and 15 percent other soils.

Ridgebury Series

The Ridgebury series consists of deep, poorly and somewhat poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite.

Typically these soils have a black sandy loam surface layer 6 inches thick. The mottled subsoil from 6 to 16 inches is olive gray sandy loam. The mottled substratum from 16 to 60 inches is a light olive brown and olive, very firm and brittle gravelly sandy loam.

The seasonal high water table is within 0 to 18 inches of the surface from late fall through spring. Surface runoff is slow to medium. Permeability is moderate to moderately rapid in the surface layer and subsoil and slow or very slow in the dense substratum. A perched, fluctuating water table above the dense till saturates the solum to or near the surface for 7 to 9 months of the year.

Leicester Series

The Leicester series consists of deep, poorly drained loamy soils formed in friable glacial till on uplands. They are nearly level to gently sloping soils in drainage ways and low lying positions on till covered uplands. The soils formed in acid glacial till derived mainly from schist, gneiss or granite.

Typically, these soils have a surface layer of black fine sandy loam 6 inches thick. The subsoil from 6 to 23 inches is grayish brown, mottled fine sandy loam. The substratum from 26 to 60 inches or more is dark yellowish brown, mottled, friable, gravelly fine sandy loam.

Leicester soils are poorly drained. The seasonal high water table is within 0 to 18 inches of the surface from late fall through spring. Surface runoff is slow. Permeability is moderate or moderately rapid in the surface layer and subsoil and moderately rapid to rapid in the substratum.

**CONNECTICUT ECOSYSTEMS LLC
ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)**

**Project Name & Location: 91 & 93 Meadowbrook Lane Mansfield, CT
Project #: 14-27**

Whitman Series

The Whitman series consists of very poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They occur in drainageways, at the base of hills and ridges, and in depressions. These soils formed in acid glacial till derived mainly from schist and gneiss. They are characterized by a dense, very firm hardpan at a depth of 22-60 inches.

UPLAND (NON-WETLAND) SOIL SERIES

Canton-Charlton Complex (60)

This complex consists of well drained Canton fine sandy loam and well drained Charlton fine sandy loam, described separately below. The complex consists of about 45 percent Canton, 40 percent Charlton, and 15 percent other soils.

Canton Series

The Canton series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by sandy glacial till on uplands. They are nearly level to very steep soils on till plains and hills. The soils formed in acid glacial till derived mainly from schist, gneiss or granite.

Typically, these soils have a surface layer of very dark grayish brown fine sandy loam 2 inches thick. The subsoil from 2 to 23 inches is yellowish brown fine sandy loam, gravelly fine sandy loam and gravelly sandy loam. The substratum from 23 to 60 inches is pale brown gravelly loamy sand.

The water table is commonly at a depth of more than 6 feet. Surface runoff is medium to rapid. Permeability is moderate or moderately rapid in the surface layer and subsoil and rapid in the substratum.

Charlton Series

The Charlton series consists of gently sloping, well drained soils and range from nonstony to extremely stony. Charlton soils occur on the landscape on broad hilltops, ridge tops, and glacial till plains. They formed in glacial till parent material derived mainly from schist and gneiss. Unlike the Paxton soils, which occur on the same landscape, the Charlton soils are not characterized by a dense hardpan.

Typically, the solum is 8 inches thick, dark brown fine sandy loam. The yellowish brown subsoil is 18 inches thick, and the substratum is grayish brown gravelly fine sandy loam to a depth of 60 inches.

**CONNECTICUT ECOSYSTEMS LLC
ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)**

Project Name & Location: 91 & 93 Meadowbrook Lane Mansfield, CT
Project #: 14-27

Permeability in Charlton soils is moderate or moderately rapid. The soil has a high available water capacity, and runoff is medium.

Gloucester Series (59)

Gloucester soils are somewhat excessively drained, and developed in very friable, coarse-textured glacial till derived mainly from granite and some gneiss. The sand content is high.

The wetlands were field delineated in accordance with the standards of the National Cooperative Soil Survey and the definition of wetlands as found in the Connecticut General Statutes, Chapter 440, Section 22A-38. The investigation was conducted and reviewed by a Registered Soil Scientist.

Respectfully submitted,

Connecticut Ecosystems LLC



Edward M. Pawlak
Registered Soil Scientist
Certified Professional Wetland Scientist

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Soil Map—State of Connecticut
(91 & 93 Meadowbrook Lane Mansfield, CT)



Map Scale: 1:1,610 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

8/11/2015
Page 1 of 3

MAP LEGEND

	Area of Interest (AOI)		Soil Area
	Soils		Stony Spot
	Soil Map Unit Polygons		Very Stony Spot
	Soil Map Unit Lines		Wet Spot
	Soil Map Unit Points		Other
	Special Point Features		Special Line Features
	Blowout		Water Features
	Borrow Pit		Streams and Canals
	Clay Spot		Transportation
	Closed Depression		Rails
	Gravel Pit		Interstate Highways
	Gravelly Spot		US Routes
	Landfill		Major Roads
	Lava Flow		Local Roads
	Marsh or swamp		Background
	Mine or Quarry		Aerial Photography
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 13, Oct 28, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—May 12, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	1.7	24.0%
59D	Gloucester gravelly sandy loam, 15 to 35 percent slopes, extremely stony	2.5	36.9%
60B	Canton and Charlton soils, 3 to 8 percent slopes	2.6	37.3%
306	Udorthents-Urban land complex	0.1	1.8%
Totals for Area of Interest		6.9	100.0%