

Connecticut Ecosystems LLC

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



January 18, 2016

R.A.M. Contracting, Inc.
Attn.: Mr. Robertson Michaud
72 Riverside Road
Simsbury, CT 06070

**Re: 63 Woodchuck Hill Road
Simsbury, CT
CE Job# 15-3**



Dear Rob:

As I indicated in a prior correspondence, I inspected the above-referenced property on two occasions in 2015, to delineate wetland and watercourse boundaries, and to collect biological data. I have reviewed and provided comments on the site plan prepared by Mr. Thomas H. Shannon, Professional Engineer. The site plan proposes no disturbance to wetlands or watercourses on the subject property. It is my professional opinion that, provided that the proposed construction activities are conducted in accordance with the site plan, there will be no impact to the wetlands located northwest or south of the proposed improvements.

Please do not hesitate to contact me if you have any questions regarding this correspondence.

Very truly yours,

Connecticut Ecosystems LLC

A handwritten signature in black ink, appearing to read "E.M. Pawlak".

Edward M. Pawlak
Registered Soil Scientist
Certified Professional Wetland Scientist



Town of Simsbury

933 HOPMEADOW STREET

P.O. BOX 495

SIMSBURY, CONNECTICUT 06070

January 12, 2016

Linda Smith
Canton Town Clerk
4 Market Street
P.O. Box 168
Collinsville, Connecticut 06022

Re: Simsbury Conservation Commission Application #16-01 of R.A.M. Contracting, Applicant; Cathy and Gary LaBrecque, Owner; for drainage repairs and improvements in a wetland adjacent to the existing residence on the property located at 63 Woodchuck Hill Road (Assessor's Map A10, Block 420, Lot 009). Zone R-40

Dear Ms. Smith:

I am writing you to provide notice of an application before the Simsbury Conservation Commission which is within 500 feet of the municipal boundary with Canton pursuant to 22a-42b of Connecticut General Statutes and Section 8.3b of the Simsbury Inland Wetland and Watercourse Regulations. Please consider this correspondence to serve as official notice.

The applicant is requesting approval for the repairs and improvements for an existing drainage system located at the residence of 63 Woodchuck Hill Road. The application and supporting documentation can be viewed at the Simsbury Land Use Department located at 933 Hopmeadow Street, Simsbury, Connecticut. Written correspondence concerning this application should be mailed to:

**Simsbury Conservation Commission
C/o Michael Glidden, Assistant Town Planner
933 Hopmeadow Street
Simsbury, Connecticut 06070**

The application referenced above will be discussed at February 2, 2016 meeting for the Simsbury Conservation Commission. The meeting is scheduled to be heard 7:30 pm in the Main Meeting Room located at the Simsbury Town Hall (933 Hopmeadow Street Simsbury Connecticut). Interested parties are encouraged to attend. Please contact me if you have any questions or concerns regarding this matter. I can be reached at either (860) 658 3252 or mglidden@simsbury-ct.gov.

Very Truly Yours,

Michael Glidden CFM CZEO
Assistant Town Planner

Cc: Subject File

Telephone (860) 658-3200
Facsimile (860) 658-9467

An Equal Opportunity Employer
www.simsbury-ct.gov

8:30 - 7:00 Monday
8:30 - 4:30 Tuesday through Thursday
8:30 - 1:00 Friday



Town of Simsbury

933 HOPMEADOW STREET

P.O. BOX 495

SIMSBURY, CONNECTICUT 06070

January 12, 2016

Emily Anyzeski
Canton Inland Wetlands & Watercourse Agent
4 Market Street
P.O. Box 168
Collinsville, Connecticut 06022

Re: Simsbury Conservation Commission Application #16-01 of R.A.M. Contracting, Applicant; Cathy and Gary LaBrecque, Owner; for drainage repairs and improvements in a wetland adjacent to the existing residence on the property located at 63 Woodchuck Hill Road (Assessor's Map A10, Block 420, Lot 009). Zone R-40

Dear Ms. Anyzeski:

I am writing you to provide notice of an application before the Simsbury Conservation Commission which is within 500 feet of the municipal boundary with Canton pursuant to 22a-42b of Connecticut General Statutes and Section 8.3b of the Simsbury Inland Wetland and Watercourse Regulations. Please consider this correspondence to serve as official notice.

The applicant is requesting approval for the repairs and improvements for an existing drainage system located at the residence of 63 Woodchuck Hill Road. A copy of the application and supporting documentation is attached to this correspondence. Written correspondence concerning this application should be mailed to:

**Simsbury Conservation Commission
C/o Michael Glidden, Assistant Town Planner
933 Hopmeadow Street
Simsbury, Connecticut 06070**

The application referenced above will be discussed at February 2, 2016 meeting for the Simsbury Conservation Commission. The meeting is scheduled to be heard 7:30 pm in the Main Meeting Room located at the Simsbury Town Hall (933 Hopmeadow Street Simsbury Connecticut). Interested parties are encouraged to attend. Please contact me if you have any questions or concerns regarding this matter. I can be reached at either (860) 658 3252 or mglidden@simsbury-ct.gov.

Very Truly Yours

Michael Glidden CFM CZEO
Assistant Town Planner

Cc: Subject File

Telephone (860) 658-3200
Facsimile (860) 658-9467

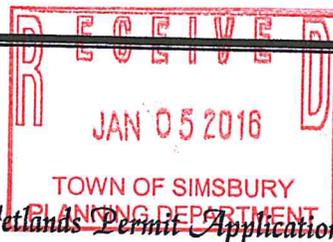
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www.simsbury-ct.gov

8:30 - 7:00 Monday
8:30 - 4:30 Tuesday through Thursday
8:30 - 1:00 Friday



Town of Simsbury

Office of Community Planning and Development - Inland Wetlands Permit Application



DATE: _____ FEE: \$ 190.00 CK #: 5057 APP #: 16-01
 PROPERTY ADDRESS: 63 Woodchuck Hill Road, West Simsbury
 NAME OF APPLICANT: R.A.M. Contracting, Inc.
 MAILING ADDRESS: 72 Riverside Rd., Simsbury
 EMAIL ADDRESS: customerservice@RAMContractingInc.com TELEPHONE # 860-413-2263
 NAME OF OWNER: Cathy + Gary LaBrecque
 MAILING ADDRESS: 63 Woodchuck Hill Rd^w Simsbury, CT 06092
 EMAIL ADDRESS: cmconsidine@netmail.com TELEPHONE # 860-978-7212

NOTE: ATTACH A WRITTEN LETTER OF AGENCY, DULY ACKNOWLEDGED, TO ACT FOR THE OWNER, INCLUDING THE ABILITY TO CARRY OUT ACTIVITIES SET FORTH HEREIN.

DESCRIBE THE SPECIFIC ACTIVITY(ies) FOR WHICH A PERMIT IS SOUGHT AS IT RELATES TO "REGULATED ACTIVITIES" AS DEFINED IN SECTION 6 OF THE SIMSBURY INLAND WETLANDS REGULATIONS, SUCH AS: A) REMOVE MATERIAL FROM; B) DEPOSIT MATERIAL IN OR DISCHARGE TO; C) CONSTRUCT ON; D) OBSTRUCT; E) ALTER; F) POLLUTE; OR G) OTHERWISE ADVERSELY AFFECT A REGULATED AREA:
Excavating. Drainage repair.

CERTIFICATIONS AND PERMISSIONS:

As owner, I hereby give permission to the Town of Simsbury's Conservation Commission Inland Wetlands Watercourses Agency, their Agents, or Town Staff to enter upon my land to make observations and tests as may be necessary to evaluate this application and ongoing work, subject to twenty-four hours notice of such entry/testing.

I hereby certify that all statements herein are true to the best of my knowledge, whether made by me or my agents. Any permit issued shall be contingent upon field conditions and activities being substantiated as indicated herein. A changed situation shall require reconsideration of the permit by the Commission upon discovery by either party.

I certify that I have the authority to sign this application.

Cathy LaBrecque 1/4/16
 Signature of Owner Date

[Signature] President 1/4/16
 Signature and Title of Applicant Date

EXHIBIT 1



December 29, 2015

Page 1 of 1

Re: INLAND WETLANDS PERMIT APPLICATION
63 Woodchuck Hill Road
West Simsbury, Connecticut

To Whom It May Concern,

Per the request of the application, this letter serves as a duly acknowledged Letter of Agency. The property owners (Cathy and Gary LaBrecque) per their contractual agreement with our firm due authorize R.A.M. CONTRACTING, INC. to represent them throughout this entire permit application process. Furthermore, it is at their request that this application be submitted for the proposed work set forth in hopes to commence said work in the near future.

Signature of owners:

Cathy LaBrecque *Gary LaBrecque* Date: 7/4/16
CATHY LABRECQUE / GARY LBRECQUE

Authorized By: *[Signature]*, President for R.A.M. CONTRACTING, INC. Date: 1/4/16



R.A.M. CONTRACTING, INC.

a Robertson Michaud company

www.ramcontractinginc.com

State of Connecticut Home Improvement Contractor License #0568807

United States Environmental Protection Agency TSCA Section 402 Certification # NAT-F113987-1

Mailing Address: 72 Riverside Road. Simsbury, Connecticut. 06070



A+
BBB
Rating





Farmington Valley Health District

95 River Road, Suite C • Canton, CT 06019 • Phone (860) 352-2333 • Fax (860) 352-2542

Avon • Barkhamsted • Canton • Colebrook • East Granby • Farmington • Granby • Hartland • New Hartford • Simsbury

MEMO

Date: 12-22-15

To: Mike Glidden, Assistant Town Planner
Town of Simsbury

From: Dianne Harding, Chief Sanitarian
FVHD

RE: Gary & Cathy Labrecque
63 Woodchuck Hill Road
Simsbury, Ct.

Plan Date: June 9, 2015

Revisions: 11-25-15, 12-4-15 & 12-10-15

The referenced plan as prepared by Thomas Shannon, PE shows the installation of two catch basins and piping in order to alleviate erosion, water ponding, frost heaves and other associated drainage problems occurring with the existing conditions on this property. Presently water flows down a steep slope in a concentrated narrow swale. This water pools immediately adjacent to a drinking water well that is below grade in a pit. The water then sheet flows over the driveway and into a brook that is greater than 100 feet downhill.

The following list represents comments for construction details that relate to the well and septic system:

1. Both catch basins should be constructed with "watertight" materials because of the close proximity to the well and septic system.
2. The pipe downhill of the second catch basin should be constructed of the same "tight" pipe material (e.g. SDR 35) as the uphill pipes.
3. It is strongly recommended to raise the well casing at least 12" above grade, preferably more, in order to protect the quality of the drinking water. The existing well pit has some type of drainage but the reliability of the well not becoming submerged at some point is questionable.

Please call me at 860-352-2333 X309 if you have any questions and/or concerns.

Cc. G. & C. Labrecque
R.A.M. Contracting, Inc.
T. Shannon

EXHIBIT 3

Thomas H. Shannon, Civil Engineer
4 Mills Lane
Canton, CT 06019

Thomas H. Shannon, P.E.

Phone: 860-693-1665

Email: shannonassoc@sbcglobal.net

December 11, 2015

Re: L#63 Woodchuck Hill Road West Simsbury, CT

To whom it may concern:

It has come to my attention that there may be some concern regarding potential changes to the water flow discharging into the existing stream at the above referenced site. The 1.1 acre property is the single family residence of Mr. & Mrs. Labrecque. The home and related site improvements were built in 1960. Due to the passage of time (over half a century) and the activities of previous owners underground drainage pipes should be replaced, in my opinion.

I realize that changes in Environmental, Health Code, and many other Municipal, State and Federal Regulations have changed over the years leading to inevitable unpermitted preexisting conditions that cause concern for those individuals that have responsibilities for enforcing compliance with current requirements. However, it is my professional opinion that the "PROPOSED SITE IMPROVEMENTS FOR GARY & CATHY LABRECQUE 63 WOODCHUCK HILL ROAD WEST SIMSBURY, CONNECTICUT" prepared by Thomas H. Shannon Civil Engineer are primarily replacement and maintenance in nature and will not in any significant way either increase or decrease the flow of storm water effluent to the existing stream at the subject property.

Very truly yours,


Thomas H. Shannon, P.E.

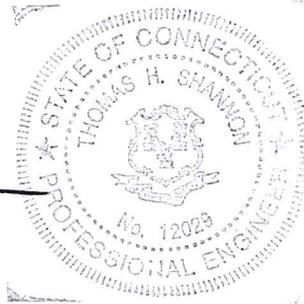


EXHIBIT 4

Connecticut Ecosystems LLC

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



December 5, 2015

R.A.M. Contracting, Inc.
Attn.: Mr. Robertson Michaud
72 Riverside Road
Simsbury, CT 06070

**Re: 63 Woodchuck Hill Road
Simsbury, CT
CE Job# 15-3**

EXHIBIT 5

Dear Rob:

At your request I inspected the above-referenced property on November 16, 2015. I previously delineated inland wetland boundaries on this property on April 29, 2015.

Property Description

The 1.12 acre property is located west of Woodchuck Hill Road (Figure 1). A single-family residence is located in the center of the property. Behind this house is a steeply sloping wooded hillside (Photo 2). The driveway and garage have experienced severe buckling as a result of frost heaving. An application has been filed with the Simsbury Inland Wetlands and Watercourses Commission to remediate this condition.

Soils Description

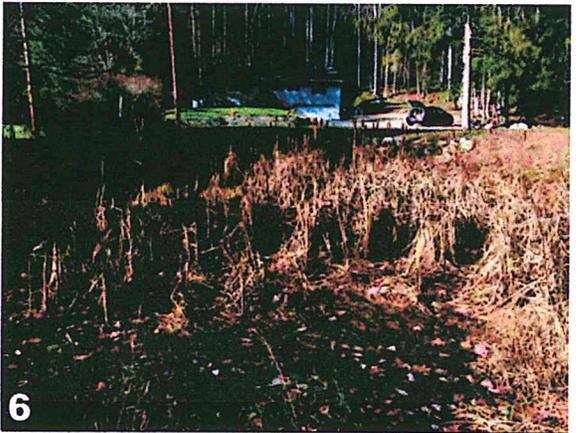
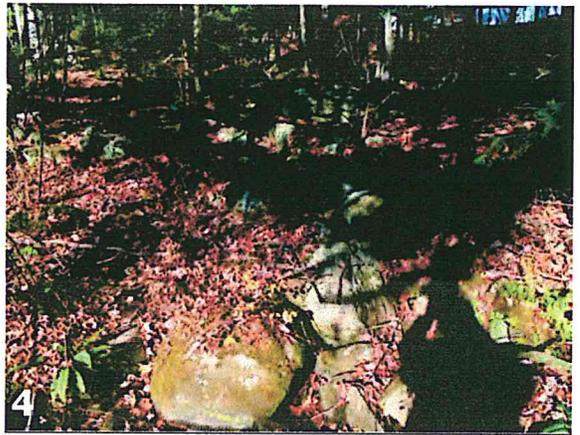
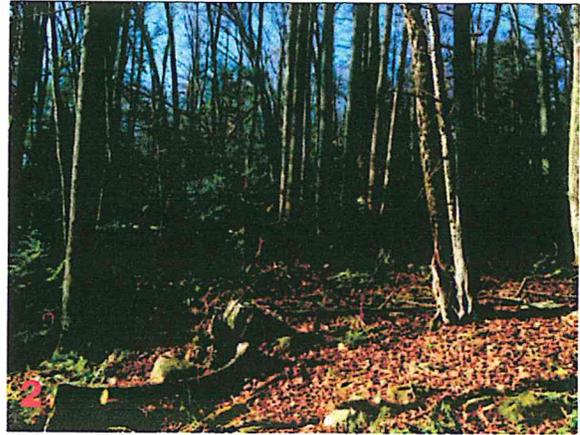
The glacial till upland and wetland soils found on the property are described in an appended Soils Report (Appendix 1).

Wetlands Description

A mixed wooded swamp located on this steep hillside seasonally discharges groundwater that flows to the toe of slope, where a concrete well pit is located (Photo 1). This discharge, along with storm water runoff, flows along the north side of the house and across a gravel bed, where a defined swale has formed (Photo 3). This runoff eventually discharges to a seasonally saturated mixed wooded swamp and associated seasonal watercourse located adjacent to and north of the driveway (Photos 4 and 5). The swamp flora includes eastern hemlock, red maple, tulip poplar, spicebush, honeysuckle, Japanese barberry, burning bush and wood fern. The watercourse contained a moderate flow in April 2015, but on the most recent inspection the flow was barely perceptible.



Figure 1. Site Location Map
63 Woodchuck Hill Road Simsbury, CT
Connecticut Ecosystems LLC
11/17/2015
Avon, CT Quadrangle Map



63 Woodchuck Hill Road Simsbury, CT 11/16/15 1. Well pit at toe of slope behind house
2. Forested hillside behind house 3. Swale created by runoff from hillside flowing over gravel
4. Wooded swamp adjacent to driveway 5. Seasonal watercourse adjacent to driveway
6. Shallow marsh (former pond) near Woodchuck Hill Road

Connecticut Ecosystems LLC

- Wetland Delineation • Wetland & Aquatic Evaluation • Mitigation
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The seasonal watercourse enters twin culverts below the driveway and discharges to a small shallow marsh located near Woodchuck Hill Road (Photo 6). This marsh, which formerly was a small pond, supports a dense stand of cattails along with purple willow herb, black willow and alder. This pond discharges to a larger pond located on an adjacent property to the south.

Wetland Functions and Values

A modified version of the Army Corps of Engineers “Highway Methodology” was used to identify principal functions associated with the on-site wetland (Appendix 2). Below is a discussion of the principal functions and services associated with this wetland.

Groundwater Discharge: Active seasonal groundwater discharges were observed throughout the wetland when it was inspected in April 2015. These discharges were no longer active in November 2015.

Floodflow Alteration: Although the on-site wetland is relatively small, it is a component of a larger wetland system that collectively detains and slowly releases storm water runoff, protecting nearby structures.

Pollutant Removal: Dense vegetation, gentle slope, constricted culvert outlets and well-developed microtopography allow the wetland to remove waterborne pollutants and sediments.

Production Export: Biomass produced in the wetland is discharged into a seasonal watercourse to sustain downstream aquatic ecosystems.

Wildlife Habitat: Although the habitat associated with the on-site wetland is impaired by its close proximity to development, nonetheless it is utilized by a variety of species tolerant of a human presence. During the November site inspection the following wildlife species were observed: black-capped chickadee, white-breasted nuthatch, tufted titmouse, hairy woodpecker, slate-colored junco and gray squirrel. The shallow marsh likely is favored by waterfowl such as mallards, and herptiles such as green frogs, American toads and garter snakes.

Wetland Impacts

No disturbance to wetlands or watercourses is proposed.

The proposed installation of two yard drains and underground PVC pipes will allow the collection and conveyance of runoff that gathers at the base of the hill behind the house, and discharge to the watercourse. Originally a portion of the PVC pipes was proposed to

38 Westland Avenue • West Hartford, CT 06107

Phone (860) 561-8598 • Fax (860) 561-0223 • email ecosys@comcast.net

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be slotted, but the plan was modified to include only solid pipes to avoid any potential impacts to the groundwater hydrology of the adjacent swamp. As a result, no impact to the hydrology of the wetland is anticipated.

A detail on the site plan clearly illustrates how runoff collected in the proposed underground drainage system will be discharged to the wetland and watercourse. The discharge will occur outside of the boundaries of the wetland and watercourse.

Please do not hesitate to contact me if you have any questions regarding this correspondence.

Very truly yours,

Connecticut Ecosystems LLC

A handwritten signature in black ink, appearing to read 'E.M. Pawlak', with a long horizontal stroke extending to the right.

Edward M. Pawlak
Registered Soil Scientist
Certified Professional Wetland Scientist

Connecticut Ecosystems LLC

- Wetland Delineation • Wetland & Aquatic Evaluation • Mitigation
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APPENDIX 1. SOILS REPORT

Connecticut Ecosystems LLC

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



ON-SITE SOIL INVESTIGATION REPORT

Project Name & Location

63 Woodchuck Hill Road
Simsbury, CT

CE Job No.: 15-3

Field Investigation Date(s): 4/29/15

Field Investigation Method(s):

- Spade & Auger
 Backhoe & Test Pits

Report Prepared For:

R.A.M. Contracting, Inc.
72 Riverside Road
Simsbury, CT

Field Conditions:

Weather: 60° 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→1-10 2-1→2-8 3-1/13

Intermittent Watercourse Marker Series: ---

Wetland Notes:

- **Type(s):** deciduous wooded swamp; pond
- **Hydroperiod(s):** seasonally saturated; permanently flooded
- **Soil Parent Material(s):** glacial till
- **Drainage Class(es):** poorly drained
- **Slope:** steep to gentle

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

**Project Name & Location: 63 Woodchuck Hill Road Simsbury, CT
Project #: 15-3**

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: 63 Woodchuck Hill Road Simsbury, CT
Project #: 15-3**

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

Paxton-Montauk Complex (84)

This complex consists of Paxton and Montauk soils, described separately below.

Paxton Series

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

In tilled areas, these soils have a dark brown fine sandy loam surface layer 8 inches thick. The subsoil from 8 to 26 inches is dark yellowish brown and olive brown fine sandy loam. The substratum from 26 to 60 inches is olive, very firm and brittle gravelly fine sandy loam.

Paxton soils are well drained. For most of the year the water table is typically below 6 feet. A temporary perched seasonal high water table is commonly found within 18 to 30 inches of the surface during the wetter periods from late winter through early spring. Surface runoff is medium to rapid. Permeability is moderate in the surface layer and subsoil and slow or very slow in the substratum.

Montauk Series

The Montauk series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by firm, compact sandy glacial till on uplands. They are nearly level to very 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 dark brown fine sandy loam surface layer 8 inches thick. The subsoil from 8 to 26 inches is dark yellowish brown fine sandy loam. The substratum from 26 to 60 inches is olive, very firm and brittle gravelly sandy loam.

For most of the year the water table is typically below six feet. A temporary perched seasonal high water table may be found between 24 and 30 inches of the surface during the wetter periods

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

**Project Name & Location: 63 Woodchuck Hill Road Simsbury, CT
Project #: 15-3**

from late winter through early spring. Surface runoff is medium to rapid. Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or moderately slow in the substratum.

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.

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

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

**Project Name & Location: 63 Woodchuck Hill Road Simsbury, CT
Project #: 15-3**

Manchester Series (37)

The Manchester series consists of very deep, excessively drained soils formed in a shallow, loamy sand mantle underlain by gravelly sand, water deposited glacial outwash materials. They are level to very steep soils on outwash plains, terraces, deltas, kames and eskers. The soils formed in loamy over stratified sandy and gravelly glacial outwash derived mainly from Triassic sandstone, shale, conglomerate and basalt.

Typically these soils have a reddish brown gravelly sandy loam surface layer 6 inches thick. The subsoil layer from 6 to 16 inches is yellowish red gravelly sandy loam. The substratum from 16 to 60 inches is yellowish brown stratified sand and gravel.

The water table is commonly at a depth below 6 feet. Surface runoff is slow to medium. Permeability is rapid in the surface layer and subsoil and very rapid in the substratum.

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

File c:\soils2015\15-3.doc

ARTHUR B. HERRICK - LAND SURVEYOR
 C.T.S.#10293



CANTON
 SIMSBURY

Approximate
 Town Line



Lot #
 48,775 Sq. Ft.
 1.120 Acres

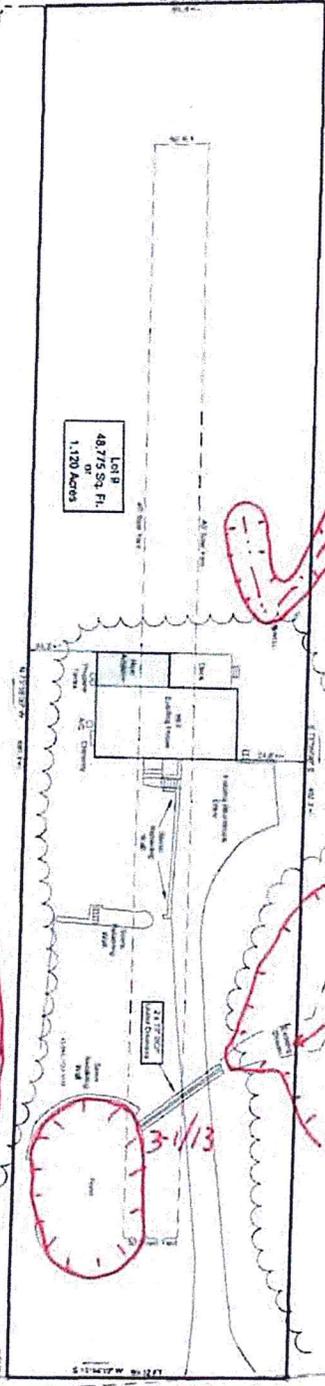
N.F.
 Raymond E. Zuber
 (65 Woodchuck Hill Road)

N.F.
 Nancy A. Humphreys
 Josephine Noll
 (59 Woodchuck Hill Road)

possibly not portion of 315-10 likely

Notes:
 1. Map is not to be used by anyone other than the person to whom it is issued.
 2. The survey was made by reference to a survey of the land shown on the map.
 3. The survey was made by reference to a survey of the land shown on the map.
 4. The survey was made by reference to a survey of the land shown on the map.

Water



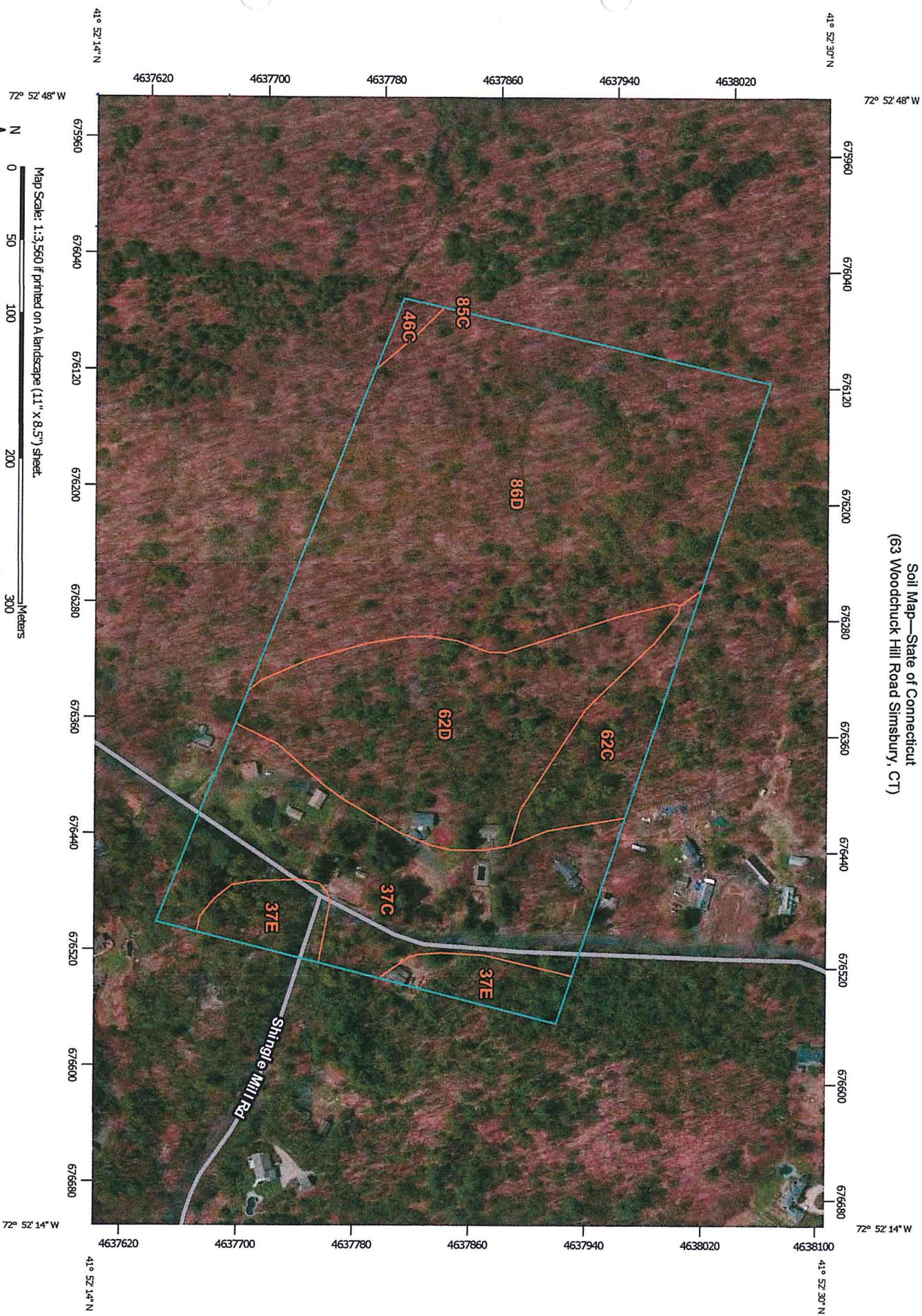
WOODCHUCK HILL ROAD



DATE	PROJECT	SCALE
2/14/14	315-10	1"=20'

As-built Plan
 Prepared for
A&B Homes, LLC
 63 Woodchuck Hill Road
 Simsbury
 Connecticut
 Scale: 1"=20'
 Prepared By
 Michael Savoy's
 35 Oak Farms Road, East Canton
 (860) 674-1732
 August 2, 2014

Soil Map—State of Connecticut
 (63 Woodchuck Hill Road Simsbury, CT)



Map Scale: 1:3,560 if printed on A landscape (11" x 8.5") sheet.
 0 50 100 200
 0 150 300 600 900
 Feet Meters
 Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

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

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—Apr 18, 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
37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	6.5	21.0%
37E	Manchester gravelly sandy loam, 15 to 45 percent slopes	1.8	5.8%
46C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	0.2	0.6%
62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	1.8	5.9%
62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	6.6	21.2%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	0.0	0.0%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	14.1	45.3%
Totals for Area of Interest		31.0	100.0%

Connecticut Ecosystems LLC

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



APPENDIX 2. WETLAND FUNCTIONS AND VALUES

38 Westland Avenue • West Hartford, CT 06107
Phone (860) 561-8598 • Fax (860) 561-0223 • email ecosys@comcast.net

Wetland Data Sheet

Project: 63 Woodchuck Hill Rd.

Date: 4/29/15
11/16/15

Wetland #:

Weather:

Time Start:

Stop:

Recent Precipitation: Below average

Average

Above average

Wildlife Investigation Method(s)

Cover search

Dip netting

Auditory songs/calls

Scat

Tracks

Minnow traps

Wetland Type(s) (Golet 1973 classification)

Class	Subclass			
<i>Open Water</i>	Vegetated	Non-vegetated		
<i>Deep Marsh</i>	Dead woody	Shrub	Sub-shrub	Robust
<u><i>Shallow Marsh</i></u>	Narrow-leaved	<u>Broad-leaved</u>		
<i>Seasonally Flooded Flats</i>	Emergent	Shrub		
<i>Wet Meadow</i>	Ungrazed	Grazed		
<i>Shrub Swamp</i>	Sapling	Bushy	Compact	Aquatic
<u><i>Wooded Swamp</i></u>	<u>Deciduous</u>	<u>Evergreen</u>		
<i>Bog</i>	Compact shrub	Bushy shrub	Wooded	Emergent

Water Regime(s)

Permanently Flooded (water covers land surface throughout year in all years)

Intermittently Exposed (surface water present throughout year except in years of extreme drought)

Semipermanently Flooded (surface water persists throughout growing season in most years)

Seasonally Flooded (surface water present for extended periods, especially early in growing season, but is absent by end of season in most years)

Seasonally Saturated (soils saturated to surface, especially early in growing season, but are unsaturated by end of season in most years; surface water absent except for ground water seepage and overland flow)

Temporarily Flooded (surface water present for brief periods during growing season, but water table usually lies well below soil surface for most of the season)

Intermittently Flooded (substrate usually exposed, but surface water is present for variable periods without detectable seasonal periodicity)

Artificially Flooded (amount/duration of flooding controlled by dikes, dams, pumps, etc.)

Hydrology

Ground water discharges present? yes no

Surface water depth: average: maximum:

Soils

Drainage Class(es): Well Moderately Poorly Very Poorly

Parent Material(s): Glacial till Outwash Glaciolacustrine Alluvial Organic

Slope: Nearly level Gentle Moderate Steep

Upland Review Area (URA)

Slope: Nearly level Gentle Moderate Steep

Cover Type(s): Mature forest Sapling forest Shrub thicket Meadow Mowed lawn Farm

Vegetation density: Trees: # Saplings: # Shrubs: # Herbs: # Grass: #

Leaf litter: Well-developed Moderately well-developed Absent

Cover objects: Logs Bark Boulders/Rocks

Evidence of erosion? No Yes (explain) Scale in gravel

Introduction

The assessment of wetland functions and values in this report is based upon the "Highway Methodology Workbook Supplement" developed by the U.S. Army Corps of Engineers New England Division. This "descriptive approach" moves away from numerical or ranking methodologies, and instead relies upon professional judgment of the reviewer. It provides criteria to standardize the assessment process.

Many of these criteria appear in the data sheets that follow. Additional criteria were obtained from other assessment methodologies (Magee and Hollands 1998; Ammann et al. 1991) and the experience of the author. Responses to these criteria that are indicators of the function are listed under the "+" column. Those that detract from the function appear in the "-" column. Excluding conditions preclude a wetland from performing a particular function. The determination of whether a particular function is identified as a "principal function" is based upon the number of positive criteria responses, and the judgment and professional experience of the evaluator.

Descriptions of Functions and Values

Groundwater Recharge

The capacity of a wetland to influence the amount of water moving from surface water to ground water (Magee and Hollands 1998).

Groundwater Discharge

The capacity of a wetland to influence the amount of water moving from ground water to surface water (Magee and Hollands 1998).

Floodflow Alteration

The storage of inflowing water from storm or flooding events, resulting in detention and retention of water on the wetland surface (Magee and Hollands 1998).

Finfish Habitat: Ponds & Lakes

Considers the quality of the aquatic habitat of a pond or lake, and its capacity to support finfish.

Finfish Habitat: Streams & Rivers

Considers the quality of the aquatic habitat of a perennial watercourse, and its capacity to support finfish.

Sediment, Pollutant & Nutrient Removal

The capacity of a wetland to remove dissolved, suspended and floatable pollutants from storm water runoff.

Production Export

The capacity of a wetland to produce wildlife food sources, or to export biomass that sustains downstream ecosystems.

Recreation

The suitability of a wetland to support various recreation activities (e.g., hiking, canoeing, boating, fishing, hunting, bird watching).

Wildlife Habitat

The capacity of a wetland to support a diverse and abundant wildlife community.

Educational/Scientific Value

The suitability of a wetland for classroom field trips, or for scientific research.

Uniqueness/Heritage

The degree to which a wetland is considered a locally or regionally unique natural resource.

Wetland #:
 Inspection Date: 4/29/15
 11/16/15

Project: 63 Woodchuck Hill Rd
 Weather:

Photograph(s):
 Inspector: E.M. Pawlak

GROUNDWATER RECHARGE (Excluding Condition: Slope Wetland)

Criteria	+	-	Comments
Soils	sand/gravel outwash	hardpan	tight fine-grained soils, shallow ledge
Wetland associated with perennial or seasonal watercourse?	yes	no	
Slope	gentle	moderate or steep	
PRINCIPAL FUNCTION? yes <input type="radio"/> no <input type="radio"/>			Limited by hardpan

GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	hardpan, shallow ledge	---	
Seeps, springs observed?	yes	no	
Wetland microrelief	well developed	none/poorly developed	
Wetland contains an outlet but no inlet?	yes	no	
PRINCIPAL FUNCTION? <input type="radio"/> yes <input type="radio"/> no			

FLOODFLOW ALTERATION (Excluding Condition: Slope Wetland)

Criteria	+	-	Comments
Area of wetland is relatively	large	small	
Amount of impervious surface in wetland watershed	large	small	
Wetland slope	gentle	steep	
Wetland characterized by variable water level?	yes	no	
Wetland in floodplain of adjacent watercourse?	yes	no	
Valuable properties, structures or resources located in or near floodplain downstream from wetland?	yes	no	
Watershed has a history of economic loss due to flooding?	yes	no	?
Wetland outlet constricted?	yes	no	Culvert
Wetland vegetation density	high	low	
Wetland microrelief	well developed	none/poorly developed	
PRINCIPAL FUNCTION? <input type="radio"/> yes <input type="radio"/> no			

FINFISH HABITAT: PONDS/LAKES (Excluding Condition: Wetland not associated with a pond or lake)

Criteria	+	-	Comments
Dominant land use adjacent to waterbody	forest, shrub, meadow	lawn	
Shallow littoral zone with emergent vegetation present?	yes	no	
Waterbody at least 10' deep?	yes	no	
% of pond covered by submerged or emergent vegetation	15-40%	other	
Direct stormwater discharge via culvert?	no	yes	
Sandbar present at inlet(s)	no	yes	
Water transparency	high	low	
Significant nutrient sources (fertilizers, waterfowl) present in watershed?	no	yes	
Pond size ≥ 0.5 acre?	yes	no	
Pond experiences dense algal blooms, nuisance aquatic vegetation, or duckweed?	no	yes	
PRINCIPAL FUNCTION? <input type="radio"/> yes <input type="radio"/> no			

Wetland #:

FINFISH HABITAT: STREAMS/RIVERS (Excluding Condition: Wetland not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs?	yes	no	
Gravel spawning areas present?	yes	no	
Barriers to anadromous fish (dams, high culverts) present in stream reach?	no	yes	
Dominant bottom substrate	gravel/cobbles	sand/silt	
Substrate embeddedness by sand & silt	low	high	
Instream habitat diversity (riffle, run, pool, shallow, deep)	high	low	
Channel alterations (channelization, islands or point bars)	absent or few	numerous	
Bank stability	stable	unstable, eroding	
Bank vegetative cover	high (trees, shrubs)	low	
Cover objects (fallen logs, boulders, undercut banks)	many	absent or few	
Riparian zone	wide	narrow	
Watershed development	low	high	
Water quality	good	poor	
Pollution tolerance of benthic macroinvertebrate taxa	mostly intolerant	mostly tolerant	
PRINCIPAL FUNCTION? yes no			

SEDIMENT, POLLUTANT & NUTRIENT REMOVAL

Criteria	+	-	Comments
Duration of water retention in wetland	(long)	short	
Wetland edge broad & intermittently aerobic?	yes	(no)	
Drainage ditches constructed in wetland?	(no)	yes	
Water flow through wetland	(diffuse)	(channelized)	
Vegetation density	(high)	low	
Evidence of sediment trapping in wetland?	(yes)	no	
Ponded water present in wetland?	(yes)	no	Marsh
Alluvial soils present?	yes	(no)	
Soil type	organic/high clay content	sand/gravel	Silt
Wetland basin topographic gradient	(low)	(high)	
Wetland microrelief	(well developed)	none/poorly developed	
PRINCIPAL FUNCTION? (yes) no			

PRODUCTION EXPORT (Excluding Condition: No outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	(abundant)	few	
Vegetation density	(high)	low	
Nutrients flushed out of wetland into watercourse?	(yes)	no	
Evidence of wildlife use in wetland?	(yes)	(no)	
Fish or shellfish develop/occur in wetland?	yes	(no)	
PRINCIPAL FUNCTION? (yes) no			

RECREATION

Criteria	+	-	Comments
Wetland is part of a recreation area, park, refuge, etc.	yes	(no)	
Fishing is available in or from the wetland	yes	(no)	
Hunting is permitted in wetland	yes	(no)	
Hiking occurs or has potential to occur in wetland	yes	(no)	
Wetland is a valuable wildlife habitat	(yes)	no	
Wetland has high visual/aesthetic quality	yes	(no)	
Boating or canoeing feasible in wetland	yes	(no)	
Off-road public parking near wetland available	(yes)	no	
Safety hazards (if present, list them)		✓	Steep slope
PRINCIPAL FUNCTION? yes (no)			

Wetland #:

WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	little or none	moderate to high	
Wetland fragmentation by development	little or none	moderate to high	
Buffer (F=forest M=meadow S=sapling/shrub thicket L=lawn A=agricultural)			
Buffer width		✓	
Connectivity with other wetlands	✓		pond to the south
Size of landscape block in which wetland is located	✓		
Wildlife food sources in wetland	abundant	few	
Interspersion of vegetation & open water	high	low	
Upland islands	present	absent	
Wetland class diversity (WS=wooded swamp SS=shrub swamp M=marsh WM=wet meadow OW=open water)	high	low	
Vegetation density	high	✓ low	
Vegetation strata (T=tree S=sapling SH=shrub V=vine H=herbaceous LL=leaf litter)	✓		
Wetland plant species diversity	high	low	
Vernal pool?	yes	(no)	
Edge diversity (list types, including upland cover types)		✓	
Water regime	wetter	drier	w/s/r forest
Habitat features (S=snags L=fallen logs SE=seep/spring)		✓	
Cover objects (L=logs/branches R=rocks B=bark)	abundant	few	
Flat rocks in/near watercourse (stream salamanders)	present	absent	
Sphagnum hummocks next to shallow pools?	present	absent	
Bare well drained sandy soils near wetland (turtle nest site)	present	absent	
Abundance of invasive exotic flora? (give examples)	none/low	high	moderate
PRINCIPAL FUNCTION? yes no			

EDUCATIONAL/SCIENTIFIC VALUE

Criteria	+	-	Comments
Wetland contains listed species	yes	no	Very unlikely
Wetland provides valuable wildlife habitat	yes	no	
Wetland class diversity	high	low	Moderate
Adjacent upland cover types (F=forest M=meadow S=sapling/shrub thicket A=agricultural)	high	✓ low	
Off-road parking near wetland available	yes	no	
Proximity to schools	near	far	
Wetland contains perennial watercourse	yes	no	
Wetland contains pond/lake	yes	no	
Safety hazards (if present, list them)		✓	steep slope
Site currently used for educational/scientific purposes	yes	no	
PRINCIPAL FUNCTION? yes no			

UNIQUENESS/HERITAGE

Criteria	+	-	Comments
Wetland contains listed species	yes	no	Very unlikely
Wetland identified as exemplary natural community	yes	no	
Wetland locally/regionally significant (explain)			
PRINCIPAL FUNCTION? yes no			

Notes