Outback Engineering Incorporated
165 East Grove Street
Middleborough, MA 02346
Tel # 508-946-9231 www.outback-eng.com Fax # 508-947-8873
Civil Engineers ✦ Land Surveyors ✦ Environmental Consultants ✦ Soil Testing Services

March 13, 2020

Avon Conservation Commission
65 East Main Street
Avon, MA 02322

RE: Abbreviated Notice of Resource Area Delineation, Antone Road, Avon, MA
Assessors Map B3 Block 1 Lots 9, 10, & 11
Assessors Map B4 Block 3 Lots 1 & 2
Assessors Map B4 Block 4 Lots 4, 5, & 6
Portion of Assessors Map B4 Block 2 Lots 1 & 2

Dear Commission Members,

On behalf of the applicant, Muhammad Itani, please find six (6) copies of WPA Form 4A, one (1) original and seven (7) copies of the accompanying plan ("Plan to Accompany ANRAD Filing For Antone Road in Avon, MA" by Outback Engineering, Inc., dated 3/13/2020). Please also find a $50.00 check to cover the Town filing fee and a $1,012.50 check to cover the WPA filing fee, both payable to the "Town of Avon".

Resource areas were flagged by Scott Goddard, PWS of Goddard Consulting, LLC in the fall of 2019 (See attached Report by Scott Goddard revised March 2, 2020). The applicant would like confirmation of the following resource areas:

- Isolated vegetated wetland (IVW) flags AA1- AA33
- Bordering vegetated wetland (BVW) flags GC29- GC70, GC72- GC90, and C2-25
- Intermittent stream flags SC1-SC8 and SD1-SD8
- Intermittent stream flags SE0-SE13 and SF1- SF13
- Intermittent stream flags SA1- SA12, R39-R55, R55SA, SB1- SB6, SB8 -SB9, SB10-2, and SB10- SB13
- Ponded area within BVW flags S1-S13

Should you have any questions or require additional information, please do not hesitate to contact me at the above listed phone number. Thank you.

Sincerely,
OUTBACK ENGINEERING, INC.

Elyse Tripp
Wetland Scientist

cc: Southeast Region, DEP
Muhammad Itani

Abbreviated Notice of Resource Area Delineation

Muhammad Itanti
Antone Road

TABLE OF CONTENTS

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Avon
City/Town

A. General Information

1. Project Location (**Note:** electronic filers will click on button for GIS locator):

Antone Road
a. Street Address

Avon
b. City/Town

02322
c. Zip Code

Latitude and Longitude:

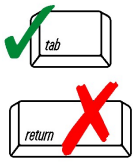
42d07m03s
d. Latitude

71d03m22s
e. Longitude

See Attached
f. Assessors Map/Plat Number

g. Parcel /Lot Number

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



2. Applicant:

Muhammad
a. First Name

Itani
b. Last Name

c. Organization

24 Forest Edge Road
d. Mailing Address

South Easton
e. City/Town

MA
f. State

02375
g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

3. Property owner (if different from applicant):

☐ Check if more than one owner (attach additional sheet with names and contact information)

SAME
a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

4. Representative (if any):

Elyse
a. Contact Person First Name

Tripp
b. Contact Person Last Name

Outback Engineering, Inc
c. Organization

165 East Grove Street
d. Mailing Address

Middleborough
e. City/Town

MA
f. State

02346
g. Zip Code

508-946-9231
h. Phone Number

508-947-8873
i. Fax Number

etripp@outback-eng.com
j. Email Address

Fees will be calculated for online users.

5. Total WPA Fee Paid (from attached ANRAD Wetland Fee Transmittal Form):

$2,000.00
a. Total Fee Paid

$987.50
b. State Fee Paid

$1012.50
c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Avon
City/Town

B. Area(s) Delineated

1. Bordering Vegetated Wetland (BVW) — 2,236 S.F. (Linear Feet of Boundary Delineated)

2. Check all methods used to delineate the Bordering Vegetated Wetland (BVW) boundary:

   a. ☒ MassDEP BVW Field Data Form (attached)

   b. ☐ Other Methods for Determining the BVW boundary (attach documentation):

      1. ☐ 50% or more wetland indicator plants
      2. ☐ Saturated/inundated conditions exist
      3. ☐ Groundwater indicators
      4. ☐ Direct observation
      5. ☐ Hydric soil indicators
      6. ☐ Credible evidence of conditions prior to disturbance

3. Indicate any other resource area boundaries that are delineated:

a. Resource Area	b. Linear Feet Delineated
Intermittent Stream	2,380
c. Resource Area	d. Linear Feet Delineated
Isolated Vegetated Wetland	808
Ponded Area within BVW	412 Linear Feet Delineated

C. Additional Information

Applicants must include the following plans with this Abbreviated Notice of Resource Area Delineation. See instructions for details. **Online Users:** Attach the Document Transaction Number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ ANRAD (Delineation Plans only)
2. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
3. ☒ Plans identifying the boundaries of the Bordering Vegetated Wetlands (BVW) (and/or other resource areas, if applicable).
4. ☒ List the titles and final revision dates for all plans and other materials submitted with this Abbreviated Notice of Resource Area Delineation.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Avon
City/Town

D. Fees

The fees for work proposed under each Abbreviated Notice of Resource Area Delineation must be calculated and submitted to the Conservation Commission and the Department (see Instructions and Wetland Fee Transmittal Form).

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to the attached Wetland Fee Transmittal Form) to confirm fee payment:

14909	2-27-2020
2. Municipal Check Number	3. Check date
14908	2-27-2020
4. State Check Number	5. Check date
Stonebridge Homes, Inc.	
6. Payor name on check: First Name	7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 4A – Abbreviated Notice of Resource Area Delineation
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Avon
City/Town

E. Signatures

I certify under the penalties of perjury that the foregoing Abbreviated Notice of Resource Area Delineation and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

I hereby grant permission, to the Agent or member of the Conservation Commission and the Department of Environmental Protection, to enter and inspect the area subject to this Notice at reasonable hours to evaluate the wetland resource boundaries subject to this Notice, and to require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

I acknowledge that failure to comply with these certification requirements is grounds for the Conservation Commission or the Department to take enforcement action.

1. Signature of Applicant	2. Date: 2-27-20
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any): Elyse Tripp Elyse Tripp	6. Date: 3-5-2020

For Conservation Commission:
Two copies of the completed Abbreviated Notice of Resource Area Delineation (Form 4A), including supporting plans and documents; two copies of the ANRAD Wetland Fee Transmittal Form; and the city/town fee payment must be sent to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Abbreviated Notice of Resource Area Delineation (Form 4A), including supporting plans and documents; one copy of the ANRAD Wetland Fee Transmittal Form; and a copy of the state fee payment must be sent to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery. (E-filers may submit these electronically.)

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Antone Road
Assessors Parcels (Map-Block-Lot)

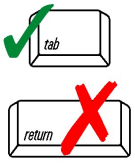
B3-1-9
B3-1-10
B3-1-11
B4-3-1
B4-3-2
B4-4-4
B4-4-5
B4-4-6
Portion of B4-2-1
Portion of B4-2-2

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

ANRAD Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

Antone Road	Avon
a. Street Address	b. City/Town
$987.50	14908
c. Fee amount	d. Check number

2. Applicant:

Muhammad	Itani	
a. First Name	b. Last Name	c. Company

24 Forest Edge Road
d. Mailing Address

South Easton	MA	02375
e. City/Town	f. State	g. Zip Code

h. Phone Number

3. Property Owner (if different):

SAME		
a. First Name	b. Last Name	c. Company

d. Mailing Address

e. City/Town	f. State	g. Zip Code

h. Phone Number

B. Fees

The fee is calculated as follows for each Resource Area Delineation included in the ANRAD (check applicable project type). The maximum fee for each ANRAD, regardless of the number of Resource Area Delineations, is $200 activities associated with a single-family house and $2,000 for any other activity.

☐ **Online users:** check box if fee exempt.

Bordering Vegetated Wetland Delineation Fee:

1. ☐	single family house project	a. feet of BVW	x $2.00 =	b. Fee for BVW
2. ☒	all other projects	2,236 a. feet of BVW	4,472 x $2.00 =	Max Fee b. Fee for BVW

Other Resource Area (e.g., bank, riverfront area, etc.):

3. ☐	single family house project	a. linear feet	x $2.00 =	b. Fee
4. ☒	all other projects	3,600 a. linear feet	7,200 x $2.00 =	Max Fee b. Fee

Total Fee for all Resource Areas:	$2,000.00 (Max Fee) Fee
State share of filing fee:	$987.50 5. 1/2 of total fee **less** $12.50
City/Town share of filing fee:	$1012.50 6. 1/2 of total fee **plus** $12.50

C. Submittal Requirements

a.) Send a copy of this form, with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Abbreviated Notice of Resource Area Delineation; a **copy** of this form; and the city/town fee payment.

c.) **To DEP Regional Office**: Send one copy of the Abbreviated Notice of Resource Area Delineation (and any additional documentation required as part of a Simplified Review Buffer Zone Project); a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

SECURITY FEATURES INCLUDE TRUE WATERMARK PAPER, HEAT SENSITIVE ICON AND FOIL HOLOGRAM.

STONEBRIDGE HOMES, INC.
32 Norfolk Avenue
South Easton, MA 02375

Eastern Bank
Boston, MA 02110
1-800-EASTERN
53-179/113

14908

2/27/2020

PAY TO THE ORDER OF Commonwealth of Massachusetts $ **987.50

Nine Hundred Eighty-Seven and 50/100********** DOLLARS

MEMO ANRAD filing fee: Central St, Avon, MA

AUTHORIZED SIGNATURE

HEAT SENSITIVE

"014908" :011301798: 07 60108938"

Details on Back. Security Features Included

SECURITY FEATURES INCLUDE TRUE WATERMARK PAPER, HEAT SENSITIVE ICON AND FOIL HOLOGRAM.

STONEBRIDGE HOMES, INC.
32 Norfolk Avenue
South Easton, MA 02375

Eastern Bank
Boston, MA 02110
1-800-EASTERN
53-179/113

14909

2/27/2020

PAY TO THE ORDER OF Town of Avon $ **1,012.50

One Thousand Twelve and 50/100********** DOLLARS

Town of Avon
P.O. Box 611
Medford, MA 02155-0007

MEMO Avon Conservation Comm. filing of an ANRAD

AUTHORIZED SIGNATURE

HEAT SENSITIVE

"014909" :011301798: 07 60108938"

Details on Back. Security Features Included

Figure 1:

MassGIS Aerial Locus Map

Source: MassGIS 2018 OrthoImagery

Attachment A:

Abutter List, Abutter Notification, Affidavit of Service

300' CERTIFIED ABUTTERS LIST
LOTS B4-2-1, B4-2-2, B4-4-4, B4-4-5, B4-4-6, B3-1-9, B4-3-2, B4-3-1, B3-1-10, B3-1-11
AVON, MA FOR
OUTBACK ENGINEERING INC.
OWNER: MUHAMMAD ITANI

Board of Assessors
Certified Copy
Paul J. Sullivan
as of 12/31/19

Map	Block	Lot	Location	Owners Name	Mailing Address	City	St Zip
A4	1	2	4 Russell Rd.	Simonds, Frank H., Jr.	4 Russell Rd.	Avon	MA 02322
A4	1	3	6 Russell Rd.	Webb, Danny & Webb, Rosemary A.	6 Russell Rd.	Avon	MA 02322
B3	1	12	Central St.	Owner Unknown			
B3	1	13	200 Central St.	A&B Campbell Realty LLC	71 South St.	Avon	MA 02322
B3	1	3	222 Central St.	Cross, Robert S. & Cross, Donna M.	222 Central St.	Avon	MA 02322
B3	1	4	230 Central St.	Danier, Sanon & Danier, Julie	230 Central St.	Avon	MA 02322
B3	1	5	296 Central St.	Jean, Pierre & Burnett, Valerie	296 Central St.	Avon	MA 02322
B3	1	6	300 Central St.	Lindesey, Vernon B. & Lindesey, Maxine M.	300 Central St.	Avon	MA 02322
B3	1	7	304 Central St.	Mooney, Kevin	304 Central St.	Avon	MA 02322
B3	1	8	310 Central St.	Moore, Robert J. & Moore, Judith A.	310 Central St.	Avon	MA 02322
B3	2	1	305 Central St.	Vuytowecz, Charles J. & Vuytowecz, Janet C., L.E.	305 Central St.	Avon	MA 02322
B3	2	2	301 Central St.	Idumwonyi, Henrietta Imade & Idumwonyi, Clara Adesuwa	301 Central St.	Avon	MA 02322
B3	2	3	297 Central St.	Nguyen, Viet	297 Central St.	Avon	MA 02322
B3	2	4	275 Central St.	Charlceus, Bonat & Buisson, Marilyne F.	275 Central St.	Avon	MA 02322
B3	2	5	253 Central St.	Jeannot, Garry & Jeannot, Buline	253 Central St.	Avon	MA 02322
B3	2	6	243 Central St.	Wedgeworth, Marc C.	243 Central St.	Avon	MA 02322
B3	2	7	233 Central St.	Aten, Norris L. & Aten, Janis M.	233 Central St.	Avon	MA 02322
B3	2	8	223 Central St.	Demesmin, Stanley	223 Central St.	Avon	MA 02322
B3	2	9	213 Central St.	Perry, Walter A. & Perry, Eugenia E.	213 Central St.	Avon	MA 02322
B4	2	1	Sanborn Hill Rd.	Town of Avon	65 E. Main St.	Avon	MA 02322
B4	2	2	340 Central St.	Sandy, Michael B. & Cooper, Jeanne L.	340 Central St.	Avon	MA 02322
B4	4	1	314 Central St.	O'Neill, Sean T.	314 Central St.	Avon	MA 02322
B4	4	2	318 Central St.	Baher, Bernard H. & Baher, Ruth A.	318 Central St.	Avon	MA 02322
B4	5	5	313 Central St.	Selman, Maryann	313 Central St.	Avon	MA 02322
B4	5	6	309 Central St.	Campbell, Brian A., Tr. 309 Central St. R.T.	19 Klondike Rd.	Avon	MA 02322
B4	5	7	348 Old Pond St.	Damiano, James D. & Damiano, Heidi A.	348 Old Pond St.	Avon	MA 02322
B4	4	3	332 Central St.	MacQuarrie, Douglas M. & MacQuarrie, Agnes M.	332 Central St.	Avon	MA 02322
B4	5	4	321 Central St.	Teixeira, Assuncao, M.	321 Central St.	Avon	MA 02322
B4	5	3	331 Central St.	Monahan, Gerard & Perry, Rose	331 Central St.	Avon	MA 02322
B4	1	7	Pond/Central Sts.	Mass. Electric Co.	40 Sylvan Rd.	Waltham	MA 02452
B4	1	8	341 Old Pond St.	Kelly, Peter D. & Kelly, Janis L.	341 Old Pond St.	Avon	MA 02322

300' CERTIFIED ABUTTERS LIST
LOTS B4-2-1, B4-2-2, B4-4-4, B4-4-5, B4-4-6, B3-1-9, B4-3-2, B4-3-1, B3-1-10, B3-1-11
AVON, MA FOR
OUTBACK ENGINEERING INC.
OWNER: MUHAMMAD ITANI

A4	2	4	1 Russell Rd.	Green, Joshua Nathaniel & Green, Tonya Lynn	1 Russell Rd.	Avon	MA 02322
A4	2	5	406 Central St.	Ahmed, Muhammad A.	408 Central St.	Avon	MA 02322
B4	1	1	Central St.	Town of Avon	65 E. Main St.	Avon	MA 02322
B4	1	5	361 Central St.	Foss, Robert A. & Foss, Kathryne M.	361 Central St.	Avon	MA 02322
B4	1	6	357 Central St.	Diligent, Marie	357 Central St.	Avon	MA 02322
B4	5	1	356 Old Pond St.	Munson, Mark I & Munson, Jayne M.	356 Old Pond St.	Avon	MA 02322
B4	5	2	364 Old Pond St.	Bryant, Edwin R. & Bryant, Dorothy M., L.E. & Bryant, Wayne Rd.	364 Old Pond St.	Avon	MA 02322

Notification to Abutters Under the

Massachusetts Wetlands Protection Act

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following.

A. The applicant is Muhammad Itani.

B. Property is owned by Muhammad Itani.

C. The applicant has filed an Abbreviated Notice of Resource Area Delineation with the Conservation Commission for the municipality of Avon, Massachusetts seeking confirmation of Resource Areas Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40).

D. The address of the lot where the activity is proposed is Antone Road.

E. Assessors Map B3 Block 1 Lots 9, 10, & 11, Assessors Map B4 Block 3 Lots 1 & 2 Assessors Map B4 Block 4 Lots 4, 5, & 6, and a portion of Assessors Map B4 Block 2 Lots 1 & 2.

F. Copies of the filing may be examined at the Avon Conservation Commission by calling 508-588-0414 ext.1032 to make an appointment.

G. Brief description of project: The applicant is seeking confirmation of resource areas subject to protection under the Wetlands Protection Act.

H. Copies of the filing may be obtained for $25.00 from the applicant's representative, by calling this telephone number 508-946-9231 between the hours of 8:30 a.m. and 4:30 p.m. on the following days of the week: Monday-Friday.

I. The public hearing will be held on April 9, 2020 at 7pm in the Avon Town Hall at 65 East Main Street in Avon, MA 02322.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least seven (7) days in advance in the Moneysaver.

NOTE: You may contact the Department of Environmental Protection Regional office at 508-946-2800 for more information.

ABUTTER ATTENDANCE AT THE HEARING IS NOT REQUIRED

AFFIDAVIT OF SERVICE

Under
Massachusetts Wetlands Protection Act M.G.L. c.131, §40

I, Elyse Tripp, hereby certify under the pains and penalties of perjury that on or before April 1, 2020 I gave notification to abutters in compliance with Massachusetts Wetlands Protection Act M.G.L. c.131, §40 in connection with the following matter:

An Abbreviated Notice of Resource Area Delineation for Antone Road has been filed under Massachusetts Wetlands Protection Act M.G.L. c.131, §40, by the applicant, Muhammad Itani, with the Avon Conservation Commission on or before March 26, 2020 for confirmation of resource areas subject to protection under the Wetlands Protection Act.

The notification letter, a list of the abutters to whom it was given to and their addresses, and proof of notification are enclosed with this Affidavit of Service.

Elyse Tripp
Name

3-12-2020
Date

Attachment B:

Wetland Report and Field Data Sheets
by Scott Goddard

Revised March 2, 2020
November 13, 2019

Stonebridge Homes, Inc.
32 Norfolk Ave
South Easton, MA 02375

Re: Antone Road, Avon

Dear Stonebridge Homes:

In the fall of 2019, the wetland resources were delineated on a portion of land located at the above referenced site. The wetland border was flagged using the criteria in the most recent edition of MA Wetland Protection Act (WPA) and Regulations 310 CMR 10.00 et al and the Avon Bylaw. Hydric soil indicators, vegetation changes, hydrological indicators, and topography were all considered for delineation purposes.

The resources on site consist of and Isolated Vegetated Wetland and Bordering Vegetated Wetland. The isolated vegetated wetland (IVW) was delineated with series AA1-33. No defined channel was observed at the time of inspections, leaving or connecting this wetland with another resource area and therefore is considered isolated. This IVW is vegetated with sweet pepperbush, red maple, ferns and poison ivy. An IVW is only protected by the MA Wetlands Protection Act if it qualifies as an Isolated Land Subject to Flooding; which by definition is a depression able to hold ¼ acer foot of water at a minimum depth of 6-inches. This small wetland does not appear to be able to meet this definition for an ILSF resource and therefore would not be jurisdictional under the Massachusetts Wetlands Protection Act and according to the local wetland bylaw IVWs are not specifically identified as a resource area.

The BVW resource area was flagged with series GC1-90, A1-22, B1-18 and C1-25. This resource area was vegetated with sweet pepperbush, brier, red maple, elm, highbush blueberry and poison ivy. A ponded area within the BVW was flagged with series S1-13. The adjacent upland to this wetland is vegetated with witch hazel, princess-pine, sweet pepperbush, oak, white pine and brier. Department of Environmental Protection BVW field data forms were documented at wetland flag GC-34 and A22 (see attached forms).

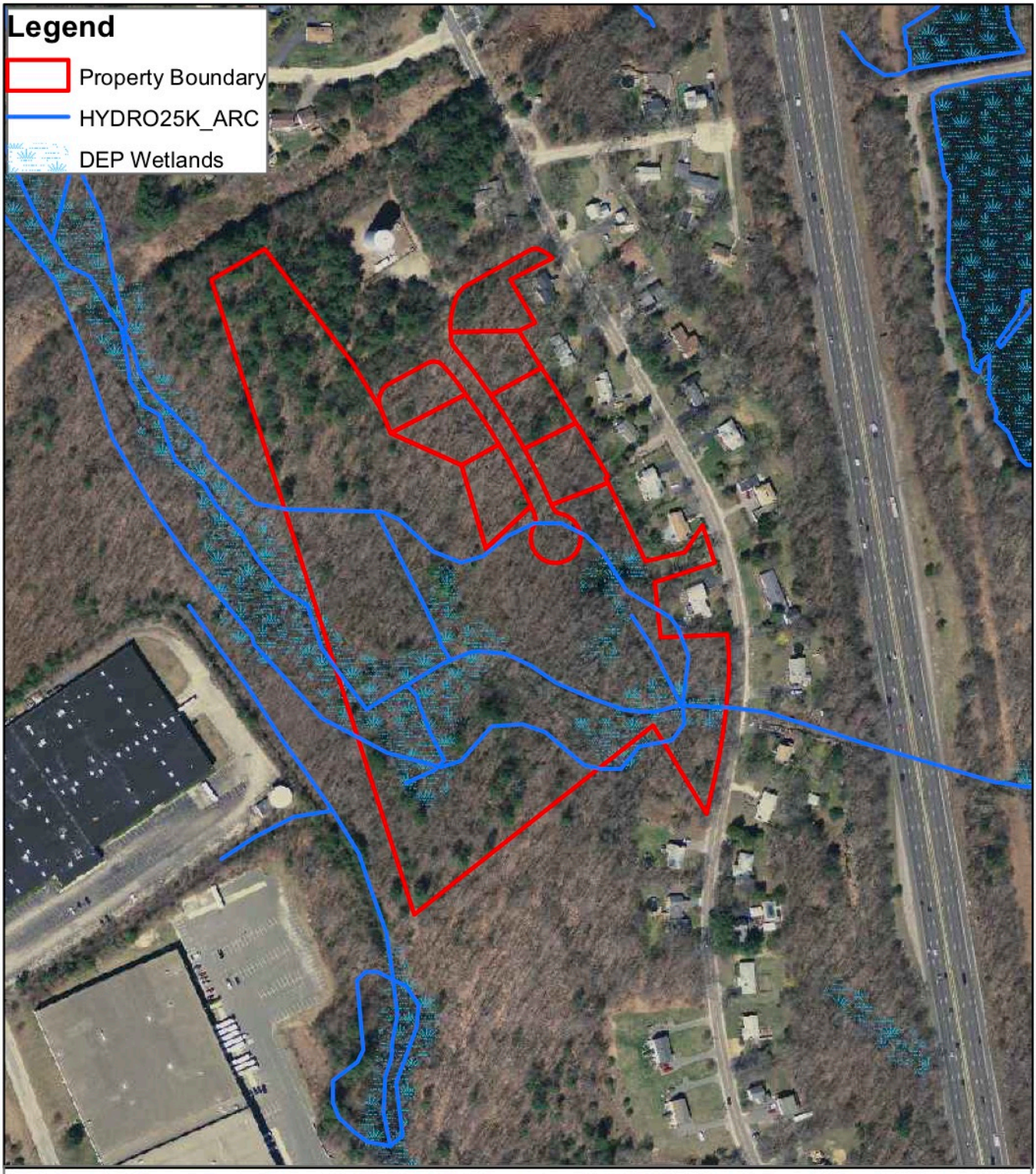
Since this site is located within a Department of Conservation and Recreation (DCR) jurisdictional Zone A area, all stream channels shown on the DCR maps and Zone A Maps were delineated in the field. These streams have additional DCR jurisdiction since they contribute to the Brockton Reservoir. This jurisdiction, according to the maps extends 200-feet (however in some cases can extend up to 400-ft) from the mapped streams. The centrally located stream, which is shown as intermittent on the USGS map, was delineated with series: SA1-12, R39-55 and SB1-40. A stream stats analysis was also performed for this stream which indicated the stream has a watershed of 0.23 square miles which is far below the required 0.5 square mile watershed to be considered perennial. Two other, more narrow, intermittent stream channels shown on the DCR maps where delineated with series SC1-8 and SD1-8 (in the southeastern section of the site) and flags SE1-13 and SF1-13 in southwestern section of the site).

According to the Mass GIS data layers for NHESP, this site is not located within Estimated and/or Priority Habitat of Rare Wildlife, and no mapped vernal pools are located on or near the site. The site is not located in a jurisdictional FEMA Flood Zone.

The MA Wetlands Protection Act takes jurisdiction over BVW resources and their jurisdictional 100-foot Buffer Zone. Any work within the BVW resource area, BVW buffer zone or within the DCR jurisdictional area; requires a Request for Determination (RDA) or Notice of Intent (NOI) be filed with the Conservation Commission and potentially DCR. If you need further assistance with permitting, please call us we would be happy to assist.

Very truly yours,

Scott Goddard,
Principal & PWS



Ortho View of Site

Central Street, Avon MA

N

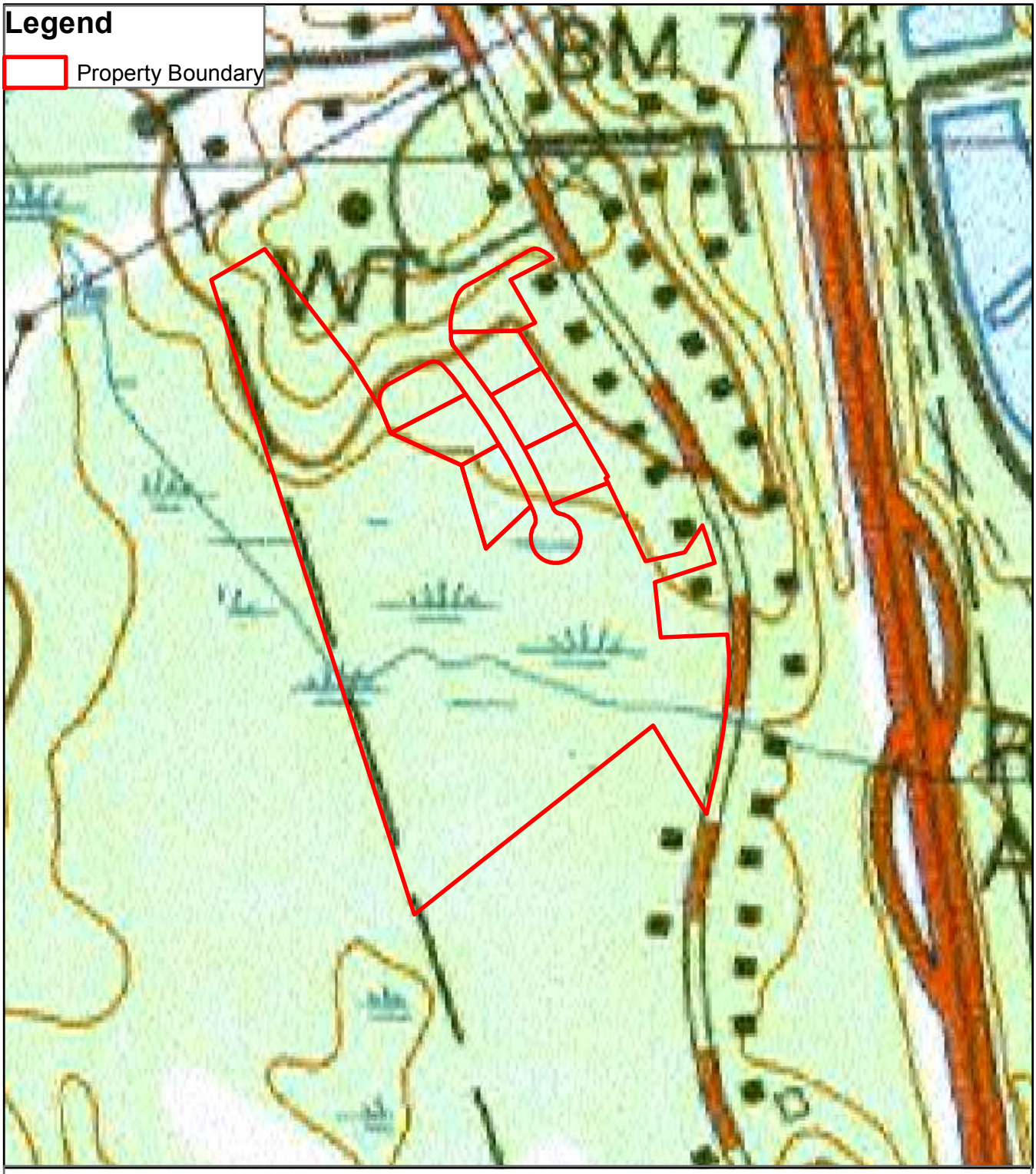
0 150 300 Feet

1 inch = 300 feet

Date: 10/07/19

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting



USGS Site Locus

Central Street, Avon MA

N

0 150 300 Feet

1 inch = 300 feet

Date: 10/07/19

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **Antone Rd, Avon** DEP File #: _____

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **GC-34** Transect Number: **Upgradient** Date of Delineation: **1-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Red Maple	*Acer rubrum*	3%	3.2%	No	FAC*
Red Oak	*Quercus rubra*	36%	37.9%	Yes	FACU
American beech	*Fagus grandifolia*	36%	37.9%	Yes	FACU
Northern white oak	*Quercus alba*	20%	21.1%	Yes	FACU
Sapling Layer					
Red Oak	*Quercus rubra*	15%	100.0%	Yes	FACU
Shrub Layer					
White pine	*Pinus strobus*	20%	35.7%	Yes	FACU
Witch hazel	*Hamamelis virginiana*	36%	64.3%	Yes	FACU
Climbing Woody Vine					
Ground Cover					
Princess-pine	*Dendrolycopodium obscurum*	10%	100.0%	Yes	FACU

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 0 **Number of dominant non-wetland indicator plants: 7**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? no

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number:

soil type mapped: **Canton fine sandy loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
A	0-4"	10YR2/2	
B	4-18"	10YR5/4	

Remarks:

3. Other:

Conclusion: Is soil hydric? ☐ yes ☑ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Upgradient of GC-34

	yes	no
Number of wetland indicator plants >= number of non-wetland plants		**X**
Wetland hydrology present:		
hydric soils present		**X**
other indicators of hydrology present		**X**
Sample location is in a BVW		**X**

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **Antone Rd, Avon** DEP File #: _____

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **GC-34** Transect Number: **Downgradient** Date of Delineation: **1-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Red Maple	*Acer rubrum*	36%	100.0%	Yes	FAC*
Sapling Layer					
Red maple	*Acer rubrum*	10%	100.0%	Yes	FAC*
Shrub Layer					
Sweet pepperbush	*Clethra alnifolia*	36%	64.3%	Yes	FAC*
American hornbeam	*Carpinus caroliniana*	20%	35.7%	Yes	FAC*
Climbing Woody Vine					
Horse brier	*Smilax rotundifolia*	20%	100.0%	Yes	FAC*
Ground Cover					
Cinnamon fern	*Osmundastrum cinnamomeum*	20%	100.0%	Yes	FACW*

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 6 **Number of dominant non-wetland indicator plants: 0**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number:

soil type mapped: **whitman fine sandy loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
O	0-10"	10YR2/1	
C	10-20	10YR6/1	

Remarks:

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☑ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☑ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Downgradient of GC-34

	yes	no
Number of wetland indicator plants >= number of non-wetland plants	X	
Wetland hydrology present:		
hydric soils present	X	
other indicators of hydrology present	X	
Sample location is in a BVW	X	

Submit this form with the Request for Determination of Applicability or Notice of Intent

Attachment C:

StreamStats Report

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **Antone Rd, Avon** DEP File #: _____

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **A-22** Transect Number: **Upgradient** Date of Delineation: **15-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Red Maple	*Acer rubrum*	0%	0.0%	No	FAC*
Red Oak	*Quercus rubra*	36%	64.3%	Yes	FACU
American beech	*Fagus grandifolia*	0%	0.0%	No	FACU
Northern white oak	*Quercus alba*	20%	35.7%	Yes	FACU
Sapling Layer					
Red Oak	*Quercus rubra*	3%	100.0%	Yes	FACU
Shrub Layer					
White pine	*Pinus strobus*	20%	35.7%	Yes	FACU
Witch hazel	*Hamamelis virginiana*	36%	64.3%	Yes	FACU
Climbing Woody Vine					
Ground Cover					
Princess-pine	*Dendrolycopodium obscurum*	10%	100.0%	Yes	FACU

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 0 **Number of dominant non-wetland indicator plants: 6**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? no

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent. MA DEP; 3/95

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number:

soil type mapped: **Scituate fine sandy loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
A	0-6"	10YR2/2	
B	6-18"	10YR5/4	

Remarks:

3. Other:

Conclusion: Is soil hydric? ☐ yes ☑ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Upgradient of A-22	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants		**X**
Wetland hydrology present:		
hydric soils present		**X**
other indicators of hydrology present		**X**
Sample location is in a BVW		**X**

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **Antone Rd, Avon** DEP File #: _____

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **A-22** Transect Number: **Downgradient** Date of Delineation: **15-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Red Maple	*Acer rubrum*	36%	64.3%	Yes	FAC*
Red oak	*Quercus rubra*	20%	35.7%	Yes	FACU
Sapling Layer					
Red maple	*Acer rubrum*	10%	100.0%	Yes	FAC*
Shrub Layer					
Sweet pepperbush	*Clethra alnifolia*	36%	50.0%	Yes	FAC*
American hornbeam	*Carpinus caroliniana*	36%	50.0%	Yes	FAC*
Climbing Woody Vine					
Horse brier	*Smilax rotundifolia*	20%	100.0%	Yes	FAC*
Ground Cover					
Sweet pepperbush	*Clethra alnifolia*	20%	100.0%	Yes	FAC*

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 6 **Number of dominant non-wetland indicator plants: 1**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number:

soil type mapped: **Ridgebury**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
O	0-10"	10YR2/1	
C	10-20	10YR6/1	

Remarks:

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☑ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☑ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Downgradient of A-22

	yes	no
Number of wetland indicator plants >= number of non-wetland plants	X	
Wetland hydrology present:		
hydric soils present	X	
other indicators of hydrology present	X	
Sample location is in a BVW	X	

Submit this form with the Request for Determination of Applicability or Notice of Intent

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number:

soil type mapped: **whitman fine sandy loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
O	0-10"	10YR2/1	
C	10-20	10YR6/1	

Remarks:

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☑ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☑ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Downgradient of GC-34

	yes	no
Number of wetland indicator plants >= number of non-wetland plants	X	
Wetland hydrology present:		
hydric soils present	X	
other indicators of hydrology present	X	
Sample location is in a BVW	X	

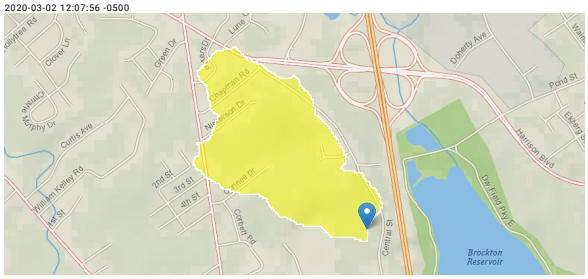
Submit this form with the Request for Determination of Applicability or Notice of Intent

Attachment C:

StreamStats Report

StreamStats Report

Region ID:
MA
Workspace ID:
MA20200302170740021000
Clicked Point (Latitude, Longitude):
42.11752, -71.06285
Time:
2020-03-02 12:07:56 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.23	square miles
DRFTPERSTR	Area of stratified drift per unit of stream length	0	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.196	percent
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	0	percent
FOREST	Percentage of area covered by forest	31.96	percent
BSLDEM10M	Mean basin slope computed from 10 m DEM	2.98	percent
ELEV	Mean Basin Elevation	249	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	4.61	percent

Flow-Duration Statistics Parameters[Statewide Low Flow WRIR00-4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.23	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	0.196	percent	0.32	24.6

Flow-Duration Statistics Disclaimers[Statewide Low Flow WRIR00-4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Flow-Duration Statistics Flow Report[Statewide Low Flow WRIR00-4135]

Statistic	Value	Unit
50 Percent Duration	0.213	ft^3/s
60 Percent Duration	0.123	ft^3/s
70 Percent Duration	0.0554	ft^3/s
75 Percent Duration	0.0385	ft^3/s
80 Percent Duration	0.0159	ft^3/s
85 Percent Duration	0.00884	ft^3/s
90 Percent Duration	0.00365	ft^3/s
95 Percent Duration	0.00157	ft^3/s
98 Percent Duration	0.00105	ft^3/s
99 Percent Duration	0.000663	ft^3/s

Flow-Duration Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

Low-Flow Statistics Parameters[Statewide Low Flow WRIR00-4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.23	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.196	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Disclaimers[Statewide Low Flow WRIR00-4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report[Statewide Low Flow WRIR00-4135]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00293	ft^3/s
7 Day 10 Year Low Flow	0.00041	ft^3/s

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

August Flow-Duration Statistics Parameters[Statewide Low Flow WRIR00-4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.23	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.196	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

August Flow-Duration Statistics Disclaimers[Statewide Low Flow WRIR00-4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

August Flow-Duration Statistics Flow Report[Statewide Low Flow WRIR00-4135]

Statistic	Value	Unit
August 50 Percent Duration	0.0116	ft^3/s

August Flow-Duration Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

Probability Statistics Parameters[Perennial Flow Probability]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.23	square miles	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	0	percent	0	100
FOREST	Percent Forest	31.96	percent	0	100
MAREGION	Massachusetts Region	0	dimensionless	0	1

Probability Statistics Flow Report[Perennial Flow Probability]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PC
Probability Stream Flowing Perennially	0.648	dim	71

Probability Statistics Citations

Bent, G.C., and Steeves, P.A.,2006, A revised logistic regression equation and an automated procedure for mapping the probability of a stream flowing perennially in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2006–5031, 107 p. (http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR_2006-5031rev.pdf)

Bankfull Statistics Parameters[Bankfull Statewide SIR2013 5155]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.23	square miles	0.6	329
BSLDEM10M	Mean Basin Slope from 10m DEM	2.98	percent	2.2	23.9

Bankfull Statistics Disclaimers[Bankfull Statewide SIR2013 5155]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Bankfull Statistics Flow Report[Bankfull Statewide SIR2013 5155]

Statistic	Value	Unit
Bankfull Width	7.24	ft
Bankfull Depth	0.553	ft
Bankfull Area	3.94	ft^2
Bankfull Streamflow	6.28	ft^3/s

Bankfull Statistics Citations

Bent, G.C., and Waite, A.M.,2013, Equations for estimating bankfull channel geometry and discharge for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2013–5155, 62 p., (http://pubs.usgs.gov/sir/2013/5155/)

Peak-Flow Statistics Parameters[Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.23	square miles	0.16	512
ELEV	Mean Basin Elevation	249	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	4.61	percent	0	32.3

Peak-Flow Statistics Flow Report[Peak Statewide 2016 5156]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SEp
2 Year Peak Flood	12.9	ft^3/s	6.51	25.7	42.3
5 Year Peak Flood	22.1	ft^3/s	10.9	44.6	43.4
10 Year Peak Flood	29.5	ft^3/s	14.2	61.2	44.7
25 Year Peak Flood	40.4	ft^3/s	18.8	86.9	47.1
50 Year Peak Flood	49.6	ft^3/s	22.3	110	49.4
100 Year Peak Flood	59.4	ft^3/s	25.9	137	51.8
200 Year Peak Flood	70.2	ft^3/s	29.6	167	54.1
500 Year Peak Flood	85.9	ft^3/s	34.5	214	57.6

Peak-Flow Statistics Citations

Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016–5156, 99 p. (https://dx.doi.org/10.3133/sir20165156)

Application Version: 4.3.11