

# Wetland Resource Area Delineation Report



**TOWN OF WAYLAND**  
MASSACHUSETTS  
01778  
**CONSERVATION COMMISSION**

TOWN BUILDING  
41 COCHITUATE ROAD  
TELEPHONE: (508) 358-3669  
FAX: (508) 358-3046

November 24, 2015

Chris D'Antonio  
Chadwick Homes, LLC  
73 Pelham Island Road  
Wayland, MA 01778

RE: DEP File 322-845 – Order of Resource Area Delineation for 24 School Street, Wayland

Dear Mr. D'Antonio:

Enclosed is the Order of Resource Area Delineation for 24 School Street in Wayland. This decision was issued to define the wetlands pursuant to the Wetlands Protection Act, MGL Chap. 131, Sec. 40 and the Wayland Wetlands and Water Resources Protection Bylaw, Chapter 194.

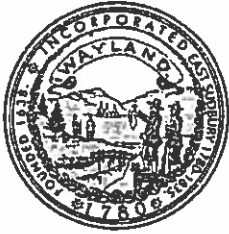
If you have any questions, please call the Conservation Office at (508) 358-3669.

Sincerely,

Brian J. Monahan  
Conservation Administrator

Enclosure

cc: DEP NERO w/enc.  
Building Department w/enc.  
Town Clerk w/enc.  
Creative Land & Water Engineering LLC w/enc.  
Linda Knowles w/enc.  
Town Assessor  
Board of Health  
Abutters  
File



**TOWN OF WAYLAND**  
MASSACHUSETTS  
01778  
**CONSERVATION COMMISSION**

TOWN BUILDING  
41 COCHITUATE ROAD  
TELEPHONE: (508) 358-3669

**Wayland's Wetlands and Water Resources Protection Bylaw**  
**CHAPTER 194 - Resource Area Determination**  
**24 School Street**  
November 24, 2015  
**Applicant: Chris D'Antonio, Chadwick Homes, LLC**  
**Owner: Linda Knowles**  
(Also DEP File 322-845)

**Project Description:** An application seeking the definition of certain areas subject to protection under the Wetlands Protection Act, M.G.L. c. 131, s. 40 and the Town of Wayland's Wetlands and Water Resources Protection Bylaw, Chapter 194 of the Code of the Town of Wayland ("Chapter 194") at 24 School Street, Wayland, MA, Assessor's Map 52, Parcel 189.

**Plan Reference/s:** Sheet 1 of 1, "Existing Conditions Site Plan #24 School Street in Wayland, Mass", Metrowest Engineering, Inc., Robert A. Gemma, P.E., P.L.S., May 18, 2015, Revision #2, 07/29/15 (Add top of bank) and #311/01/15 (Add elevation datum reference Revise WF #11, WF #12) There was no Revision #1 apparent on the plan.

**Procedural:** The Conservation Commission received the application for resource area delineation from Creative Land and Water Engineering on behalf of the applicant, Chris D'Antonio of Chadwick Homes, LLC. The public hearing was opened on July 15, 2015, continued several times and closed on November 4, 2015.

**CONSERVATION COMMISSION CONCLUSION:**

1. The wetland delineation on the plan referenced in this decision is accepted as an accurate depiction of wetland resources protected by Chapter 194 except as noted below.
2. The stream is presumed to be perennial as defined by Chapter 194.
3. The Applicant did not overcome the presumption that the stream is perennial along its entire length, i.e. it flows throughout the year as the result of surface water runoff and/or groundwater discharge.
4. Buffer zone to the vegetated wetlands has been defined on the plan.
5. There is buffer zone to bordering land subject to flooding and inundation which has not been defined on the plan.
6. Buffer zone is a resource area as defined by Chapter 194.
7. There is bank along the stream channels. The bank has been defined on the plan referenced in this decision.
8. The Applicant failed to provide sufficient evidence to show that the stream does not flow throughout the year.

**FINDINGS – Wayland's Wetlands and Water Resources Bylaw Chapter 194**

- a. Chapter 194 includes more resource areas than those defined by the Wetlands Protection Act and the Wetlands Regulations (310 CMR 10.00).
- b. Chapter 194 is intended to be more inclusive and definitive with respect to protected resource areas than the Wetlands Protection Act.
- c. Vegetated wetlands are a resource area.
- d. The delineation of wetlands is based upon plants and soils. Plants are difficult to assess between November and April of any year.
- e. Flooding has not been defined on the plan – the applicant's representative noted it would be defined should a project be proposed.
- f. Abutters suggested the area around the stream floods at times.
- g. Buffer zone is a resource area protected by Chapter 194.
- h. The Applicant submitted photographs at two locations of the stream channel on the five consecutive days in 2015 of August 17, 18, 19, 20 and 21.
- i. The Bylaw regulations require photographs that are 200 feet apart along the length of the stream. The photographs submitted did not meet that requirement.
- j. The Applicant submitted a report purporting to show average and actual rainfall in Wayland for May, June and July 2105, the three months prior to the August photographs.
- k. The average rainfall in Wayland was approximately 3.6 inches in May, 3.78 inches in June and 3.38 inches in July 2105.
- l. The actual rainfall in Wayland was approximately 1.27 inches in May, 5.16 inches in June and 1.81 inches in July 2105.
- m. The rainfall in Wayland was significantly below average in May and July 2015.
- n. The Applicant failed to provide the location of water withdrawal wells for potable or irrigation use within 0.5 miles of the property.
- o. The Applicant failed to identify any upstream impoundments or ponds with control structures.

*This decision is not valid without a signature sheet.*  
*The page numbering does not include the signature sheet.*  
**This Resource Area Determination expires on November 24, 2018**



**TOWN OF WAYLAND**  
MASSACHUSETTS  
01778  
**CONSERVATION COMMISSION**

TOWN BUILDING  
41 COCHITUATE ROAD  
TELEPHONE: (508) 358-3669  
FAX: (508) 358-3606

**CHAPTER 194**  
**WETLANDS AND WATER RESOURCES PROTECTION BYLAW**

Resource Area Determination  
Signature Sheet

24 School Street – DEP File 322-845

Wayland Conservation Commission

*[Signature]*  
*Barbara Howell* *Betty Salberg*  
*RH Beckman*

Date issued: November 24, 2015

This Permit is issued to the applicant as follows: ☐ by hand delivery on \_\_\_\_\_  
☒ by certified mail on November 24, 2015



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**WPA Form 4B – Order of Resource Area  
Delineation**

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

Provided by MassDEP:

322-845

MassDEP File Number

eDEP Transaction Number

Wayland

City/Town

**A. General Information**

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



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

From: Wayland  
1. Conservation Commission

2. This Issuance is for (check one):

- a. ☒ Order of Resource Area Delineation  
b. ☐ Amended Order of Resource Area Delineation

3. Applicant:

Chris D'Antonio  
a. First Name b. Last Name  
Chadwick Homes, LLC  
c. Organization  
73 Pelham Island Road  
d. Mailing Address  
Wayland MA 01778  
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):

Linda Knowles  
a. First Name b. Last Name  
  
c. Organization  
24 School Street  
d. Mailing Address  
Wayland MA 01778  
e. City/Town f. State g. Zip Code

5. Project Location:

24 School Street Wayland 01778  
a. Street Address b. City/Town c. Zip Code  
52 189  
d. Assessors Map/Plat Number e. Parcel/Lot Number  
Latitude and Longitude 42°19'21" 71°21'22"  
(in degrees, minutes, seconds): d m s d m s  
6. Dates: June 29, 2015 November 4, 2015 November 24, 2015  
a. Date ANRAD filed b. Date Public Hearing Closed c. Date of Issuance

7. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

a. Title b. Date  
c. Title d. Date



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**WPA Form 4B – Order of Resource Area  
Delineation**

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**B. Order of Delineation**

1. The Conservation Commission has determined the following (check whichever is applicable):

- a. ☒ **Accurate:** The boundaries described on the referenced plan(s) above and in the Abbreviated Notice of Resource Area Delineation are accurately drawn for the following resource area(s):

1. ☒ Bordering Vegetated Wetlands
2. ☐ Other resource area(s), specifically:

a. \_\_\_\_\_

- b. ☐ **Modified:** The boundaries described on the plan(s) referenced above, as modified by the Conservation Commission from the plans contained in the Abbreviated Notice of Resource Area Delineation, are accurately drawn from the following resource area(s):

1. ☐ Bordering Vegetated Wetlands
2. ☐ Other resource area(s), specifically:

a. \_\_\_\_\_

- c. ☐ **Inaccurate:** The boundaries described on the referenced plan(s) and in the Abbreviated Notice of Resource Area Delineation were found to be inaccurate and cannot be confirmed for the following resource area(s):

1. ☐ Bordering Vegetated Wetlands
2. ☒ Other resource area(s), specifically:

Bordering land subject to flooding not defined

3. ☐ The boundaries were determined to be inaccurate because:



**Massachusetts Department of Environmental Protection**  
**Bureau of Resource Protection - Wetlands**

**WPA Form 4B – Order of Resource Area  
Delineation**

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

Provided by MassDEP:

322-845

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Wayland

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**C. Findings**

This Order of Resource Area Delineation determines that the boundaries of those resource areas noted above, have been delineated and approved by the Commission and are binding as to all decisions rendered pursuant to the Massachusetts Wetlands Protection Act (M.G.L. c.131, § 40) and its regulations (310 CMR 10.00). This Order does not, however, determine the boundaries of any resource area or Buffer Zone to any resource area not specifically noted above, regardless of whether such boundaries are contained on the plans attached to this Order or to the Abbreviated Notice of Resource Area Delineation.

This Order must be signed by a majority of the Conservation Commission. The Order must be sent by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>).

**D. Appeals**

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate DEP Regional Office to issue a Superseding Order of Resource Area Delineation. When requested to issue a Superseding Order of Resource Area Delineation, the Department's review is limited to the objections to the resource area delineation(s) stated in the appeal request. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order of Resource Area Delineation will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order or Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act, (M.G.L. c. 131, § 40) and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal bylaw or ordinance, and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.





Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**WPA Form 4B – Order of Resource Area  
Delineation**

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

Provided by MassDEP:

322-845

MassDEP File Number

eDEP Transaction Number

Wayland

City/Town

**E. Signatures**

11/24/15  
Date of Issuance

Please indicate the number of members who will sign this form.

6  
1. Number of Signers

*Sherre Greenbaum*  
Signature of Conservation Commission Member

*Betty Sakberg*  
Signature of Conservation Commission Member

*Pat Backman*  
Signature of Conservation Commission Member

*[Signature]*  
Signature of Conservation Commission Member

*Sam B. Bann*  
Signature of Conservation Commission Member

*[Signature]*  
Signature of Conservation Commission Member

*Barbara Hull*  
Signature of Conservation Commission Member

This Order is valid for three years from the date of issuance.

If this Order constitutes an Amended Order of Resource Area Delineation, this Order does not extend the issuance date of the original Final Order, which expires on \_\_\_\_\_ unless extended in writing by the issuing authority.

This Order is issued to the applicant and the property owner (if different) as follows:

2. ☐ By hand delivery on

a. Date

3. ☒ By certified mail, return receipt requested on

a. Date

*November 24, 2015*

***"Attachment A"***  
**ORDER OF RESOURCE AREA DELINEATION**  
**MGL Chap 131, Sec 40**  
**DEP # 322-845**  
**APPLICANT: Chris D'Antonio, Chadwick Homes, LLC**  
**OWNER: Linda Knowles**  
**PROJECT LOCATION: 24 School Street, Wayland MA**  
**Map 52, Parcel 189**  
**November 24, 2015**

**Plan Reference:** Sheet 1 of 1, "Existing Conditions Site Plan #24 School Street in Wayland, Mass", Metrowest Engineering, Inc., Robert A. Gemma, P.E., P.L.S., May 18, 2015, Revision #2, 07/29/15 (Add top of bank) and #311/01/15 (Add elevation datum reference Revise WF #11 , WF #12) There was no Revision #1 apparent on the plan.

**CONSERVATION COMMISSION CONCLUSION:**

1. The stream, as defined by the Wetlands Regulations under Chapter 131, Section 40 would be considered intermittent.
2. There are bordering vegetated wetlands along the stream channel and the eastern side of the bvz has been accepted as shown on the most recently amended plan.
3. There is bordering land subject to flooding along the stream. It has not been defined on the plan.

**FINDINGS- MGL Chapter 131, Section 40:**

- a. This decision is intended to define only bordering vegetated wetlands and is not for any work on any of the parcels identified in this decision.
- b. P. Fletcher reviewed the soils associated with wetlands flagging on October 13, 2015 and submitted a report looking at hydric soils.
- c. Based upon the criteria in 310 CMR 10.58 the stream is considered intermittent.
- d. The Commission asked for calculations to determine the extent of bordering land subject to flooding and were told it would be calculated when any development for 24 School Street was proposed.
- e. At least one abutter reported the area along the stream floods.
- f. There is bordering land subject to flooding along the stream which has not been calculated.



## CREATIVE LAND & WATER ENGINEERING, LLC

Environmental Science and Engineering

Mailing address

P.O. Box 584

Southborough, MA 01772

Technical Office

303 Worcester Road

Framingham, MA 01701

508-281-4370 (Office)

774-454-0266 (cell)

508-281-4370 (Fax)

desheng@Creative-land-water-eng.com

WWW.CREATIVE-LAND-WATER-ENG.COM

Effective, Affordable, and Sustainable Solutions for Land & Water Environment

June 18, 2015

### WETLAND BORDER REPORT

24 School Street, Wayland, MA

On December 15, 2014 and June 18, 2015, Desheng Wang, Ph.D., flagged the wetland resource areas on the of 24 School Street in Wayland, MA. The area has existing houses, lawn and landscape, and some wooded area around the north and northwest area. The area drains to west and southwest to a stream marked as intermittent in the USGS map. Dominant soil is Hinckley loamy sand (HG A soil) and Narragansett silt loam (HG B soil) in the upland, Swansea muck (HG B soil) in the wetland. Please see Figure 1 for a site locus and Figure 2 for the soil map.

The wetland border was flagged using vegetation, soils, and hydrology according to the criteria in the most recent edition of 310 CMR 10.00 *et al* and MA BVW Delineation Handbook. The resources were demarcated with blue flags. One set of flags were hung: WF-1 to WF-12 to mark the edge of BVW around the western property area.

A general plant list was created while working on the site. In addition, wetland flag WF-4 was documented to show vegetation and soil conditions. Vegetation, soil, and other evidence of hydrology at this location support the wetland line which represents the overall site conditions. The DEP Field Delineation Forms are attached.

	<i>Upgradient</i>	<i>Downgradient</i>
<b><u>Tree Layer</u></b>	White pine Norway Maple East Hemlock Honey Locust White Ash Japanese Crimson Maple	Red maple Ash leaf Maple
<b><u>Shrub layer</u></b>	Norway Maple Ash leaf Maple European Buckthorn Black Locust Multiflora Rose Common Buckthorn Yew Oriental Bittersweet Pin Cherry Burning Bush	Silky Dogwood European Buckthorn Multiflora Rose

*Upgradient*

*Downgradient*

**Herb Layer**

Burdock  
Poke Weed  
Celandine  
Garlic Mustard  
Partridge Berry  
Evergreen Ivy  
Pachysandra  
Ground Ivy  
Hay scented Fern

Jewelweed  
Tussock Sedge  
Sensitive Fern  
Sphagnum Fern  
Rough Golden Rod

According to the Massachusetts Natural Heritage Atlas in the latest MassGIS, this site is not located within an estimated habitat of rare wildlife. No certified vernal pools or potential vernal pools were marked on the property on the NHESP Atlas.

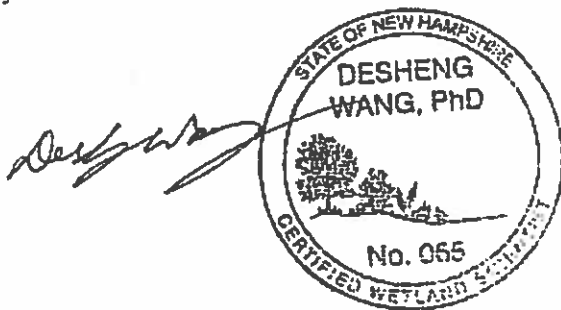
**River Status**

There is one stream shown as an intermittent stream on USGS map flowing north to south, which joins Snake Brook. In accordance with 310 CMR 10.58 (2) (a) 1 a, no river front will apply to this property.

All work proposed within 100 feet of bordering vegetated wetlands or 200 ft river front area requires the filing of a Notice of Intent under both the State Wetlands Protection Act and the Town Wetlands Protection Bylaw and a permit from the Wayland Conservation Commission. For assistance with filing or if there are any questions concerning the resource borders, please do not hesitate to contact us.

Sincerely,

Creative Land & Water Engineering, LLC  
by



Desheng Wang, Ph.D., P.E.  
Certified Wetland Scientist

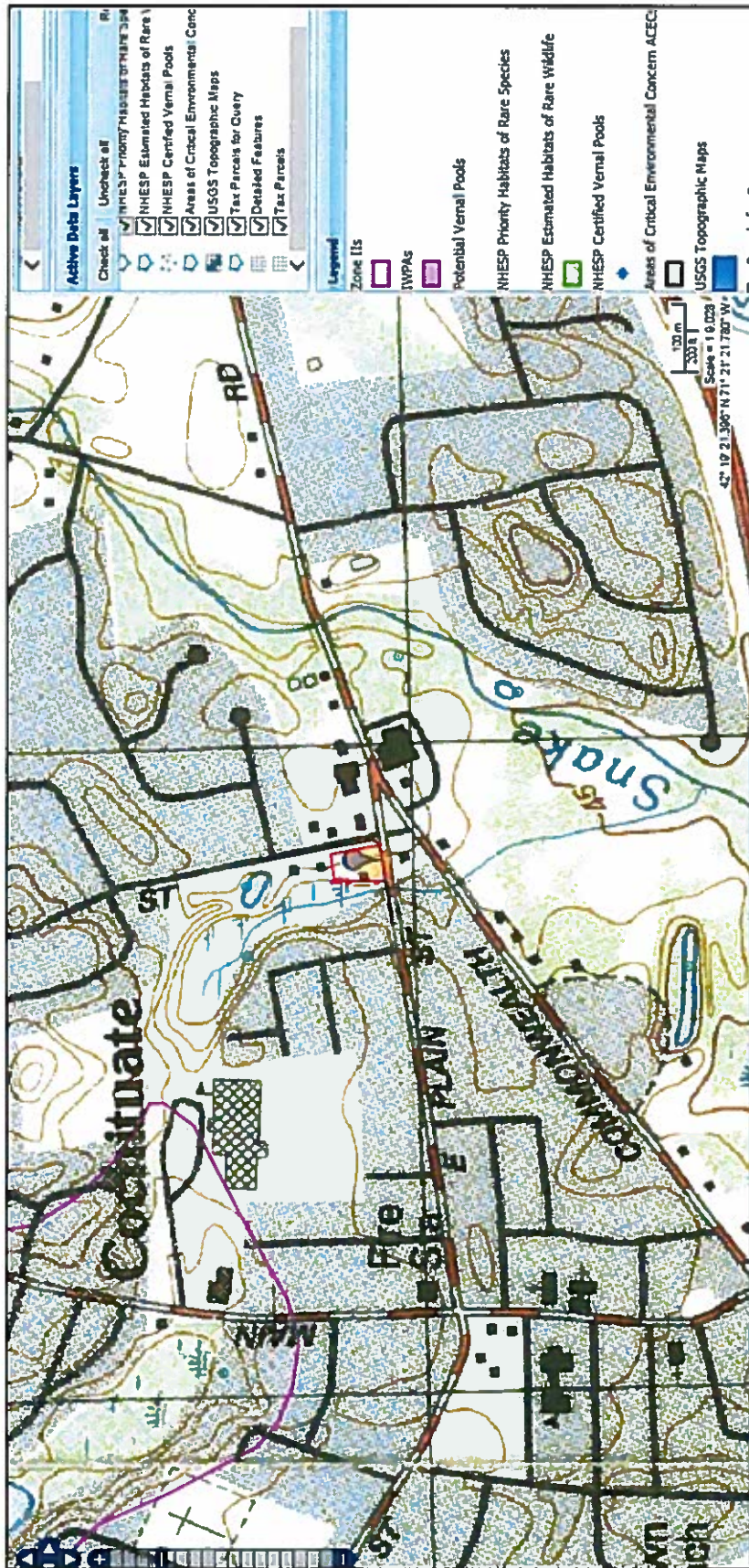


Figure 1. USGS Site Locus & Resources Map  
24 School Street  
Wayland, MA

By: Desheng Wang, Ph.D., P.E.  
Creative Land & Water Engineering, LLC  
P.O. Box 584  
Southborough, MA 01772  
508-281-4370





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

DEP File #:

Project location: 24 School Street, Wayland

Applicant: Chris D'Antonio

Prepared by: CLAVE

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		Transect Number: Upgradient		Date of Delineation: 15-Dec-14	
Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
<u>Tree Layer</u> black locust	<i>Robinia pseudacacia</i>	15%	100.0%	yes	FACU-
<u>Savilng Layer</u> black locust	<i>Robinia pseudacacia</i>	10%	100.0%	yes	FACU-
<u>Shrub Layer</u> burning bush multiflora rose	<i>Euconymus atropurpureus</i> <i>Rosa multiflora</i>	10% 25%	28.6% 71.4%	yes yes	FACU FACU
<u>Climbing Woody Vine</u> oriental bittersweet	<i>Celastrus orbiculata</i>	15%	100.0%	yes	FACU
<u>Ground Cover</u> partridge berry celandine jewelweed garlic mustard	<i>Mitchella repens</i> <i>Chelidonium majus</i> <i>Impatiens capensis</i> <i>Alliaria petiolata</i>	5% 5% 25% 10%	11.1% 11.1% 55.6% 22.2%	no no yes yes	FACU NI FACW* FACU-

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

Morphological Adaptations: 0

\* 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, FAC+, FACW, FACW+, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 1

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 presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

MA DEP: 3/93

## Section II. Indicators of Hydrology

### Hydric Soil Interpretation

#### 1. Soil Survey

Is there a published soil survey for this site?

☒ yes ☐ no

title/date: Interim Soil Survey of Middlesex County - 1991 (Maps - 1989) ▼ - 1989)

map number: Web Soil Survey, Version 12, March 21, 2013

soil type mapped: Hincley sandy loam

hydric soil inclusions: none

Are field observations consistent with soil survey?

☐ yes ☒ no

Remarks:

#### 2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
O	0-2		leave matt
Ap	2-23	10 YR 2/1	sandy loam, no mottles

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 rhizospheres: \_\_\_\_\_
- ☐ Water-stained leaves: \_\_\_\_\_
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

### Vegetation and Hydrology Conclusion for Upgradient of WF-4

	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

DEP File #:

Applicant: Chris D'Astous

Prepared by: CLAWZ

Project location: 24 School Street, Wayland

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: WP-4	Transect Number: Downgradient		Date of Delineation: 15-Dec-14
Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
<u>Tree Layer</u>					
ash leaf maple	<i>Acer negundo</i>	20%	100.0%	yes	FAC**
<u>Seedling Layer</u>					
none					
<u>Shrub Layer</u>					
none					
<u>Climbing Woody Vine</u>					
oriental bittersweet	<i>Celastrus orbiculata</i>	10%	100.0%	yes	FACU
<u>Ground Cover</u>					
jerusalem	<i>Impatiens capensis</i>	40%	88.9%	yes	FACW*
pertridge berry	<i>Mitchella repens</i>	5%	11.1%	no	FACU

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

Morphological Adaptations: 0

\* 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, FAC\*, FACW, FACW\*, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 2

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

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

MA DEP: 393

## Section II. Indicators of Hydrology

### Hydric Soil Interpretation

#### 1. Soil Survey

Is there a published soil survey for this site? ☒ yes ☐ no  
 title/date: Interim Soil Survey of Middlesex County - 1991 (Maps - 1989)  
 map number: Web Soil Survey, Version 12, March 21, 2013  
 soil type mapped: Swansea Muck  
 hydric soil inclusions: none

Are field observations consistent with soil survey? ☒ yes ☐ no  
 Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

#### 2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
O	0-2		leave matt
Ap	2-16	10 YR 2/1	sandy loam
C	16-18	10 Y 7/2	medium loamy sand

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: 14 inches
- ☐ Depth to soil saturation in observation hole: \_\_\_\_\_
- ☐ Water marks: \_\_\_\_\_
- ☐ Drift Lines: \_\_\_\_\_
- ☐ Sediment deposits: \_\_\_\_\_
- ☐ Drainage patterns in BVW: \_\_\_\_\_
- ☐ Oxidized rhizospheres: \_\_\_\_\_
- ☐ Water-stained leaves: \_\_\_\_\_
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

### Vegetation and Hydrology Conclusion for Downgradient of WF-4

	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