



Enter your transmittal number

X287000

Transmittal Number

Your unique Transmittal Number can be accessed online:

<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html>

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: MassDEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application.
Copy 2 must accompany your fee payment.
Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

WPA Form 3

1. Permit Code: 4 to 7 character code from permit instructions

Removal of one 20,000 gallon Underground Storage Tank (UST) and associated piping, a portion of which is located in a 100' buffer zone.

Notice of Intent

2. Name of Permit Category

B. Applicant Information – Firm or Individual

Massachusetts Division of Capital Asset Management

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

Susan

Ruch

2. Last Name of Individual

3. First Name of Individual

4. MI

One Ashburton Place

5. Street Address

Boston

MA

02108

617-727-4050

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Susan Ruch

Susan.Ruch2@mass.gov

11. Contact Person

12. e-mail address

C. Facility, Site or Individual Requiring Approval

1. Name of Facility, Site Or Individual

2. Street Address

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

Watermark Environmental, Inc.

1. Name of Firm Or Individual

175 Cabot Street

2. Address

Lowell

MA

01854

978-452-9696

213

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

Olaf Westphalen

9982

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOE file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

Special Provisions:

1. ☒ **Fee Exempt** (city, town or municipal housing authority)(state agency if fee is \$100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ **Hardship Request** - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ **Alternative Schedule Project** (according to 310 CMR 4.05 and 4.10).
4. ☐ **Homeowner** (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Check Number

Dollar Amount

Date

November 10, 2020

Lancaster Conservation Commission
Prescott Building
701 Main Street, Suite 4 – Lower Level
Lancaster, Massachusetts 01523


Subject: **Notice of Intent Filing**
Underground Storage Tank Removal Project
220 Old Common Road, Lancaster, Massachusetts

Dear Members of the Commission:

On behalf of the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM), Watermark Environmental, Inc. (Watermark) has enclosed two (2) copies of the Notice of Intent submittal (including a full-size plan map) to fulfil the requirements of the Massachusetts Wetlands Protection Act, M.G.L. Chapter 131, Section 40 submittal requirements, and the Town of Lancaster submittal requirements. This submittal is a formal Notice of Intent for the Underground Storage Tank Removal Project. We are also sending five (5) 11"x17" copies of the plan map.

If you have any questions or require additional information, please contact me at (978) 452-9696.

Sincerely,
WATERMARK



Olaf Westphalen, PG, LSP
Project Manager

Attachments:

Attachment 1 – NOI Application (WPA Form 3)
Attachment 2 – Project Description
Attachment 3 – Project Drawings
Attachment 4 – Wetland Delineation Report
Attachment 5 – Abutters Lists
Attachment 6 – Photographs

cc: Massachusetts Department of Environmental Protection (MassDEP)
Joe Spangenberger, PE, Watermark
File 17402-03/WLC3721

ATTACHMENT 1
NOI Application (WPA Form 3)



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

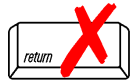
MassDEP File Number

Document Transaction Number

City/Town

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.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

220 Old Common Road

a. Street Address

Lancaster

b. City/Town

01523

c. Zip Code

Latitude and Longitude:

42.4447

d. Latitude

-71.65806

e. Longitude

Map 39

f. Assessors Map/Plat Number

Lot 4

g. Parcel /Lot Number

2. Applicant:

Susan

a. First Name

Ruch

b. Last Name

Massachusetts Division of Capital Asset Management and Maintenance (DCAMM)

c. Organization

One Ashburton Place

d. Street Address

Boston

e. City/Town

MA

f. State

02108

g. Zip Code

617-727-4050

h. Phone Number

i. Fax Number

Susan.Ruch2@mass.gov

j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Olaf

a. First Name

Westphalen

b. Last Name

Watermark Environmental, Inc. (Watermark)

c. Company

175 Cabot Street

d. Street Address

Lowell

e.

MA

f. State

01854

g. Zip Code

978-452-9696

h. Phone Number

978-453-9988

i. Fax Number

olaf.westphalen@watermarkenv.com

j. Email address

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

NA

a. Total Fee Paid

NA

b. State Fee Paid

0

c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

A. General Information (continued)

6. General Project Description:

Removal of one 20,000 gallon Underground Storage Tank (UST) and associated piping, a portion of which is located in a 100' buffer zone. Will also remove up to 500 cubic yards of petroleum-impacted soil

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input checked="" type="checkbox"/> Other | |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Worcester

a. County

549/639/1048

c. Book

b. Certificate # (if registered land)

192,193,194/254,255,256/570,571

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- ☒ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

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City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	2,715 1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

- ☐ 25 ft. - Designated Densely Developed Areas only
- ☐ 100 ft. - New agricultural projects only
- ☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

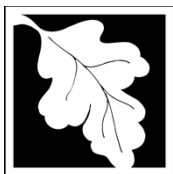
a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☒ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☒ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet _____ 2. cubic yards dredged _____	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet _____	2. cubic yards beach nourishment _____
e. <input type="checkbox"/> Coastal Dunes	1. square feet _____	2. cubic yards dune nourishment _____
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	1. linear feet _____	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet _____	
h. <input type="checkbox"/> Salt Marshes	1. square feet _____	2. sq ft restoration, rehab., creation _____
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet _____	
	2. cubic yards dredged _____	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet _____	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	1. cubic yards dredged _____	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	1. square feet _____	

4. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW _____

b. square feet of Salt Marsh _____

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings _____

b. number of replacement stream crossings _____



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

C. Other Applicable Standards and Requirements

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

- a. ☐ Yes ☒ No **If yes, include proof of mailing or hand delivery of NOI to:**

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

2020

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review*

1. ☐ Percentage/acreage of property to be altered:

(a) within wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

2. ☐ Assessor's Map or right-of-way plan of site

2. ☒ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

(a) ☒ Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) ☒ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

C. Other Applicable Standards and Requirements (cont'd)

- (c) ☐ MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) ☐ Vegetation cover type map of site
- (e) ☐ Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

- a. ☒ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

- c. ☐ Is this an aquaculture project? d. ☐ Yes ☐ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



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Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

C. Other Applicable Standards and Requirements (cont'd)

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
a. ☐ Yes ☒ No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
a. ☐ Yes ☒ No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
2. ☒ A portion of the site constitutes redevelopment
3. ☐ Proprietary BMPs are included in the Stormwater Management System.
b. ☐ No. Check why the project is exempt:
1. ☐ Single-family house
2. ☐ Emergency road repair
3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

See Attachment 2 - Project Description

D. Additional Information

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). 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. ☒ 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.)
2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

D. Additional Information (cont'd)

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Plan Map - Figure 2

a. Plan Title

Watermark

Joseph Spangenberg, PE

b. Prepared By

c. Signed and Stamped by

November 10, 2020

1" = 40 feet

d. Final Revision Date

e. Scale

November 10, 2020

f. Additional Plan or Document Title

g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. ☒ Attach NOI Wetland Fee Transmittal Form
9. ☐ Attach Stormwater Report, if needed.

E. Fees

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 pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

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 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent 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 by Certificate of Mailing or 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.

Susan Ruch, DCAMM

November 10, 2020

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

Olaf Westphalen, Watermark

November 10, 2020

5. Signature of Representative (if any)

6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

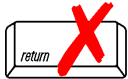
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
NOI 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.



To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

A. Applicant Information

1. Location of Project:

220 Old Common Road

a. Street Address

N/A

c. Check number

Lancaster

b. City/Town

NA

d. Fee amount

2. Applicant Mailing Address:

Susan

a. First Name

Ruch

b. Last Name

Massachusetts Division of Capital Asset Management

c. Organization

One Ashburton Place

d. Mailing Address

Boston

e. City/Town

MA

f. State

02108

g. Zip Code

617-727-4060

h. Phone Number

i. Fax Number

Susan.Ruch2@mass.gov

j. Email Address

3. Property Owner (if different):

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

B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Step 5/Total Project Fee:			0

Step 6/Fee Payments:

Total Project Fee:	0
	a. Total Fee from Step 5
State share of filing Fee:	0
	b. 1/2 Total Fee less \$12.50
City/Town share of filling Fee:	0
	c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

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

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

ATTACHMENT 2
Project Description

Notice of Intent – Attachment 2
Proposed Project Description
220 Old Common Road, Lancaster, MA

Background

The site is located in the northern portion of the Massachusetts Division of Capital Asset Management (DCAMM), Lancaster Surplus Property located at 220 Old Common Road in Lancaster, Massachusetts, near the Heating Plant building, and south of abutting Route 110. The Lancaster Surplus Property is 80 acres in size. The site is 0.4 acres in size and includes a small gravel parking area on the north side of the Heating Plant building and adjacent wetlands and wooded area. The site is abutted by wetlands and Route 110/Lower Bolton Road (north), undeveloped land (east), Heating Plant building (south), and an access road and field (west). A site locus map is included as Figure 1 (Attachment 3).

The parking area located just north of the Heating Plant building has a 20,000-gallon double-walled, fiberglass reinforced UST formerly used for the storage of No. 4 fuel oil. The UST is covered by a concrete pad and underground piping connects the UST to the Heating Plant where steam was formerly generated and transmitted to the Lancaster Surplus Property. The release was initially discovered in July 2009 during UST tank tightness testing and was determined to be associated with leaking fuel supply and return lines. MassDEP was notified of the release on July 21, 2009, resulting in RTN 2-17596. The fuel lines were removed and replaced in September 2009. The UST remained in service until the Spring of 2018. DCAMM intends to remove this UST in the Winter/Spring 2021.

In August 2018, a wetland delineation survey was completed at the Lancaster Surplus Property by the ESS Group, Inc. of Waltham, MA. The survey was completed in accordance with the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (USACE, 1989) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0) (USACE, 2012). Based on the results of the survey, several wetlands were identified and delineated, including one wetland to the north of the Heating Plant; this wetland was identified as “Wetland 2”. The wetland is described as an emergent/scrub-shrub wetland complex with surface saturation observed. This wetland is classified as a Bordering Vegetated Wetland (BVW). According to the Town of Lancaster Wetlands Protection Bylaw (§215-2(A)) the wetland is subject to a 25 foot no build or alteration zone. This wetland and work area is depicted on Figure 2 (Plan Map). The extent of work described in this Notice of Intent (NOI) will be limited to the 100 foot buffer zone and will not encroach onto the 25 foot no build or alteration zone.

Topography at the site slopes downward from south to north, with a steep rise to the south of the Heating Plant building, and then a steep drop off from the paved parking area near the Heating Plant building to the north into the undeveloped land and wetlands. The approximate groundwater flow direction has been determined to be toward the north, consistent with topography.

Site Regulatory History

After initial site reporting in 2009, various Massachusetts Contingency Plan (MCP) response actions have been performed at the site including the installation of approximately twenty-three monitoring wells and four recovery wells. A wetland delineation was conducted at the Lancaster DCAMM property in October 2018. The results of this delineation were incorporated into Figure 2, which shows that a delineated wetland is located approximately 50 to 60 feet to the northeast of the tank. A copy of the wetlands delineation survey is included in Attachment 4. To date, additional remedial activities have included light non-aqueous phase liquid (LNAPL) removal and long-term monitoring in accordance with the MCP.

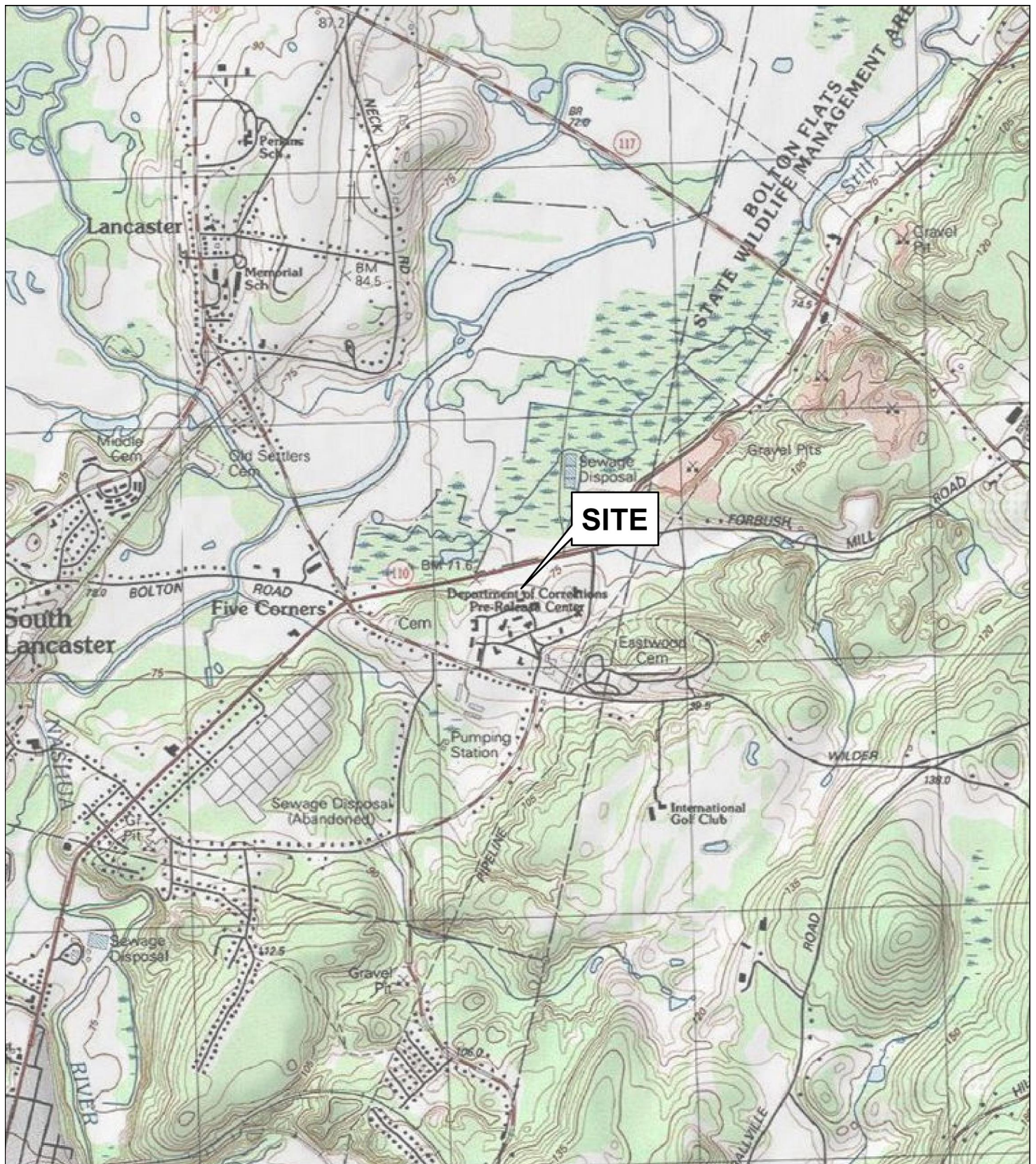
Scope of Work

The scope of work for this project is to remove one 20,000-gallon double-walled, fiberglass UST formerly used to store No. 4 fuel oil that is located within the 100 foot buffer zone at the site. In addition, up to 500 cubic yards of petroleum-impacted soil will be removed. No work will take place in the bordering vegetated wetland. Activities associated with this UST removal project include planning, permitting, site preparation, UST removal and site restoration. UST removal activities will be overseen by a Licensed Site Professional (LSP).

Planning activities in addition to the NOI include the preparation of bid specifications, selection of a contractor, and preparation of a RAM Plan. After the contract has been awarded, the RAM Plan will be submitted to MassDEP. A stormwater report is not needed (see Question C.7. in the NOI) because this project will remove impervious area (a concrete pad will be removed), which will ultimately improve infiltration at the Site, and because it will not change stormwater runoff patterns. Stormwater management best management practices will be incorporated during execution of the project including deployment of erosion and sediment control measures (silt fencing, straw wattles, and/or mulch tubes) along the northern edge of the work area, and along the slope that leads to the wetland (see Figure 2). In addition, two nearby catch basins will be protected from siltation. Stockpile areas for soil and concrete will be identified in existing and nearby parking areas. Erosion and sediment control measures will also be staged along the perimeter of the stockpile areas. In addition, it is anticipated that five to seven trees that are located north of the tank will need to be removed in order to safely remove the tank. The number of trees to be removed will be minimized (see Figure 2 and Photographs).

Prior to the UST removal project activities, the contents of the UST (No. 4 fuel oil and sludge) will be removed. The UST and associated piping will be uncovered using an excavator, and the UST will be entered and cleaned. Piping and the UST will then be removed, and soil beneath the piping and UST will be periodically screened for contamination using visual/olfactory methods and with a photoionization detector (PID). Select post-excavation confirmatory soil samples will be collected for laboratory analyses. It is estimated that up to 500 cubic yards of petroleum-impacted soil may be excavated and temporarily stockpiled prior to shipment to an authorized disposal facility. Petroleum-impacted soil will be temporarily stockpiled outside of the 100-foot buffer zone on and securely covered by 6 mil polyethylene sheeting to prevent runoff. In the event that groundwater or rainwater enters the excavation, it will be removed (pumped) to one or more temporary fractionation tank(s) for off-site disposition. After excavation activities are completed, excavations will be backfilled and compacted with clean, imported fill. The UST, associated piping, petroleum-impacted soil, and pumped groundwater/rainwater will be transported to appropriate approved off-site waste disposal facilities. After all remediation waste has been transported off-site, a RAM Completion Report will be submitted to MassDEP. Seeding activities (as needed outside of the parking area) will be completed after tank removal is complete; parking areas will be topped with gravel. Erosion control measures will be removed from the site after the site has stabilized, and the erosion control measures are no longer needed. A Certificate of Compliance will be sought after removal of the environmental controls and completion of a follow-up visit by the Lancaster Conservation Commission agent.

ATTACHMENT 3
Project Drawings



Drawn: CM

Approved: OW

Project #: 17402-03

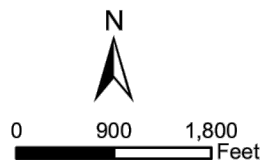
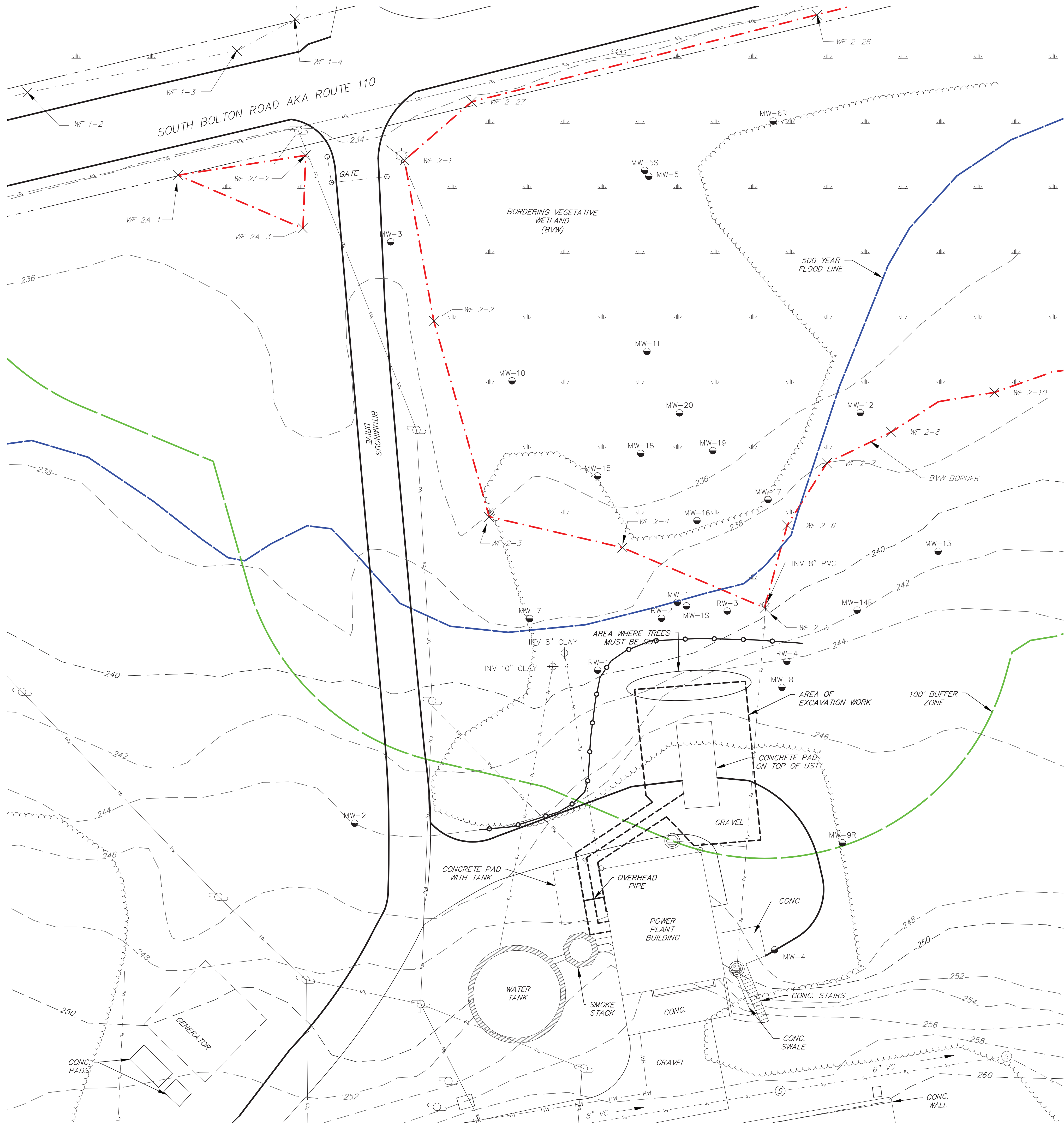


FIGURE 1

SITE LOCUS

DCAMM LANCASTER
SURPLUS FACILITY
220 OLD COMMON ROAD
LANCASTER, MASSACHUSETTS
RTN 2-17596

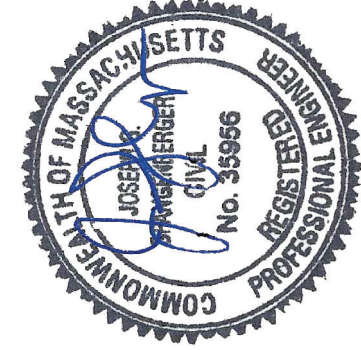


LEGEND

	PROPERTY LINE
	CONTOUR
	500 YEAR FLOOD LINE
	100' BUFFER ZONE
	WETLAND
	OVERHEAD ELECTRIC LINE
	DRAIN LINE
	SEWER LINE
	STEAM LINE
	UNDERGROUND ELECTRIC LINE
	TREE LINE
	EROSION AND SEDIMENT CONTROL MEASURES
	UTILITY POLE
	LIGHT POST
	SEWER MANHOLE
	MONITORING WELL
	DISCHARGE PIPE
	WETLAND FLAG
	STORM WATER WELL

NOTES:

- SURVEY BASE MAP TAKEN FROM DRAWING FILE TITLED LANCASTER BASE SURVEY. PREPARED BY DESIGN PROFESSIONALS, DATED NOVEMBER 2018.
- CONTOURS TAKEN FROM DRAWING FILE TITLED TOPOGRAPHIC & UTILITY MAP, LAND OWNED BY THE COMMONWEALTH OF MASSACHUSETTS IN LANCASTER AND BOLTON, MASSACHUSETTS, DATE OF PHOTOGRAPHY: DECEMBER 24, 1993. PREPARED BY BOULEY BROTHERS INC.
- WETLAND INFORMATION TAKEN FROM WETLAND DELINEATION REPORT, ASSESSOR'S MAP 39, LOTS 1 AND 4 LANCASTER, MASSACHUSETTS, ASSESSOR'S MAP 5A, LOT 8 BOLTON, MASSACHUSETTS. PREPARED BY ESS GROUP, DATED OCTOBER 19, 2018.
- UPDATED WELL LOCATIONS TAKEN FROM SURVEY DRAWING TITLED BORING LOCATION SURVEY, DCAMM LANCASTER SURPLUS PROPERTY. PREPARED BY GREEN INTERNATIONAL AFFILIATES, DATED OCTOBER 21, 2020.
- WORK AREA IN 100' BUFFER ZONE = 2,715 SQ. FT.



UNDERGROUND STORAGE TANK
REMOVAL PROJECT
220 OLD COMMON ROAD
LANCASTER, MA

MARK	DATE	DESCRIPTION

PROJECT NO: 17402-03
MODEL FILE: DCAMM Lancaster-Figure 2.dwg
DRAWN BY: CAM
CHKD BY: DW
COPYRIGHT WATERMARK 2019

SHEET TITLE

PLAN MAP

NOTICE OF
INTENT

FIGURE 2

ATTACHMENT 4
Wetland Delineation Report



Wetland Delineation Report

Assessor's Map 39, Lots 1 and 4
Lancaster, Massachusetts

Assessor's Map 5A, Lot 8
Bolton, Massachusetts

PREPARED FOR:

Design Professionals, Inc.
P.O. Box 1167
21 Jeffrey Drive
South Windsor, Connecticut 06074

PREPARED BY:

ESS Group, Inc.
10 Hemingway Drive, 2nd Floor
East Providence, Rhode Island 02915

ESS Project No. D192-000

October 19, 2018



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2.0 DELINEATION METHODOLOGY.....	2
3.0 DELINEATION RESULTS.....	2
4.0 REFERENCES.....	6

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Table 1	Summary of Wetland Delineation Results at the Project Site
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APPENDICES

Appendix A	Wetland Delineation Data Forms
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1.0 INTRODUCTION

ESS Group, Inc. (ESS) was contracted by Design Professionals, Inc. (DPI) in August 2018 to delineate jurisdictional wetland resource areas at three parcels under the ownership of the Commonwealth of Massachusetts: Assessor's Map 39, Lots 1 (in part) and 4 in Lancaster, Massachusetts and Assessor's Map 5A, Lot 8 in Bolton, Massachusetts (hereafter referred to collectively as "the project site"). The delineation included a portion of Assessor's Map 39, Lot 1 and all of Assessor's Map 39, Lot 4 and Assessor's Map 5A, Lot 8, for a total area of approximately 105 acres. The wetland delineation at the project site was conducted on August 28, 2018.

Nearly the entire project site is located in the North Nashua River to Catacoonamug Brook watershed (hydrologic unit code [HUC] 010700040204), part of the larger Nashua River watershed (HUC 01070004). The southern-most portion of Assessor's Map 39, Lot 4 is located in the Headwaters to North Nashua River watershed (HUC 010700040203).

Natural Resource Conservation Service (NRCS) soil data for the project site indicates that multiple soil map units are present at the project site. A soil map unit is a grouping of soils by their natural landscape and soil patterns. Each map unit is designated as all hydric, partially hydric, not hydric, or unknown hydric, depending on the rating of its respective components. Hydric soils are defined by the National Technical Committee for Hydric Soils as soils that are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil horizon. Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. Therefore, hydric soils are typically found within wetlands. The primary soil map units present at the project site are described below.

Merrimac fine sandy loam, 3 to 8 percent slopes (254B). This somewhat excessively drained sandy loam is typically found in outwash plains, outwash terraces, and moraines. Depth to water table is more than 80 inches. This soil map unit does not meet the hydric criteria.

Sudbury fine sandy loam, 0 to 3 percent slopes (260A). This moderately well-drained sandy loam is typically found in depressions. Depth to water table is approximately 18 to 36 inches. This soil map unit does not meet the hydric criteria.

Sudbury fine sandy loam, 3 to 8 percent slopes (260B). This moderately well-drained sandy loam is typically found in depressions. Depth to water table is approximately 18 to 36 inches. This soil map unit does not meet the hydric criteria.

Walpole sandy loam, 0 to 3 percent slopes (31A). This poorly-drained sandy loam is typically found in outwash plains, outwash terraces, deltas, and depressions. Depth to water table is approximately 0 to 4 inches. This soil map unit meets the hydric criteria.

Limerick silt loam, 0 to 3 percent slopes (8A). This poorly-drained silt loam is typically found in floodplains. Depth to water table is approximately 6 to 18 inches. This soil map unit meets the hydric criteria.

Deerfield sandy loam, 0 to 3 percent slopes (249A). This moderately well-drained sandy loam is typically found on terraces. Depth to water table is approximately 18 to 36 inches. This soil map unit does not meet the hydric criteria.



2.0 DELINEATION METHODOLOGY

An ESS wetland scientist delineated wetlands at the project site in accordance with the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (USACE 1989) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (USACE 2012). The delineation included an initial desktop data review followed by a field investigation. ESS reviewed existing data sources prior to conducting the field investigation to determine the general extent of wetland resource areas at the project site. Data sources reviewed included USGS 7.5-minute topographic maps, National Wetlands Inventory (NWI) maps from the U.S. Fish and Wildlife Service (USFWS), Massachusetts Department of Environmental Protection (DEP) wetlands mapping, Natural Resource Conservation Service (NRCS) soils maps, and Federal Emergency Management Agency (FEMA) flood hazard mapping data.

Three criteria are typically required to document an area as wetland under the 1989 *Federal Manual*: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details regarding these criteria are provided below.

Hydrophytic Vegetation: The hydrophytic vegetation criterion is satisfied at a location if more than 50% of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC). An OBL indicator status refers to plants that have a 99% probability of occurring in wetlands under natural conditions. An FACW indicator status refers to plants that usually occur in wetlands (67% to 99% probability) but occasionally are found elsewhere. A FAC indicator status refers to plants that are equally likely to occur in wetlands or elsewhere (estimated probability 34% to 66% for each).

Hydric Soils: The hydric soil criterion is satisfied at a location if soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reduced environment in the upper 18 inches of the soil profile.

Wetland Hydrology: The wetland hydrology criterion is satisfied at a location based on conclusions inferred from field observations that indicate that an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially within the root zone.

Wetlands were identified in the field by marking the wetland boundary with pink flagging, labeled "WETLAND DELINEATION". Each flag was labeled in consecutive order. Flags were generally tied so that each flag was visible from the flag tied before and the flag tied after, generally 25 feet apart or less as boundaries dictated.

Each wetland resource area was documented by completing a Routine Onsite Determination Method Data Form from the 1989 *Federal Manual* (Appendix A).

3.0 DELINEATION RESULTS

ESS delineated a total of five wetlands represented by nine wetland flag series at the project site. Table 1 summarizes the results of the wetland delineation conducted at the project site.

Table 1. Summary of Wetland Delineation Results at the Project Site.

Flag Series	Assessor's Map and Lot	Municipality	Cowardin Classification
1-1 to 1-16	Map 39, Lot 1	Lancaster	PSS/PEM
1A-1 to 1A-26	Map 39, Lot 1	Lancaster	PSS/PEM
2-1 to 2-27	Map 39, Lot 4	Lancaster	PEM/PSS
2A-1 to 2A-3	Map 39, Lot 4	Lancaster	PEM
3-1 to 3-7	Map 39, Lot 4	Lancaster	PEM
3A-1 to 3A-4	Map 39, Lot 4	Lancaster	PEM
4-1 to 4-11	Map 39, Lot 4	Lancaster	PEM
5-1 to 5-4	Map 5A, Lot 8	Bolton	PEM/R3
5A-1 to 5A-14	Map 5A, Lot 8 Map 39, Lot 4	Bolton Lancaster	PEM/R3

The five wetlands delineated at the project site are described in the following sections.

Wetland 1

Wetland 1 is a large wetland complex located north of Still River Road (MA-110) in the Bolton Flats Wildlife Management Area. With the exception of the existing gravel road and the area immediately surrounding the existing building at the site, the entirety of this parcel was identified as wetland. The southern portion of the parcel, including the maintained mowed fields, is primarily an emergent wetland, while the central and northern portions of the parcel are primarily scrub-shrub wetlands. The emergent plant community in Wetland 1 is comprised primarily of sensitive fern (*Onoclea sensibilis*), late goldenrod (*Solidago gigantea*), purple loosestrife (*Lythrum salicaria*), jewelweed (*Impatiens capensis*), joe-pye-weed (*Eutrochium purpureum*), narrow-leaved cattail (*Typha angustifolia*), gray dogwood (*Cornus racemosa*), and common reed (*Phragmites australis*). The scrub-shrub plant community is comprised primarily of gray dogwood, southern arrowwood (*Viburnum dentatum*), speckled alder (*Alnus incana*), yellow birch (*Betula alleghaniensis*), and silver maple (*Acer saccharinum*). Wetland 1 is primarily comprised of the following soil map units: Limerick silt loam, 0 to 3 percent slopes; Walpole sandy loam, 0 to 3 percent slopes; and Deerfield sandy loam, 0 to 3 percent slopes.

Wetland 1 would be classified as a Bordering Vegetated Wetland (BVW) under the Massachusetts Wetlands Protection Act (WPA). BVW is defined at 310 CMR 10.55 as “freshwater wetlands that border creeks, rivers, streams, and ponds, and include wet meadows, bogs, marshes, and swamps.” The BVW resource area has an associated 100-foot buffer zone which begins at the outer edge of the resource area boundary. Although not a resource area itself, work which occurs within the 100-foot buffer zone is subject to the jurisdiction of the WPA.

Wetland 1 is an area under the jurisdiction of the Lancaster Wetlands Protection Bylaw (§215-2(A)). Under the Bylaw, Wetland 1 would also have an associated 100-foot buffer zone as well as a 25-foot no build or no-alteration zone.



According to the Massachusetts Natural Heritage Atlas, 14th edition (August 1, 2017), Wetland 1 is located entirely within both Priority Habitats of Rare Species (PH 1677) and Estimated Habitats of Rare Wildlife. Consultation with the Massachusetts Natural Heritage and Endangered Species Program (NHESP), including through the submittal of a State-listed Species Information Request Form, should be conducted prior to any work occurring in the mapped habitat area.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the site (map no. 25027C0458E, effective date 7/4/2011 and map no. 25027C0459E, effective date 7/4/2011), Wetland 1 is located in flood zones AE and X. Flood zone AE is defined as the area that will be inundated by the flood event having a 1-percent-annual-chance of being equaled or exceeded in any given year, also known as the 100-year flood. The base flood elevation (bfe) for flood zone AE is 232 feet. Flood zone X is defined as the area that will be inundated by the flood event have a 0.2-percent-annual-chance of being equaled or exceeded in any given year, also known as the 500-year flood.

Wetland 2

Wetland 2 is an emergent/scrub-shrub wetland complex located adjacent to and south of Still River Road near the center of the project site. The emergent wetland community within Wetland 2 is vegetated primarily with reed canary grass (*Phalaris arundinacea*), sensitive fern, and jewelweed. The scrub-shrub wetland community within Wetland 2 is vegetated primarily with gray dogwood, southern arrowwood, gray birch (*Betula populifolia*), and red maple (*Acer rubrum*). Surface saturation was observed in some portions of the emergent areas of Wetland 2. Other evidence of hydrology was also observed, including a seasonal high water table. Wetland 2 is primarily comprised of the following soil map units: Walpole sandy loam, 0 to 3 percent slopes and Sudbury fine sandy loam, 3 to 8 percent slopes.

Wetland 2 would be classified a BVW under the WPA, and would have an associated 100-foot buffer zone.

Wetland 2 is an area under the jurisdiction of the Lancaster Wetlands Protection Bylaw (§215-2(A)). Under the Bylaw, Wetland 2 would also have an associated 100-foot buffer zone as well as a 25-foot no build or no-alteration zone.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the site (map no. 25027C0458E, effective date 7/4/2011 and map no. 25027C0459E, effective date 7/4/2011), Wetland 2 is located in flood zone X. Flood zone X is defined as the area that will be inundated by the flood event have a 0.2-percent-annual-chance of being equaled or exceeded in any given year, also known as the 500-year flood.

Wetland 3

Wetland 3 is comprised of two very small, isolated depressions located within the maintained grounds of the state facility. Wetland 3 is vegetated primarily with narrow-leaved cattail, purple loosestrife, jewelweed, smartweed, curly dock, aster, and nightshade. Standing water and saturated soils were observed in this wetland. Wetland 3 is comprised of the Merrimac fine sandy loam, 8 to 15 percent slopes soil map unit.

Wetland 3 does not border on a stream, pond, or other waterbody or waterway and hence does not meet the definition of BVW per 310 CMR 10.55. Due to its small size, Wetland 3 may also not meet the



definition of Isolated Land Subject to Flooding (ILSF), which is defined at 310 CMR 10.57 as “an isolated depression or closed basin without an inlet or an outlet...which at least once a year confines standing water to a volume of at least ¼ acre-feet and to an average depth of at least six inches.” Therefore, Wetland 3 may not be an Area Subject to Protection under the WPA.

Wetland 3 is an area under the jurisdiction of the Lancaster Wetlands Protection Bylaw (§215-2(A)). Under the Bylaw, Wetland 3 would also have an associated 100-foot buffer zone as well as a 25-foot no build or no-alteration zone.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the site (map no. 25027C0458E, effective date 7/4/2011 and map no. 25027C0459E, effective date 7/4/2011), Wetland 3 is not located in a mapped flood zone.

Wetland 4

Wetland 4 is a small emergent wetland located adjacent to and south of Still River Road near the intersection with Old Common Road, in the far western corner of the project site. Wetland 4 is vegetated primarily with narrow-leaved cattail, jewelweed, sensitive fern, purple loosestrife, southern arrowwood, and yellow birch. Standing water was observed in this wetland, and it likely receives surface runoff from the adjacent road and forested hillside. Wetland 4 is comprised of the Merrimac fine sandy loam, 3 to 8 percent slopes soil map unit.

Wetland 4 would be classified a BVW under the WPA, and would have an associated 100-foot buffer zone.

Wetland 4 is an area under the jurisdiction of the Lancaster Wetlands Protection Bylaw (§215-2(A)). Under the Bylaw, Wetland 4 would also have an associated 100-foot buffer zone as well as a 25-foot no build or no-alteration zone.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the site (map no. 25027C0458E, effective date 7/4/2011 and map no. 25027C0459E, effective date 7/4/2011), Wetland 4 is located in flood zone AE. Flood zone AE is defined as the area that will be inundated by the flood event having a 1-percent-annual-chance of being equaled or exceeded in any given year, also known as the 100-year flood. The base flood elevation (bfe) for flood zone AE is 233 feet.

Wetland 5

Wetland 5 includes the Still River and the bordering vegetated wetland located along the banks of the river. Within the project site, the Still River flows in a generally northwesterly direction, crossing under Sand Road to the southeast and under Still River Road to the northwest. Between these two road crossings, the river flows through an active agricultural field, has a width of approximately five to ten feet, and has a primarily sandy bottom. Dense stands of Japanese knotweed (*Fallopia japonica*) are present along most of the river's banks through this segment. In the vicinity of Sand Road the river flows through a forested upland, and in the vicinity of Still River Road the river flows through a bordering vegetated wetland comprised primarily of a native emergent/scrub-shrub wetland plant community. Wetland 5 is primarily comprised of the following soil map units: Sudbury fine sandy loam, 0 to 3 percent slopes and Walpole sandy loam, 0 to 3 percent slopes.



The vegetated wetland habitats associated with Wetland 5 would be classified a BVW under the WPA, and would have an associated 100-foot buffer zone. The land under the Still River would be classified as the Land under water (LUW) resource area, which is defined at 310 CMR 10.56 as the land occurring below the mean annual low water level of the waterway. The banks of the Still River would be classified as the Inland Bank resource area, which is defined at 310 CMR 10.54 as the land which contains water within a waterbody or waterway. The Inland Bank resource area also has an associated 100-foot buffer zone. Finally, as a perennial stream, the Still River has an associated 200-foot Riverfront Area, which is defined at 310 CMR 10.58 as the area of land between a river's mean annual high-water line and a parallel line measured horizontally outward 200 feet away.

Wetland 5 is an area under the jurisdiction of the Lancaster Wetlands Protection Bylaw (§215-2(A)). Under the Bylaw, Wetland 5 would also have an associated 100-foot buffer zone as well as a 25-foot no build or no-alteration zone.

Wetland 5 is also an area under the jurisdiction of the Bolton Wetlands Bylaw (§1.18.2). Under the Bylaw, the first 25-feet of land extending from the outer edge of the wetland is considered part of wetland resource area. The next 75 feet of land is considered the Adjacent Upland Resource Area (AURA).

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the site (map no. 25027C0458E, effective date 7/4/2011 and map no. 25027C0459E, effective date 7/4/2011), Wetland 5 is located in flood zone X. Flood zone X is defined as the area that will be inundated by the flood event have a 0.2-percent-annual-chance of being equaled or exceeded in any given year, also known as the 500-year flood.

4.0 REFERENCES

- Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 131 pp.
- Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, D.C. Cooperative technical publication. 76 pp. plus appendices.
- Munsell Color, 2000. Munsell soil color chart: Baltimore, Maryland, 22 pp.
- U.S. Army Corps of Engineers. 1989. Corps of Engineers Wetlands Delineation Manual. Wetlands Research Program Technical Report Y-87-1.
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). ERDC/EL TR-12-1.
- U.S. Fish and Wildlife Service. 1994. National Wetlands Inventory Data (Map). U. S. Fish and Wildlife Service, National Wetlands Inventory (Publisher), St. Petersburg FL.

Appendix A

Wetland Delineation Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI - LANCASTER / BOLTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: W1 - WET
 Investigator(s): ESS/A. PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____			
Water Table Present? Yes _____ No _____ Depth (inches): _____			
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: 4 I-WET

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
2. <u>Acer saccharinum</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
_____ = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Cornus racemosa</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Viburnum dentatum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>																	
3. <u>Alnus incana</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>																	
4. <u>Betula alleghaniensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Impatiens capensis</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. <u>Carex crinita</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>																	
3. <u>Symplocarpus foetidus</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover																				
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. <u>N/A</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>✓</u> No _____																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) 																				

Sampling Point: ↓ 1-WET

[illegible]²Location: PL=Pore Lining, M=Matrix.

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> MLRA 149B	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)

Hydric Soil Present? Yes ☒ No ☐

Northcentral and Northeast Region – Interim Version

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI - LANCASTER / BOLTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: #1 - UPL
 Investigator(s): ESS / A. PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil ☒, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No _____ Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Water Table Present? Yes _____ No _____ Depth (inches): _____		
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: 1 - UPL

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Pinus strobus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
2. <u>Quercus alba</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>N/A</u>	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Fallopia japonica</u>	<u>90</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover																				
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. <u>N/A</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

Sampling Point: St. 1 - UPL

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Hydric Soil Present? Yes _____ No ☒

Soil consists of fill material

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI-LANCASTER/BOLTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: #2-WET
 Investigator(s): ESS/A. PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Sampling Point: *2-WET

Northcentral and Northeast Region – Interim Version

Sampling Point: K2-WET

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> MLRA 149B | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

Restrictive Layer (if observed):

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Northcentral and Northeast Region – Interim Version

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI - LANCASTER / BOLTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: 42-UPL
 Investigator(s): ESS/A PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.)			If yes, optional Wetland Site ID: _____

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: 42-UPL

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
			_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
			_____ = Total Cover	
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Phalaris arundinacea</u>	<u>100%</u>	<u>Y</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
			_____ = Total Cover	
Woody Vine Stratum (Plot size: <u>15'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
			_____ = Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

Sampling Point: 2-CPL

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> MLRA 149B | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI- LANCASTER - BOXTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: 4-WET
 Investigator(s): ESS/A. PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: 44-WET

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Viburnum dentatum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Betula alleghaniensis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Typha angustifolia</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Impatiens capensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Oxyclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Lythrum salicaria</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				_____ = Total Cover
Woody Vine Stratum (Plot size: <u>15'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
				_____ = Total Cover

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

____ Prevalence Index is ≤3.0¹

____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No _____

Sampling Point: 4-WET

[illegible]²Location: PL=Pore Lining, M=Matrix.

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes ✓ No

Northcentral and Northeast Region – Interim Version

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI - LANCASTER/ BOLTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: 4-UPL
 Investigator(s): ESS/A. PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No _____ Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Water Table Present? Yes _____ No _____ Depth (inches): _____		
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: 44-UPL

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Quercus alba</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
2. <u>Quercus rubra</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>																	
3. <u>Acer rubrum</u>	<u>20</u>	<u>N</u>	<u>FAC</u>																	
4. <u>Pinus strobus</u>	<u>20</u>	<u>N</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Lonicera morrowii</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>																	
2. <u>Pinus strobus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Pinus strobus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover																				
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				
Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

Sampling Point: 4. UPL

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> MLRA 149B | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

Restrictive Layer (if observed):

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Northcentral and Northeast Region – Interim Version

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI- LANCASTER/BOLTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: 5-WET
 Investigator(s): ESS/A. PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: REM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: 5-WET

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Impatiens capensis</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Typha angustifolia</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Onoclea sensibilis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Carex crinita</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
5. <u>Eutrochium purpureum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				_____ = Total Cover
Woody Vine Stratum (Plot size: <u>15'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
				_____ = Total Cover
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>				

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

____ Prevalence Index is ≤3.0¹

____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No _____

Sampling Point: 1K 5-WET

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DPI-LANCASTER/BOLTON City/County: LANCASTER Sampling Date: 8/28/18
 Applicant/Owner: _____ State: MA Sampling Point: LS-UPL
 Investigator(s): ESS/A. PATTERSON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No _____ Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Water Table Present? Yes _____ No _____ Depth (inches): _____		
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: 45-UPL

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Robinia pseudacacia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>N/A</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Fallopia japonica</u>	<u>100</u>	<u>Y</u>	<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>15'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. <u>N/A</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				

Sampling Point: 45-JAL

[illegible]

ATTACHMENT 5
Abutters Lists



100 foot Abutters List Report

Lancaster, MA
October 07, 2020

Subject Property:

Parcel Number: 039-0004.0
CAMA Number: 039-0004.0
Property Address: 0 OLD COMMON RD

Mailing Address: MASSACHUSETTS COMMONWEALTH
OF
C/O DCAM 1 ASHBURTON PLACE
BOSTON, MA 02108

Abutters:

Parcel Number: 038-0100.0
CAMA Number: 038-0100.0
Property Address: 65 OLD COMMON RD

Mailing Address: WHEELER MARK K & JENNIFER A H
65 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 038-0101.0
CAMA Number: 038-0101.0
Property Address: 71 OLD COMMON RD

Mailing Address: VALERIO-LAINE JILL A
~~C/O VINA D VALERIO~~ 71 OLD COMMON
RD
LANCASTER, MA 01523

Parcel Number: 038-0102.0
CAMA Number: 038-0102.0
Property Address: 85 OLD COMMON RD

Mailing Address: HARRIS DAVID B JR & PATRICIA A
85 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 038-0103.0
CAMA Number: 038-0103.0
Property Address: 105 OLD COMMON RD

Mailing Address: SHAW KAREN S
105 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 038-0104.0
CAMA Number: 038-0104.0
Property Address: 119 OLD COMMON RD

Mailing Address: DONALDSON DARREL D & ELLEN R TRS
DONALDSON 2018 REV TRU
119 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 038-0105.0
CAMA Number: 038-0105.0
Property Address: 0 OLD COMMON RD

Mailing Address: LANCASTER TOWN OF CEMETERY
101 695 MAIN ST, SUITE 1
LANCASTER, MA 01523

Parcel Number: 038-0106.0
CAMA Number: 038-0106.0
Property Address: 32 OLD COMMON RD

Mailing Address: JOHNSON FRANK G JR & SANDRA L
32 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 038-0107.0
CAMA Number: 038-0107.0
Property Address: 12 OLD COMMON RD

Mailing Address: CREIGHTON JOHN H & CHARLOTTE
P O BOX 307
SO LANCASTER, MA 01561

Parcel Number: 038-0108.0
CAMA Number: 038-0108.0
Property Address: 0 STILL RIVER RD

Mailing Address: R & R BROTHERS, LLC
35 LOWER BOLTON RD
LANCASTER, MA 01523

Parcel Number: 038-0109.0
CAMA Number: 038-0109.0
Property Address: 460 HIGH ST EXT

Mailing Address: CUMBERLAND FARMS INC
165 FLANDERS RD
WESTBOROUGH, MA 01581



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100 foot Abutters List Report

Lancaster, MA
October 07, 2020

Parcel Number: 039-0001.0
CAMA Number: 039-0001.0
Property Address: 0 STILL RIVER RD

Mailing Address: MASSACHUSETTS COMMONWEALTH
OF DIVISION OF FISHERIES & WILDLIFE
251 CAUSEWAY STREET SUITE 400
BOSTON, MA 02114

Parcel Number: 039-0001.A
CAMA Number: 039-0001.A
Property Address: 0 RTE 110/STILL RIVER

Mailing Address: MASSACHUSETTS COMMONWEALTH
OF DIVISION OF FISHERIES & WILDLIFE
251 CAUSEWAY STREET SUITE 400
BOSTON, MA 02114

Parcel Number: 039-0003.0
CAMA Number: 039-0003.0
Property Address: 110 STILL RIVER RD

Mailing Address: MORTIMER THOMAS E & SUSAN P
PO BOX 155
LANCASTER, MA 01523-0155

Parcel Number: 039-0005.0
CAMA Number: 039-0005.0
Property Address: 124 OLD COMMON RD

Mailing Address: ROBERT F KENNEDY CHILDRENS
ACTION
40 COURT ST SUITE 410
BOSTON, MA 02108

Parcel Number: 039-0006.0
CAMA Number: 039-0006.0
Property Address: 330 OLD COMMON RD

Mailing Address: LANCASTER TOWN OF
701 MAIN ST SUITE 1
LANCASTER, MA 01523

Parcel Number: 039-0007.0
CAMA Number: 039-0007.0
Property Address: 141 OLD COMMON RD

Mailing Address: LALLY RICHARD F
141 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0008.0
CAMA Number: 039-0008.0
Property Address: 151 OLD COMMON RD

Mailing Address: NUTTING DEBRA A & MICHELLE L, ANNA
M KUSH
151 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0009.0
CAMA Number: 039-0009.0
Property Address: 159 OLD COMMON RD

Mailing Address: WILLIAMS BRUCE & DEBRA
159 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0010.0
CAMA Number: 039-0010.0
Property Address: 169 OLD COMMON RD

Mailing Address: JOHNSON LINDA M
169 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0014.0
CAMA Number: 039-0014.0
Property Address: 183 OLD COMMON RD

Mailing Address: MINER CHARLES J & SUSAN V
183 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0015.0
CAMA Number: 039-0015.0
Property Address: 195 OLD COMMON RD

Mailing Address: HALL SUZANNE M & DAVID D
195 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0016.0
CAMA Number: 039-0016.0
Property Address: 207 OLD COMMON RD

Mailing Address: LYLE JARED C, THERESA A PORTANTE
207 OLD COMMON RD
LANCASTER, MA 01523



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10/7/2020

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100 foot Abutters List Report

Lancaster, MA
October 07, 2020

Parcel Number: 039-0017.0
CAMA Number: 039-0017.0
Property Address: 217 OLD COMMON RD

Mailing Address: POLITCH JUSTIN J
49 BOYLSTON ST
BROOKLINE, MA 02445

Parcel Number: 039-0018.0
CAMA Number: 039-0018.0
Property Address: 223 OLD COMMON RD

Mailing Address: LAFFERTY RYAN
223 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0019.0
CAMA Number: 039-0019.0
Property Address: 237 OLD COMMON RD

Mailing Address: FARREN MICHAEL & SANDRA J
237 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 039-0020.0
CAMA Number: 039-0020.0
Property Address: 251 OLD COMMON RD

Mailing Address: SOUSA JOSE E & MEREDITH L
251 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 043-0003.0
CAMA Number: 043-0003.0
Property Address: 267 OLD COMMON RD

Mailing Address: SONIA MICHAEL M & SUSAN M
267 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 043-0021.0
CAMA Number: 043-0021.0
Property Address: 283 OLD COMMON RD

Mailing Address: SONIA STEPHEN N TR, STEPHEN N
SONIA IRREV TRUST
283 OLD COMMON RD
LANCASTER, MA 01523

Parcel Number: 043-0022.0
CAMA Number: 043-0022.0
Property Address: 0 OLD COMMON RD

Mailing Address: SONIA JOHN P & CAROL J
333 OLD COMMON RD
LANCASTER, MA 01523

Michael Burke Sr., Vice-Chairman
Lancaster Board of Assessors
3pg. Oct 8, 2020



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10/7/2020

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100 foot Abutters List Report

Bolton, MA
October 14, 2020

Subject Properties:

Parcel Number: 005.A-0007.0
CAMA Number: 005.A-0007.0
Property Address: 353 WILDER RD

Mailing Address: TOWN OF LANCASTER EASTWOOD
CEMETERY
P O BOX 293
LANCASTER, MA 01523

Parcel Number: 005.A-0008.0
CAMA Number: 005.A-0008.0
Property Address: 0 FORBUSH MILL RD

Mailing Address: COMMONWEALTH OF
MASSACHUSETTS CAPITAL PLANNING
OLD COMMON RD
LANCASTER, MA 01523

Abutters:

Parcel Number: 005.A-0001.0
CAMA Number: 005.A-0001.0
Property Address: 396 WILDER RD

Mailing Address: MACKO KENNETH W & BRENDA M
396 WILDER RD
BOLTON, MA 01740

Parcel Number: 005.A-0001.A
CAMA Number: 005.A-0001.A
Property Address: 392 WILDER RD

Mailing Address: DOW DERYEK D & ERIKA R
392 WILDER RD
BOLTON, MA 01740

Parcel Number: 005.A-0001.B
CAMA Number: 005.A-0001.B
Property Address: 388 WILDER RD

Mailing Address: COMPTON MARY E, TR 388 WILDER RD
RTY TR
388 WILDER RD
BOLTON, MA 01740

Parcel Number: 005.A-0002.0
CAMA Number: 005.A-0002.0
Property Address: 0 WILDER RD

Mailing Address: ARKLOW LIMITED PARTNERSHIP
159 BALLVILLE RD
BOLTON, MA 01740

Parcel Number: 005.A-0006.1
CAMA Number: 005.A-0006.1
Property Address: 0 WILDER RD

Mailing Address: VESPA MARY EST OF & DONATE B
VESPA & K VESPA & M N VESPA
BRAZEAU
225 WILDER RD
BOLTON, MA 01740

Parcel Number: 005.A-0009.0
CAMA Number: 005.A-0009.0
Property Address: 0 FORBUSH MILL RD

Mailing Address: TOWN OF BOLTON SOCCER FIELD
663 MAIN ST
BOLTON, MA 01740

Parcel Number: 005.A-0012.C
CAMA Number: 005.A-0012.C
Property Address: 173 FORBUSH MILL RD

Mailing Address: FOSTER KEVIN M JACKY-ANN FOSTER
173 FORBUSH MILL
BOLTON, MA 01740

Parcel Number: 005.A-0013.0
CAMA Number: 005.A-0013.0
Property Address: 189 FORBUSH MILL RD

Mailing Address: BRUNELLE ROBERT D & CAROLYN
189 FORBUSH MILL RD
BOLTON, MA 01740

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10/14/2020

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100 foot Abutters List Report

Bolton, MA

October 14, 2020

Parcel Number: 005.A-0016.0
CAMA Number: 005.A-0016.0
Property Address: FORBUSH MILL RD

Mailing Address: MCNULTY LAWRENCE E JR
50 PEABODY DR
STOW, MA 01775

Parcel Number: 005.A-0017.0
CAMA Number: 005.A-0017.0
Property Address: 0 FORBUSH MILL RD

Mailing Address: TOWN OF BOLTON ACTING BOLTON
CONSERVATION COMMISSION
663 MAIN ST
BOLTON, MA 01740

Parcel Number: 006.A-0009.0
CAMA Number: 006.A-0009.0
Property Address: 0 FORBUSH MILL RD

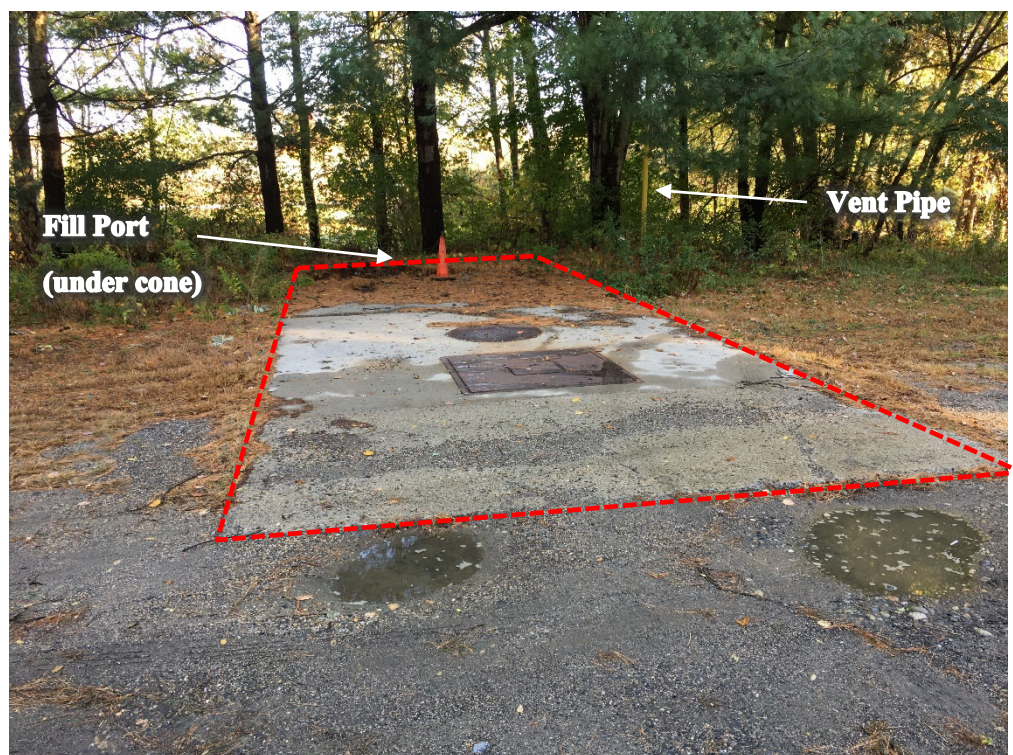
Mailing Address: MORTIMER THOMAS E & SUSAN P
P O BOX 155
LANCASTER, MA 01523

As set forth in the Assessor's records as of July 1, 2020.

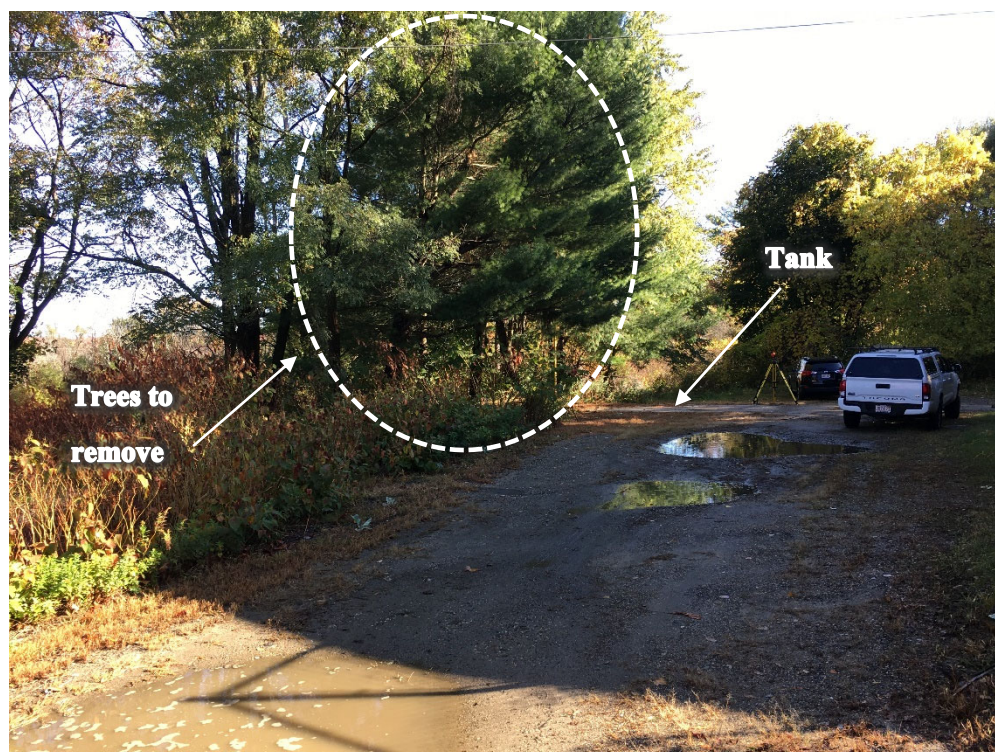
Kelly Garlock
Assistant Assessor

ATTACHMENT 6
Photographs

Photograph #1 – View of the Concrete Pad on Top of Tank



Photograph #2 – View of the driveway. Some of the trees to remove shown.



Photograph #3 – Typical trees to remove north of the tank.
Fill port under cone. Well in the distance.



Photograph #4 – Fill port (under cone) and vent pipe. Looking towards wetland.



Photograph #5 – View looking south towards Power Plant building.



Photograph #6 – View of vegetation north of tank (vent pipe visible on left).



Photograph #7 – Another view of tank pad and trees to the north of the tank.

