



# Notice of Intent to Lower Dam Crest

Fyfeshire Pond Dam  
Bolton, Massachusetts

**PREPARED FOR:**

Town of Bolton  
663 Main Street  
Bolton, Massachusetts 01740

**PREPARED BY:**

ESS Group, Inc.  
100 Fifth Avenue, 5th Floor  
Waltham, Massachusetts 02451

ESS Project No. L176-000

July 12, 2013



**NOTICE OF INTENT TO LOWER DAM CREST  
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Bolton, Massachusetts**

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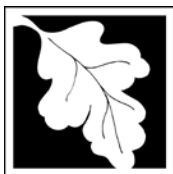


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## Notice of Intent – WPA Form 3

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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  
Bolton Wetlands Bylaw

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Bolton

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):

Fyfeshire Pond Dam

a. Street Address

Bolton

b. City/Town

01740

c. Zip Code

Latitude and Longitude:

42° 24' 55.08"

d. Latitude

71° 38' 56.4714"

e. Longitude

3A

f. Assessors Map/Plat Number

3.A-44

g. Parcel /Lot Number

2. Applicant:

Carol

a. First Name

Gumbart

b. Last Name

Town of Bolton

c. Organization

Conservation Commission – Town Hall

d. Street Address

Bolton

e. City/Town

Massachusetts

f. State

01740

g. Zip Code

978-779-3304

h. Phone Number

i. Fax Number

concom@townofbolton.com

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):

Dan

a. First Name

Herzlinger

b. Last Name

ESS Group, Inc.

c. Company

100 Fifth Avenue, 5<sup>th</sup> Floor

d. Street Address

Waltham

e. City/Town

MA

f. State

02451

g. Zip Code

781-419-7715

h. Phone Number

781-622-2612

i. Fax Number

dherzlinger@essgroup.com

j. Email address

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

Exempt

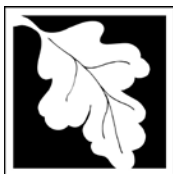
a. Total Fee Paid

Exempt

b. State Fee Paid

Exempt

c. City/Town Fee Paid



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### A. General Information (continued)

6. General Project Description:

Improvements to repair structural deficiencies in the dam, including lowering the dam crest to reduce risk of flooding to downstream areas and residences.

7a. Project Type Checklist:

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Single Family Home                | 2. <input type="checkbox"/> Residential Subdivision                   |
| 3. <input type="checkbox"/> Limited Project Driveway Crossing | 4. <input type="checkbox"/> Commercial/Industrial                     |
| 5. <input type="checkbox"/> Dock/Pier                         | 6. <input type="checkbox"/> Utilities                                 |
| 7. <input type="checkbox"/> Coastal Engineering Structure     | 8. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) |
| 9. <input type="checkbox"/> Transportation                    | 10. <input checked="" type="checkbox"/> Other                         |

7b. Is any portion of the proposed activity eligible to be treated as a 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:

310 CMR 10.53(3)(i) for repair and improvement of dam

2. Limited Project

8. Property recorded at the Registry of Deeds for:

Worcester

a. County

44466

c. Book

b. Certificate # (if registered land)

392

d. Page Number

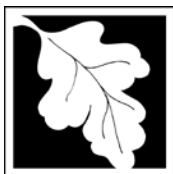
### B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☐ 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.
2. ☒ 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.

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 checked="" type="checkbox"/> Bank	15 1. linear feet	2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	633 (Temporary) 1. square feet	633 2. square feet
c. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	34 1. square feet 3. cubic yards dredged	2. square feet



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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	221 1. square feet 0 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 checked="" type="checkbox"/> Riverfront Area	Outlet Stream of Fyfreshire Pond	
	1. Name of Waterway (if available)	
2. Width of Riverfront Area (check one):		
<input type="checkbox"/> 25 ft. - Designated Densely Developed Areas only		
<input type="checkbox"/> 100 ft. - New agricultural projects only		
<input checked="" type="checkbox"/> 200 ft. - All other projects		
3. Total area of Riverfront Area on the site of the proposed project:		> 1 acre square feet
4. Proposed alteration of the Riverfront Area:		
221 a. total square feet	221 b. square feet within 100 ft.	0 c. square feet between 100 ft. and 200 ft.
5. Has an alternatives analysis been done and is it attached to this NOI?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. Was the lot where the activity is proposed created prior to August 1, 1996?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. <input type="checkbox"/> Coastal Resource Areas: (See 310 CMR 10.25-10.35)		

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



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

	<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. <input type="checkbox"/> 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. <input type="checkbox"/> Project Involves Stream Crossings		
	a. number of new stream crossings	b. number of replacement stream crossings

### C. Other Applicable Standards and Requirements

#### 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://www.mass.gov/dfwele/dfw/nhesp/regulatory\\_review/priority\\_habitat/online\\_viewer.htm](http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/online_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  
100 Hartwell Street, Suite 230  
West Boylston, MA 01583

2008

b. Date of map





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

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.1.d, 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).*

1. c. Submit Supplemental Information for Endangered Species Review\*

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

(a) within wetland Resource Area

255 square-feet

percentage/acreage

(b) outside Resource Area

percentage/acreage

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

3. ☒ 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

(c) ☒ MESA filing fee (fee information available at:

[http://www.mass.gov/dfwele/dfw/nhosp/regulatory\\_review/mesa/mesa\\_fee\\_schedule.htm](http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_fee_schedule.htm)).

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

d. 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, [http://www.mass.gov/dfwele/dfw/nhosp/regulatory\\_review/mesa/mesa\\_exemptions.htm](http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_exemptions.htm); the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

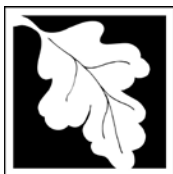
2. ☐ Separate MESA review ongoing.

a. NHESP Tracking #

b. Date submitted to NHESP

\* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/dfwele/dfw/nhosp/nhosp.htm>, regulatory review tab). 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

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Bolton

City/Town

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

3. ☐ Separate MESA review completed.  
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.
2. 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 or hand delivery of NOI to either:

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

North Shore - Hull to New Hampshire:

Division of Marine Fisheries -  
Southeast Marine Fisheries Station  
Attn: Environmental Reviewer  
1213 Purchase Street – 3rd Floor  
New Bedford, MA 02740-6694

Division of Marine Fisheries -  
North Shore Office  
Attn: Environmental Reviewer  
30 Emerson Avenue  
Gloucester, MA 01930

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.

3. 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

4. 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

5. 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

6. 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

#### Online Users:

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



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

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

- 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.

**D. Additional Information**

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.
- 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.

Fyfeshire Pond Dam, Modification and Repair

a. Plan Title

Karen Fung, PE

b. Prepared By

July 11, 2013

d. Final Revision Date

Karen Fung, PE

c. Signed and Stamped by

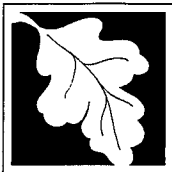
Varies, see plans

e. Scale

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.



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

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### 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

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name

### 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.

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

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.

## Wetlands Fee Transmittal Form

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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.



## A. Applicant Information

### 1. Location of Project:

Fyfeshire Pond Dam

a. Street Address

Bolton

b. City/Town

c. Check number

d. Fee amount

### 2. Applicant Mailing Address:

Carol

a. First Name

Gumbart

b. Last Name

Town of Bolton

c. Organization

Conservation Commission – Town Hall

d. Mailing Address

Bolton

e. City/Town

MA

f. State

01740

g. Zip Code

978-779-3304

h. Phone Number

i. Fax Number

concom@townofbolton.com

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.

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

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Exempt – Town Project	Exempt		Exempt

**Step 5/Total Project Fee:**

**Step 6/Fee Payments:**

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

## **Abutter Notification Materials**

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**Notification to Abutters Under the  
Massachusetts Wetland Protection Act and Town of Bolton Wetlands Bylaw**

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

- A. The name of the applicant is The Town of Bolton, MA
- B. The applicant has filed a Notice of Intent with the Conservation Commission for the municipality of Bolton seeking permission to remove, fill, dredge, or alter an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40).
- C. The address of the lot where the activity is proposed is Fyfeshire Pond Dam  
Map 3A, 3.A-44
- D. Copies of the Notice of Intent may be examined at Bolton Town Hall, Conservation Commission Office between the hours of 9 am and 2:30 pm on the following days of the week: Mon, Wed, Thursday  
For more information, call: Dan Herzlinger, ESS Group, Inc. - (781) 419-7715  
Check One: This is the applicant ☐, representative ☒, or other ☐ (specify): \_\_\_\_\_
- E. Copies of the Notice of Intent may be obtained from either (check one) the applicant ☐, or the applicant's representative ☒, by calling this telephone number: (781) 419-7715 between the hours of 8 am and 5 pm on the following days of the week: Mon-Friday
- F. Information regarding the date, time, and place of the public hearing may be obtained from Bolton Conservation Commission (Tentatively scheduled for July 30<sup>th</sup>, 2013) by calling this telephone number: (978) 779-3304 between the hours of 9 am and 2:30 pm on the following days of the week: Monday, Wed, Thursday Check one: This is the applicant ☐, representative, ☐, or other ☒ (specify): Bolton Conservation Commission

**NOTE:** Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in the The Bolton Common  
(name of newspaper)

NOTE: Notice of the public hearing, including its date, time, and place, will be posted in the City or Town Hall not less than forty-eight (48) hours in advance.

NOTE: You may also contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:

**Central Region: (508) 729-7650**

**Northeast Region: (978) 694-3200**

**Southeast Region: (508) 946-2700**

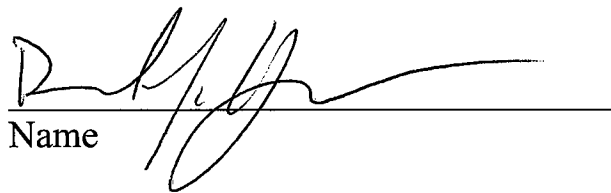
**Western Region: (413) 784-1100**

**AFFIDAVIT OF SERVICE**  
**Under the Massachusetts Wetlands Protection Act**

I, Daniel J. Herzlinger, hereby certify under the pains and penalties of perjury that on July 15, 2013 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by Town of Bolton with the Bolton Conservation Commission on July 15, 2013 for property located at Fyfeshire Pond, Bolton, Massachusetts.

The form of the notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

  
Name

7/15/13  
Date



**TOWN OF BOLTON**  
ASSESSORS OFFICE  
TOWN HALL  
663 MAIN STREET  
BOLTON, MASSACHUSETTS 01740  
PHONE (978) 779-5556 FAX (978) 779-5461

Date of Application April 30, 2013

### REQUEST FOR LIST OF ABUTTERS

Effective August 24, 2004, anyone requesting a list of abutters must give at least three (3) working days notice. This notice will allow the Assessors Office sufficient time necessary to prepare the list of Abutters.

Effective July 1, 2004, the fee schedule is \$15 per certified abutters list.

*\*Please note that these fees apply to preparation of new list or verification or reverification of an existing list.*

Please indicate with a check


- ☐ Immediate Abutters (Board of Selectmen)
- ☐ Board of Appeals, Planning Board, Site Plan review - within 300 feet
- ☒ Conservation Commission within 100 feet or distance = \_\_\_\_\_ feet
- ☐ Planning Board for sub division - 500 feet
- ☐ Abutter to Abutter within distance of \_\_\_\_\_ feet

Map 3.A Parcel(s) 3.A - 44

ESS Group, Inc.

On behalf of the Town of Bolton  
Applicant (please print)

Fyfreshire Pond and Dam, Bolton, MA.  
Location of Property

 (on behalf of the Town of Bolton)  
Signature of Applicant

401 Wampunag Trail, Suite 400  
East Providence RI 02915-2228  
Mailing Address of Applicant

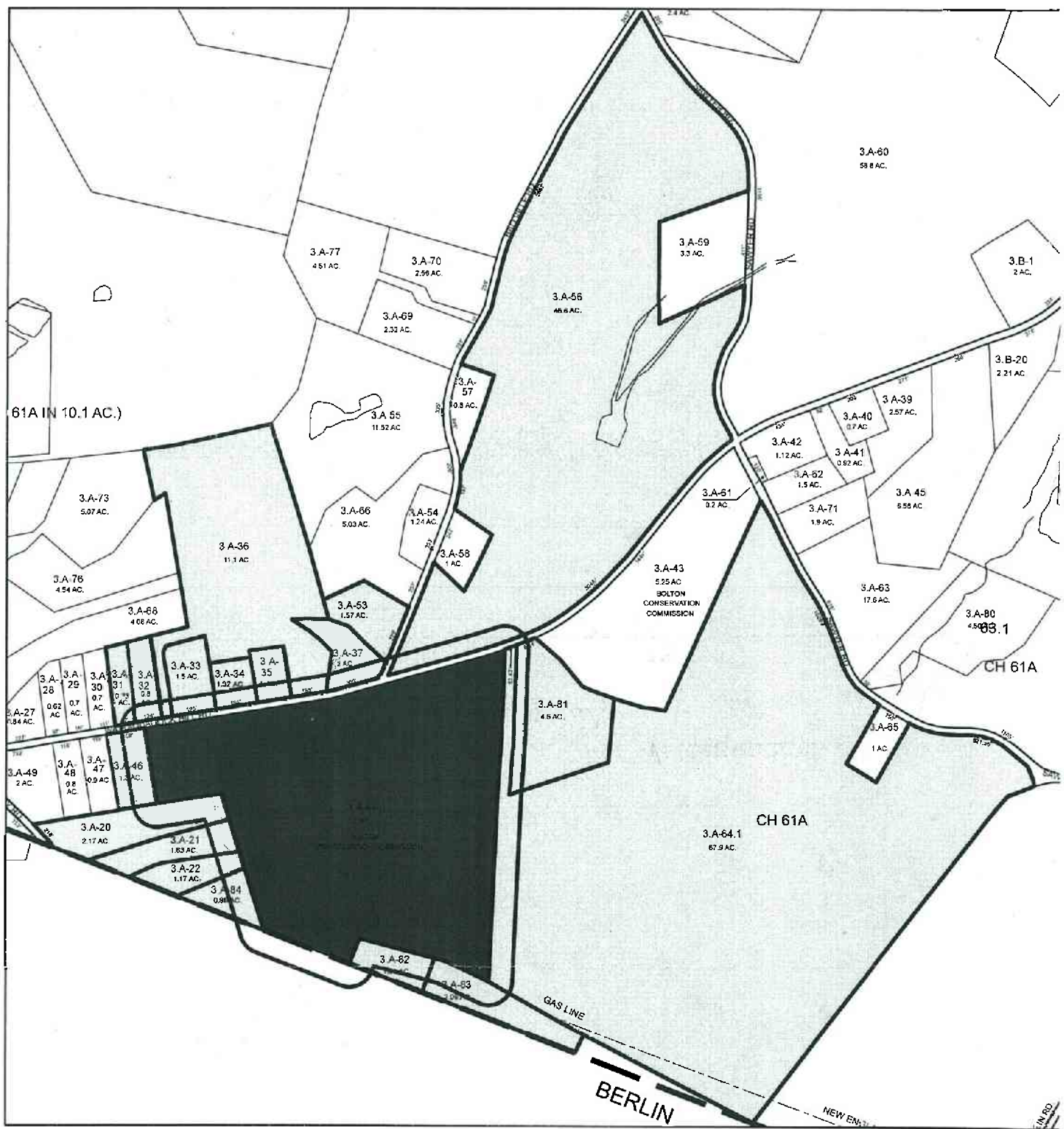
(Attn: Eliza Moore)

(401) 330-1209  
Telephone Number

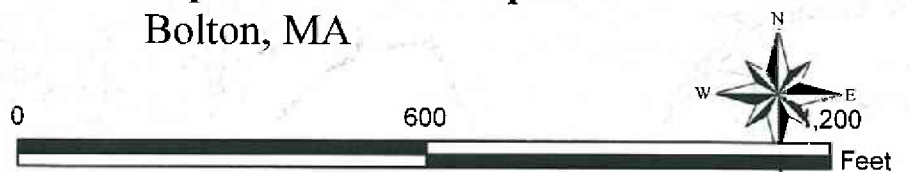
(401) 434-8158  
FAX Number

**PLEASE NOTE: THIS ABUTTERS LIST IS VALID FOR SIX MONTHS**

*5/2/13 also copy given B.C.C.  
5/2/13 Mailed to ESS Group*



**Abutters List - 100 Ft / Map 3A - 44 / Wattaquadock Hill Rd  
Bolton, MA**



5/2/2013

ESS Group  
ATTN: ELIZA MOORE

Certified: Cynthia Bradley

**Subject Properties:**

003.A-0044.0

003.A-0000-0044.0

0.00 WATTAQUADOC HILL RD

TOWN OF BOLTON ACTING PLUMMER  
BOLTON CONSERVATION COMMISSIO  
663 MAIN ST  
BOLTON, MA 01740

Parcel Number: 003.A-0046.0

Mailing Address: WHITE CHARLES H TR  
BOLTON ROAD HOUSE RTY TR  
544 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0046.0

Property Address: 544.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0053.0

Mailing Address: RIGOLI JAMES A & KAREN A RIGOLI  
325 BALLVILLE RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0053.0

Property Address: 325.00 BALLVILLE RD

Parcel Number: 003.A-0056.0

Mailing Address: ARKLOW LIMITED PARTNERSHIP  
C/O INTERNATIONAL GOLF CLUB  
159 BALLVILLE RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0056.0

Property Address: 0.00 BALLVILLE SAWYER &amp; W

Parcel Number: 003.A-0064.1

Mailing Address: NICEWICZ VERA & DAVID J & KENNE  
116 SAWYER RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0064.1

Property Address: 0.00 SAWYER RD

Parcel Number: 003.A-0081.0

Mailing Address: NICEWICZ VERA & DAVID J & KENNE  
116 SAWYER RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0081.0

Property Address: 0.00 WATTAQUADOC HILL RD  
LOT A

Parcel Number: 003.A-0082.0

Mailing Address: ODELL JEFFREY S & MELISSA D  
14 COLLINS RD  
BERLIN, MA 01503

Cama Number: 003.A-0000-0082.0

Property Address: 0.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0083.0

Mailing Address: ~~OLD FARM REALTY TRUST~~ *Town of Bolton Acting*  
~~P O BOX 257~~ *Bolton Conservation Commission*  
~~BERLIN, MA 01503~~ *663 Main St*  
*Bolton MA 01740*

Cama Number: 003.A-0000-0083.0

Property Address: 0.00 WATTAQUADOC HILL RD U

Parcel Number: 003.A-0084.0

Mailing Address: CHRISTENSEN CHRISTOPHER S & BET  
197 LANCASTER RD  
BERLIN, MA 01503-1025

Cama Number: 003.A-0000-0084.0

Property Address: 0.00 MCNULTY RD

# Abutters List Report

Town of Bolton, MA

May 02, 2013

## Subject Properties:

003.A-0044.0

003.A-0000-0044.0

0.00 WATTAQUADOC HILL RD

TOWN OF BOLTON ACTING PLUMMER  
BOLTON CONSERVATION COMMISSIO  
663 MAIN ST  
BOLTON, MA 01740

Parcel Number: 003.A-0020.0

Mailing Address: GALESKI BERNARD T SR EST OF  
ELENA GALESKI, TR, GALESKI FAMILY  
22 MCNULTY RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0020.0

Property Address: 22.00 MCNULTY RD

Parcel Number: 003.A-0021.0

Mailing Address: GALESKI RONALD R  
ANDREA J GALESKI  
24 MCNULTY RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0021.0

Property Address: 24.00 MCNULTY RD

Parcel Number: 003.A-0022.0

Mailing Address: GALESKI GEORGE W  
PRISCILLA A GALESKI  
1-B BRIGHAM CIR #2  
HUDSON, MA 01749

Cama Number: 003.A-0000-0022.0

Property Address: 0.00 MCNULTY RD

Parcel Number: 003.A-0031.0

Mailing Address: HAYNES SHIRLEY  
545 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0031.0

Property Address: 545.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0032.0

Mailing Address: JANDA ALLEN J  
541 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0032.0

Property Address: 541.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0033.0

Mailing Address: JEFFREY EDWARD J  
JEAN A JEFFREY  
533 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0033.0

Property Address: 533.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0034.0

Mailing Address: ABLAVSKY LEONID M & EDITH T, TR  
THE ABLAVSKY 2011 REVOCABLE TR  
525 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0034.0

Property Address: 525.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0035.0

Mailing Address: LAWTON JUDITH & RICHARD INNERA  
519 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0035.0

Property Address: 519.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0036.0

Mailing Address: VICKERY JENIFER  
P O BOX 200805  
BOSTON, MA 02120-0014

Cama Number: 003.A-0000-0036.0

Property Address: 539.00 WATTAQUADOC HILL RD

Parcel Number: 003.A-0037.0

Mailing Address: TRIPP SUSAN E & RICHARD L  
SANDRA J TRIPP  
505 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

Cama Number: 003.A-0000-0037.0

Property Address: 505.00 WATTAQUADOC HILL RD



GALESKI BERNARD T SR EST OF  
ELENA GALESKI, TR, GALESKI FAMILY  
22 MCNULTY RD  
BOLTON, MA 01740

WHITE CHARLES H TR  
BOLTON ROAD HOUSE RTY TR  
544 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

GALESKI RONALD R  
ANDREA J GALESKI  
24 MCNULTY RD  
BOLTON, MA 01740

RIGOLI JAMES A & KAREN A RIGOLI  
325 BALLVILLE RD  
BOLTON, MA 01740

GALESKI GEORGE W  
PRISCILLA A GALESKI  
1-B BRIGHAM CIR #2  
HUDSON, MA 01749

ARKLOW LIMITED PARTNERSHIP  
C/O INTERNATIONAL GOLF CLUB  
159 BALLVILLE RD  
BOLTON, MA 01740

HAYNES SHIRLEY  
545 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

NICEWICZ VERA & DAVID J & KENNE  
116 SAWYER RD  
BOLTON, MA 01740

JANDA ALLEN J  
541 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

NICEWICZ VERA & DAVID J & KENNE  
116 SAWYER RD  
BOLTON, MA 01740

JEFFREY EDWARD J  
JEAN A JEFFREY  
533 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

ODELL JEFFREY S & MELISSA D  
14 COLLINS RD  
BERLIN, MA 01503

ABLAVSKY LEONID M & EDITH T, TR  
THE ABLAVSKY 2011 REVOCABLE TR  
525 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

~~OLD FARM REALTY TRUST~~ *town of Bolton Acting*  
~~P O BOX 257~~ *Bolton Conservation Comm. 1*  
~~BERLIN, MA 01503~~ *663 Main St*  
*Bolton MA 01740*

LAWTON JUDITH & RICHARD INNERA  
519 WATTAQUADOCK HILL RD  
BOLTON, MA 01740

CHRISTENSEN CHRISTOPHER S & BE  
197 LANCASTER RD  
BERLIN, MA 01503-1025

VICKERY JENIFER  
P O BOX 200805  
BOSTON, MA 02120-0014

TRIPP SUSAN E & RICHARD L  
SANDRA J TRIPP  
505 WATTAQUADOCK HILL RD  
BOLTON, MA 01740



## CERTIFIED LIST OF ABUTTERS

### SUBJECT PROPERTY:

BOLTON MAP#

3-A-44

BOLTON TOWNLINE PORTION

OWNER

BOLTON, TOWN OF

CO-OWNER

MAILING ADDRESS

663 MAIN ST

BOLTON MA

01740

### PROPERTIES WITHIN 150' OF SUBJECT:

M-B-L	STR#	STREET	BOOK	PAGE	OWNER	CO-OWNER	MAILING ADDRESS		
23-18-0		LANCASTER RD	2064		246 BOLTON, TOWN OF		663 MAIN ST	BOLTON	MA 01740
23-20-0	187	LANCASTER RD	21905		136 STONE, PHYLLIS A		152 ALLEN RD	BERLIN	MA 01503
23-22-0	185	LANCASTER RD	3173		429 CLINTON FISH & GAME PROTECTIVE ASSOC	STONE, GARY H	185 LANCASTER RD	BERLIN	MA 01503
23-17-1	197	LANCASTER RD	43012		126 CHRISTENSEN, CHRISTOPHER S & BETH L		197 LANCASTER RD	BERLIN	MA 01503
23-19-0	191	LANCASTER RD	42116		88 REZAC, PETER A & SHANA L		191 LANCASTER RD	BERLIN	MA 01503
23-23-10	14	COLLINS RD	38300		90 O'DELL, JEFFREY S & MELISSA D		14 COLLINS RD	BERLIN	MA 01503
23-23-1	12	COLLINS RD	45123		40 CLISHAM, PATRICK J & SUZANNE M		12 COLLINS RD	BERLIN	MA 01503

CERTIFIED BY:

*Gary Peterson*

DATE:

*5/2/13*



## Notice of Intent Narrative

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## **1.0 INTRODUCTION**

ESS Group, Inc. (ESS) and Lenard Engineering, Inc. (Lenard) have prepared this Notice of Intent (NOI) on behalf of the Town of Bolton to lower the crest of the Fyfeshire Pond Dam on Fyfeshire Pond. Fyfeshire Pond Dam is an earthen filled dam with stone masonry walls on both upstream and downstream faces. The existing dam spillway is concrete. The dam was determined to be in an Unsafe Condition based upon a 2008 state-required inspection. On March 13, 2009, the Massachusetts Department of Conservation and Recreation, Office of Dam Safety issued Orders to rectify the condition. After additional studies and discussions with the Office of Dam Safety, the Town of Bolton committed to lowering the dam height to reduce the hazard to residents and properties downstream of the dam and remove it from the jurisdiction of the Commonwealth. The *Fyfeshire Dam Phase II Investigations Report* (Phase II Report) (Fuss and O'Neill, 2009) provides the background information on the dam and an evaluation of the alternatives that were considered for repair.

Since the work to lower the dam crest will occur within a jurisdictional wetland resource area, this filing is made pursuant to the Massachusetts Wetlands Protection Act (WPA), (M.G.L. c. 131 § 40) and its implementing regulations (310 CMR 10.00) as well as the Town of Bolton Wetlands Bylaw (Section 1.18.7) and its implementing regulations. The work associated with the project is eligible to be reviewed as a limited project in accordance with 310 CMR 10.53(3)(i) for the repair and improvement of a dam.

## **2.0 EXISTING CONDITIONS AND WETLAND RESOURCE AREAS**

Fyfeshire Pond Dam is located in a shallow cove at the southeastern end of Fyfeshire Pond, in the Town of Bolton (Figure 1). The watershed of Fyfeshire Pond is approximately 1.11 square miles of land characterized as pasture with significant areas of residential development. The outflow of water at the dam feeds a perennial stream, flowing to the southwest. The entire system is located in the headwaters of North Brook, a tributary of the Assabet River, part of the Sudbury-Assabet-Concord watershed which ultimately flows into the Merrimack River in Lowell.

The pond is approximately 9.1 acres in area and is fed by an unnamed perennial stream to the northeast, as well as several intermittent streams. The northern portion of Fyfeshire Pond is relatively shallow, with extensive areas of emergent vegetation, while a deeper pool exists upstream of the dam at the southern end. Areas upland of the pond consist of hardwood transition forest, characterized by species including red oak (*Quercus rubra*), beech (*Fagus grandifolia*), white ash (*Fraxinus americana*), sugar maple (*Acer saccharum*), striped maple (*Acer pensylvanicum*), maple-leaved viburnum (*Viburnum acerfolium*), witch hazel (*Hamamelis virginiana*), clubmoss (*Lycopodium* sp.), hay-scented fern (*Dennstaedtia punctilobula*), and Canada mayflower (*Maianthemum canadense*). Wetland areas near the pond and stream consist of alluvial red maple swamps, with species including red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), arrow-wood (*Viburnum recognitum*), skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmunda cinnamoma*), false hellebore (*Veratrum viride*), sedges (*Carex* spp.), jack-in-the-pulpit (*Arisaema triphyllum*), and horsetail (*Equisetum* sp.).

Several inspections of Fyfeshire Pond Dam between 2007 and 2009 identified structural deficiencies to the spillway and stonewall embankments on both the upstream and downstream faces. Debris and sediment buildup in the cove, erosion of surrounding banks, as well as the growth of large trees near the dam also threaten to further compromise its structural integrity. The planned project will make necessary improvements to the structure of the dam, preserving the conditions of the pond and stream, and protecting downstream residents from flood risk.

Several wetland resource areas that fall under the jurisdiction of the WPA occur at the project site. These resource areas include the following: land under water (LUW), inland bank, bordering vegetated wetland (BVW), riverfront area and bordering land subject to flooding (BLSF). Under the Town of Bolton Wetlands Bylaw, an Adjacent Wetland Resource Area and an Adjacent Upland Resource Area also falls under the Conservation Commission jurisdiction. Wetland resource areas at the site were delineated by Fuss and

O'Neill in accordance with the methods described in MassDEP's *Delineating Bordering Vegetated Wetlands* (2005) and the criteria outlined in 310 CMR 10.55 (Fuss and O'Neill 2009).

## **2.1 Land Under Water**

Per 310 CMR 10.56, the land under Fyfreshire Pond is considered LUW and occurs below the mean annual low water level of the pond. The LUW within the pond provides substrate for plant growth and habitat for benthic organisms, many of which provide food for fishes, waterfowl, and other wildlife.

## **2.2 Inland Bank**

Inland bank as defined at 310 CMR 10.54 is the band of vegetated or unvegetated area confining water within a pond or stream under normal conditions and during most storms. The lower boundary of this resource area is defined by the mean annual low flow level of the pond or stream. The upper boundary is set at the first break in the slope, or, if lower, the mean annual flood level. By confining most floodwaters, banks help to maintain the temperature and depth of waters, protecting fisheries and wildlife from disturbance that may alter the suitability of habitat. Depending on the topography, presence and community of plants, and soil structure of the bank, it may also provide food and habitat for aquatic and/or terrestrial organisms. A broad band of inland bank area surrounds Fyfreshire pond and runs along the sides of the stream running from Fyfreshire Dam (Fuss and O'Neill 2009).

## **2.3 Bordering Vegetated Wetlands**

BVW as defined in 301 CMR 10.55 includes wet meadows, marshes, swamps, and bogs. The plants and soils of these areas serve to buffer waterbodies by retaining and/or removing sediments and pollutants (e.g., heavy metal compounds, nutrients) from runoff or floods which may otherwise contaminate the water. Four zones of BVW were delineated in the area surrounding the Fyfreshire Dam, including the area surrounding the pond as well as areas along the stream downstream of the dam (Fuss and O'Neill 2009).

## **2.4 Riverfront Area**

Riverfront area as defined in 310 CMR 10.58 is the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away. The soils and vegetation of the riverfront area contribute to water quality maintenance by filtering nutrients and pollutants from non-point source pollution. The vegetation and topography of riverfront area also supports wildlife that use the area as habitat. The stream running from Fyfreshire Dam is perennial and therefore has an associated riverfront area. Riverfront area begins on the downstream side of the dam, after the water passes over the spillway. The riverfront resource area begins at the inland bank line and extends 200 feet outward.

## **2.5 Bordering Land Subject to Flooding**

The limit of BLSF is the lateral extent of the 100-year floodplain, which begins upgradient of the top of the inland bank. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the project vicinity was reviewed to determine whether any portions of the site are BLSF (Figure 2). Most of the upland area surrounding Fyfreshire Pond and the perennial stream flowing from Fyfreshire Dam through Bolton and into Berlin lies within the 100-year floodplain, designated as flood zones A and AE.

## **2.6 Buffer Zone and Adjacent Upland Resource Area**

The inland bank and BVW along the banks of the pond and outlet have an associated 100-foot buffer zone which begins at the edge of the resource area boundary. Work which occurs within the buffer zone is subject to the jurisdiction of the Bolton Conservation Commission. The Bolton Wetlands Bylaw defines the first 25 feet of the buffer zone as the Adjacent Wetland Resource Area and remaining 75 feet of the buffer zone as Adjacent Upland Resource Area (AURA).

## **2.7 Massachusetts Natural Heritage and Endangered Species Data Review**

Massachusetts Natural Heritage and Endangered Species Program (NHESP) databases were reviewed to determine whether any portion of the proposed project area is mapped as rare species habitat. Fyfreshire Pond Dam lies within Estimated Habitat 485 and Priority Habitat 1305 (Figure 3). There are no certified vernal pools near the Project area.

Based on previous correspondence with NHESP, the area is mapped as listed-species habitat for the Blanding's Turtle (*Emydoidea blandingii*), which use both wetland and upland habitats. According to the Phase II Report (Fuss & O'Neill, 2009), NHESP also stated that removal of the dam or creating a breach in the dam such that it no longer impounds water is compatible with Blanding's Turtle, subject to slow drawdown of the impoundment only during seasons when the turtles are active (May 15 through October 1).

NHESP correspondence also included information on fisheries in Fyfreshire Pond. Fourteen species of fish have been found during surveys, including American eel (*Anguilla rostrata*), blacknose dace (*Rhinichthys atratulus*), bluegill (*Lepomis macrochirus*), native brook trout (*Salvelinus fontinalis*), brown bullhead (*Ameiurus nebulosus*), reproducing brown trout (*Salmo trutta*), chain pickerel (*Esox niger*), fallfish (*Semotilus corporalis*), golden shiner (*Notemigonus crysoleucas*), largemouth bass (*Micropterus salmoides*), pumpkinseed (*Lepomis gibbosus*), redbfin pickerel (*Esox americanus*), white sucker (*Catostomus commersoni*) and yellow bullhead (*Ameiurus natalis*). The NHESP correspondence also stated that the brook is annually stocked with brook trout, brown trout, rainbow trout (*Oncorhynchus mykiss*) and tiger trout (*Salmo trutta x Salvelinus fontinalis*).

## **3.0 PROJECT DESCRIPTION**

The project proposes to cut down approximately four feet of the stone walls and earthen fill across the entire length of the dam. Construction on the dam will be conducted primarily in the dry. A temporary cofferdam will be installed on the upstream side of the dam and a clean water bypass will be set up to maintain downstream water flow (Attachment A). Erosion controls will be set up at the limit of the work area prior to the start of work as shown on the Project Plans prepared by Lenard Engineering (Attachment A).

The existing steel footbridge, currently closed, will be removed. The existing spillway will be removed and a new concrete spillway with adequate capacity to pass a 100-year storm event will be cast in place. The exposed top of the remaining crest will be protected with a permanent turf reinforcement mat. The ends of the dam will be sloped to meet the new crest. Both upstream and downstream water approaches will be graded and armored against erosion. Under the new configuration, the pond will remain at the existing level and there will be no change in the amount of water discharging from the pond. Access across the stream will be preserved; the existing trail will be relocated and will consist of stepping stones and the old slab.

The dam will be accessed via the use of a temporary access road. The temporary access road will begin at the end of the driveway of a private residence at 14 Collins Road in the neighboring town of Berlin. From the end of the driveway, the access road will follow a route to the south end of the pond. The route will be widened and cleared of vegetation only to the extent that is needed to allow construction equipment access to the dam.

After completion of work on the dam, all temporarily disturbed areas will be seeded with a native seed mix. Disturbed wetland areas will be seeded with a native wetland seed mix (available from New England Wetland Plants, Inc. or comparable supplier) and planted with three to four-foot tall northern arrowwoods (*Viburnum dentatum*) (Attachment B). Disturbed areas along the temporary access road and areas adjacent to the pond will be restored with a native seed mix for erosion control/restoration (available from

New England Wetland Plants, Inc. or comparable supplier) (Attachment B). The temporary access road will also be planted with a mix of native shrubs and trees described in Section 4.6.

#### **4.0 REGULATORY COMPLIANCE AND MITIGATION**

The work on the dam is eligible to be reviewed under the limited project provisions at 310 CMR 10.53(3)(i) and therefore must meet the resource area performance standards to the maximum extent possible. The project's general compliance with the resource area performance standards are outlined in the following section.

##### **4.1 Land Under Water**

The relevant performance standards for LUW are found at 310 CMR 10.56(4). Approximately 34 square feet of LUW will be permanently impacted for the placement of rip-rap in front of the dam. This represents a very small impact when compared to the overall size of the 9.1-acre Fyfreshire Pond. The water carrying capacity and ground and surface water quality is not expected to be impacted as a result of this alteration to LUW. The capacity of Fyfreshire Pond to provide habitat for fisheries and other aquatic life is not anticipated to be diminished as a result of the project. Lowering the dam crest will maintain the existing pond water elevation so that the pond can continue to provide habitat for aquatic life.

##### **4.2 Inland Bank**

The relevant performance standards for inland bank are found at 310 CMR 10.54(4). Approximately 15 linear feet of bank will be impacted as a result of the project. The bank on the downstream side of the dam will be altered as a result of grading and placement of rip-rap. The physical stability of the bank and water carrying capacity of the channel are not expected to be impacted as a result of the project. Physical bank stability of the bank will be improved as a result of armoring. The bank alteration is not anticipated to negatively impact ground or surface water quality.

##### **4.3 Bordering Vegetated Wetlands**

The relevant performance standards for BVW are found at 310 CMR 10.55(4). There will be no permanent impact to BVW associated with the work on the dam. Any wetland soils that are temporarily disturbed will be segregated and stockpiled separately from any disturbed upland soils. Temporarily disturbed BVW will be seeded with a native wetland seed mix and planted with native wetland shrubs as described in Section 3.0, allowing in-situ restoration of wetlands. Existing wetland soils will be 'puddled' and graded over any rip-rap that is placed in the BVW prior to seeding. The temporary cofferdam that is located in BVW on the upgradient side of the dam will be removed after construction and wetland will be restored. The BVW at the site is anticipated to continue to provide wildlife habitat, flood control and pollution attenuation functions following completion of construction.

##### **4.4 Riverfront**

The relevant performance standards for riverfront area are found at 310 CMR 10.58(4). Although portions of the riverfront area will be graded, the placement of rip-rap on the downstream side of the dam is the only permanent alteration in the riverfront area associated with the project. Disturbed riverfront area will be seeded and restored with native vegetation.

Seven different alternatives were considered for the dam repair/replacement in the Phase II Report. Although the alternatives were not specifically completed for a riverfront area impact analysis, the alternatives did consider overall impacts to BVW and other wetland resource areas and are therefore applicable. The proposed alternatives would each have varying impacts on riverfront area downstream of the dam. A brief summary is provided below for compliance with 310 CMR 10.58(4).

The seven alternatives included:

### 1.1 Cast-In Place Spillway with Inlet and Reconstructed Stone Walls

### 1.2 Precast Spillway with Weir Boards and Reconstructed Stone Walls

### 2.1 Cast-in-place Spillway with Buttressing Downstream Face

### 2.2 Precast Spillway with Buttressing the Downstream Face

### 3.0 Partial Removal

### 4.0 Complete Removal

### 5.0 Lower Dam Crest

Alternatives 1.1 and 1.2 both involved permanently filling small areas of BVW within the riverfront area downstream of the dam, which would have required mitigation. Alternatives 2.1 and 2.2 both involved widening the dam on the downstream side which would lead to greater fill in BVW and riverfront area than Alternatives 1.1 and 1.2. Alternatives 3.0 and 4.0 would have greater temporary impacts to BVW and riverfront area downstream of the dam while providing valuable long-term benefits. Alternative 5.0 involved comparable or reduced impacts to riverfront areas when compared to the other alternatives. Alternative 5.0 does not involve any permanent fill within BVW in the riverfront area. Alternative 5.0 was ultimately selected as the preferred alternative. See the Phase II Report for additional information on the alternatives analysis.

### **4.5 Bordering Land Subject to Flooding**

The relevant performance standards for BLSF are found at 310 CMR 10.57(4). Approximately 221 square feet of BLSF will be permanently impacted for the placement of rip-rap on the downstream side of the dam. The remaining work in BLSF for access and minor grading will lead to temporary impacts. The minimal amount of rip-rap placed in BLSF is not anticipated to have significant impact on flood storage capacity. As noted in the Addendum to the Phase II Report (Fuss and O'Neill, 2012), reduction of the dam crest will increase the capacity of the dam to pass storm flows safely. The peak pond elevation during storms will be reduced, with a subsequent reduction in the volume of flood waters stored. Implementing the proposed project will reduce flood impacts on downstream areas if the dam were to fail.

### **4.6 Bolton Wetland Bylaw Compliance**

All areas within 25-feet of wetland resource area boundaries as well as areas within the AURA will be restored with native seeding following completion of work. Disturbed soils within the AURA will be segregated from wetland soils and stockpiled separately so these soils can be used for plantings. The recommended native seed mix for areas outside BVW is a restoration mix for dry sites and is provided in Attachment B. Disturbed areas (with exception of areas where turf reinforcement mats are being used), will also be planted with native shrubs and trees (Table 1). Fast-growing pioneer shrubs and trees were selected to match species that have been documented at the site (Fyfeshire Conservation Land Inventory, 1997). These species are expected to become established relatively quickly and will supplement natural colonization of vegetation in disturbed areas.

**Table 1. Recommended plant species list for disturbed upland areas.**

Scientific Name	Size	Spacing	Type
<i>Hamamelis virginiana</i>	2-3 feet	3-5 feet on center	Shrub
<i>Viburnum acerfolium</i>	2-3 feet	3-5 feet on center	Shrub
<i>Betula populifolia</i>	3-4 feet	3-5 feet on center	Tree
<i>Acer rubrum</i>	3-4 feet	3-5 feet on center	Tree



The combination of native plantings and natural re-vegetation is expected to provide upland habitat that will function to buffer adjacent wetland areas. The area should be restored within two growing seasons.

#### **4.6.1 Dam Access Alternatives**

The Town of Bolton reviewed several alternatives to access Fyfreshire Dam and sought to choose the alternative that minimized impacts to wetland resource areas. These alternatives included the following:

- Access from Wattaquaddock Hill Road
- Access from Lancaster Road (Two options)
- Access from end of private residence driveway, 14 Collins Road (Preferred Alternative)

The Preferred Alternative was selected because it minimizes the distance of the AURA that will be crossed and impacted for access to the dam. Access from Wattaquaddock Hill Road and Lancaster Road would both require crossing greater distances through AURA, leading to greater disturbance.

The Wattaquaddock Hill Road access was ruled out because it would have involved the construction of a wider road over the dam at the northern end of the pond. This access road construction would have led to significant fill in wetland resource areas. In addition, extensive forest clearing would have been required to construct the temporary road through the AURA near the pond.

The Lancaster Road options were ruled out due to a combination of landowner issues and the extensive forest clearing near the bank of the pond that would have been required for the temporary access road. Although some vegetation clearing will be required for the Preferred Alternative, it is much lower than the clearing levels that would have been required under the alternative routes.

#### **4.6.2 Best Management Practices for Turf Reinforcement Mats**

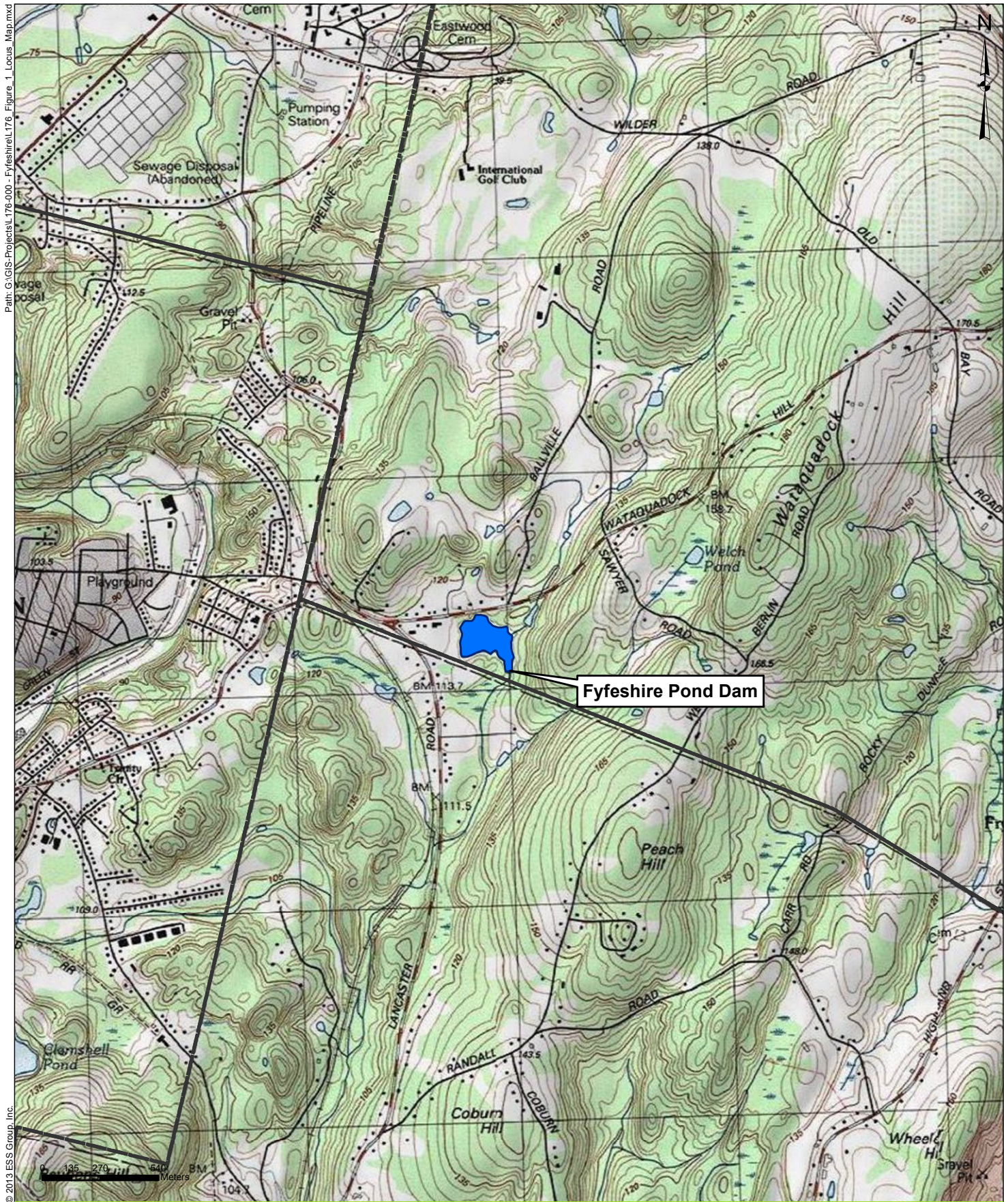
The following best management practices will be implemented to maintain the permanent turf reinforcement mats that are placed in disturbed areas around the dam. Some of these mats will be placed within 25 feet of a wetland resource area.

- Mats will be checked for deficient areas at least once per year and after heavy flows. Mats will be checked for damage, low areas, animal holes, bare or eroded spots, and areas of improper drainage.
- The crest and slopes will be mowed at least twice a year. The mowing prevents the channel from restricting water flow and will encourage a thick erosion resistant stand of vegetation.
- Damaged mat will be replaced in accordance with the manufacturer's installation suggestions.
- Low areas and areas with poor drainage should be re-graded with similar material. In areas of deep erosion (more than 4 inches), backfill with gravel borrow (such as for roadways) and compact. Top with loam and reseed with native restoration seed mix (Attachment B).
- All bare or eroded areas will be repaired and reseeded as soon as possible with native restoration seed mix (Attachment B). Undesirable species of vegetation including shrubs, saplings, and bushes will be removed. Native shrubs will not be planted in areas where the turf reinforcement mat is used. Woody vegetation will be removed from the dam area before it grows to more than 3 inches in trunk diameter.
- Remove silt from the surface of the permanent TRM. If there is a low spot under the silt, repair it and re-establish vegetative cover.

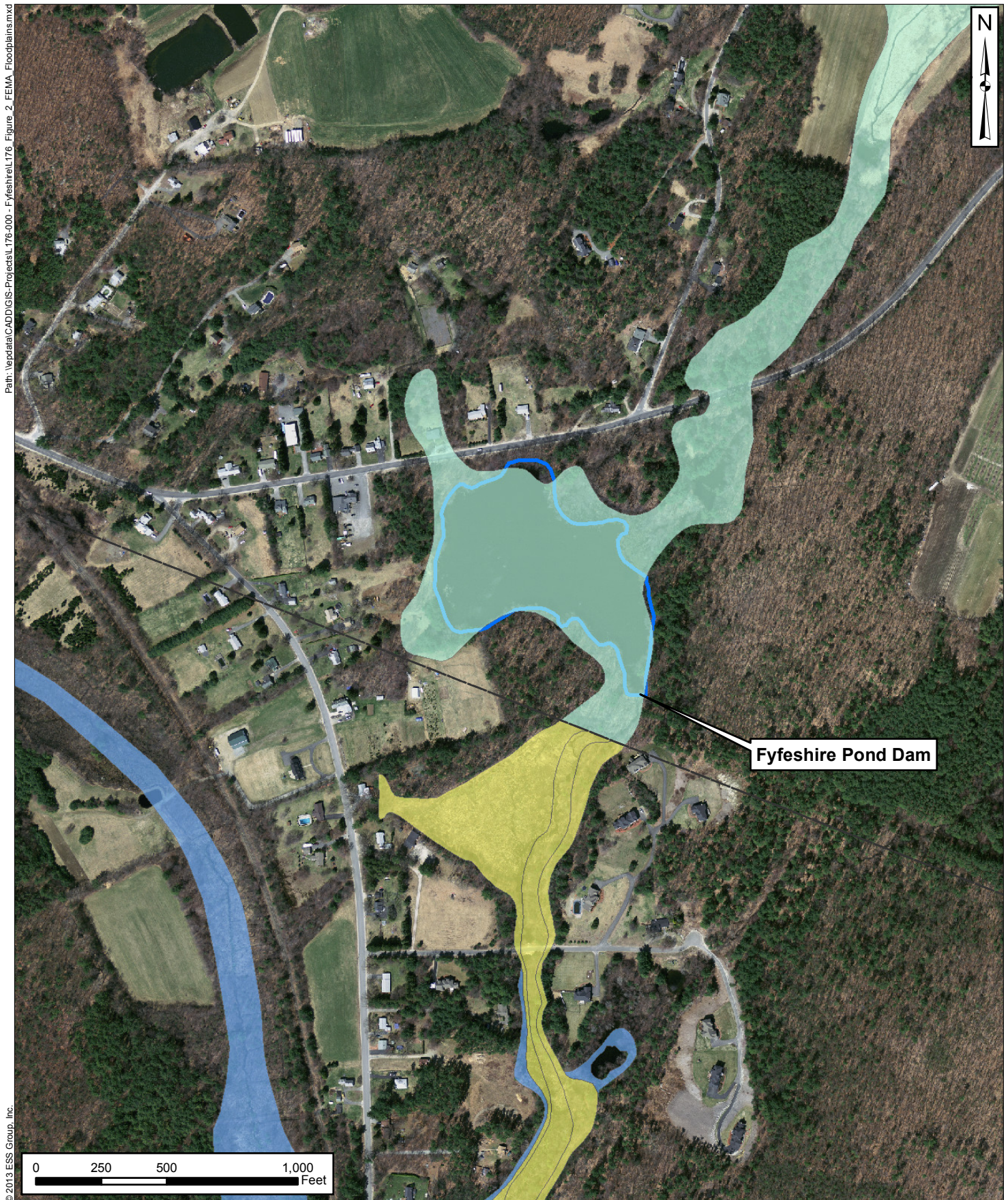
## Figures

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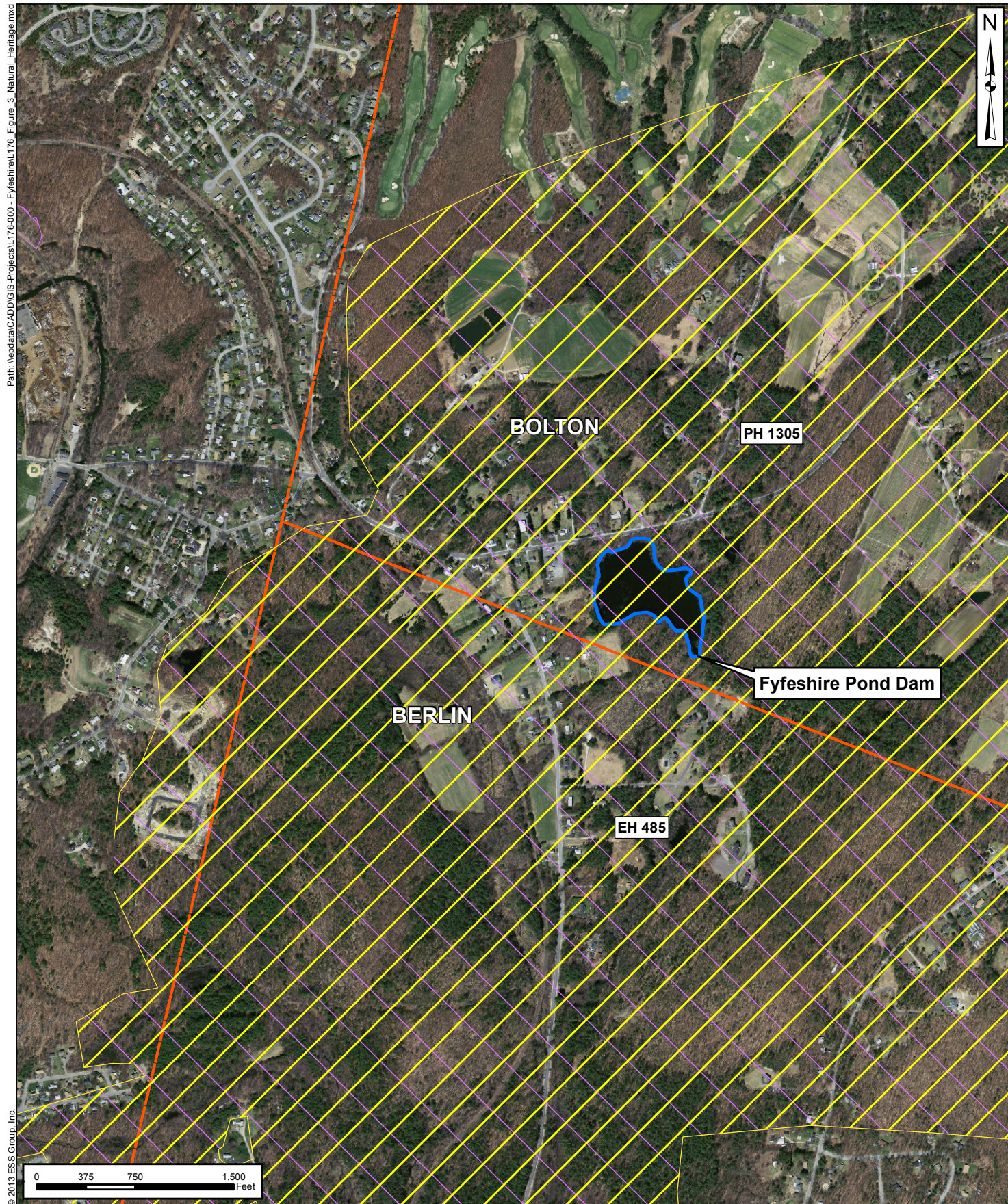












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### Fyeshire Pond Dam Bolton, Massachusetts

1 inch = 1,000 feet

Source: 1) MASSGIS, Orthophotos (2008),  
NHESP Habitat data (2008),  
Vernal Pools data (2011)

### Legend

- Certified Vernal Pools
- Estimated Habitat
- Priority Habitat
- Pond Area
- Municipal Boundary

### Priority and Estimated Habitats of Rare Species

**Figure 3**



## **Attachment A**

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**Project Plans  
(Under separate cover)**

## **Attachment B**

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### **Recommended Seed Mixes**



# ***NEW ENGLAND WETLAND PLANTS, INC***

820 WEST STREET, AMHERST, MA 01002  
PHONE: 413.548.8000 FAX: 413.549.4000  
EMAIL: [INFO@NEWP.COM](mailto:INFO@NEWP.COM) WEB ADDRESS: WWW.NEWP.COM

## **New England Erosion Control/Restoration Mix** **For Dry Sites**

BOTANICAL NAME	COMMON NAME	IND.
<i>FESTUCA RUBRA</i>	CREEPING RED FESCUE	FACU
<i>ELYMUS CANADENSIS</i>	CANADA WILD RYE	FACU+
<i>LOLIUM MULTIFLORUM</i>	ANNUAL RYEGRASS	NI
<i>LOLIUM PERENNE</i>	PERENNIAL RYEGRASS	NI
<i>BOUTELOUA GRACILIS</i>	BLUE GRAMA	NI
<i>SCHIZACHYRIUM SCOPARIUM</i>	LITTLE BLUESTEM	FACU
<i>SORGHASTRUM NUTANS</i>	INDIAN GRASS	UPL
<i>AGROSTIS SCABRA</i>	ROUGH BENTGRASS/TICKLEGRASS	FAC
<i>AGROSTIS PERENNANS</i>	UPLAND BENTGRASS	FACU

PRICE PER LB. \$10.00

REQ. QUANTITY: 5 LBS.

**TOTAL** \$50.00

APPLY: 35 LBS/ACRE

MINIMUM QUANTITY: 5 LBS

The New England Erosion Control/Restoration Mix For Dry Sites provides an appropriate selection of native and naturalized grasses to ensure that dry and recently disturbed sites will be quickly revegetated and the soil surface stabilized. It is an appropriate seed mix for road cuts, pipelines, steeper slopes, and areas requiring quick cover during the ecological restoration process. The

mix may be applied by hydro-seeding, by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper soil-seed contact. Best results are obtained with a Spring or late Summer seeding. Late Spring through Mid-Summer seeding will benefit from a light mulching of weed-free straw to conserve moisture. If conditions are drier than usual, watering will be required. Fertilization is not required unless the soils are particularly infertile. Preparation of a clean weed free seed bed is necessary for optimal results.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged.

Price is \$/bulk pound, FOB warehouse, plus S&H and applicable taxes.



# NEW ENGLAND WETLAND PLANTS, INC

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## New England Wetmix (Wetland Seed Mix)

BOTANICAL NAME	COMMON NAME	IND.
CAREX VULPINOIDEA	FOX SEDGE	OBL
CAREX LURIDA	LURID SEDGE	OBL
CAREX SCOPARIA	BLUNT BROOM SEDGE	FACW
VERBENA HASTATA	BLUE VERVAIN	FACW
SCIRPUS ATROVIRENS	GREEN BULRUSH	OBL
CAREX LUPULINA	HOP SEDGE	OBL
BIDENS CERNUA	NODDING BUR MARIGOLD	OBL
CAREX COMOSA	BRISTLY/COSMOS SEDGE	OBL
CAREX CRINITA	FRINGED SEDGE	OBL
JUNCUS EFFUSUS	SOFT RUSH	FACW+
SCIRPUS CYPERINUS	WOOL GRASS	FACW
GLYCERIA GRANDIS	AMERICAN MANNA GRASS	OBL
EUPATORIUM MACULATUM	SPOTTED JOE PYE WEED	FACW
EUPATORIUM PERFOLIATUM	BONESET	FACW
ALISMA SUBCORDATUM	MUD PLANTAIN	OBL
ASTER PUNICEUS	PURPLE STEMMED ASTER	OBL
GLYCERIA CANADENSIS	RATTLESNAKE GRASS	OBL
SCIRPUS VALIDUS	SOFT STEM BULRUSH	OBL
ASCLEPIAS INCARNATA	SWAMP MILKWEED	OBL
MIMULUS RINGENS	SQUARE STEMMED MONKEY FLOWER	OBL

PRICE PER LB. \$125.00

REQ. QUANTITY: 1 LBS.

**TOTAL** \$125.00

APPLY: 18 LBS/ACRE

MINIMUM QUANTITY: 1 LBS

The New England Wetmix (wetland seed mix) contains a wide variety of native seeds which are suitable for most wetland restoration sites that are not permanently inundated. All species are best suited to moist disturbed ground as found in most wet meadows, scrub shrub, or forested wetland restoration areas. This mix is well suited for detention basin borders, and the bottom of detention basins not generally under standing water. The seeds will not germinate under inundated conditions. During the first year of growth, several

species will produce seeds, while other species will produce seeds after the second growing season. Not all species will grow in all wetland situations. This mix is composed of the wetland species most likely to grow in created/restored wetlands and should produce more than 75% ground cover in two full growing seasons. Always apply on clean bare soil. The mix may be applied by hydro-seeding, by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper seed to soil contact. Best results are obtained with a spring seeding. Late spring and early summer seeding will benefit with a light mulching of clean weed-free straw to conserve moisture. If conditions are drier than usual, watering may be required. Late fall and winter dormant seeding require an increase in the seeding rate. Fertilization is not recommended. Preparation of a clean weed free seed bed is necessary for optimal results.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability.  
The design criteria and ecological function of the mix will remain unchanged.

Price is \$/bulk pound, FOB warehouse, plus S&H and applicable taxes.