



REC

Rimmer Environmental Consulting, LLC

30 Green Street ◦ Newburyport, MA 01950 ◦ Tel 978-463-9226 ◦ Fax 978-463-8716

July 2, 2015

Conservation Commission
Town Hall
7A Spofford Road
Boxford, MA 01921

**Re: iFarm Notice of Intent
Stream Crossing Improvement and Hydrant Installation
55 Towne Road**

Dear Conservation Commission:

Please find enclosed one original and seven (7) copies of a Notice of Intent filed by REC on behalf of iFarm, LLC for a proposed stream crossing improvement and installation of a hydrant for fire suppression. Enclosed, please find filing fees in the amount of \$317.50 for the local portion of the state filing fee and \$100 for the local bylaw fee. In addition, to be included as a separate attachment provided by project engineer ASB Design, you will be provided:

Project site plans, sheets C1-C12
Project Data Report dated July 2, 2015
Geotechnical Engineering Report – Proposed Bridge Abutments
MassDEP Stormwater Management Report

We look forward to the opportunity to discuss this project with you at your next scheduled public hearing on July 16, 2015. In the meantime, should you have any questions or require additional information, please do not hesitate to contact me.

Very truly,

Mary Rimmer, M.A., P.W.S.
Principal/S. Wetland Scientist

C: Christine Barendsfeld
Thad Berry, iFarm, LLC



WPA Form 3 – Notice of Intent

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

MassDEP File Number
Document Transaction Number
Boxford
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):

<u>55 Towne Road</u>	<u>Boxford</u>	<u>01921</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>42.39' 28.332"N</u>	<u>71.01' 30.684"W</u>	
d. Latitude	e. Longitude	
<u>31</u>	<u>2-16A</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Christine</u>	<u>Barensfeld</u>	
a. First Name	b. Last Name	
<u>iFarm, LLC</u>		
c. Organization		
<u>55 Towne Road</u>		
d. Street Address		
<u>Boxford</u>	<u>MA</u>	<u>01921</u>
e. City/Town	f. State	g. Zip Code
<u>617-803-1624</u>	<u>c.barensfeld@verizon.net</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

<u></u>	<u></u>	
a. First Name	b. Last Name	
<u></u>		
c. Organization		
<u></u>		
d. Street Address		
<u></u>	<u></u>	<u></u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Mary</u>	<u>Rimmer</u>	
a. First Name	b. Last Name	
<u>Rimmer Environmental Consulting, LLC</u>		
c. Company		
<u>30 Green Street</u>		
d. Street Address		
<u>Newburyport</u>	<u>MA</u>	<u>01950</u>
e. City/Town	f. State	g. Zip Code
<u>978-463-9226</u>	<u>978-463-8716</u>	<u>rimmerenv@verizon.net</u>
h. Phone Number	i. Fax Number	j. Email address

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

<u>610</u>	<u>292.50</u>	<u>317.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

Removal of existing culvert and construction of a bridge to span intermittent stream, installation of hydrant and supporting fire access road for fire suppression and driveway re-surfacing.

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

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. 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)
- 310 CMR 10.53(4) resource enhancement : (stream crossing improvement) and 310 CMR 10.53(3)(I) construction of water dependent uses (hydrant)

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(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:

Essex

a. County

28304

c. Book

b. Certificate # (if registered land)

262

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.



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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 checked="" type="checkbox"/> Bank	122 1. linear feet	122 2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	215 1. square feet	215 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): <input type="checkbox"/> 25 ft. - Designated Densely Developed Areas only <input type="checkbox"/> 100 ft. - New agricultural projects only <input type="checkbox"/> 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.



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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

one improved stream crossing

b. number of replacement stream crossings



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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 Notice of Intent – 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**

MassGIS _____

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.1.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	.08% or .002 acres
	percentage/acreage
(b) outside Resource Area	5% or .05 acres
	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 <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/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.



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

(c) MESA filing fee (fee information available at 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

(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, 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 _____

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:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

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.



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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.

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.



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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.

Culvert Reconstruction and Hydrant Installation

a. Plan Title

ASB Design Group, LLC

Thad Berry

b. Prepared By

c. Signed and Stamped by

7-1-15

1"=10'

d. Final Revision Date

e. Scale

Sheets C1-C12

7-1-15

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



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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:

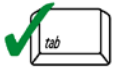
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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.



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:

55 Towne Road Boxford
 a. Street Address b. City/Town
 _____ \$292.50
 c. Check number d. Fee amount

2. Applicant Mailing Address:

Christine Barensfeld
 a. First Name b. Last Name
 iFarm, LLC
 c. Organization
 55 Towne Road
 d. Mailing Address
 Boxford MA 01921
 e. City/Town f. State g. Zip Code
 617-803-1624 c.berensfeld@verizon.net
 h. Phone Number i. Fax Number 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).

Notice of Intent
iFarm Stream Crossing Improvement and Dry Hydrant Installation
55 Towne Road
Boxford, MA

1.0 Project Location

The proposed project site is located at the end of the public portion of Towne Road on an approximately 2.4 acre parcel that is part of iFarm, LLC, as indicated on Figures 1 and 2 below. The existing driveway crosses an intermittent stream that flows southerly out of a small pond and toward Fish Brook. iFarm is an historic farm and homestead dedicated to the restoration of historical and agricultural resources of the original Towne Farm located at this site.

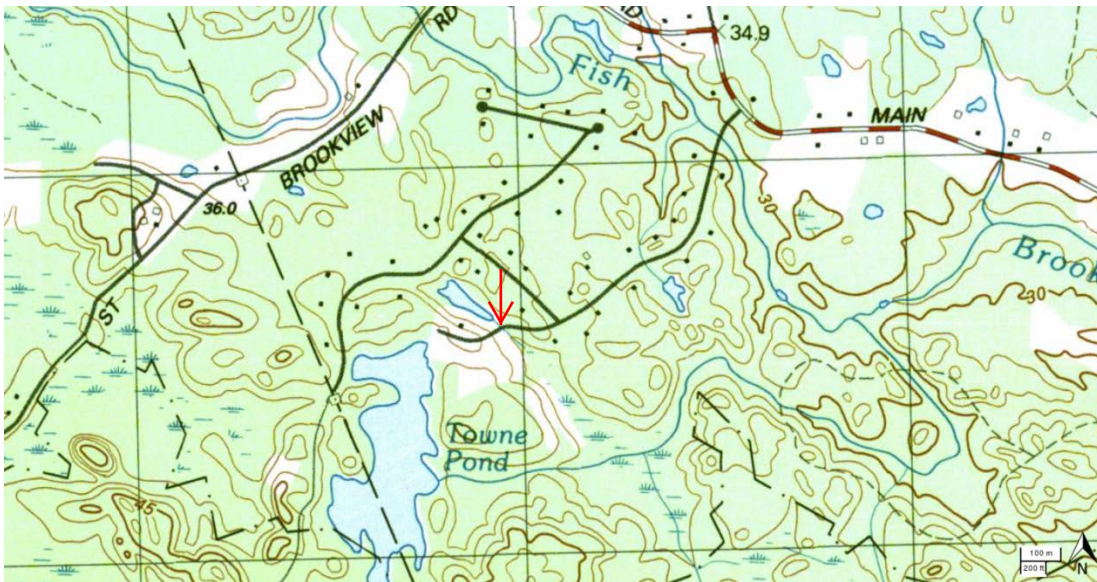


Fig. 1: USGS Locus

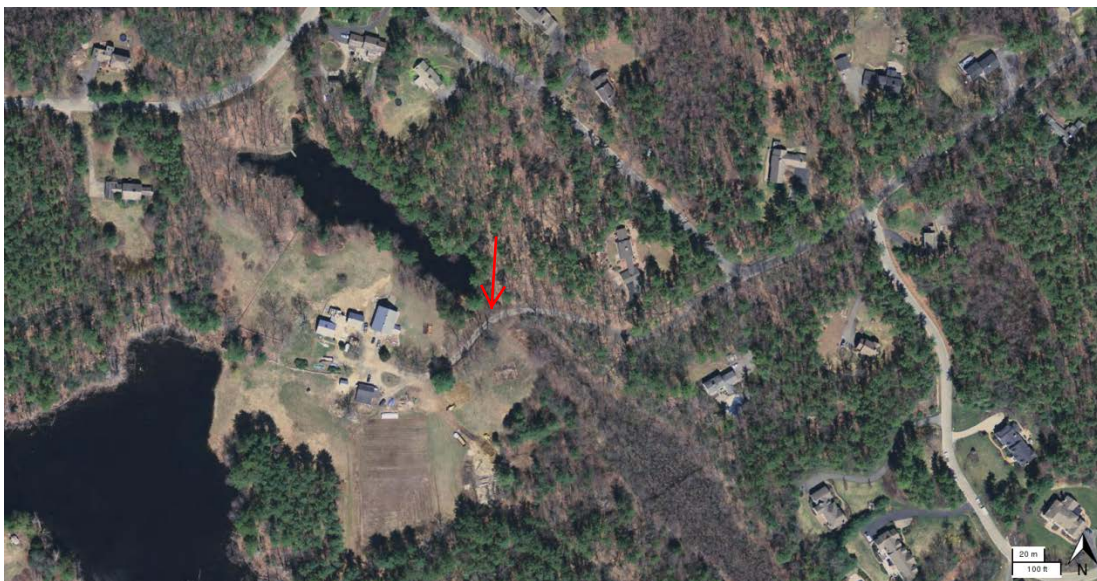


Fig. 2: 2013 Orthophoto (massGIS)

2.0 Project Description

2.1 Improvements to the existing stream crossing at the driveway entrance

The present driveway access to iFarm includes a former portion of the public way known as Towne Road. iFarm purchased this portion of the road and it serves now as a driveway and the sole access to the property. East of the driveway is a small, unnamed pond containing a concrete dam estimated to have been constructed in the late 1960's. During high flows, the dam overtops and flows into a small spillway channel, then into a 48-foot long, 15-inch diameter plastic culvert that conveys flow under the driveway to the natural channel on the south side of the drive. Following heavy flooding which occurred following the Mother's Day Storm in May of 2006, the pond overtopped the dam and the driveway was washed out. The Town of Boxford, then owner of this portion of Towne Road, repaired the road and installed the present culvert. However, there is concern that this culvert is inadequate to handle future flood events and that the existing driveway could again be washed out, restricting access to the property.

In order to address this problem, the applicant proposes to remove the existing culvert, construct a 24 foot wide aluminum bridge containing a 14-foot wide arch span bridge across the stream, and restore the natural stream channel under the driveway. The bridge will create 6-feet of headroom from the streambed. This work will minimize the potential for future storm damage from flood events, restore a natural stream bottom and bring the site into compliance with current Stream Crossing Standards recommended by MassDEP. The channel is proposed to be constructed with stone and boulders available on site and the channel configuration is indicated on the attached Sheet C-8. The project will result in some temporary impact during construction, but will provide long term benefits to flood control, storm damage prevention, wildlife habitat and fisheries.



Photo 1: View upstream from driveway of dam and outlet channel

2.2 Installation of a Dry Hydrant for Fire Suppression

There is no available water supply or hydrant near the project site, so the applicant proposes to install a dry hydrant adjacent to the pond. This will provide water for fire suppression not only for iFarm but for all of the surrounding neighborhood.

Work will require the construction of a gravel access road for fire trucks to access the hydrant and some temporary disturbance to the pond bank to install the 8-inch PVC water line from the pond to the hydrant on the pond shore. The gravel road presently consists of portions of an existing farm road, mowed lawn areas and a border of rhododendrons. Two trees within this area are required to be removed since their roots can interfere with the integrity of the dam should they fall.



Photo 2: Location of dry hydrant and access road

2.3 Re-surfacing of Existing Paved Driveway

Once construction is completed the applicant proposes to re-pave the entire length of the existing paved driveway to improve runoff and minimize erosion.

3.0 Wetland Resource Areas

Wetland resources were delineated by Jim MacDougall of Biodiversity Consulting, LLC on May 21, 2015. DEP Bordering Vegetated Wetland Delineation Field Data Forms as attached to provide documentation of the wetland boundary. The following jurisdictional wetland resources are present:

Inland Bank

This resource includes the bank along the pond shore from flags A1.3-A5. The banks at this location are low, well defined by slope and contained mowed lawn to nearly the water's edge.

The upper boundary of the bank is the first observable break in slope or the mean annual flood level, whichever is lower. At the project site, the break in slope was flagged as the top of bank.

The intermittent stream also contains bank resource which confines the channel. These banks are indicated in blue on the project plans.

Bordering Vegetated Wetland

Flags A5-A11 and B1-B12 represent the limit of Bordering Vegetated Wetland (BVW) associated with the intermittent stream on the north and south sides of the driveway. The north side consists primarily of herbaceous vegetation, especially sensitive fern (*Onoclea sensibilis*). The south side contains more woody vegetation, including American elm (*Ulmus americana*) and red maple (*Acer rubrum*).

4.0 Other Resources

The project site is located within both Estimated Habitat of Rare Wetlands Wildlife and Priority Habitat as determined by reference to the most recently available data from the Mass. Division of Fisheries and Wildlife – Natural Heritage and Endangered Species Program (NHESP) available on MassGIS (see Figure 3). A copy of this Notice of Intent will be provided to NHESP for review and comment.



Fig. 3 NHESP Estimated and Priority Habitat

5.0 Project Impacts and Mitigation Measures

The proposed project is expected to result in the following temporary impacts to wetland resources:

Inland Bank:

Installation of Dry Hydrant:	10 lf
Stream restoration:	65 lf

Bordering Vegetated Wetland:

Stream restoration:	215 sf
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Buffer Zone:

0-25-foot buffer zone	5,949 sf (of which 1,595 sf is existing driveway or farm road)
25-100 foot buffer zone	4,568 sf (of which 2,918 sf is existing driveway or farm road)

A total of 3 trees on the south side of the crossing and 2 trees near the pond shore are proposed to be removed to complete the required grading and prevent impacts to the stability of the existing dam.

All impacts will be restored upon completion of work. The pond shore bank will be re-graded to match pre-construction conditions and seeded to minimize erosion. The existing stream banks above and below the culvert to be removed will be graded so to provide continuity into and out of the newly constructed channel segment. Construction of the channel is expected to be completed during no-flow conditions. However, during excavation for the bridge footings and construction of the channel there may be some dewatering of groundwater required. Dewatering measures are described on the attached plan sheets C10-12.

Any temporary impacts to wetlands alongside the existing stream channel upstream and downstream of the culvert will be restored upon project completion. The attached list of proposed native wetland and buffer zone plantings will be used to guide any supplemental planting that may be required to fully restore the small area of BVW along the newly constructed channel.

A standard erosion control barrier consisting of silt sock will be installed between wetlands and all work areas as indicated on sheet C4 of the attached site plans. This will serve both as a limit of work and a means to prevent sediment from entering adjacent wetlands. The proposed construction phasing is described on Sheet C-10-12.

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

Applicant: iFarm Prepared by: Rimmer Environmental Project location: 55 Towne Road DEP File #:

Check all that apply:

- Vegetation alone presumed adequate BVW boundary: fill out section I only
- Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out sections I and II
- Method other than dominance test used (attach additional information)

Section I. Vegetation: Observation plot Number: wet Transect number: A8 Date of delineation: 5/21/15

A. Sample layer and plant species (by common name/scientific name)	B. Percent cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Groundcover sensitive fern/ <i>Onoclea sensibilis</i>	20.5	100	Y	FACW*

Use an asterisk to mark wetland indicator plants: species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FAC-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusion:
Number of dominant wetland indicator plants: 1 Number of dominant non-wetland plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes no

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site?

Title/date:

Map number:

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey? yes no

Remarks:

2. Soil description

Horizon	Depth	Matrix Color	Mottles Color
A	0-3	10YR 2/1	
B	3-14	10YR 4/2	

Remarks

3. Other

Conclusion: Is soil hydric? yes no

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

Site inundated: _____

Depth to free water in observation hole: _ _____

Water marks: _____

Drift lines: _____

Sediment deposits: _____

Drainage patterns in BVW: _____

Oxidized rhizospheres: _____

Water-stained leaves: _____

Recorded data(stream, lake, or tidal gauge; aerial photo, other):__

Other: _____

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present: Hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other indicators of hydrology present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Applicant: iFarm Prepared by: Rimmer Environmental Project location: 55 Towne Road DEP File #: _____

Check all that apply:

- Vegetation alone presumed adequate BVW boundary: fill out section I only
 Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out sections I and II
 Method other than dominance test used (attach additional information)

Section I. Vegetation: Observation plot Number: u01 Transect number: A8 Date of delineation: 5/21/15

A. Sample layer and plant species (by common name/scientific name)	B. Percent cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
shrub				
glossy buckthorn/ <i>Frangula alnus</i>	10.5	34	Y	FAC*
japanese barberry/ <i>Berberis vulgaris</i>	20.6	66	Y	FACU
Groundcover				
violet/ <i>Viola palmata</i>	10.5	100	Y	FACU

Use an asterisk to mark wetland indicator plants: species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FAC-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusion:
Number of dominant wetland indicator plants: 1 **Number of dominant non-wetland plants: 2**
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes no

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

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site?

Title/date:

Map number:

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey? yes no

Remarks:

2. Soil description

Horizon	Depth	Matrix Color	Mottles Color
A	0-1	10YR 2/2	
B	1-10	10YR 5/6	

Remarks

3. Other

Conclusion: Is soil hydric? yes no

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

Site inundated: _____

Depth to free water in observation hole: _ _____

Water marks: _____

Drift lines: _____

Sediment deposits: _____

Drainage patterns in BVW: _____

Oxidized rhizospheres: _____

Water-stained leaves: _____

Recorded data(stream, lake, or tidal gauge; aerial photo, other):__

Other: _____

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetland hydrology present: Hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other indicators of hydrology present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Applicant: iFarm Prepared by: Rimmer Environmental Project location: 55 Towne Road DEP File #:

Check all that apply:

- Vegetation alone presumed adequate BVW boundary: fill out section I only
 Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out sections I and II
 Method other than dominance test used (attach additional information)

Section I. Vegetation: Observation plot Number: wet Transect number: B1.2 Date of delineation: 5/21/15

A. Sample layer and plant species (by common name/scientific name)	B. Percent cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Canopy				
American elm/ <i>Ulmus americana</i>	20.5	100	Y	FACW*
Groundcover				
skunk cabbage/ <i>Symplocarpus foetidus</i>	10.5	50	Y	OBL*
jewelweed/ <i>Impatiens capensis</i>	10.5	50	Y	FACW*

Use an asterisk to mark wetland indicator plants: species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FAC-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusion:
Number of dominant wetland indicator plants: 3 **Number of dominant non-wetland plants: 0**
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes no

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

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site?

Title/date:

Map number:

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey? yes no

Remarks:

2. Soil description

Horizon	Depth	Matrix Color	Mottles Color
A	0-8	10YR 2/1	
B	8-16	10YR 5/1	

Remarks

3. Other

Conclusion: Is soil hydric? yes no

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

Site inundated: _____

Depth to free water in observation hole: _ _____

Water marks: _____

Drift lines: _____

Sediment deposits: _____

Drainage patterns in BVW: _____

Oxidized rhizospheres: _____

Water-stained leaves: _____

Recorded data(stream, lake, or tidal gauge; aerial photo, other):__

Other: _____

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present: Hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other indicators of hydrology present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Applicant: iFarm Prepared by: Rimmer Environmental Project location: 55 Towne Road DEP File #: _____

Check all that apply:

- Vegetation alone presumed adequate BVW boundary: fill out section I only
 Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out sections I and II
 Method other than dominance test used (attach additional information)

Section I. Vegetation: Observation plot Number: upl Transect number: B1.2 Date of delineation: 5/21/15

A. Sample layer and plant species (by common name/scientific name)	B. Percent cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
canopy American elm/ <i>Ulmus americana</i>	20.5	100	Y	FACW*
shrub honeysuckle/ <i>Lonicera tatarica</i>	20.5	100	Y	FACU

Use an asterisk to mark wetland indicator plants: species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FAC-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusion:
Number of dominant wetland indicator plants: 1 **Number of dominant non-wetland plants: 1**
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? **yes** **no**

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

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site?

Title/date:

Map number:

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey? yes no

Remarks:

2. Soil description

Horizon	Depth	Matrix Color	Mottles Color
A	0-3	10YR 2/2	
C	3-20	fill	

Remarks

3. Other

Conclusion: Is soil hydric? yes no

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

Site inundated: _____

Depth to free water in observation hole: _ _____

Water marks: _____

Drift lines: _____

Sediment deposits: _____

Drainage patterns in BVW: _____

Oxidized rhizospheres: _____

Water-stained leaves: _____

Recorded data(stream, lake, or tidal gauge; aerial photo, other):__

Other: _____

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present: Hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other indicators of hydrology present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>

TOWN OF BOXFORD

ABUTTER LIST

PARCEL #31-02-16A ~ 55 TOWNE ROAD ~ CONSERVATION COMMISSION 250' and POND FRONTAGE ABUTTERS

Map/Lot	Location	Owner	Owner 2	Owner Address	Owner City/Town	Owner State	Zip Code
(31-02-15)	50 TOWNE RD	ANGELO LAURA	ANGELO THOMAS	50 TOWNE RD	BOXFORD	MA	01921
(31-02-09)	14 HOLLOW TREE RD	CAMPBELL KATHERINE M		14 HOLLOW TREE RD	BOXFORD	MA	01921
(31-02-11)	51 TOWNE RD	CHIUCHIOLO EDWARD A	CHIUCHIOLO JANICE A	51 TOWNE RD	BOXFORD	MA	01921
(31-02-01)	STONECLEAVE RD	ESSEX COUNTY GREENBELT ASSOC		82 EASTERN AVE	ESSEX	MA	01929
(31-02-16-B)	TOWNE RD	ESSEX COUNTY GREENBELT ASSOC		82 EASTERN AVE	ESSEX	MA	01929
(31-02-05)	44 STONECLEAVE RD	FISKE JOHN F	FISKE JANE	44 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-16-2)	40 WINDING OAKS WAY	GRANT PAUL C & PATRICIA L TRS	40 WINDING OAKS WAY RTY TR	40 WINDING OAKS WAY	BOXFORD	MA	01921
(31-02-16-A)	55 TOWNE RD	i-FARM LLC	CHRISTINE BARENSFELD	39 TOWNE RD	BOXFORD	MA	01921
(31-02-16-1)	44 WINDING OAKS WAY	LIPTROT ROBERT N	LIPTROT CYNTHIA S	44 WINDING OAKS WAY	BOXFORD	MA	01921
(31-03-07)	45 TOWNE RD	MARTIN VERNON A & YOLANDA A TRS	V & Y MARTIN REALTY TRUST	45 TOWNE RD	BOXFORD	MA	01921
(31-03-08)	HOLLOW TREE RD	MARTIN VERNON A & YOLANDA A TRS	NITRAM REALTY TRUST	45 TOWNE RD	BOXFORD	MA	01921
(31-02-03)	50 STONECLEAVE RD	MILLER CHRISTOPHER J TE	MILLER CAROLYN J	50 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-01-2)	64 STONECLEAVE RD	REITMAN BRUCE H	REITMAN JADE A	64 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-06)	STONECLEAVE RD	SALOOM B B & J A TR	SALOOM RLT TR	18 HOLLOW TREE RD	BOXFORD	MA	01921
(31-02-07)	18 HOLLOW TREE RD	SALOOM B B & J A TR	SALOOM REALTY TR	18 HOLLOW TREE RD	BOXFORD	MA	01921
(31-02-14)	52 WINDING OAKS WAY	YEAKEL LLOYD STANLEY III TR	YEAKEL SUSAN H TR	52 WINDING OAKS WAY	BOXFORD	MA	01921

POND ABUTTERS

(31-02-11-C)	LOT 3 STONECLEAVE RD	BEEKLEY FRANCES		1525 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-02)	56 STONECLEAVE RD	BRUNS DANIEL TE	BRUNS JEAN B	56 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-11-A)	66 STONECLEAVE RD	COTE MATTHEW	SKARULIS TERESA	66 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-01)	STONECLEAVE RD	ESSEX COUNTY GREENBELT ASSOC		82 EASTERN AVE	ESSEX	MA	01929
(31-02-16-B)	TOWNE RD	ESSEX COUNTY GREENBELT ASSOC		82 EASTERN AVE	ESSEX	MA	01929
(31-02-05)	44 STONECLEAVE RD	FISKE JOHN F	FISKE JANE	44 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-16-A)	55 TOWNE RD	i-FARM LLC	CHRISTINE BARENSFELD	39 TOWNE RD	BOXFORD	MA	01921

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Jandilva

PAGE 1 of 2 ~ JUNE 29, 2015

TOWN OF BOXFORD

ABUTTER LIST

PARCEL #31-02-16A ~ 55 TOWNE ROAD ~ CONSERVATION COMMISSION 250' and POND FRONTAGE ABUTTERS

(31-02-03)	50 STONECLEAVE RD	MILLER CHRISTOPHER J TE	MILLER CAROLYN J	50 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-01-2)	64 STONECLEAVE RD	REITMAN BRUCE H	REITMAN JADE A	64 STONECLEAVE RD	BOXFORD	MA	01921
(31-02-06)	STONECLEAVE RD	SALOOM B B & J A TR	SALOOM RLT TR	18 HOLLOW TREE RD	BOXFORD	MA	01921
(31-02-07)	18 HOLLOW TREE RD	SALOOM B B & J A TR	SALOOM REALTY TR	18 HOLLOW TREE RD	BOXFORD	MA	01921
(31-02-11-B)	LOT 2 STONECLEAVE RD	WALKER JONATHAN C	WALKER JEANETTE	1535 STONECLEAVE ROAD	BOXFORD	MA	01921

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Jan Silva