

Applicant:
8A Andersen Drive Realty Trust
36 Winter Street
Malden, MA

Project File: BOX-0205

Notice of Intent Application

**Proposed Driveway
Andersen Drive, Lot 8A
Boxford, Massachusetts**

August 2020



603 Salem Street
Wakefield, MA 01880
Tel: (781) 246-2800
Fax: (781) 246-7596

Nantucket, MA 02554
Tel: (508) 228-7909

**CONTENTS
NOTICE OF INTENT
ANDERSEN DRIVE, LOT 8A
BOXFORD, MASSACHUSETTS**

August 25, 2020

LIST OF PLANS AND DOCUMENTS

<u>Identifying Number / Letter</u>	<u>Title / Date</u>
DOCUMENT A	WPA Form 3 – Notice of Intent and NOI Wetland Fee Transmittal Form for Proposed Driveway, Andersen Drive, Lot 8A, Boxford, with attachments: USGS Locus Map, and List of Abutters (July 30, 2020).
DOCUMENT B	Project Narrative, Proposed Driveway, Andersen Drive, Lot 8A, Boxford, MA; August 25, 2020, including: <ul style="list-style-type: none"> ➤ Site Photographs dated 2014 by Hayes Engineering, Inc., ➤ Locus Map showing NHESP Estimated and Priority Habitat (MassGIS "Oliver" Online Mapping). ➤ Locus Map from Town of Boxford GIS. ➤ Order of Conditions for Andersen Drive issued by the Boxford Conservation Commission 5/5/14 (14 pages) and reduced scale plan set dated 4/8/14 referenced in Order (3 sheets 11" x 17").
DOCUMENT C	Erosion and Sedimentation Control, Andersen Drive, Lot 8A, Boxford, MA; August 25, 2020.
PLANS	Plan to Accompany Notice of Intent, Andersen Drive, Boxford, Mass.; Scale: 1"=40; Hayes Engineering, Inc., Date: August 10, 2020 (Sheet 1 of 3 –Overview). Plan to Accompany Notice of Intent, Andersen Drive, Boxford, Mass.; Scale: 1"=20; Hayes Engineering, Inc., Date: August 10, 2020 (Sheets 2 of 3 and 3 of 3 - Topographic)



WPA Form 3 – Notice of Intent

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

MassDEP File Number

Document Transaction Number

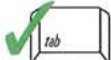
Boxford

City/Town

AND BOXFORD WETLANDS PROTECTION BYLAW

A. General Information

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



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

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

Lot 8A Andersen Drive (vicinity Cartwright Dr.)	Boxford	01921
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	42d 41m 1s2 N	71d 03m 11s W
	d. Latitude	e. Longitude
17	1/16	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

a. First Name	b. Last Name	
8A Andersen Drive Realty Trust, Donald and Carol Gianquitto, Trustees		
c. Organization		
36 Winter Street		
d. Street Address		
Malden	MA	02148
e. City/Town	f. State	g. Zip Code
(781)953-2414	donaldgianquitto@gmail.com	
h. Phone Number	i. Fax Number	j. Email Address

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

Same as applicant.

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):

a. First Name	b. Last Name	
Hayes Engineering, Inc.c/o Elizabeth Wallis and Gordon Rogerson		
c. Company		
603 Salem Street		
d. Street Address		
Wakefield	MA	01880
e. City/Town	f. State	g. Zip Code
(781)246-2800	(781)246-7596	lwallis@hayeseng.com, grogerson@hayeseng.com
h. Phone Number	i. Fax Number	j. Email address

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

\$110.00	\$42.50	67.50
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:

The applicant proposes to construct a gravel and pavement driveway with associated utilities, stormwater management, and wetlands replication area as shown on the accompanying plans and described in the attached project narrative.

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)

2. Limited Project Type

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 South

a. County

34355

c. Book

b. Certificate # (if registered land)

161

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	20+/- 1. linear feet	20+/- (in kind pipe replacement)
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	20+/- (anticipated temporary disturb for culvert/wall work)	.None - Disturbed soil to be raked/seeded with wet mix.
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
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- f. Riverfront Area
1. Name of Waterway (if available) - specify coastal or inland
2. Width of Riverfront Area (check one):
- 25 ft. - Designated Densely Developed Areas only
 - 100 ft. - New agricultural projects only
 - 200 ft. - All other projects

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

4. Proposed alteration of the Riverfront Area:

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

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

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

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

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



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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.

Table with 3 columns: Resource Area, Size of Proposed Alteration, Proposed Replacement (if any). Rows include Designated Port Areas, Land Under the Ocean, Barrier Beach, Coastal Beaches, Coastal Dunes.

Table with 3 columns: Resource Area, Size of Proposed Alteration, Proposed Replacement (if any). Rows include Coastal Banks, Rocky Intertidal Shores, Salt Marshes, Land Under Salt Ponds, Land Containing Shellfish, Fish Runs, Land Subject to Coastal Storm Flowage.

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

a. square feet of BVW b. square feet of Salt Marsh

5. Project Involves Stream Crossings

a. number of new stream crossings b. number of replacement stream crossings



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Provided by MassDEP:

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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 Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

- a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:** ¹

MassGIS NHESP
online mapping

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

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

- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:

(a) within wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

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

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

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

(b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <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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Provided by MassDEP:

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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
836 South Rodney French Blvd.
New Bedford, MA 02744
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.



WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Boxford

City/Town

D. Additional Information (cont'd)

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

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

Refer to the accompanying document "Contents / List of Plans and Documents" for titles and dates of submitted materials.

Hayes Engineering, Inc.

b. Prepared By

Peter J. Ogren, P.E., P.L.S.

c. Signed and Stamped by

d. Final Revision Date

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.

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:

#688 + #690

2. Municipal Check Number

8/17/20

3. Check date

#687

4. State Check Number

8/17/20

5. Check date

Swans Pond Homes, LLC

6. Payor name on check: First Name

7. Payor name on check: Last Name



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MassDEP File Number

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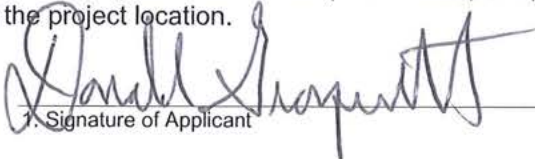
Boxford

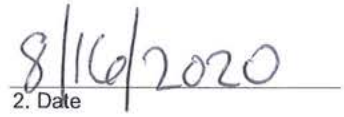
City/Town

F. Signatures and Submittal Requirements

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

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

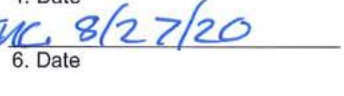

1. Signature of Applicant


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:

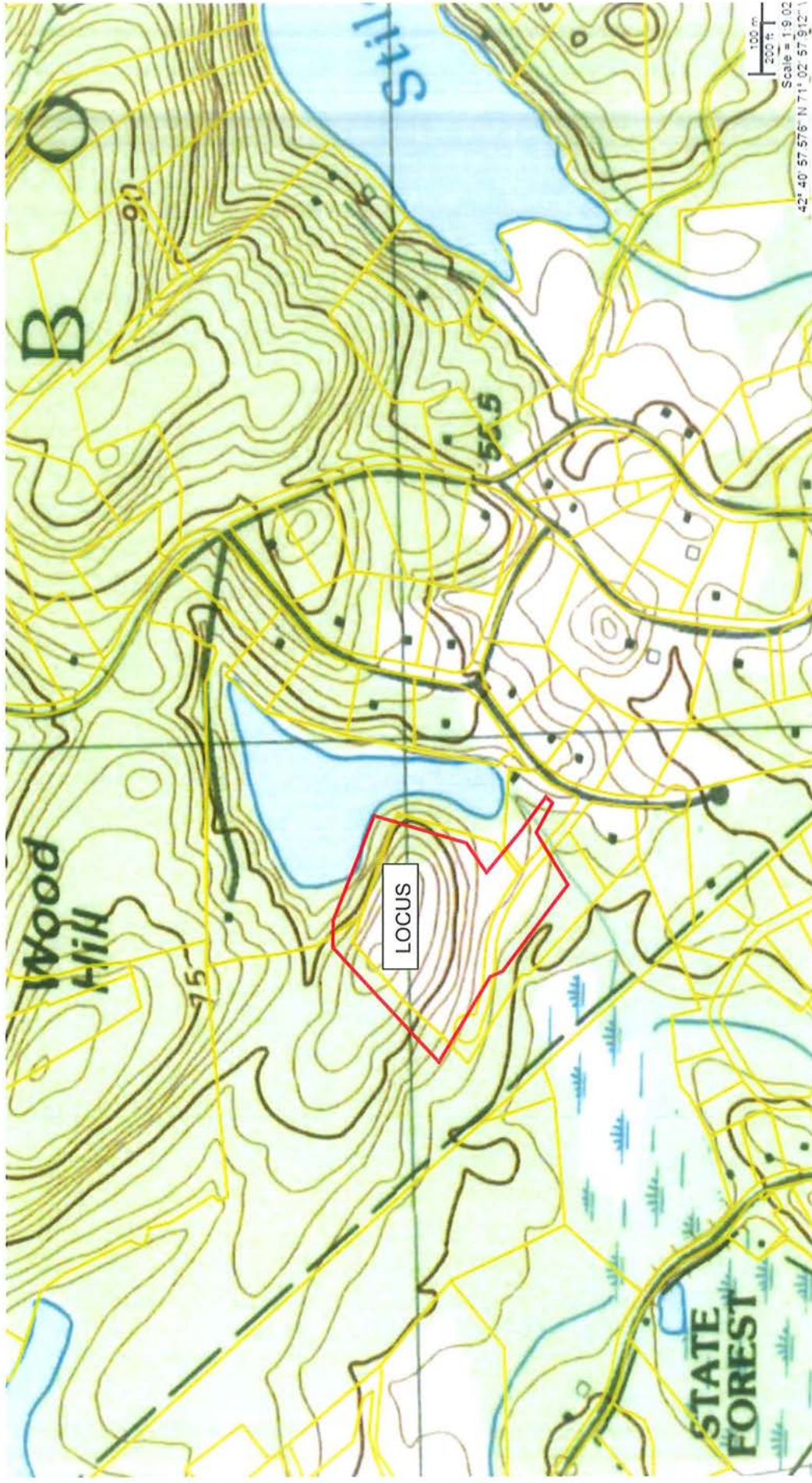
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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.

HAYES ENGINEERING, INC.
CIVIL ENGINEERING &
LAND SURVEYORS



603 SALEM STREET
WAKEFIELD, MA 01880
(781) 246-2800



UNITED STATES GEOLOGICAL SURVEY MAP
25K MASSGIS QUADRANGLE
(Map Source: MassGIS "Oliver" Online Mapping)

LOCUS MAP
ANDERSEN DRIVE, LOT 8A
BOXFORD, MASSACHUSETTS





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

ADD BOXFORD WETLANDS PROJECT TO LIST (2/15/10)

A. Applicant Information

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



1. Location of Project:

Lot 8A Andersen Drive (vicinity Cartwright Dr.)

Boxford

a. Street Address

b. City/Town

c. Check number

d. Fee amount

2. Applicant Mailing Address:

a. First Name

b. Last Name

8A Andersen Drive Realty Trust, Donald and Carol Gianquitto, Trustees

c. Organization

36 Winter Street

d. Mailing Address

Malden

MA

02148

e. City/Town

f. State

g. Zip Code

(781)953-2414

donaldgianquitto@gmail.com

h. Phone Number

i. Fax Number

j. Email Address

3. Property Owner (if different):

Same as applicant.

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
Single Family House Driveway Category 1.a.)	1	\$110.00	\$110.00

Step 5/Total Project Fee: \$110.00

Step 6/Fee Payments:

Total Project Fee:	\$110.00
State share of filing Fee:	\$42.50
City/Town share of filing Fee:	\$67.50
	a. Total Fee from Step 5
	b. 1/2 Total Fee less \$12.50
	c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

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

 Department of Environmental Protection
 Box 4062
 Boston, MA 02211
 - b.) To the Conservation Commission: Send the Notice of Intent or Abbreviated Notice of Intent; a copy of this form; and the city/town fee payment.
- To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a copy of this form; and a copy of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

**NOTICE OF INTENT
FEE CALCULATION WORKSHEET
ANDERSEN DRIVE, LOT 8A
BOXFORD, MASSACHUSETTS**

August 25, 2020

State NOI Fees:

<u>Activity</u>	<u>Category</u>	<u>Fee</u>
Driveway on Single Family Lot	1.a.	\$110.00
<u>TOTAL FEE</u>		<u>\$110.00</u>

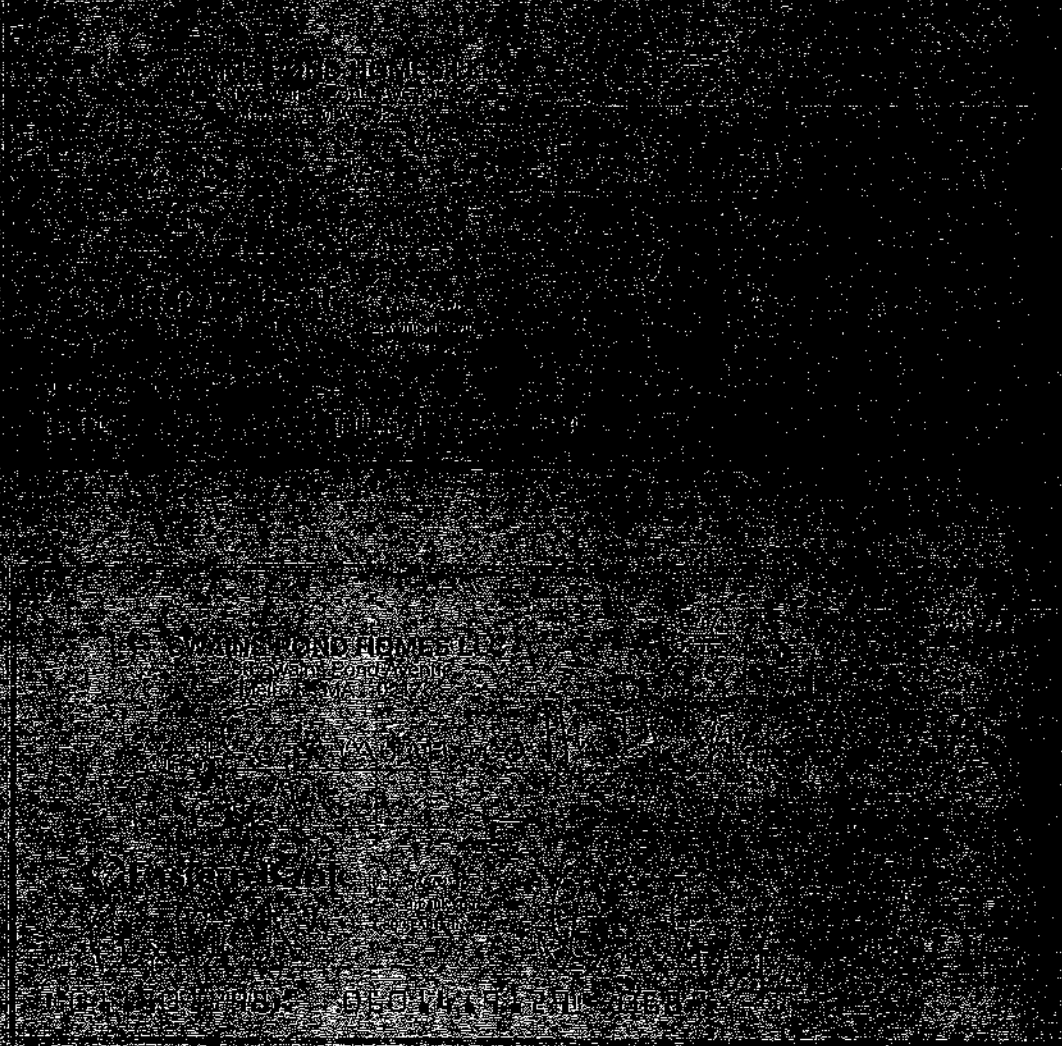
State Fee: $(\$110 \div 2) - 12.50 = \underline{\$42.50}$

Town Fee: $(\$110 \div 2) + 12.50 = \underline{\$67.50}$

Boxford Local Bylaw Fee:

This project consists of activities located within Resource Areas regulated under the Town of Boxford Wetlands Bylaw. Fees for this project are calculated below using the fee table provided in Section G. of the Bylaw Regulations.

<u>Activity</u>	<u>Number</u>	<u>Fee</u>
Category 2		
(a.) Site Work without a house	1	<u>\$200.00</u>
(c.) Resource area crossing for Driveway– intermittent stream	1	<u>\$400.00</u>
(h.) Wetland Resource Alteration	1	20 s.f BVW x \$0.50 per s.f. = <u>\$10.00</u> (Temporary disturb for headwall work)
(i.) Bank Alteration	1	20 l.f. x \$0.50 per linear ft. = <u>\$10.00</u> (Culvert replacement)
<u>TOTAL FEE</u>		<u>\$620.00</u>



AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of
Environmental Protection and the Conservation Commission
when filing a Notice of Intent)

I, Diane Benoit, hereby certify under the pains and
penalties of perjury that on — 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: Driveway Construction.

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by
8A Andersen Drive Realty Trust, with the Boxford Conservation Commission on
9/3/20 for property located at Andersen Drive, Lot 8A, Boxford, MA,
(Assessor Map 17, Block 01, Lot 16).

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.

Diane Benoit
Name - Signature

9/3/20
Date

TOWN OF BOXFORD
 ABUTTER LIST

PARCEL #17-01-16 - 8A ANDERSEN DRIVE - CONSERVATION COMMISSION 250'

PARCEL ID	PARCEL ADDRESS	OWNER 1	OWNER 2	MAILING ADDRESS	CITY/TOWN	STATE	ZIP CODE
17-01-14	408 MAIN ST	KACHEL CAROLE L		408 MAIN ST	BOXFORD	MA	01921
17-01-15	35 ANDERSEN DR	DOUGHERTY LARRY J TE	DOUGHERTY PATRICIA A	35 ANDERSEN DR	BOXFORD	MA	01921
17-01-16	ANDERSEN DR	8A ANDERSEN DRIVE RUTY TRUST	GIANQUITTO CAROL & DONALD W TRS	236 SWAINS POND AVE	MELROSE	MA	02176
17-01-17	41 ANDERSEN DR	GUERIN MICHAEL A JT	ELLEN SHUMSKY	41 ANDERSEN DR	BOXFORD	MA	01921
17-01-18	47 ANDERSEN DR	CHAPMAN GARY B TE	BARBARA I CHAPMAN	47 ANDERSEN DR	BOXFORD	MA	01921
17-01-19	IPSWICH RD	ELDRED P G & E L TR	NO ANDOVER BOXFORD RLTY TR	997 DALE ST	N ANDOVER	MA	01845
17-02-02	42 ANDERSEN DR	STOCKWELL JAMES E	STOCKELL DEBRA J	42 ANDERSEN DR	BOXFORD	MA	01921
17-02-03	40 ANDERSEN DR	DELMONTE KARA MANN	MANN DAVID	40 ANDERSEN DR	BOXFORD	MA	01921

CERTIFIED COPY

Judith

JULY 30, 2020

8A Andersen Drive Realty Trust
Carol & Donald W. Gianquitto, Trs.
236 Swains Pond Avenue
Melrose, MA 02176

8A Andersen Drive Realty Trust
Carol & Donald W. Gianquitto, Trs.
36 Winter Street
Malden, MA 02148

Michael A. Guerin &
Ellen Shumsky
41 Andersen Drive
Boxford, MA 01921

Gary B. & Barbara J. Chapman
47 Andersen Drive
Boxford, MA 01921

No Andover Boxford Realty Trust
F.G. & E.L. Eldred, Trs.
997 Dale Street
North Andover, MA 01845

James E. & Debra J. Stockwell
42 Andersen Drive
Boxford, MA 01921

Kara Mann Deimonti &
David Mann
40 Andersen Drive
Boxford, MA 01921

Carole L. Kachel
408 Main Street
Boxford, MA 01921

Larry J. & Patricia A. Dougherty
35 Andersen Drive
Boxford, MA 01921

**PROJECT NARRATIVE
PROPOSED DRIVEWAY
ANDERSEN DRIVE, LOT 8A
BOXFORD, MASSACHUSETTS**

August 25, 2020

1.0 Existing Conditions

The subject locus is a 15.22 acre vacant residential parcel known as Lot 8A located between developed properties at #35 and #41 Andersen Drive. This hilly, forested parcel contains a roadway easement known as Cartwright Lane and a woods pathway, the initial length of which was historically cleared, filled and developed into an existing 18'-20' wide dirt/gravel access path with two culvert crossings and existing power cable with electric box. Resource areas consisting of bordering vegetated wetlands (demarcated by flags #1-11 and #A2-A21) and Inland bank protected under both the Massachusetts Wetlands Protection Act and The Town of Boxford Wetlands Protection Bylaw are present on the property in association with the intermittent stream known as Fish Book. Also present is the 100-foot buffer zone associated with these resource areas. Existing features are shown on the accompanying August 2020 Hayes Engineering, Inc. plan titled "Plan to Accompany Notice of Intent, 8A Andersen Drive, Boxford, MA" and the attached Hayes Engineering, Inc. Site Photographs dated December 2014.

2.0 Proposed Work

The overall project is to develop the property to accommodate a single-family house with associated septic system, well, utilities, and driveway. This Notice of Intent focuses on the 447± l.f section of driveway entering from Andersen Drive which will be constructed within and adjacent to wetland and buffer areas regulated by the Conservation Commission. The remaining section of driveway, house, well, and septic system will be constructed within upland areas. No trees of significant size will be removed as part of this work, although some trimming of the existing canopy might be required. Saplings and fallen tree debris will be removed within the driveway layout. Further details of driveway construction activities are provided below.

Brief Project History

The driveway construction proposed under this Notice of Intent application was previously permitted by an Order of Conditions issued under DEP file #114-1178 by the Boxford Conservation Commission on May 5, 2014 (attached) and as shown on the Hayes Engineering, Inc. plan titled "Plan to Accompany Notice of Intent, Lot 8 A Anderson Road, Boxford Mass." revised through 4/8/14 (modified wetland flag locations). The 2014 Order of Conditions, issued pursuant to the Wetlands Protection Act and Boxford Wetlands Protection Bylaw, lapsed without any construction started and, as such, the Applicant desires to re-permit the previously approved project design so that construction may be accomplished. A "Certificate of Compliance" will be obtained from the Boxford Conservation Commission to close out the 2014 permit in preparation for this application.

Driveway Overview

The proposed 11-foot wide driveway will enter off of Andersen Drive along the existing Cartwright easement (woods road) and proceed into the property in an northwesterly direction along the existing woods road at relatively shallow slopes ranging from 2% to 7%) until curving northerly up the hill at approximately 10% slope to access to the proposed house and garage. The driveway will be graded to ensure proper drainage. The surface will consist a base course of compacted gravel, then have a final course of pavement at the entrance followed by sections of either gravel

or pavement material along its length dependent on steepness of slope. Stormwater management, drainage improvements, replication, and utility installation will occur as part of driveway construction. Further details relative to driveway construction are provided below.

Electric, Telephone, and Cable Utilities

The proposed house will be serviced by electric, telephone and cable utilities and also connect to a water well. Utility lines will run underground along the eastern side of the driveway from an electric box present at the Cartwright entrance to a point close to wetland flag #8, then transition overhead to four proposed utility poles, then transition back to underground near the proposed turnout to continue up the hill to the house. The existing power cable extending from the afore-mentioned electric box will be removed as part of the utility work. Activities associated with the utility work consists of excavating a trench to accommodate power cable removal and electric and cable conduit installation; backfilling; hole drilling for utility pole installation, and loaming and seeding. Proposed activities will occur within wetland and buffer zone areas. Wetland and 25-foot buffer zone disturbances will be mitigated by both re-establishing vegetation cover on the backfilled trench with wetland seed mix and through the construction of a wetland replacement area located on the west side of the driveway as further detailed below.

Stormwater Management

Best management practices (BMPs) for stormwater management will be included as part of the project to capture and treat runoff from the driveway. Proposed stormwater BMP components consist of five-foot wide grass swales to be constructed along each side of the driveway as well as the construction of two infiltration ponds (one 446 s.f. and the other 641 s.f.) with spillways and level spreaders on each side of the driveway in the vicinity of wetland flags #A7 to #A-8A and #A-15 to #A-16. Activities associated with stormwater management consist of vegetation removal, grading, basin structure construction, swale construction, loaming and seeding. Refer to attached document "Operation and Maintenance Plan, Lot 8A Andersen Drive, Boxford, MA". This work will occur within the 0-50-foot buffer zone.

Brook Culvert and Headwall Replacement

The existing 30" corrugated metal pipe culvert at the brook crossing is in a deteriorated condition and will be replaced with a metal pipe culvert of similar type and diameter to be installed within the same location and invert elevation to ensure proper water flow along the stream channel. Stone headwalls to be removed as part of culvert replacement will be reconstructed to match the location and extent of existing structures as closely as possible. Activities associated with culvert replacement include headwall stone removal (to be saved if practicable for later use), excavation as required for culvert removal, pipe installation, headwall reconstruction with saved stones, and backfilling as needed. Note that culvert replacement was added to the driveway project as a result of a site visit conducted in March 2014 by Conservation Director Ross Povenmire, Town Engineer John Dold, and Hayes Engineering, Inc. This work will occur within bordering vegetated wetlands and inland bank resource areas.

Erosion/sedimentation Control

One or more temporary runoff velocity and pollutant prevention BMP controls such as compost-type silt sock barriers (Filtrexx Silt Soxx or equivalent), swale check dams, catch basin sediment inserts, and crushed stone tracking pad (stabilized construction entrance) will be utilized during construction in conjunction with the attached document titled "Erosion and Sedimentation Control, Lot 8A Andersen Drive, Boxford, MA".

3.0 Regulations

The proposed work will be performed within the jurisdiction of both the Massachusetts Wetlands Protection Act (M.G.L. Chapter 131, Sec. 40, 310 CMR 10.00 et. al.) and the Boxford Wetlands Protection Bylaw (General Bylaws Chapter 192 and Chapter 375) and is required to meet performance standards outlined in the associated regulations. A description of how the project meets the regulatory performance standards is provided below. Existing and proposed conditions are shown on the accompanying Plans.

Massachusetts Wetlands Protection Act (M.G. L. Ch 131, Sec. 40)

Buffer Zone

Portions of the 100-foot buffer zone will be altered as a result of driveway grading, paving, and culvert replacement, as described above. Temporary disturbances may also occur due to the need for an equipment and materials staging area and machine and personnel work space. A fence or silt sock erosion control barrier will be installed along the work area as shown on the Notice of Intent plan to protect adjacent buffer zone and resource areas and to provide a visible limit of work. Erosion and sedimentation control procedures will be implemented as outlined in the attached document titled "Erosion and Sedimentation Control".

Bordering Vegetated Wetlands

No permanent alteration to bordering vegetated wetlands (BVW) is proposed as part of this project. It is anticipated that culvert replacement work will be conducted from the driveway surface, however, small amounts of the BVW boundary along the ends of the culvert may temporarily be disturbed should personnel require direct access to that work area during headwall stone removal and reconstruction activities (10± s.f. on each side).

Boxford Wetland Protection Bylaw Regulations (Town of Boxford Ch. 192, Sec. 375)

§375-98 Buffer Zones

Construction Setbacks- §375-98 (B)(5).

Boxford Wetlands Protection Bylaw and associated regulations establish the 100-foot buffer zone as a resource area and more specifically require minimum setbacks for work within that resource area as shown in the Chart provided at §375-98 (B)(5). For this site, the driveway is required to be at least 30 feet and the house at least 75 feet from resource areas. Proposed driveway construction will necessitate culvert replacement within an existing bank and wetland resource area crossing. As such, portions of the project will result in bank resource area disturbance and encroach closer than 25 feet to the wetland boundary, therefore not complying with that performance standard. The Applicant requests the Conservation Commission to grant a waiver from the 30-foot regulatory setback requirement to allow driveway construction in consideration that the project proposes construction of 2,610 s.f. of wetland and stormwater treatment BMP's as mitigation. The house is outside of the 75-foot buffer zone.

25-foot No Disturb Zone - §375-98(D)

Portions of the driveway, infiltration basins, utility pole installation, grass swales, and mitigation wetland will be constructed within 25 feet of the bank resource area and so the project does not comply with the performance standard specified in Section 375-98(D). The Applicant requests the Conservation Commission to grant a waiver from this regulatory setback requirement in consideration that some of the features that are located within the 25-foot No

Project Narrative, Andersen Drive, Lot 8A, Boxford, MA
August 25, 2020

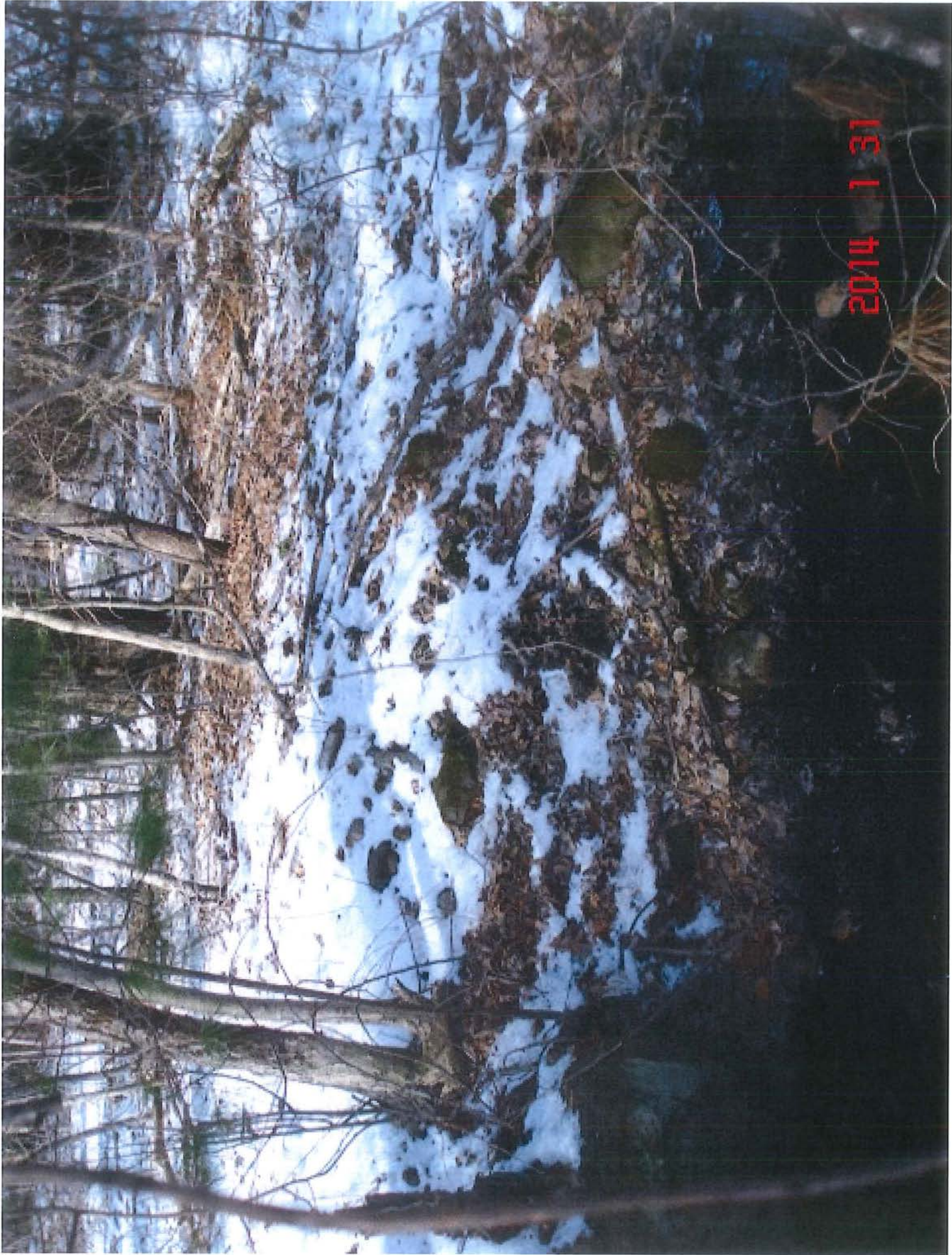
Disturbance Zone are provided as project mitigation (e.g. The new wetland area, grass swales, and ponds).

Other Permits

Other permits needed for the project will be Sanitary Disposal System and well permits from the Boxford Board of Health and Building Permit from the Boxford Building Department. These permits will be obtained prior to project construction.

Natural Heritage Program

A review of the MassGIS online Natural Heritage Endangered Species Program mapping revealed that both Estimated Habitat and Priority Habitat of Endangered Species are present within the property, but do not encroach upon the proposed project activities as shown on the plan and the MassGIS Locus Map.



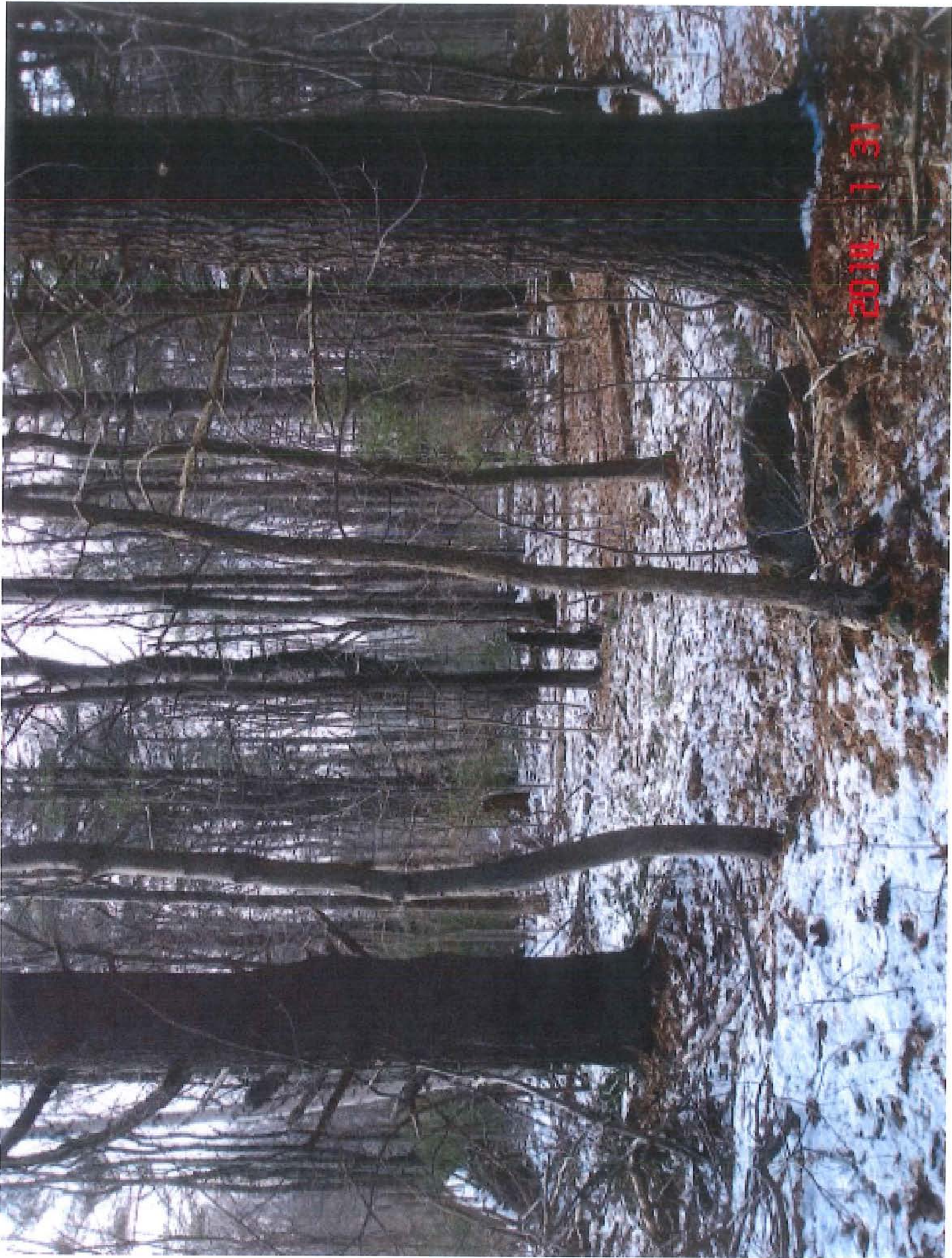
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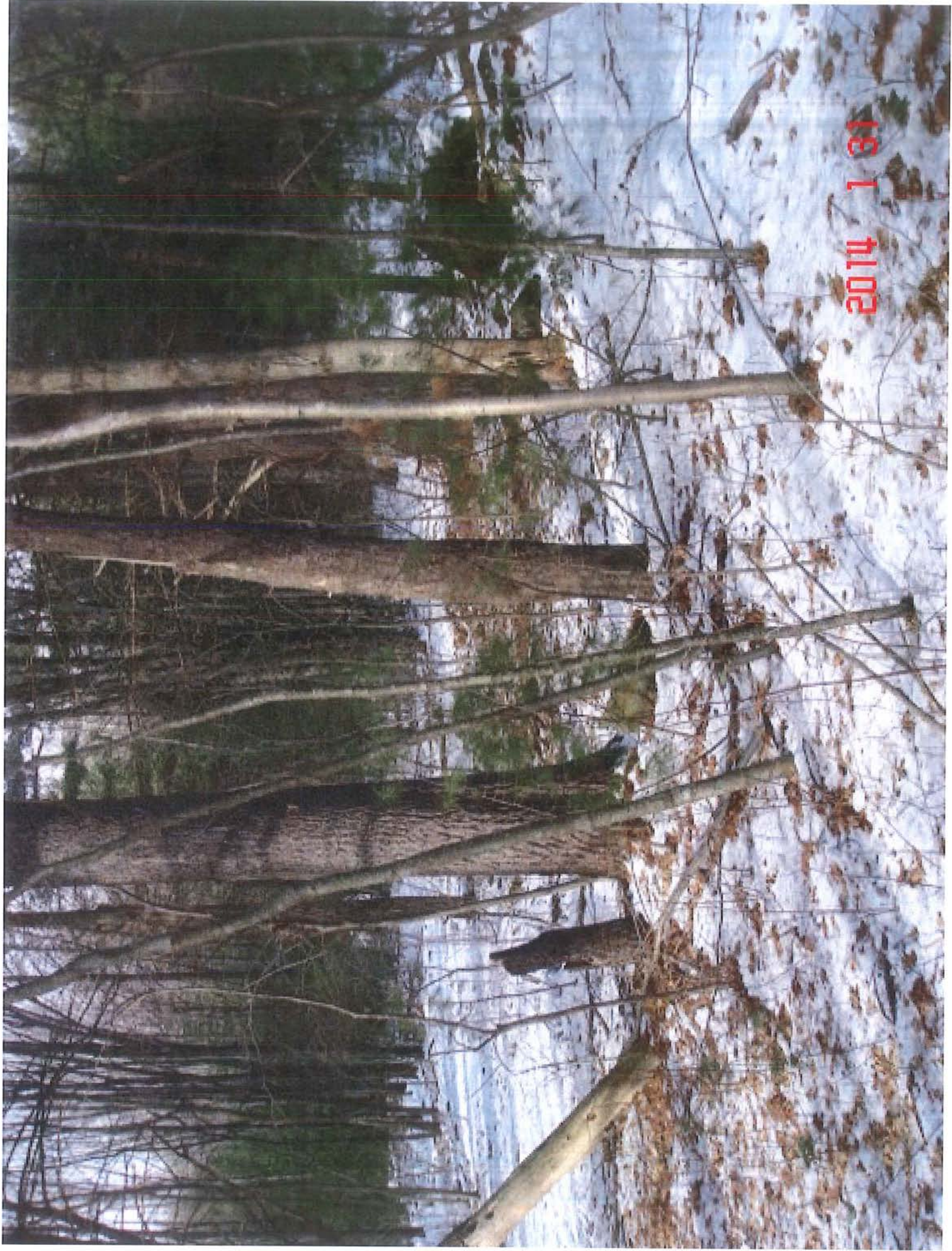


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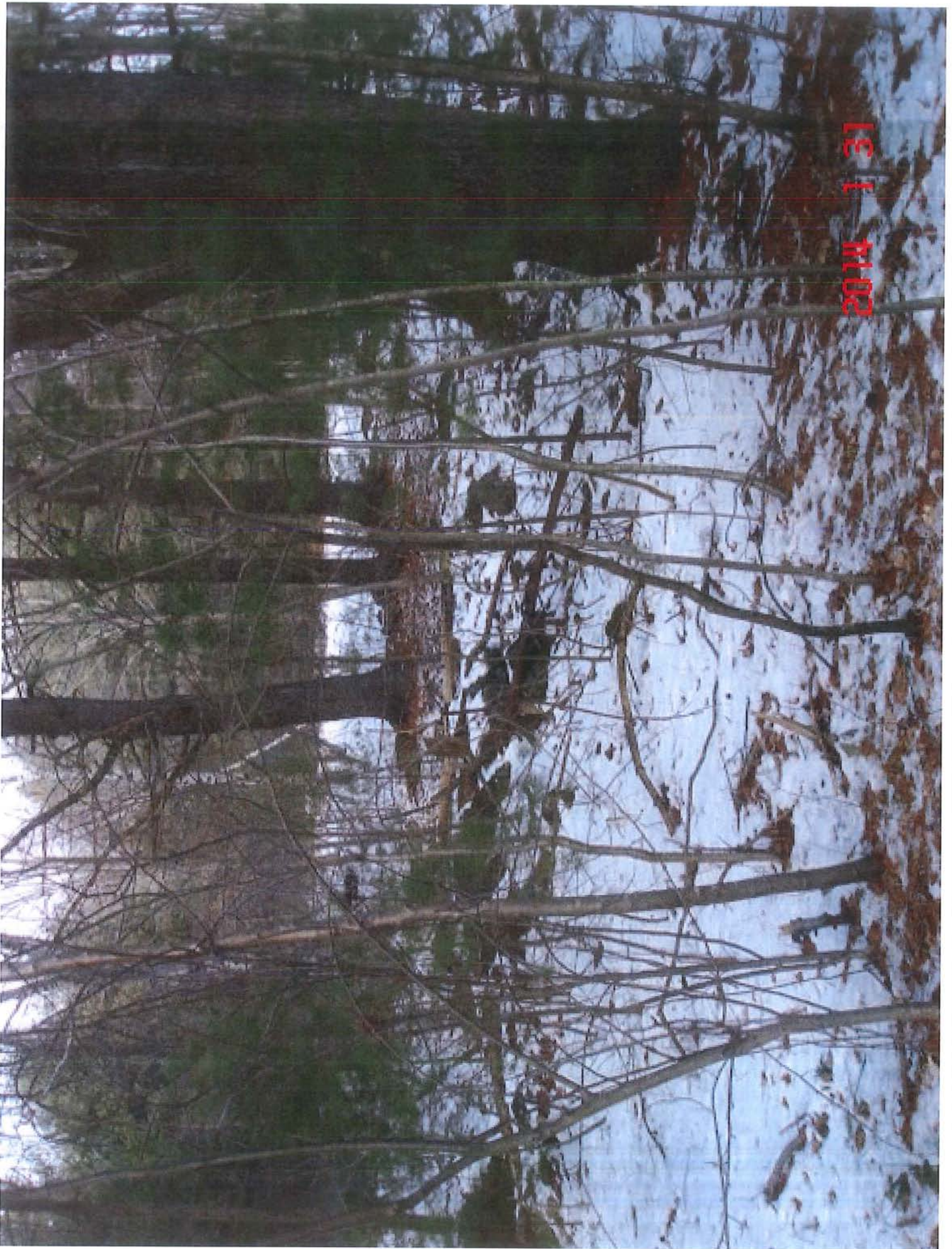
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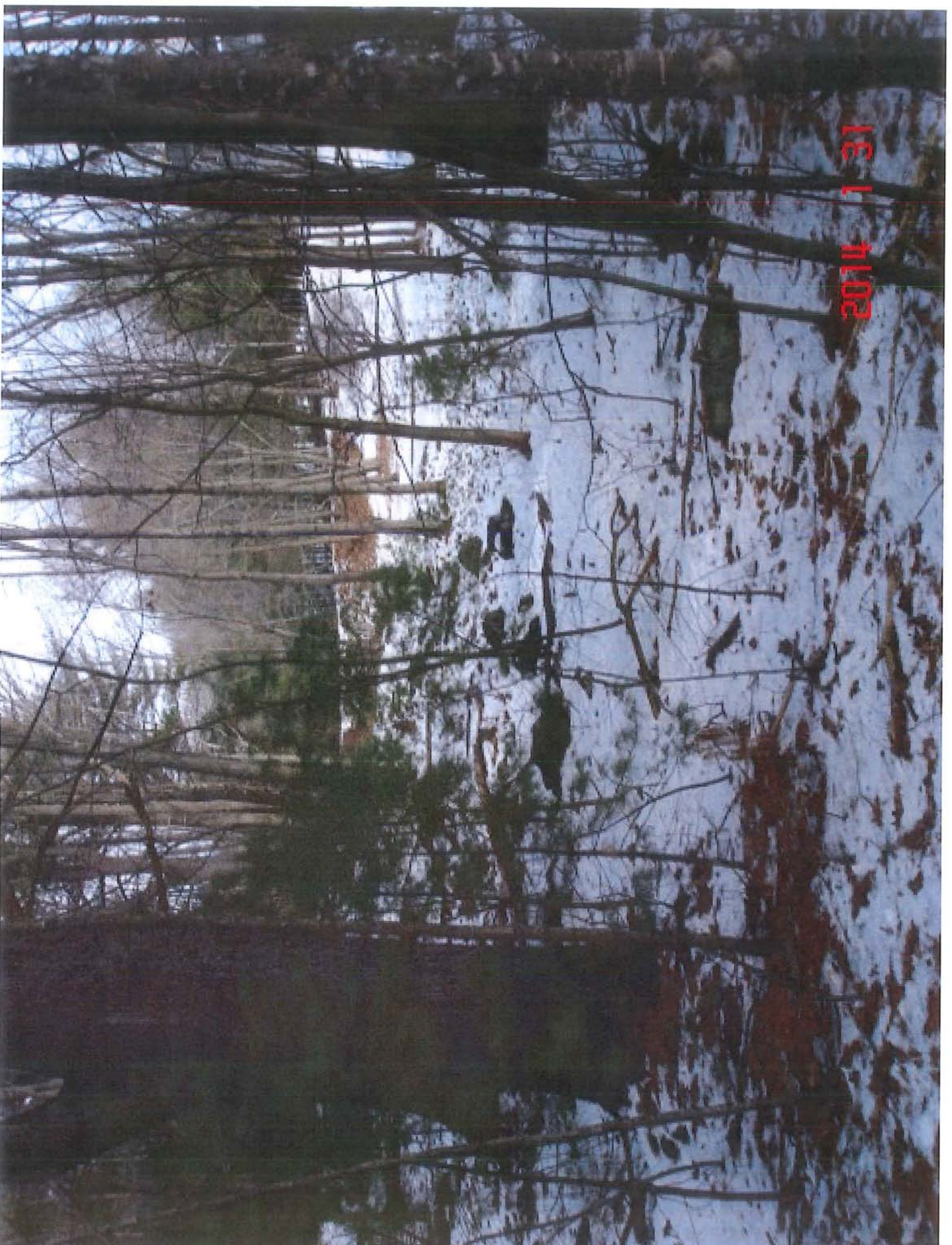


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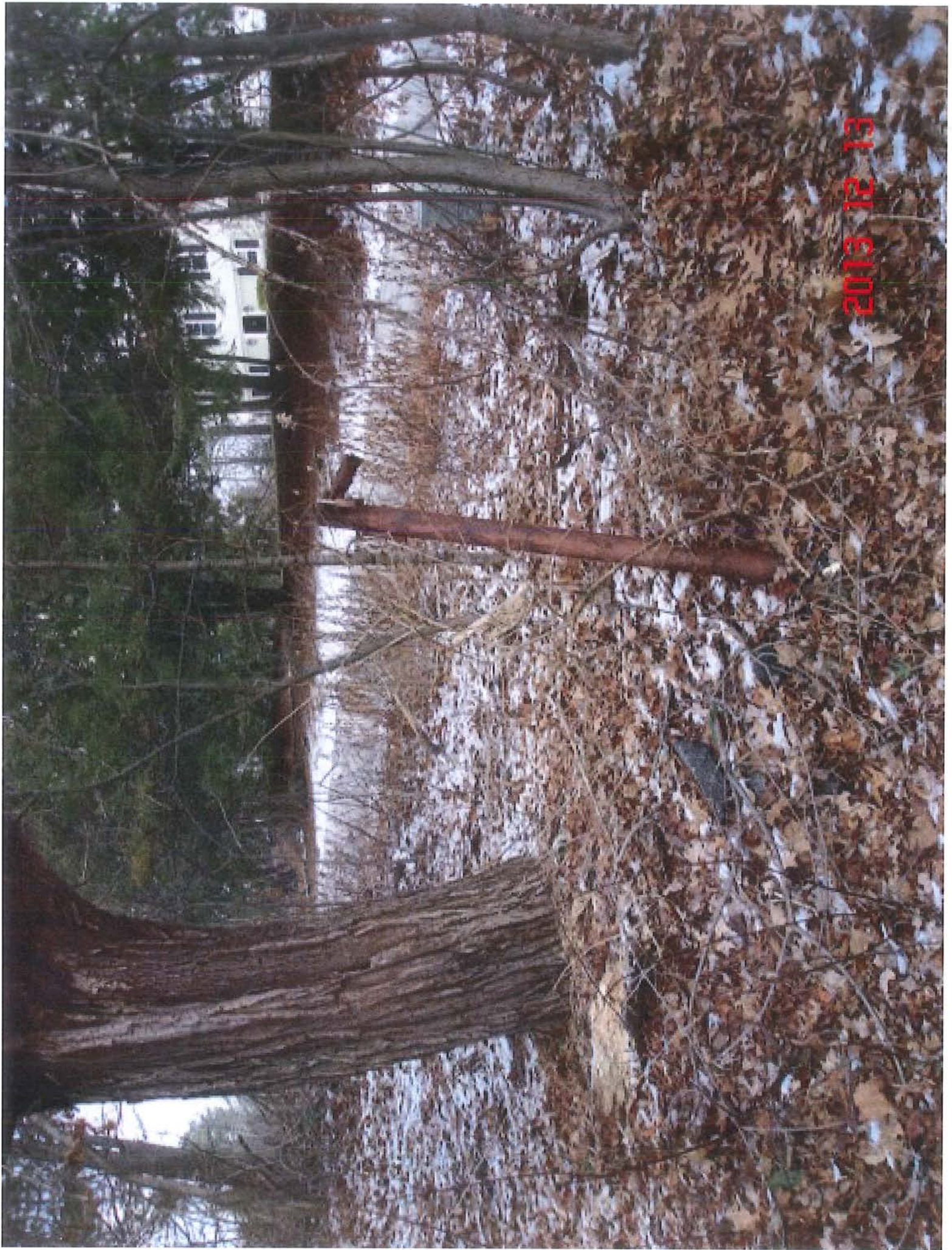
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Oliver OLIVER: MassGIS's Online Mapping Tool [OLIVER Updates](#)

Search for a location

Zoom to a town

Available Data Layer

- Search data layers
- Coastal and Mar
 - Conservation / R
 - Cultural Resourc
 - Environmental M
 - Images
 - Index (grids/filing
 - Infrastructure
 - Physical Resourc
 - Anadromous
 - Aquifers
 - Bedrock Lithic
 - DFW Coldwa
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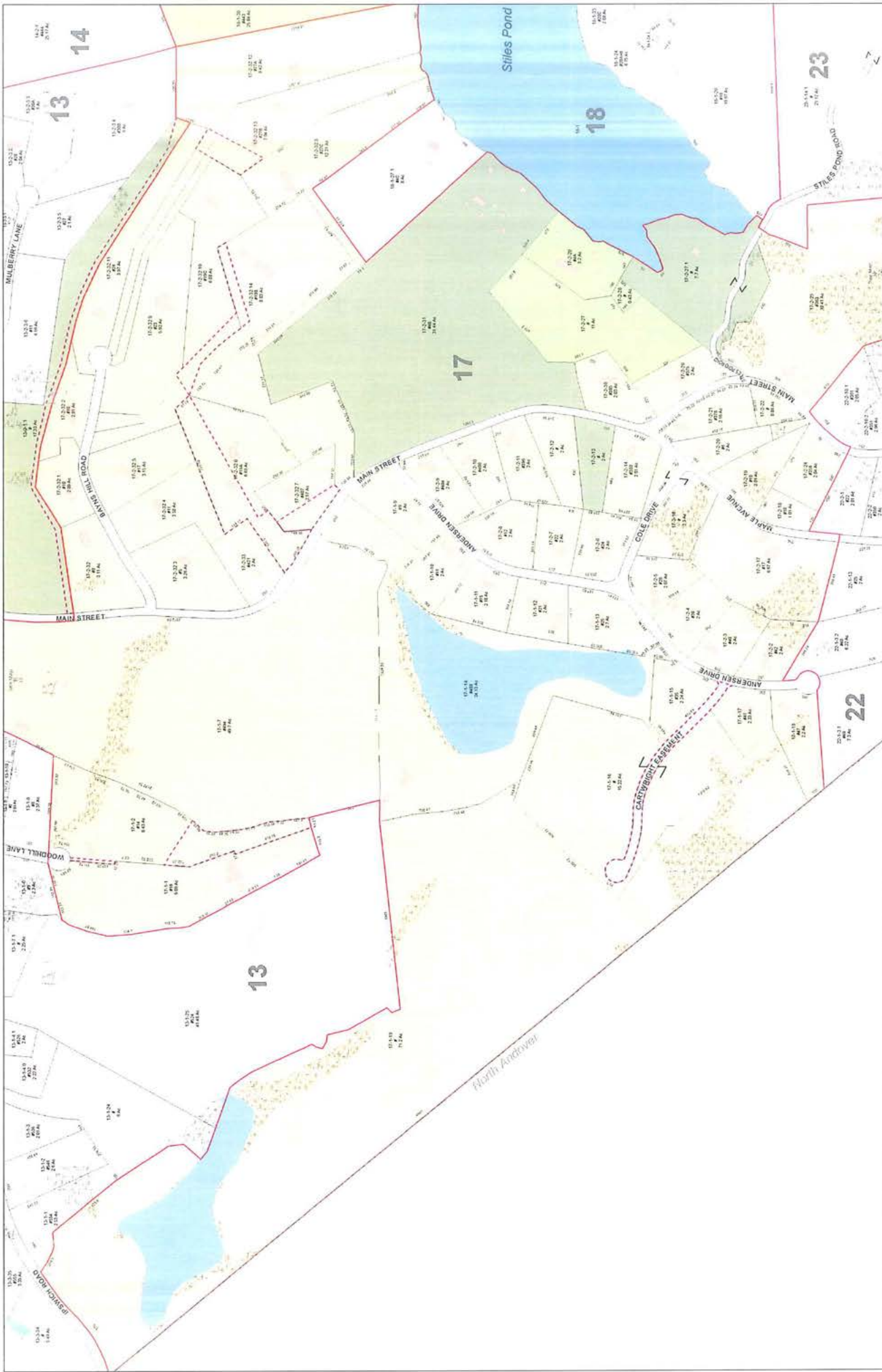
Active Data Layers

- Check all Uncheck a
- Potential V
 - NHESP Pr
 - NHESP Ni
 - NHESP E

Legend

- Potential Vernal Pools
- NHESP Priority Habita
- NHESP Estimated Hat
- NHESP Certified Vern:
- Parcels Level 3





Legend

- Adjacent Maps
- Town Boundaries
- Property Parcels
- Easements
- Building Footprint
- Street Centerline
- Common Use Land
- Water
- Municipal
- Private
- Public
- Other



**Town of Boxford
Property Parcel Maps
17**



NOTES

This map is for reference only. It is not a legal document. For legal purposes, consult the original deed or other legal documents. The map is based on the best available information and is not a guarantee of accuracy. The Town of Boxford is not responsible for any errors or omissions. For more information, contact the Planning Commission.

**Merrimack Valley
Planning Commission**



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #
 114-1178
 eDEP Transaction #
 Boxford
 City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Essex
 a. County
23980
 c. Book
 b. Certificate Number (if registered land)
45
 d. Page
7. Dates: 12-31-2013 4-17-2014 5/5/2014
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
Plan to Accompany Notice of Intent Andersen Drive (3 sheets)
 a. Plan Title
Hayes Engineering, Inc. Peter J. Ogren, P.E.
 b. Prepared By c. Signed and Stamped by
4-8-2014 1"=20'
 d. Final Revision Date e. Scale
 f. Additional Plan or Document Title g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:
 Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:
- a. Public Water Supply b. Land Containing Shellfish c. Prevention of Pollution
 d. Private Water Supply e. Fisheries f. Protection of Wildlife Habitat
 g. Groundwater Supply h. Storm Damage Prevention i. Flood Control
2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) 0.0
 a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet e. c/y dredged	b. square feet f. c/y dredged	c. square feet	d. square feet
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

- | | Proposed
Alteration | Permitted
Alteration | Proposed
Replacement | Permitted
Replacement |
|--|---|---|--|--|
| 10. <input type="checkbox"/> Designated Port Areas | Indicate size under Land Under the Ocean, below | | | |
| 11. <input type="checkbox"/> Land Under the Ocean | <u> </u>
a. square feet | <u> </u>
b. square feet | | |
| | <u> </u>
c. c/y dredged | <u> </u>
d. c/y dredged | | |
| 12. <input type="checkbox"/> Barrier Beaches | Indicate size under Coastal Beaches and/or Coastal Dunes below | | | |
| 13. <input type="checkbox"/> Coastal Beaches | <u> </u>
a. square feet | <u> </u>
b. square feet | <u> </u>
c. nourishment
cu yd | <u> </u>
d. nourishment
cu yd |
| 14. <input type="checkbox"/> Coastal Dunes | <u> </u>
a. square feet | <u> </u>
b. square feet | <u> </u>
c. nourishment
cu yd | <u> </u>
d. nourishment
cu yd |
| 15. <input type="checkbox"/> Coastal Banks | <u> </u>
a. linear feet | <u> </u>
b. linear feet | | |
| 16. <input type="checkbox"/> Rocky Intertidal Shores | <u> </u>
a. square feet | <u> </u>
b. square feet | | |
| 17. <input type="checkbox"/> Salt Marshes | <u> </u>
a. square feet | <u> </u>
b. square feet | <u> </u>
c. square feet | <u> </u>
d. square feet |
| 18. <input type="checkbox"/> Land Under Salt Ponds | <u> </u>
a. square feet | <u> </u>
b. square feet | | |
| | <u> </u>
c. c/y dredged | <u> </u>
d. c/y dredged | | |
| 19. <input type="checkbox"/> Land Containing Shellfish | <u> </u>
a. square feet | <u> </u>
b. square feet | <u> </u>
c. square feet | <u> </u>
d. square feet |
| 20. <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 | | | |
| | <u> </u>
a. c/y dredged | <u> </u>
b. c/y dredged | | |
| 21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage | <u> </u>
a. square feet | <u> </u>
b. square feet | | |



Massachusetts Department of Environmental Protection
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B. Findings (cont.)

* #22. 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.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

22. Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

23. Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 5-17 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 114-1178 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. **The work associated with this Order (the "Project") is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:**

a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:

- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
- ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
- iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;
- iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
- v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #
114-1178
eDEP Transaction #
Boxford
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #

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Boxford

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #

114-1178

eDEP Transaction #

Boxford

City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The Boxford Conservation Commission hereby finds (check one that applies):
 Conservation Commission
 - a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Boxford Wetlands Protection Bylaw

Town Code

1. Municipal Ordinance or Bylaw

Ch. 192

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

See separate Order of Conditions issued pursuant to the Boxford Wetlands Protection Bylaw, Town Code Ch. 192.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #
 114-1178
 eDEP Transaction #
 Boxford
 City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.
 Please indicate the number of members who will sign this form.
 This Order must be signed by a majority of the Conservation Commission.

5/5/2014
 1. Date of Issuance
4
 2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

P. G. Lawrence
Paris A. Beckett
Albert F. ...

[Signature]

by hand delivery on

by certified mail, return receipt requested, on

Date

Date

5/5/2014

F. Appeals

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

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

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



Town of Boxford Massachusetts
Conservation Commission

Order of Conditions

Boxford Wetlands Protection Bylaw, Town Code c. 192

Boxford File Number

114-1178

for official use only

A Applicant Information

From:

Boxford Conservation Commission
Conservation Commission

For:

114-1178
Project File Number

To:

Bill Gianguito
Applicant Name

36 Winter Street
Mailing Address

Malden
City/Town

MA 01248
State *Zip Code*

The project site is located at:

Andersen Drive, Lot 8A Boxford
Street/Street address (if available) *City/Town*

Map: 17 Block: 1 Lot: 16
Assessors Map/Block/Lot Number

and the property is recorded at the Registry of Deeds for:

Essex South 23980 45
County *Book* *Page*

Certificate (if registered land)

The Notice of intent for this project was filed on:

12-31-2013
Date

The public hearing was closed on:

4-17-2014
Date

Issuance date of this Order:

5/5/2014
Date

Title and date of final plans and other documents:

Plan to Accompany Notice of Intent Andersen Drive Boxford, Mass., prepared by Hayes Engineering and stamped by Peter J. Ogren, P.E., dated December 12, 2013 and last revised 4-8-2014 (3 sheets)

Plan Title

B Findings

Findings of the Boxford Conservation Commission pursuant to the Boxford Wetlands Protection Bylaw:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this commission finds that the area in which work is proposed is significant to the following interests of the Bylaw (check all that apply)

- Public Water Supply
- Private Water Supply
- Groundwater Supply
- Flood Control
- Fisheries
- Storm Damage Prevention
- Prevention of Pollution
- Protection of Wildlife Habitat
- Protection of Rare Species Habitat
- Agriculture
- Recreation values

Furthermore, the Boxford Conservation Commission hereby finds that the project, as proposed, is:

(check one of the following boxes)

Approved subject to:

the following conditions which are necessary, in accordance with the performance standards set forth in the Bylaw regulations, to protect those interests checked above. This Commission orders that all the work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Order of Conditions

Boxford Wetlands Protection Bylaw, Town Code c. 192

B Findings (cont.)

Additional Findings

This Order is issued under the Boxford Wetlands Protection Bylaw, Town Code c. 192. The Boxford Bylaw is more protective of wetland resources than the Wetland Protection Act and associated regulations because, among other things, it identifies a 100-foot wide wetland buffer zone around wetlands as a separate resource area, and establishes specific wetland setbacks for identified activities within the buffer zone. The Boxford Conservation Commission reviewed the proposed project with consideration for the more protective requirements of the Boxford Bylaw, and determined that the additional conditions contained in this Bylaw Order are necessary to ensure adequate protection of resource areas.

This Order permits improvement of an existing wood road to serve as a residential driveway, including the replacement of an existing culvert at an intermittent stream crossing. The culvert replacement shall occur only during the month of August when the stream bed is dry. The replacement culvert shall have the same nominal interior dimension as the existing culvert. No disturbance of the stream channel on either side of the culvert is authorized by this Order.

General Conditions

1. This Bylaw Order of Conditions hereby incorporates by reference and affirms all conditions set forth in the Massachusetts Wetlands Protection Act Order of Conditions issued simultaneously by the Boxford Conservation Commission for this project (if so issued).
2. The BCC or its Administrator, officers, or employees shall have the right to enter and inspect the property at any time for compliance with the conditions of this Order, the Boxford Wetlands Protection Bylaw and Regulations, Town Code Ch. 192 and Ch. 375, and shall have the right to require any data or documentation that it deems necessary for that evaluation.
3. No work shall be undertaken until this Order has become final and then has been recorded in its entirety in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Boxford Conservation Commission on the form at the end of this Order, which must be stamped by the Registry of Deeds, prior to the commencement of the work.
4. All activities on this property shall comply with the provisions of the Boxford Wetlands Protection Bylaw and Regulations.

Prior to Construction

5. At the Pre-Activity Meeting, the Conservation Commission's representative shall install conservation markers as shown on the approved plan and along the approved limit of work. Conservation markers consist of a four-inch diameter white

metal disk with green lettering which reads: "Boxford Conservation Commission Protected Area."

6. The applicant shall provide pre-construction photographs of the work area.

During Construction

7. The burial of stumps and any other type of construction refuse or other waste material is prohibited in the buffer zone.
8. In case of emergencies, problems, or the need to discuss site conditions with the Boxford Conservation Commission, please contact the Commission or its Administrator during business hours at (978) 887-6000 x506.
9. Mulch sock may be used as erosion control in lieu of silt fence and haybales where approved by the Conservation Agent. Conservation Agent may require different or additional erosion control as site conditions warrant.
10. Erosion controls shall be placed at the construction access sufficient to prevent mud from tracking onto paved areas or as directed by the Conservation Agent in the field.
11. The culvert replacement shall occur only during the month of August when the stream bed is dry. No disturbance of the stream channel on either side of the culvert is authorized by this Order.

After Construction

12. An application for a Certificate of Compliance must be submitted to the Boxford Conservation Office within 30 days of completion of the work, but in no event later than 30 days after the expiration of this Order whether work is completed or not. This requirement shall continue in force after the expiration of this Order.
13. In addition to the items required for a Certificate of Compliance by the Wetlands Protection Act Order of Conditions, the following items must also be submitted under this Bylaw Order of Conditions:
 - (1) A check for the applicable Bylaw fee made out to the "Town of Boxford" must be submitted with the written request for a Certificate of Compliance.
 - (2) A letter from a Registered Professional Engineer certifying compliance of the property with this Order of Conditions.
 - (3) Post-construction photographs of the work area.
 - (4) An "As-Built" plan signed and stamped by a Registered Professional Engineer or Land Surveyor showing post-construction conditions within all areas under the jurisdiction of the Boxford Wetlands Protection Bylaw. This plan shall include at a minimum:
 - (a) All wetland resource area boundaries with associated buffer zones and regulatory setback areas taken from the plan(s) approved in this Order of Conditions;
 - (b) Locations and elevations of all stormwater management conveyances, structures and best management measures, including foundation drains,



Order of Conditions

Boxford Wetlands Protection Bylaw, Town Code c. 192

B Findings (cont.)

- constructed under this Order within any wetland resource area or buffer zone;
- (c) Distances from any structures constructed under this Order to wetland resource areas - "structures" include, but are not limited to, all buildings, septic system components, wells, utility lines, fences, retaining walls, and roads/driveways;
- (d) The location of Conservation markers;
- (e) A line delineating the limit of work - "work" includes any filling, excavating and/or disturbance of soils or vegetation approved under this Order;

Continuing Conditions: These condition shall survive the expiration of this Order, and shall be included as continuing conditions in perpetuity on the Certificate of Compliance,

- 14. Conservation markers shall remain in place during and after construction, in perpetuity.
- 15. De-icing chemicals (e.g. sodium, potassium, and calcium chloride) are prohibited on driveways located in wetland resource areas and buffer zones.
- 16. Only slow-release organic granular type fertilizers shall be used within the wetland buffer zone. Use of fertilizers on all areas of the site shall be minimized as much as practicable.

This Order is valid for three years from the following date unless extended:

5/5/2014
Date

This Order must be signed by a majority of the Conservation Commission. The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate regional office of the Department of Environmental Protection.

Signatures:

P. Delaney
Robin Berghetti
Carole...
Alit...

On this 1st

day of May

Month 2014
Year

before me, the undersigned notary public, personally appeared

Peter Delaney

who proved to me through satisfactory evidence of identification, which is my identification of the principal based upon my personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Ross M. Povenmire
Notary Public

2.24.2017
My commission expires

This Order is issued to the applicant as follows:

by hand delivery on

Date

by certified mail, return receipt requested, on

5-5-2014
Date



ROSS M. POVENMIRE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
February 24, 2017



Order of Conditions

Boxford Wetlands Protection Bylaw, Town Code c. 192

C Appeals

Any person wishing to appeal this Bylaw Order of Conditions must file an appeal with the Massachusetts Supreme Judicial Court or the Superior Court within 60 days of the date of issuance of this Order. The Bylaw Order appeal process is completely distinct from any appeal to the Massachusetts Department of Environmental Protection of an Order of Conditions issued by the Conservation Commission under the Massachusetts Wetlands Protection Act.

D Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information shall be submitted to the Boxford Conservation Commission on the form below, which must be stamped by the Registry of Deeds.

Detach on dotted line (or photocopy this page) and submit to the Conservation Commission

To:
Boxford Conservation Commission

Signature of Applicant

Please be advised that the Order of Conditions for the project at

Please sign where indicated and mail or hand deliver to the Boxford Conservation Office, 7A Spofford Road, Boxford, MA 01921

Andersen Drive, Lot 8A 114-1178
Project Location *DEP File Number*

has been recorded at the Registry of Deeds of

Essex South
County

and has been noted in the chain of title of the affected property in

Book

Page

in accordance with the Order of Conditions issued on

Date

If recorded land, the instrument number which identifies this transaction is

Date

If registered land, the document number which identifies this transaction is

Document Number

**EROSION AND SEDIMENTATION CONTROL
ANDERSEN DRIVE, LOT 8A
BOXFORD, MASSACHUSETTS**

August 25, 2020

PART I - GENERAL

QUALITY ASSURANCE

- A. The applicant and all site contractors shall be responsible for reviewing, and taking steps to meet, all requirements contained in the Order of Conditions issued by the Conservation Commission for this project.
- B. Follow siltation control methods as outlined below, shown on the plan and as directed by Engineer.
- C. Operations will be restricted to areas of work indicated on drawings (and clearly marked on site) and area which must be entered for construction of temporary or permanent facilities.
- D. Conservation Commission has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations, and to direct immediate permanent or temporary pollution control measures to prevent contamination of wetlands, including construction of temporary berms, sediment basins, sediment traps, slope drains and use of temporary mulches, mats or other control devices or methods as necessary to control erosion.
- E. Temporary stockpiles of soil shall be located in an upland area (not to exceed the limit of construction as demarcated by siltation fencing shown on the plan) and be surrounded with an erosion control barrier to prevent sediments from encroaching upon adjacent resource areas.

PART 2 – EROSION CONTROL BARRIERS

Erosion barriers shall be installed along wetland boundaries as shown on the Notice of Intent Plan prior to commencement of any site work. Barriers specified on the plan shall be installed as specified below. Alternative types of barriers (i.e straw, coir or Filtrex™ type logs) may be used with the approval of the Conservation Commission and Project Engineer, and be installed per manufacturer's instructions. The approved alternative barrier must be designed and sized specifically for conditions on this site. After initial barrier installation, site personnel shall perform weekly inspections of, and maintain, the siltation control barrier during construction. Inspections of the siltation control barrier shall also be performed prior to and immediately following major (>1") rainfall event. After all construction activities are completed, and the areas of bare soil are vegetated and or stabilized, the siltation control barriers may be removed upon approval of the Conservation Commission. It is important that the disturbed areas previously occupied by the siltation control barriers, as well as adjacent areas, be repaired and vegetated immediately after removal of the barriers.

A. MATERIALS

Staked Haybale Barrier

1. Hay or straw bales, enough to accomplish length specified on plan and 10 to be reserved for replacement or barrier re-enforcement use, as needed.
2. 2-inch by 2-inch by 3.5-foot wooden stakes for hay bales, two stakes per bale.

Filter Fences

1. Synthetic Filter Fabric
 - a. Synthetic filter fabric (i.e Marafi or other brand of siltation control filter fabric) shall consist of a pervious sheet of propylene, nylon, polyester or ethylene filaments. Standard or extra –strength filter fabric may be installed.
 - b. Certified by manufacturer or supplier as conforming to the following requirements:

<u>Physical Property</u>	<u>Minimum Requirements</u>
Filtering Efficiency	75 percent
Tensile Strength at 20% (maximum) Elongation	Extra Strength: 50 lbs./ linear inch Standard Strength: 30 lbs./ linear inch
Flow Rate	.3 gal./ sq.ft.

2. Non-synthetic Filter Fabric
 - a. Shall consist of burlap fabric weighing 10 ounces per square yard.
3. Filter Fabric Support
 - a. Posts or stakes for filter fences shall be of sufficient size and strength to support the fabric. Steel posts shall have projections for fastening wire to them.
 - b. When standard strength filter fabric fencing is used on a sloped location, the fabric shall be reinforced by wire mesh fence. Wire fence reinforcement for filter fences shall be a minimum of 36 inches in height, a minimum of 14 gauge and a maximum mesh spacing of 6 inches.

B. INSTALLATION

Location

Install erosion controls prior to commencement of construction activities along limits of work area as specified on plan, surrounding bases of all deposits of stored fill material outside of disturbed area, and where directed by the Conservation Commission.

Barrier Installment

1. Hay Bales

Hay bales, if specified, will be embedded in the soil a minimum of 4 inches. Hold bales in place with two 2-inch by 2-inch by 3.5-foot stakes so that each bale is butted tightly against adjoining bale, thereby precluding short-circuiting of erosion check. The first stake in each bale shall be driven toward the previously-laid bale to push the bales together.

2. Filter Fences (If required)

- a. Excavate trench along post line 6 inches wide and 6 inches deep on the upslope side of the barrier.
- b. Space posts a maximum of 10 feet apart and drive them a minimum of 12 inches into the ground. The posts should not be greater than 36 inches above the ground.
- c. Staple, wire or tie the standard or extra- strength filter fabric to the posts. The fabric shall extend 8 inches into the trench and shall not extend more than 36 inches above the ground. Do not staple filter fabric to existing trees.
- d. Backfill trench and compact soil over filter fabric.
- e. When extra-strength filter fabric or burlap and closer post spacing (6 ' max.) is used for projects on slopes, wire mesh support may be eliminated, in which case the filter fabric is stapled, wired or tied directly to the posts with all other provisions of item 4 applying.

PART 3 – POLLUTION CONTROL MEASURES

- A. Discharge silt-laden water from excavations onto filter fabric mat and/or baled hay or straw sediment traps to ensure that only sediment-free water is returned to wetland areas. Sediment traps, if needed, should be constructed by standard methods.
- B. Do not place soil backfill material adjacent to resource areas without proper siltation controls or otherwise preventing the soil from washing away by high water or runoff.
- C. Do not dump any materials into any streams, wetlands, surface waters or unspecified locations.
- D. Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, washwater from concrete trucks or hydroseeders, or any other pollutant into any streams, wetlands, surface waters or natural or man-made channels leading thereto, or unspecified locations.
- E. No disturbance or alteration of any kind allowed between the specified limit of work and the wetlands.

- F. Prevent any operation of equipment outside the designated limit of work (erosion control barrier).
- G. Prevent indiscriminate, arbitrary or capricious operation of equipment in surface waters.

PART 4 – EQUIPMENT STORAGE AND REFUELING

- A. All equipment refueling shall take place as far away as possible from wetlands as possible.
- B. All equipment shall be parked as far away as possible from the on-site wetland boundary or removed from the site at the end of the workday.
- C. No permanent or temporary storage of fuel and / or lubricants allowed on the site.

PART 5 – STABILIZATION TECHNIQUES

A. Protecting and Minimizing Exposed Areas

Steps shall be taken to minimize area of bare soil exposure by preserving existing vegetation and providing soil stabilization. Equipment and trucks shall be routed only over the existing pavement or areas of proposed work, and workers shall minimize foot traffic in vegetated areas adjacent to the work area as much as possible. During site work, utilization of stabilization techniques is necessary for controlling erosion on exposed areas, including grading, seeding and otherwise stabilizing the areas.

B. Sediment And Erosion Control / Soil Stabilization

1. Prior to any construction occurring adjacent to identified resource areas (shown on the plan and/or marked in the field, proper erosion and siltation barriers will be installed so that throughout and until completion of construction, those areas will be afforded maximum protection. Temporary stockpiles of soil shall be surrounded with an erosion control barrier to prevent sediments from exiting the subject property. All erosion control barriers are to be Maintained and periodically inspected until areas of bare soil are stabilized to ensure that they are in functioning condition. Any accumulations of sediments present along erosion control barriers shall be removed as soon as possible after deposition in order to ensure the effectiveness of all sedimentation controls.
2. On sites where grading or other work will occur on moderately steep slopes (3:1 and greater) located immediately upgradient of wetlands, the contractor shall work on one portion of the slope at a time, ensuring the stability of the disturbed soil by immediately foaming and seeding the slope, or otherwise vegetating the slope as desired, and installing erosion control mats (straw or cocoanut fiber designed for the slope steepness). If work is interrupted and the slope is to be left bare or otherwise unstabilized for duration of a day or more, a series of erosion control fences oriented parallel to the slope contours shall be installed along the length of slope.

C. Vegetational Covers

1. Temporary Vegetational Cover

Any area proposed for removal of vegetation where soil will be exposed for more than 10 days shall be mulched or otherwise treated to prevent erosion. On sediment-producing areas in the buffer zone, where the period of exposure will be more than 30 days, the following procedures should be followed for a cover of annual rye. When bare soils are not completely graded and vegetated by September 30 of any year, winter rye shall be planted as specified in table and mulched with three (3) inches of hay or straw.

- a. Install needed surface water control measures.
- b. Perform all cultural operations at right angles to the slope.
- c. Establish grass or other ground cover species as recommended in the attached excerpt (pgs 144 -146) from Massachusetts Erosion and Sedimentation Guidelines for Urban and Suburban Areas, 2003.

2. Permanent Vegetational Cover

To reduce damages from the potential incidence of sedimentation and runoff to other properties, and to avoid erosion on the site itself, a permanent type cover shall be established in disturbed areas located adjacent to resource areas immediately upon completion of grading. Seeding herbaceous cover is usually the most economical and practical way to stabilize any large area. For this site, all disturbed areas where lawns are desired will be seeded in Fall during the period of August 1 to October 1; or in spring by May 15 with a commercial lawn mixture utilizing standard landscape methods and as recommended by the seed manufacturer. Grass sod or landscape plantings may be used instead of seed, if preferred.

In upland/ buffer zone areas, outside of lawn locations, where an erosion control - wildlife seed mixture is desired, prepare soil and use one of grass seed mixes #1 through #6 as recommended in the attached excerpts (pgs 136 -139) from Massachusetts Erosion and Sedimentation Guidelines for Urban and Suburban Areas 2003, to establish a stable, permanent cover.

REFERENCES

Department of Environmental Protection, Bureau of Resource Protection and U.S. Environmental Protection Agency, Massachusetts Erosion and Sedimentation Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers and Municipal Officials. Massachusetts Executive Office of Environmental Affairs, Boston, Massachusetts, Reprint: May 2003.

Use low-maintenance native species wherever possible.

Planting should be timed to minimize the need for irrigation.

Sheet erosion, caused by the impact of rain on bare soil, is the source of most fine particles in sediment. To reduce this sediment load in runoff, the soil surface itself should be protected. The most efficient and economical means of controlling sheet and rill erosion is to establish vegetative cover. Annual plants which sprout rapidly and survive for only one growing season are suitable for establishing temporary vegetative cover. Temporary seeding is effective when combined with construction phasing so bare areas of the site are minimized at all times.

Temporary seeding may prevent costly maintenance operations on other erosion control systems. For example, sediment basin clean-outs will be reduced if the drainage area of the basin is seeded where grading and construction are not taking place. Perimeter dikes will be more effective if not choked with sediment.

Proper seedbed preparation and the use of quality seed are important in this practice just as in permanent seeding. Failure to carefully follow sound agronomic recommendations will often result in an inadequate stand of vegetation that provides little or no erosion control.

Soil that has been compacted by heavy traffic or machinery may need to be loosened. Successful growth usually requires that the soil be tilled before the seed is applied. Topsoiling is not necessary for temporary seeding; however, it may improve the chances of establishing temporary vegetation in an area.

Planting Procedures

Time of Planting

Planting should preferably be done between April 1 and June 30, and September 1 through September 30. If planting is done in the months of July and August, irrigation may be required. If planting is done between October 1 and March 31, mulching should be applied immediately after planting. If seeding is done during the summer months, irrigation of some sort will probably be necessary.

Site Preparation

Before seeding, install needed surface runoff control measures such as gradient terraces, interceptor dike/swales, level spreaders, and sediment basins.

Seedbed Preparation

The seedbed should be firm with a fairly fine surface.

Perform all cultural operations across or at right angles to the slope. See **Topsoiling** and **Surface Roughening** for more information on seedbed preparation. A minimum of 2 to 4 inches of tilled topsoil is required.

Annual ryegrass used for temporary seeding

Ryegrass reseeds itself and makes it difficult to establish a good cover of permanent vegetation.

Seed not broadcast evenly or rate too low

Results in patchy growth and erosion.

Maintenance

Inspect within 6 weeks of planting to see if stands are adequate. Check for damage after heavy rains. Stands should be uniform and dense. Fertilize, reseed, and mulch damaged and sparse areas immediately. Tack or tie down mulch as necessary.

Seeds should be supplied with adequate moisture. Furnish water as needed, especially in abnormally hot or dry weather or on adverse sites. Water application rates should be controlled to prevent runoff.

References

Massachusetts Department of Environmental Protection, Office of Watershed Management, Nonpoint Source Program, Massachusetts ***Nonpoint Source Management Manual***, Boston, Massachusetts, June, 1993.

North Carolina Department of Environment, Health, and Natural Resources, ***Erosion and Sediment Control Field Manual***, Raleigh, NC, February 1991.

U.S. Environmental Protection Agency, ***Storm Water Management For Construction Activities***, EPA-832-R-92-005, Washington, DC, September, 1992.

Washington State Department of Ecology, ***Stormwater Management Manual for the Puget Sound Basin***, Olympia, WA, February, 1992.

Silt Curtain

A temporary sediment barrier installed parallel to the bank of a stream or lake. Used to contain the sediment produced by construction operations on the bank of a stream or lake and allow for its removal.

Where Practice Applies

The silt curtain is used along the banks of streams or lakes where sediment could pollute or degrade the stream or lake.

Seeding Dates

Seeding operations should be performed as an early spring seeding (April 1-May 15) with the use of cold treated seed. A late fall early winter dormant seeding (November 1 - December 15) can also be made, however the seeding rate will need to be increased by 50%.

Seeding Methods

Seeding should be performed by one of the following methods:

- Drill seedings (de-awned or de-bearded seed should be used unless the drill is equipped with special features to accept awned seed).
- Broadcast seeding with subsequent rolling, cultipacking or tracking the seeding with small track construction equipment. Tracking should be oriented up and down the slope.
- Hydroseeding with subsequent tracking. If wood fiber mulch is used, it should be applied as a separate operation after seeding and tracking to assure good seed to soil contact.

Mulch

Mulch the seedings with straw applied at the rate of ½ tons per acre. Anchor the mulch with erosion control netting or fabric on sloping areas.

Seed Mixtures for Permanent Cover

Recommended mixtures for permanent seeding are provided on the following pages. Select plant species which are suited to the site conditions and planned use. Soil moisture conditions, often the major limiting site factor, are usually classified as follows:

Dry - Sands and gravels to sandy loams. No effective moisture supply from seepage or a high water table.

Moist - Well drained to moderately well drained sandy loams, loams, and finer; or coarser textured material with moderate influence on root zone from seepage or a high water table.

Wet - All textures with a water table at or very near the soil surface, or with enduring seepage.

When other factors strongly influence site conditions, the plants selected must also be tolerant of these conditions.

Permanent Seeding Mixtures					
Mix	Site	Seed Mixture	Seed, Pounds per:		Remarks
			Acre	1,000 sf	
1	Dry	Little Bluestem	10	0.25	* Use Warm Season planting procedure. * Roadsides * Sand and Gravel Stabilization * Clover requires inoculation with nitrogen-fixing bacteria * Rates for this mix are for PLS.
		or Broomsedge			
		Tumble Lovegrass*	1	0.10	
		Switchgrass	10	0.25	
		Bush Clover*	2	0.10	
Red Top	1	0.10			
2	Dry	Deertongue	15	0.35	* Use Warm Season planting procedures. * Acid sites/Mine spoil * Clover requires inoculation with nitrogen-fixing bacteria. * Rates for this mix are for PLS.
		Broomsedge	10	0.25	
		Bush Clover*	2	0.10	
		Red Top	1	0.10	
3	Dry	Big Bluestem	10	0.25	* Use Warm Season planting procedures. * Eastern Prairie appearance * Sand and Gravel pits. * Golf Course Wild Areas * Sanitary Landfill Cover seeding * Wildlife Areas * OK to substitute Poverty Dropseed in place of Red Top/Ryegrass. * Rates for this mix are for PLS.
		Indian Grass	10	0.25	
		Switchgrass	10	0.25	
		Little Bluestem	10	0.25	
		Red Top or	1	0.10	
		Perennial Ryegrass	10	0.25	
4	Dry	Flat Pea	25	0.60	* Use Cool Season planting procedures * Utility Rights-of-Ways (tends to suppress woody growth)
		Red Top or	2	0.10	
		Perennial Ryegrass	15	0.35	
5	Dry	Little Bluestem	5	0.10	* Use Warm Season planting procedures. * Coastal sites * Rates for Bluestein and Switchgrass are for PLS.
		Switchgrass	10	0.25	
		Beach Pea*	20	0.45	
		Perennial Ryegrass	10	0.25	
6	Dry - Moist	Red Fescue	10	0.25	* Use Cool Season planting procedure. * Provides quick cover but is non-aggressive; will tend to allow indigenous plant colonization. * General erosion control on variety of sites, including forest roads, skid trails and landings.
		Canada Bluegrass	10	0.25	
		Perennial Ryegrass	10	0.25	
		Red Top	1	0.10	
7	Moist-Wet	Switchgrass	10	0.25	* Use Warm Season planting procedure. * Coastal plain/flood plain * Rates for Bluestem and Switchgrass are for PLS.
		Virginia Wild Rye	5	0.10	
		Big Bluestem	15	0.35	
		Red Top	1	0.10	

Permanent Seeding Mixtures					
Seed, Pounds per:					
Mix	Site	Seed Mixture	Acre	1,000 sf	Remarks
8	Moist	Creeping Bentgrass	5	0.10	* Use Cool Season planting procedures. * Pond Banks * Waterways/ditch banks
	Wet	Fringed Bromegrass	5	0.10	
		Fowl Meadowgrass	5	0.10	
		Bluejoint Reedgrass or Rice Cutgrass	2	0.10	
		Perennial Ryegrass	10	0.25	
9	Moist	Red Fescue	5	0.10	*Salt Tolerant * Fescue and Bentgrass provide low growing appearance, while Switchgrass provides tall cover for wildlife.
	Wet	Creeping Bentgrass	2	0.10	
		Switchgrass	8	0.20	
		Perennial Ryegrass	10	0.25	
10	Moist	Red Fescue	5	0.10	* Use Cool Season planting procedure. * Trefoil requires inoculation with nitrogen fixing bacteria. * Suitable for forest access roads, skid trails and other partial shade situations.
	Wet	Creeping Bentgrass	5	0.10	
		Virginia Wild Rye	8	0.20	
		Wood Reed Grass*	1	0.10	
		Showy Tick Trefoil*	1	0.10	
11	Moist	Creeping Bentgrass	5	0.10	* Use Cool Season planting procedure. * Suitable for waterways, pond or ditch banks. * Trefoil requires inoculation with nitrogen fixing bacteria.
	Wet	Bluejoint Reed Grass	1	0.10	
		Virginia Wild Rye	3	0.10	
		Fowl Meadow Grass	10	0.25	
		Showy Tick Trefoil*	1	0.10	
		Red Top	1	0.10	
12	Wet	Blue Joint Reed Grass	1	0.10	* Use Cool Season planting procedure. * OK to seed in saturated soil conditions, but not in standing water. * Suitable as stabilization seeding for created wetland. * All species in this mix are native to Massachusetts.
		Canada Manna Grass	1	0.10	
		Rice Cut Grass	1	0.10	
		Creeping Bent Grass	5	0.10	
		Fowl Meadow Grass	5	0.10	
13	Dry -	American Beachgrass	18"	18'	*Vegetative planting with dormant culms, 3-5 culms per planting centers
	Moist			centers	
14	Inter-	Smooth Cordgrass	12-18"	12-18"	* Vegetative planting with transplants. centers
	Tidal	Saltmeadow Cordgrass		centers	