



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

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



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

A. General Information

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

_____	_____	_____
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
_____	_____	_____
d. Latitude	e. Longitude	
_____	_____	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. 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

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

_____	_____	
a. First Name	b. Last Name	

c. Organization		

d. Street Address		
_____	_____	_____
e. City/Town	f. State	g. Zip Code
_____	_____	_____
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

_____	_____	
a. First Name	b. Last Name	

c. Company		

d. Street Address		
_____	_____	_____
e. City/Town	f. State	g. Zip Code
_____	_____	_____
h. Phone Number	i. Fax Number	j. Email address

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

_____	_____	_____
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:

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:

_____	_____
a. County	b. Certificate # (if registered land)
_____	_____
c. Book	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 type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

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

2. Width of Riverfront Area (check one):

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

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

4. Proposed alteration of the Riverfront Area:

a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
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5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

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

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

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



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

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	

	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	

	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	

	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
	_____	_____
	a. square feet of BVW	b. square feet of Salt Marsh
5. <input type="checkbox"/> Project Involves Stream Crossings		
	_____	_____
	a. number of new stream crossings	b. number of replacement stream crossings



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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:**

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

b. Date of map _____

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

- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage

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

2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site

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

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

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



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

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

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

D. Additional Information

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

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



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D. Additional Information (cont'd)

- 3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
- 4. List the titles and dates for all plans and other materials submitted with this NOI.

a. Plan Title

b. Prepared By

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:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name



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F. Signatures and Submittal Requirements

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

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

DocuSigned by:
Ryan McLane
4C4579CF4AD54F0...

10/2/2025

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

Meghan Sullivan

9/30/2025

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.



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Appendix A: Ecological Restoration Limited Project Checklists

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Eligibility Checklist

This Ecological Restoration Limited Project Eligibility Checklist guides the applicant in determining if their project is eligible to file as an Inland or Coastal Ecological Restoration Limited Project (310 CMR 10.53(4) or 310 CMR 10.24(8) respectively). These criteria must be met when submitting the Ecological Restoration Limited Project Notice of Intent to ensure that the restoration and improvement of the natural capacity of a Resource Area(s) to protect and sustain the interests identified in the WPA is **necessary** to achieve the project's ecological restoration goals.

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.

Regulatory Features of All Coastal and Inland Ecological Restoration Limited Projects

- (a) May result in the temporary or permanent loss of or conversion of Resource Area: An Ecological Restoration Limited Project that meets the requirements of 310 CMR 10.24(8) may result in the temporary or permanent loss of Resource Areas and/or the conversion of one Resource Area to another when such loss is necessary to the achievement of the project's ecological restoration goals.
- (b) Exemption from wildlife habitat evaluation: A NOI for an Ecological Restoration Limited Project that meets the minimum requirements for Ecological Restoration Projects and for a MassDEP Combined Application outlined in 310 CMR 10.12(1) and (2) is exempt from providing a wildlife habitat evaluation (310 CMR 10.60).
- (c) The following are considerations for applicants filing an Ecological Restoration Limited Project NOI and for the issuing authority approving a project as an Ecological Restoration Limited Project:
 - The condition of existing and historic Resource Areas proposed for restoration.
 - Evidence of the extent and severity of the impairment(s) that reduce the capacity of the Resource Areas to protect and sustain the interests identified in M.G.L. c. 131, § 40.
 - The magnitude and significance of the benefits of the Ecological Restoration Project in improving the capacity of the affected Resource Areas to protect and sustain the other interests identified in M.G.L. c. 131, § 40.
 - The magnitude and significance of the impacts of the Ecological Restoration Project on existing Resource Areas that may be modified, converted and/or lost and the interests for which said Resource Areas are presumed significant in 310 CMR 10.00, and the extent to which the project will:
 - a. avoid adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that can be avoided without impeding the achievement of the project's ecological restoration goals.
 - b. minimize adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that are necessary to the achievement of the project's ecological restoration goals.
 - c. utilize best management practices such as erosion and siltation controls and proper construction sequencing to avoid and minimize adverse construction impacts to resource areas and the interests identified in M.G.L. c. 131, § 40.



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Appendix A: Ecological Restoration Limited Project Checklists

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

Eligibility Criteria - Coastal Ecological Restoration Limited Projects (310 CMR 10.24(8))

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Complete this Eligibility Criteria Checklist **before** filling out a Notice of Intent Application to determine if your project qualifies as a Coastal Ecological Restoration Limited Project. (310 CMR 10.24(8)) Sign the Eligibility Certification at the end of Appendix A, and attach the checklist with supporting documentation and the Eligibility Certification to your Notice of Intent Application.

General Eligibility Criteria for All Coastal Ecological Restoration Limited Projects

Notwithstanding the requirements of 310 CMR 10.25 through 10.35, 310 CMR 10.54 through 10.58, and the Wildlife Habitat evaluations in 310 CMR 10.60, the Issuing Authority may issue an Order of Conditions permitting an Ecological Restoration Project listed in 310 CMR 10.24(8)(e) as an Ecological Restoration Limited Project and impose such conditions as will contribute to the interests identified in the WPA M.G.L. provided that the project meets all the requirements in 310 CMR 10.24(8).

- The project is an Ecological Restoration Project as defined in 310 CMR 10.04 and is a project type listed below [310 CMR 10.24(8)(e)].
- Tidal Restoration.
- Shellfish Habitat Restoration.
- Other Ecological Restoration Limited Project Type.
- The project will further at least one of the WPA (M.G.L. c. 131, § 40) interests identified below.
 - Protection of public or private water supply.
 - Protection of ground water supply.
 - Flood control.
 - Storm damage prevention.
 - Prevention of pollution.
 - Protection of land containing shellfish.
 - Protection of fisheries.
 - Protection of wildlife habitat.
- If the project will impact an area located within estimated habitat which is indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetlands, a NHESP preliminary written determination is attached to the NOI submittal that the project will not have any adverse long-term and short-term effects on specified habitat sites of Rare Species or the project will be carried out in accordance with an approved NHESP habitat management plan.



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Eligibility Criteria - Coastal Ecological Restoration Limited Projects (310 CMR 10.24(8)) (Cont.)

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General Eligibility Criteria for All Coastal Ecological Restoration Limited Projects (cont.)

- If the project is located in a Coastal Dune or Barrier Beach, the project avoids and minimizes armoring of the Coastal Dune or Barrier Beach to the maximum extent practicable.
- The project complies with all applicable provisions of 310 CMR 10.24(1) through (6) and 310 CMR 10.24(9) and (10).

Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

These additional criteria must be met to qualify as an Ecological Restoration Limited Project to ensure that the restoration and improvement of the natural capacity of a Resource Area to protect and sustain the interests identified in the WPA is **necessary** to achieve the project's ecological restoration goals.

- This Ecological Restoration Limited Project application meets the eligibility criteria for Ecological Restoration Limited Project [310 CMR 10.24(8)(a) through (d) and as proposed, furthers at least one of the WPA interests is for the project type identified below.

Tidal Restoration Projects

- A project to restore tidal flow that will not significantly increase flooding or storm damage impacts to the built environment, including without limitation, buildings, wells, septic systems, roads or other man-made structures or infrastructure.

Shellfish Habitat Restoration Projects

- The project has received a Special Projects Permit from the Division of Marine Fisheries or, if a municipality, has received a shellfish propagation permit.
- The project is made of cultch (e.g., shellfish shells from oyster, surf or ocean clam) or is a structure manufactured specifically for shellfish enhancement (e.g., reef blocks, reef balls, racks, floats, rafts, suspended gear).

Other Ecological Restoration Projects that meet the criteria set forth in 310 CMR 10.24(8)(a) through (d).

- Restoration, enhancement, or management of Rare Species habitat.
- Restoration of hydrologic and habitat connectivity.
- Removal of aquatic nuisance vegetation to impede eutrophication.
- Thinning or planting of vegetation to improve habitat value.
- Fill removal and re-grading.
- Riparian corridor re-naturalization.
- River floodplain re-connection.



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Eligibility Criteria - Coastal Ecological Restoration Limited Projects (310 CMR 10.24(8)) (Cont.)

Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

- In-stream habitat enhancement.
- Remediation of historic tidal wetland ditching.
- Eelgrass restoration.
- Invasive species management.
- Installation of fish passage structures.
- Other. Describe: _____
- This project involves the construction, repair, replacement or expansion of public or private infrastructure (310 CMR 10.24(9)).
 - The NOI attachment labeled _____ is an operation and maintenance plan to ensure that the infrastructure will continue to function as designed.
 - The operation and maintenance plan will be implemented as a continuing condition in the Order of Conditions and the Certificate of Compliance.
 - This project proposes to replace an existing stream crossing (310 CMR 10.24(10)). The crossing complies with the Massachusetts Stream Crossing Standards to the maximum extent practicable with details provided in the NOI. The crossing type:
 - Replaces an existing non-tidal crossing that is part of an Anadromous/Catadromous Fish Run (310 CMR 10.35)
 - Replaces an existing tidal crossing that restricts tidal flow. The tidal restriction will be eliminated to the maximum extent practicable.
 - At a minimum, in evaluating the potential to comply with the standards to the maximum extent practicable the following criteria have been consider site constraints in meeting the standard, undesirable effects or risk in meeting the standard, and the environmental benefit of meeting the standard compared to the cost, by evaluating the following:
 - The potential for downstream flooding;
 - Upstream and downstream habitat (in-stream habitat, wetlands);
 - Potential for erosion and head-cutting;
 - Stream stability;
 - Habitat fragmentation caused by the crossing;
 - The amount of stream mileage made accessible by the improvements;
 - Storm flow conveyance;



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Eligibility Criteria - Coastal Ecological Restoration Limited Projects (310 CMR 10.24(8)) (Cont.)

Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

- Engineering design constraints specific to the crossing;
- Hydrologic constraints specific to the crossing;
- Impacts to wetlands that would occur by improving the crossing;
- Potential to affect property and infrastructure; and
- Cost of replacement.

Eligibility Criteria - Inland Ecological Restoration Limited Project (310 CMR 10.53(4))

Complete this Eligibility Criteria Checklist **before** filling out a Notice of Intent Application to determine if your project qualifies as an Inland Ecological Restoration Limited Project. (310 CMR 10.53(4)) Sign the Eligibility Certification at the end of Appendix A, and attach the checklist with supporting documentation and the Eligibility Certification to your Notice of Intent Application.

General Eligibility Criteria for All Inland Ecological Restoration Limited Projects

Notwithstanding the requirements of any other provision of 310 CMR 10.25 through 10.35, 310 CMR 10.54 through 10.58, and 310 CMR 10.60, the Issuing Authority may issue an Order of Conditions permitting an Ecological Restoration Project listed in 310 CMR 10.53(4)(e) as an Ecological Restoration Limited Project and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40, provided that:

- The project is an Ecological Restoration Project as defined in 310 CMR 10.04 and is a project type listed below [310 CMR 10.53(4)(e)].
 - Dam Removal
 - Freshwater Stream Crossing Repair and Replacement
 - Stream Daylighting
 - Tidal Restoration
 - Rare Species Habitat Restoration
 - Restoring Fish Passageways
 - Other (describe project type): Selective invasive plant control and native plantings



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Eligibility Criteria - Inland Ecological Restoration Limited Project (310 CMR 10.53(4)) (cont.)

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General Eligibility Criteria for All Inland Ecological Restoration Limited Projects

- The project will further at least one of the WPA (M.G.L. c. 131, § 40) interests identified below.
 - Protection of public or private water supply
 - Protection of ground water supply
 - Flood control
 - Storm damage prevention
 - Prevention of pollution
 - Protection of land containing shellfish
 - Protection of fisheries
 - Protection of wildlife habitat
- If the project will impact an area located within estimated habitat which is indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetlands, a NHESP preliminary written determination is attached to the NOI submittal that the project will have no adverse long-term and short-term effects on specified habitat sites of Rare Species or the project will be carried out in accordance with an approved NHESP habitat management plan.
- The project will be carried out in accordance with any time of year restrictions or other conditions recommended by the Division of Marine Fisheries for coastal waters and the Division of Fisheries and Wildlife in accordance with 310 CMR 10.11(3).
- If the project involves the dredging of 100 cubic yards of sediment or more or dredging of any amount in an Outstanding Resource Water, a Water Quality Certification has been applied for or obtained.
- The project complies with all applicable provisions of 310 CMR 10.53(1), (2), (7), and (8).



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

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

Eligibility Criteria - Inland Ecological Restoration Limited Project (310 CMR 10.53(4)) (cont.)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

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Additional Eligibility Criteria for Specific Inland Ecological Restoration Limited Project Types

These additional criteria must be met to qualify as an Ecological Restoration Limited Project to ensure that the restoration and improvement of the natural capacity of a Resource Area to protect and sustain the interests identified in the WPA is **necessary** to achieve the project's ecological restoration goals.

- This project application meets the eligibility criteria for Ecological Restoration Limited Project in accordance with [310 CMR 10.53(4)(a) through (d) and as proposed, furthers at least one of the WPA interests is for the project type identified below:
- Dam Removal**
 - Project is consistent with MassDEP's 2007 Dam Removal Guidance.
 - Freshwater Stream Crossing Repair and Replacement.** The project as proposed and the NOI describes how:
 - Meeting the eligibility criteria set forth in 310 CMR 10.13 would result in significant stream instability or flooding hazard that cannot otherwise be mitigated, and site constraints make it impossible to meet said criteria.
 - The project design ensures that the stability of the bank is NOT impaired.
 - To the maximum extent practicable, the project provides for the restoration of the stream upstream and downstream of the structure as needed to restore stream continuity and eliminate barriers to aquatic organism movement.
 - The project complies with the requirements of 310 CMR 10.53(7) and (8).
 - Stream Daylighting Projects**
 - The project meets the eligibility criteria for Ecological Restoration Limited Project [310 CMR 10.53(4)(a) through (d)] and as proposed the NOI describes how the proposed project meets to the maximum extent practicable, consistent with the project's ecological restoration goals, all the performance standards for Bank and Land Under Water Bodies and Waterways.
 - The project meets the requirements of 310 CMR 10.12(1) and (2) and a wildlife habitat evaluation is not included in the NOI.
 - Tidal Restoration Project**
 - Restores tidal flow.
 - the project, including any proposed flood mitigation measures, will not significantly increase flooding or storm damage to the built environment, including without limitation, buildings, wells, septic systems, roads or other man-made structures or infrastructure.



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Appendix A: Ecological Restoration Limited Project Checklists

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

Eligibility Criteria - Inland Ecological Restoration Limited Project (310 CMR 10.53(4)) (cont.)

- Other Ecological Restoration Projects** that meet the criteria set forth in 310 CMR 10.53 (4) (a) through (d).
 - Restoration, enhancement, or management of Rare Species habitat.
 - Restoration of hydrologic and habitat connectivity.
 - Removal of aquatic nuisance vegetation to impede eutrophication.
 - Thinning or planting of vegetation to improve habitat value.
 - Riparian corridor re-naturalization.
 - River floodplain re-connection.
 - In-stream habitat enhancement.
 - Fill removal and re-grading.
 - Flow restoration.
 - Installation of fish passage structures.
 - Invasive species management.
 - Other. Describe: _____
- This project involves the construction, repair, replacement or expansion of public or private infrastructure. (310 CMR 10.53(7))
 - The NOI attachment labeled _____ is an operation and maintenance plan to ensure that the infrastructure will continue to function as designed.
 - The operation and maintenance plan will be implemented as a continuing condition in the Order of Conditions and the Certificate of Compliance.
- This project replaces an existing stream crossing (310 CMR 10.53(8)). The crossing type:
 - Replaces an existing non-tidal crossing designed to comply with the Massachusetts Stream Crossing Standards to the maximum extent practicable with details provided in the NOI.
 - Replaces an existing tidal crossing that restricts tidal flow. The tidal restriction will be eliminated to the maximum extent practicable.



WPA Form 3 – Notice of Intent
Appendix A: Ecological Restoration Limited
Project Checklists

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

Eligibility Criteria - Inland Ecological Restoration Limited Project (310
CMR 10.53(4)) (cont.)

Provided by MassDEP:

MassDEP File Number

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- At a minimum, in evaluating the potential to comply with the standards to the maximum extent practicable the following criteria have been consider site constraints in meeting the standard, undesirable effects or risk in meeting the standard, and the environmental benefit of meeting the standard compared to the cost, by evaluating the following:
 - The potential for downstream flooding;
 - Upstream and downstream habitat (in-stream habitat, wetlands);
 - Potential for erosion and head-cutting;
 - Stream stability;
 - Habitat fragmentation caused by the crossing;
 - The amount of stream mileage made accessible by the improvements;
 - Storm flow conveyance;
 - Engineering design constraints specific to the crossing;
 - Hydrologic constraints specific to the crossing;
 - Impacts to wetlands that would occur by improving the crossing;
 - Potential to affect property and infrastructure; and
 - Cost of replacement.



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

Carlisle
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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40 Required Actions (310 CMR 10.11)

Complete the Required Actions before submitting a Notice of Intent Application for an Ecological Restoration Project and submit a completed copy of this Checklist with the Notice of Intent.

Massachusetts Environmental Policy Act (MEPA) / Environmental Monitor
<https://www.mass.gov/service-details/the-environmental-monitor>

For Ecological Restoration Limited Projects, there are no changes to MEPA requirements.

Submit written notification at least 14 days prior to the filing of a Notice of Intent (NOI) to the Environmental Monitor for publication. A copy of the written notification is attached and provides at minimum:

- A brief description of the proposed project.
- The anticipated NOI submission date to the conservation commission.
- The name and address of the conservation commission that will review the NOI.
- Specific details as to where copies of the NOI may be examined or acquired and where to obtain the date, time, and location of the public hearing.

Massachusetts Endangered Species Act (MESA) /Wetlands Protection Act Review

Preliminary Massachusetts Endangered Species Act Review from the Natural Heritage and Endangered Species Program (NHESP) has been met and the written determination is attached.

Supplemental Information for Endangered Species Review has been submitted.

1. Percentage/acreage of property to be altered:

a. Within Wetland Resource Area	0.004% of 242 acres
	_____ Percentage/acreage
b. Outside Wetland Resource Area	0.004% of 242 acres
	_____ Percentage/acreage
2. Assessor's Map or right-of-way plan of site
3. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work.
4. Project description (including description of impacts outside of wetland resource area & buffer zone)
5. Photographs representative of the site
6. MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>)



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Appendix A: Ecological Restoration Limited Project Checklists

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Required Actions (310 CMR 10.11) (cont.)

Provided by MassDEP:	
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Carlisle	
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Make check payable to “Commonwealth of Massachusetts - NHESP” and mail to NHESP:

Natural Heritage & Endangered Species Program

MA Division of Fisheries & Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

- 7. Projects altering 10 or more acres of land, also submit:
 - a. Vegetation cover type map of site
 - b. Project plans showing Priority & Estimated Habitat boundaries

OR Check One of the Following:

- 1. Project is exempt from MESA review.

Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/ma-endangered-species-act-mesa-overview>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59 – see C4 below)

- 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.

Estimated Habitat Map of State-Listed Rare Wetlands Wildlife

If a portion of the proposed project is 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), complete the portion below. To view habitat maps, see the **Massachusetts Natural Heritage Atlas** or view the maps electronically at: <https://www.mass.gov/guides/masswildlife-publications#-massachusetts-natural-heritage-atlas->

- A preliminary written determination from Natural Heritage and Endangered Species Program (NHESP) must be obtained indicating that:

Project will NOT have long- or short-term adverse effect on the actual Resource Area located within estimated habitat indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetlands Wildlife published by NHESP.

Project will have long- or short-term adverse effect on the actual Resource Area located within estimated habitat indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetlands Wildlife published by NHESP. A copy of NHESP’s written preliminary determination in accordance with 310 CMR 10.11(2) is attached. This specifies:

Date of the map: NHESP Atlas 2021



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Appendix A: Ecological Restoration Limited Project Checklists

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

Required Actions (310 CMR 10.11) (cont.)

Provided by MassDEP:

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- If the Rare Species identified is/are likely to continue to be located on or near the project, and if so, whether the Resource Area to be altered is in fact part of the habitat of the Rare Species.
- That if the project alters Resource Area(s) within the habitat of a Rare Species:
- The Rare Species is identified;
- NHESP's recommended changes or conditions necessary to ensure that the project will have no short or long term adverse effect on the habitat of the local population of the Rare Species is provided; or
- An approved NHESP habitat management plan is attached with this Notice of Intent.

Send the request for a preliminary determination to:
Natural Heritage & Endangered Species Program
MA Division of Fisheries & Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

Division of Marine Fisheries

- If the project will occur within a coastal waterbody with a restricted Time of Year, [see Appendix B of the Division of Marine Fisheries (DMF) Technical Report TR 47 "Marine Fisheries Time of Year Restrictions (TOYs) for Coastal Alteration Projects" dated April 2011 <https://www.nae.usace.army.mil/Portals/74/docs/regulatory/StateGeneralPermits/MA/TR-47.pdf>].
- Obtain a DMF written determination stating:
 - The proposed work does NOT require a TOY restriction.
 - The proposed work requires a TOY restriction. Specific recommended TOY restriction and recommended conditions on the proposed work is attached.
- If the project may affect a diadromous fish run [re: Division of Marine Fisheries (DMF) Technical Reports TR 15 through 18, dated 2004: <https://www.mass.gov/service-details/marine-fisheries-technical-reports>]
- Obtain a DMF written determination stating:
 - The design specifications and operational plan for the project are compatible with the passage requirements of the fish run.
 - The design specifications and operational plan for the project are not compatible with the passage requirements of the fish run.



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Appendix A: Ecological Restoration Limited Project Checklists

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Required Actions (310 CMR 10.11) (cont.)

Provided by MassDEP:
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Send the request for a written or electronic determination to:

South Shore – Bourne to Rhode Island border,
and the Cape & Islands:
Division of Marine Fisheries –
South Coast Field Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore – Plymouth to New Hampshire
border:
Division of Marine Fisheries –
North Shore Field Station
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

- Division of Fisheries and Wildlife** – <https://www.mass.gov/orgs/division-of-fisheries-and-wildlife>
 - Projects that involve silt-generating, in-water work that will impact a non-tidal perennial river or stream and the in-water work will not occur between May 1 and August 30.
 - Obtain a written determination from the Division of Fisheries and Wildlife (DFW) as to whether the proposed work requires a TOY restriction.
 - The proposed work does NOT require a TOY restriction.
 - The proposed work requires a TOY restriction. The DFW determination with TOY restriction and other conditions is attached.
- MassDEP Water Quality Certification**
 - Project involves dredging of 100 cubic yards or more in a Resource Area or dredging of any amount in an Outstanding Resource Water (ORW). A copy and proof of the MassDEP Water Quality Certification pursuant to 314 CMR 9.00 is attached to the NOI.
 - This project is a Combined Permit Application for 401 Dredging and Restoration (BRP WW 26).
- MassDEP Wetlands Restriction Order**

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)?

Yes No
- Department of Conservation and Recreation**

Office of Dam Safety

 - For Dam Removal Projects, obtain a written determination from the Department of Conservation and Recreation Office of Dam Safety that the dam is not subject to the jurisdiction of the Office under 302 CMR 10.00, a written determination that the dam removal does not require a permit under 302 CMR 10.00 or a permit authorizing the dam removal in accordance with 302 CMR 10.00 has been issued.



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

Carlisle
City/Town

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40 Required Actions (310 CMR 10.11) (cont.)

Areas of Critical Environmental Concern (ACECs)

Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

- Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations).

Name of ACEC

Minimum Required Documents (310 CMR 10.12)

Complete the Required Documents Checklist below and provide supporting materials before submitting a Notice of Intent Application for an Ecological Restoration Project.

- This Notice of Intent meets all applicable requirements outlined in for Ecological Restoration Projects in 310 CMR 10.12. Use the checklist below to ensure that all documentation is included with the NOI.

At a minimum, a Notice of Intent for an Ecological Restoration Project shall include the following:

- Description of the project’s ecological restoration goals;
- The location of the Ecological Restoration Project;
- Description of the construction sequence for completing the project;
- A map of the Areas Subject to Protection Under M.G.L. c. 131, § 40, that will be temporarily or permanently altered by the project or include habitat for Rare Species, Habitat of Potential Regional and Statewide Importance, eel grass beds, or Shellfish Suitability Areas.
- 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.) is attached with documentation methodology.
- List the titles and dates for all plans and other materials submitted with this NOI.

Plan of Land in Carlisle, Massachusetts

a. Plan Title

Stamski & McNary, Inc. _____

b. Prepared by

September 9, 2025 _____

d. Final Revision Date

Joseph March _____

c. Signed and Stamped by

1" = 30' _____

e. Scale

Town of Carlisle Greenough Land Knotweed Management & Restoration Plan _____

July 2025 _____

g. Date

- If there is more than one property owner, attach a list of these property owners not listed on this form.

- Attach NOI Wetland Fee Transmittal Form.



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Appendix A: Ecological Restoration Limited Project Checklists

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

Minimum Required Documents (310 CMR 10.12)

Provided by MassDEP:

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- An evaluation of any flood impacts that may affect the built environment, including without limitation, buildings, wells, septic systems, roads or other man-made structures or infrastructure as well as any proposed flood impact mitigation measures;
- A plan for invasive species prevention and control;
- The Natural Heritage and Endangered Species Program written determination in accordance with 310 CMR 10.11(2), if needed;
- Any Time of Year restrictions and/or other conditions recommended by the Division of Marine Fisheries or the Division of Fisheries and Wildlife in accordance with 310 CMR 10.11(3), (4), (5), if needed;
- Proof that notice was published in the Environmental Monitor as required by 310 CMR 10.11(1);
- A certification by the applicant under the penalties of perjury that the project meets the eligibility criteria set forth in 310 CMR 10.13;
- If the Ecological Restoration Project involves the construction, repair, replacement or expansion of infrastructure, an operation and maintenance plan to ensure that the infrastructure will continue to function as designed;
- If the project involves dredging of 100 cubic yards or more or dredging of any amount in an Outstanding Resource Water, a Water Quality Certification issued by the Department pursuant to 314 CMR 9.00;
- If the Ecological Restoration Project involves work on a stream crossing, information sufficient to make the showing required by 310 CMR 10.24(10) for work in a coastal resource area and 310 CMR 10.53(8) for work in an inland resource area; and
- If the Ecological Restoration Project involves work on a stream crossing, baseline photo-points that capture longitudinal views of the crossing inlet, the crossing outlet and the upstream and downstream channel beds during low flow conditions. The latitude and longitude coordinates of the photo-points shall be included in the baseline data.
- This project is subject to provisions of the MassDEP Stormwater Management Standards. A copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) is attached.
- Provide information as to whether the project has the potential to impact private water supply wells including agricultural or aquacultural wells or surface water withdrawal points.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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Appendix A: Ecological Restoration Limited
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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Certification that the Ecological Restoration Project Meets the
Eligibility Criteria

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Carlisle
City/Town

I hereby certify under penalties of perjury that the Ecological Restoration Project Notice of Intent application does not meet the Eligibility criteria for an Ecological Restoration Order of Conditions set forth in 310 CMR 10.13, but does meet the Eligibility Criteria for a Ecological Restoration Limited Project set forth in 10.24(8) or 10.53(4) whichever is applicable. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

DocuSigned by:
Ryan McLane
4C4579CF4AD54F0...

Signature of Applicant or Authorized Agent
Ryan McLane Town Administrator 10/2/2025

Printed Name of Applicant or Authorized Agent Date

The certification must be signed by the applicant; however, it may be signed by a duly authorized agent (named in Item 2) if this form is accompanied by a statement by the applicant designating the agent and agreeing to furnish upon request, supplemental information in support of the application.

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

I, David Crossman, hereby certify under the pains and penalties of perjury that on December 29, 2025 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, section 40, the Department of Environmental Protection Guide to Abutter Notification dated April 8, 1994 and in connection with the following matter;

An Ecological Restoration Notice of Intent was filed under the Massachusetts Wetlands Protection Act by Town of Carlisle with the Town of Carlisle Conservation Commission on December 29, 2025, for the removal of invasive plant species and the restoration of a disturbed area to a native plant community. (Assessors Map 12 Parcel 2-0)

A form of the notification, and a list of abutters to whom the notifications were sent is attached to this Affidavit of Service.

Signature: David Crossman Date: December 9, 2025

David Crossman - B & C Associates Inc.

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

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

The name of the applicant is: **Town of Carlisle**

The applicant has filed a Notice of Intent with the Conservation Commission for the municipality of Carlisle seeking permission to install geothermal wells within an Area Subject to Protection Under the Wetlands Protection Act and the Carlisle Wetlands Protection Bylaw.

The address of the lot where activity is proposed is:
Greenough Conservation Land Assessors Map **12** Parcel **2-0**

Copies of the Notice of Intent may be examined at the Town of Carlisle Town Hall (Conservation Office) between the hours of 9:00 AM and 3:00 PM on the following days of the week; Monday through Thursday. For more information, please call: (978)369-0336.

Copies of the Notice of Intent may be obtained from the Town of Carlisle Town Hall (Conservation Office) between the hours of 9:00 AM and 3:00 PM on the following days of the week; Monday through Thursday. For more information, please call: (978)369-0336.

Information regarding the date, time and place of the public hearing may be obtained from the Carlisle Conservation Commission by calling this telephone number (978)369-0336 between the hours of 9:00 AM and 3:00 PM on the following days of the week; Mondays through Thursday and 9:00 AM to 12:00 PM on Fridays.

Public hearing will be held via teleconference. The Commission and members of the public will participate remotely. The meeting agenda will contain information on how to participate.

Notice of the public hearing, including its date, time and place, will be published at least five (5) business days in advance in the Carlisle Mosquito. The public hearing is anticipated to be held on January 22, 2026.

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

NOTE: You also may contact the nearest Department of Environmental Protection (DEP) Regional Office for more information about this application of the Wetlands Protection Act. To contact DEP, call;

Central Regional: (508)792-7650
Southeast Region: (508)946-2700

X Northeast Region: (978)694-3200
Western Region: (413)784-1100

Since you are receiving this notice, you may have wetland resource areas or wetland buffers on your property. Therefore, construction, cutting, clearing or grading may require a permit. For clarification or for more information, call the Conservation office at 978-369-0336 or visit their page on the town website; http://www.carlislema.gov/Pages/CarlisleMA_ConComm/index.

Abutters List

Abutters:

Parcel Number: 93-1-0

Property Address: 0 Pauline Drive
Billerica, MA

Mailing Address:

Carlisle Conservation Foundation, Inc.
P.O. Box 300
Carlisle, MA 01741

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Westborough, MA 01581

Certified Mail Fee	\$5.30
Postage	\$10.45
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postage \$10.45

Total Postage and Fees \$20.15

Sent To

Street and Apt. No.

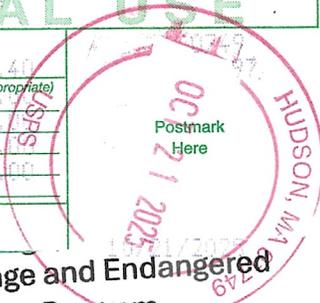
City, State, ZIP+4

PS Form 3800, A

Reverse for instructions

7022 2410 0001 1335 0717

OFFICIAL USE



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



MASSWILDLIFE

DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
[MASS.GOV/MASSWILDLIFE](https://www.mass.gov/masswildlife)

November 19, 2025

Ryan McLane
Town of Carlisle
66 Westford Street
Carlisle, Massachusetts 01741

Carlisle Conservation Commission
Town Of Carlisle
66 Westford St
Carlisle, MA 01741

RE: Applicant: Ryan McLane, Town of Carlisle
 Project Location: 812 Maple Street, Greenough Conservation Area
 Project Description: Habitat Management Plan - Japanese Knotweed Removal
 DEP Wetlands File No.:
 NHESP Tracking No.: 25-19932

Heritage Hub Form ID: RC-96405

Dear Commissioners & Applicant:

The applicant listed above has submitted a Notice of Intent with project plans entitled "Town of Carlisle Greenough Land Knotweed Management and Restoration Plan" (dated July 2025, revised through September 2025; the "Plan") to the Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife (the "Division"), in compliance with the rare wildlife species section of the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.58(4)(b), 10.59) and pursuant to the Massachusetts Endangered Species Act (MESA) (MGL c.131A) and its implementing regulations (321 CMR 10.00).

PROJECT DESCRIPTION (the "Project")

The Plan proposes treatment of two stands of invasive Japanese Knotweed (*Reynoutria japonica*) totaling approximately one acre on the westernmost portion of the Greenough Land. The proposed control strategy includes sequential grazing by livestock (goats) to defoliate plants, followed by targeted herbicide application, and finally smothering the treated areas with woodchips, landscape fabric, and other organic materials. This combination is intended to suppress regrowth and support subsequent restoration efforts, including the re-establishment of native vegetation post-treatment.

WETLANDS PROTECTION ACT (WPA)

The purpose of the Division's review of the proposed project under the WPA regulations for state-listed rare wetland wildlife is to determine whether the project will occur within the actual Resource Area Habitat and will result in short- or long term- adverse effects to the Resource Area Habitats. Based on a review of the information

MASSWILDLIFE

provided and the information that is currently contained in our database, the Division has determined that this project **will not adversely affect** the actual Resource Area Habitat of state-listed rare wildlife. Therefore, this project meets the state-listed rare wetland wildlife performance standards for the issuance of an Order of Conditions. This determination addresses only the matter of state-listed rare wetland wildlife habitat.

Notice, Wetland Protection Act Filings. When filing for any Notice of Intent, Request for Determination of Applicability or associated renewal, extension, or amendment of the WPA Orders of Conditions, the Applicant shall contact the Division for written response regarding impacts to Resource Area Habitat of state-listed wildlife. A renewal, extension or amendment of an Order of Conditions does not renew, extend or amend the MESA authorization.

MA ENDANGERED SPECIES ACT (MESA)

The Plan is approved by the Division provided the following conditions are implemented:

1) Invasive Vegetation Treatment – Motorized Equipment: Turtle Protection Measures

If motorized equipment (e.g., mower, backhoe, bobcat) is proposed for use during invasive vegetation removal, the Applicant shall submit a Blanding's Turtle Protection Plan to the Division for review and written approval prior to operating any such equipment. The Plan shall describe procedures to avoid and minimize impacts to state-listed turtles during equipment operation and shall be prepared and implemented by a qualified, Division-approved wildlife biologist. The Division is available for consultation during plan development and may provide contact information for qualified biologists.

The Division-approved Plan shall be implemented as written. Any proposed changes must be submitted to the Division for review and written approval before implementation. Protective measures for state-listed turtles are required for any construction activity occurring between April 1 and October 15 of any year, unless otherwise approved in writing by the Division.

2) Post-Treatment Site Restoration - Time of Year Restrictions

Following the removal of invasive vegetation, the treated areas (Stands 1 and 2) may consist of open or bare soils that could provide suitable nesting habitat for state-listed turtles. To avoid impacts during the nesting season, the following Time of Year (TOY) Restriction applies:

No work involving the alteration or covering of soils—including the application of landscape fabric, woodchips, or other organic materials—shall occur within these post-treatment areas between May 15 and October 15, unless conducted under the direct oversight of a qualified turtle biologist implementing a Division-approved turtle protection plan.

A Division-approved turtle biologist shall evaluate post-treatment site conditions to determine whether the cleared areas constitute potential nesting habitat. If habitat conditions are supportive, turtle protective measures consistent with the approved plan must be implemented. Such measures may include the installation of temporary turtle exclusion barriers around open/bare soil areas prior to May 15 to prevent turtle nesting.

Any revisions to the Division-approved turtle protection plan must be submitted to the Division for review and written approval prior to implementation.

If applicable, any materials submitted to the United States Fish & Wildlife Service (USFWS) in pursuit of or in compliance with ESA 50 CFR 17.11, shall also be submitted to the Division in writing at the same time they are

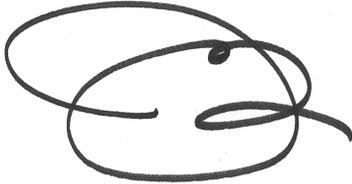
submitted to USFWS.

Based on a review of the information provided, the Division has determined that the project as proposed in the Plan is exempt pursuant to 321 CMR 10.14 which states: “[t]he following Projects and Activities shall be exempt from the requirements of 321 CMR 10.18 through 10.23...”

(15) the active management of State-listed Species habitat, including but not limited to mowing, cutting, burning, or pruning of vegetation, or removing exotic or invasive species, for the purpose of maintaining or enhancing the habitat for the benefit of rare species, provided that the management is carried out in accordance with a habitat management plan approved in writing by the Division and;

Any changes to the proposed project or any additional work beyond that shown on the project plans may require a filing with the Division pursuant to the MESA. Please note that this determination addresses only the matter of state-listed species and their habitats. If you have any questions about this letter, please contact Melany Cheeseman, Endangered Species Review Assistant, at Melany.Cheeseman@mass.gov, (508) 389-6357.

Sincerely,

A handwritten signature in black ink, appearing to read "Jesse Leddick". The signature is fluid and cursive, with a large loop at the beginning and a smaller loop at the end.

Jesse Leddick
Assistant Director

cc:

Project Narrative

Existing Conditions

This project is located on a 242-acre parcel owned by the Town of Carlisle called Greenough Land. There had been an existing single-family house located in the easternmost area of the property, just north of Greenough Dam.

The area around the house had been maintained as lawn until the house became vacant. Once the house was vacant, no maintenance was carried out on the house or the surrounding yard.

The surrounding wetland resource areas were field delineated by B & C Associates several times during the previous 5 to 10 years. These delineations were performed for several Notice of Intent filings involving the dam and house.

The existing dam has undergone improvements to meet current dam safety regulations. The existing house has been removed from the site. The entire 242 acres is now Town of Carlisle conservation land administered by the Town of Carlisle Conservation Commission.

The yard area, north of the old house, has become overrun with Japanese Knotweed (*Polygonum cuspidatum*) as well as several other invasive plant species including Multiflora Rose (*Rosa multiflora*) and Oriental Bittersweet (*Celastrus orbiculatus*). There is also an area of Knotweed located to the west of this area just on the opposite side of a hiking trail. These two areas now total 21008 square feet of invasive plants. Some of the Knotweed has begun to spread into an adjacent Shrub Swamp complex located to the north of the Knotweed.

There is also an area to the south totaling an additional 5870 square feet of invasive Knotweed. This area has also begun to spread into the adjacent Shrub Swamp/Shallow Marsh wetland resource area.

The location of the old house was back filled with sand and is now becoming the home to additional Japanese Knotweed sprouts.

The project area is located right on the town line between Carlisle and Billerica. The area to the south is wetland resource area. To the east is a White Pine - Oak Forest. Just north of the Japanese Knotweed is the wetland resource area. Located to the northwest and west is an Oak - Hardwood Forest type. The area in the center of the project area is primarily grass and is also where 4 trails converge.

Project Description

The project area comprises approximately 86112 square feet. Most of the area is within the 100-foot Buffer Zone of various Bordering Vegetated Wetlands (BVW). The project proposed to remove Japanese Knotweed from 541 square feet of Bordering Vegetated Wetland at both the northern end and the southern ends of the project area. Those BVW areas will be restored.

There is also a perennial brook which flows out of Greenough Pond. This waterway is Pages Brook which, eventually, flows to the Concord River. Pages Brook does project a Riverfront Area into the project area. Removal of the invasive plant species will require work within 23889 square feet of Riverfront Area. This area will also be restored.

There will also be temporary disturbance of the 100-year flood plain totaling 21900 square feet. There will be no displacement of flood storage area for this project.

Finally, this project area lies within Priority and Endangered Species Habitat which we are trying to restore.

Most of the project area was developed and we are now proposing to restore the area to a more natural vegetative community including the lawn areas and the areas of invasive plants.

The Applicant is proposing an ecological restoration of these areas with the objective of restoring the ecological biomes and habitat functions of this area.

Methodology

The Applicant is proposing a variety of methodologies to remove and control the invasive plant species. Most of the work will be done by hand. The removed invasive plants will be disposed of offsite in a manner which prevents the dispersal of the invasive plants to this or any other site.

Native plants will be planted in the areas which are located near the natural wooded area adjacent to the project area. The area which is currently lawn or exposed sand/dirt will be overseeded with a native grass seed mixture and wildflower mix which promotes soil stabilization, vegetative cover and provides habitat for local pollinator species.

The Applicant is proposing very little disturbance to the soils within the project area and there will be no removal or filling of soils. Straw wattles may be placed between the project area and adjacent BVW as well as along the edge of the trail which travels over Greenough Dam.

The Town of Carlisle Management and Restoration Plan is attached to this filing. This plan requires the approval of the State of Massachusetts Natural Heritage and Endangered Species Program.

Monitoring

- A. The Town of Carlisle Conservation Commission will be notified 72 hours in advance of the restoration preparation.
- B. All restoration preparation work and plantings shall be overseen by a qualified Botanist. A brief progress report will be provided to the Town of Carlisle Conservation Commission at the end of each week until preparation and planting of the restoration areas are completed.
- C. An annual compliance report, prepared by a qualified Botanist, will be submitted to the Town of Carlisle Conservation Commission by November 15th each year through November 2028.
- D. Each report will include a comprehensive observed species list, will clearly describe the relative abundance of each species, percent cover of upland and wetland species, the viability of the plantings and proposed remedial measures to ensure 75 percent re-establishment within two growing seasons. The report shall also describe wildlife habitat functions of each restored plant community. Each report will contain pictures from the same stations year to year.
- E. As part of the monitoring, the groundwater elevations shall be checked by hand auguring within the wetland restoration areas. Evidence of the groundwater depth shall be noted and included within the monitoring report.
- F. While performing the inspection of the restoration areas, any invasive plants species found shall be removed. The plant species, and number of plants removed shall be included within the monitoring reports.
- G. If the restoration areas do not achieve the required 75 percent coverage within two growing seasons, then additional plantings will be provided. These plantings will be monitored for the next two growing seasons with reports provided to the Town of Carlisle Conservation Commission by October 15th of each year to ensure the viability of these late plantings.

Riverfront Alternative Analysis

The proposed activity will temporarily alter 23889 square feet of Riverfront Area associated with Pages Brook. This is a temporary alteration of less than 3 percent of the entire Riverfront Area within the entire property boundaries. This activity involves the removal of an invasive plant species, Japanese Knotweed, and the restoration of that area to a native woodland. There had also been an existing structure within this general location which has since been removed. That entire area will also be restored to a meadow.

There are no alternatives to this project. Leaving the area as is will result in a massive area of invasive plants.

This project will result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests of the Wetlands Protection Act. The entire area will be restored to native vegetation. There will be no structures built. There will be no earthwork activities associated with this proposed project.

This project will have no significant long-term impacts on any of the interests of the Wetlands Protection Act.



Building which has been removed.



Japanese Knotweed north of previous building location.



Town of Carlisle

Greenough Land Knotweed Management and Restoration Plan

Prepared by:

Noelle Beland, Planning and Land Use Coordinator

Sarah Wasserman, Land Use and Sustainability Coordinator

July 2025

Edited September 2025

I. Introduction

Greenough Land

This report concentrates on the westernmost portion of the Greenough Land, which shares a border with Billerica and land owned by the Carlisle Conservation Foundation (CCF). Before Carlisle came into possession of the land, it was owned by the estate of Henry Vose Greenough¹. The 242 acres of land have held many uses over the years, including recreational, agricultural, and equestrian use. The area of focus is approximately 2 acres and was the site of the barn structure before its deconstruction in 2024.

The area is host to a large growth of Japanese Knotweed, as documented in the photos below, taken shortly after the deconstruction of the barn:



Image 1: Young Japanese Knotweed shoots growing through the fence. Photo: Sarah Wasserman



Image 2: A large stand of Japanese Knotweed adjacent to the old barn site. Photo: Sarah Wasserman

¹ Town of Carlisle website

Knotweed

Japanese Knotweed (*Reynoutria japonica*) is a plant that originates in eastern Asia and was brought to the United States in the late 19th century for ornamental and erosion control purposes. It is highly aggressive and invasive; areas where Japanese Knotweed establishes itself are quickly overrun. Native plants are pushed out, and the area rapidly begins to resemble a thicket of bamboo (Note: Japanese Knotweed is not actually related to the bamboo plant). Japanese Knotweed thrives in disturbed, unmanaged², habitats, such as forest edges and along roadsides.

Controlling Japanese Knotweed is incredibly difficult for a number of reasons. Its rhizomes, or stems that grow underground, can reach up to ten feet deep, and can extend laterally through the soil for 40 feet or more. Additionally, the plant can regenerate from rhizome fragments as small as ½” long³, meaning that traditional plant control techniques such as mowing or cutting have immense potential for further spreading the plant. Additionally, composting Japanese Knotweed is nearly impossible, as composting centers do not accept it due to its exceptional ability to regenerate. Further, leaving Knotweed stems to dry and decompose on site can restrict the ability of native plant species to return⁴. Knotweed can be burned in a controlled manner when the resources for proper transport and fire management are present.

Knotweed is incredibly resilient. It is known to grow through the concrete foundations of houses^{5,6}, and accomplishing proper Knotweed removal and suppression takes years⁷, and has the potential to be cost-intensive⁸.

II. Summary of Issues

The Knotweed present on Greenough land comprises approximately 1 acre in total area, spread over different sections of land, totaling approximately 2 acres. There are sections that are in close proximity to, and in some cases within, jurisdictional wetlands. One of the areas is slightly upland and on the edge of the wooded part of the property. The majority of the Knotweed is contiguous, but one section is distinctly separated from the rest, and is

²Cornell Cooperative Extension, 2021

³ New Hampshire Department of Agriculture, Markets, & Food, 2018

⁴ Government of Wales, 2018

⁵ Brooklin Botanic Garden, 2024

⁶ Cornell Cooperative Extension, 2021

⁷ New Hampshire Department of Agriculture, Markets, & Food, 2018

⁸ Cornell Cooperative Extension, 2021

currently being held at bay by an old metal fence that is likely a vestige of the farm structure.



Figure 1: Map of Affected Area, Greenough Land, Carlisle

With the deconstruction and removal of the Greenough Barn in the summer of 2024, there is cause for concern that these pre-existing Knotweed colonies will encroach on the newly open land. Greenough Pond and the surrounding uplands are marked as Priority Habitat for Blanding's Turtle (Image 1) and Britton's Violet (Image 2) by the Natural Heritage and Endangered Species Program run by the Massachusetts Division of Fisheries and Wildlife⁹.

⁹ Natural Heritage Atlas, 15th Edition, Town Priority Habitat Maps, MassWildlife, 2021



Image 3: Blanding's Turtle (*Emydoidea blandingii*) Photo: U.S. Fish and Wildlife Service



Image 4: Britton's Violet (*Viola brittoniana*) Photo: Stephen M. Young, New York Natural Heritage Program

III. Overview of Potential Management Strategies

Physical Removal

The physical removal of Japanese Knotweed is challenging for a number of reasons. Knotweed has root systems that can penetrate the ground up to 10 feet deep and can extend 40 feet horizontally through the soil¹⁰. Additionally, these root systems can remain dormant for up to twenty years, meaning that Knotweed can regrow after decades if preventative measures are lacking¹¹. The physical removal of Japanese Knotweed can also lead to its dispersal, both on the site and through the transport of the plant matter to an appropriate waste location. Because the plant can establish itself from a mere half-inch fragment of root¹² it is easy to inadvertently spread the plant to other locations on a site.

Similarly, mowing can pose a challenge to effectively combat Knotweed. Because of the nature of mowers and their blades, it is both difficult to cut through the woody stems and easy to accidentally spread root fragments¹³.

However, a well-organized removal effort, often involving heavy equipment (such as backhoes), can be effective when resources exist. It often requires high disturbance of the site, due to how deeply the roots can permeate¹⁴. Depending on the nature of a site, this can still be an effective strategy when done properly.

¹⁰ New Hampshire Department of Agriculture, Markets, & Food, 2018

¹¹ New Hampshire Department of Agriculture, Markets, & Food, 2018

¹² New Hampshire Department of Agriculture, Markets, & Food, 2018

¹³ Brooklin Botanic Garden, 2024

¹⁴ Site visit with Steve Phaneuf, of S. Phaneuf & Associates, October 16, 2024

Controlled Burning

When preceded by physical removal, controlled burning of Knotweed is an effective way to eliminate the vegetation without having to haul it to an approved composting site or incinerator – often a costly endeavor, in both staff time and facility fees. If the Knotweed stems are allowed to dry, burning them on-site in a controlled manner – i.e., with the approval and supervision of fire professionals – can be useful for large stands of Knotweed on unoccupied sites, such as a Town dump or cleared area. This method effectively prevents the plant from regrowing, because Knotweed does not typically spread via seeds¹⁵ (if they were to survive the burning) But rather via the rhizomes, which are completely burned.

The Carlisle Environmental Sustainability Committee is, as of this writing, preparing for a controlled burn that residents can participate in at the Transfer Station.



Image 5: Burning of Japanese Knotweed, England, UK. Photo: Japaneseknotweedspecialists.com

Goats/Livestock

The use of livestock, particularly goats, to reduce vegetation mass does not require the physical removal and transport of the Knotweed stalks and rhizomes. The seeds and plant fragments, once digested and excreted by the goats, are not viable for regrowth due to the high acid level in their rumen¹⁶. Therefore, the size of the Knotweed stands can be significantly decreased while avoiding expensive removal strategies that also carry the risk of spreading the plant further. This strategy has seen



Image 6: Goats eating invasive Japanese Knotweed in Chilliwack, British Columbia, Canada, Photo: CBC News

¹⁵ Connecticut College, 2021

¹⁶ Connecticut College, 2021

success at Connecticut College¹⁷, the town of Huntington,¹⁸ and the Mad River Valley¹⁹ in Vermont, and in Chilliwack, BC, Canada²⁰.

The Town of Carlisle, being a Right-to-Farm community, faces fewer hurdles in implementing this strategy than might be expected. Town staff have already established a relationship with a farmer who leases land in town for his goats. He has expressed interest in the idea and is willing to volunteer his (and his animals') time towards this cause.

Logistical challenges do remain with this strategy, particularly in the oversight of the goats when they are on the property. It will likely take the goats several days to weeks to completely cover the amount of Knotweed on the property. The Town would need to plan personnel or volunteer time accordingly to make sure the goats are properly attended.

Smothering

Smothering is a time-consuming method of Knotweed management, but it has seen widespread success. Best used with other strategies, such as physical removal, livestock consumption, and/or herbicide, this method takes approximately 3 to 5 years to achieve its purpose²¹. However, there is a good chance of success when done properly. By smothering the plants with layers of black landscape fabric and woodchips and building up a layer of soil with compost and other organic materials over time²² native plants can be re-established.

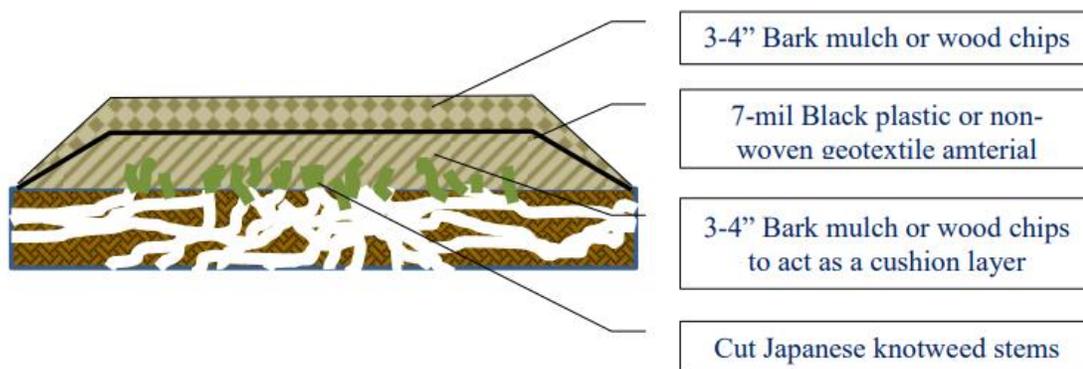


Figure 2: A diagram of the smothering method, from the New Hampshire Department of Agriculture, Markets, and Food

¹⁷ Connecticut College, 2021

¹⁸ Association of Vermont Conservation Commissions, 2022

¹⁹ NBC 5, 2024

²⁰ CBC News, 2016

²¹ New Hampshire Department of Agriculture, Markets, & Food, 2018

²² UNH Cooperative Extension, 2021

Herbicide

Finally, herbicides can be an effective management strategy when used properly. A licensed applicator is required for this work, and attention must be paid to any potential impacts to surrounding habitats. However, when timed appropriately and applied properly, for the seasons when the Knotweed is taking in nutrients through its stems (spring or fall), herbicide can be an efficient control method.

IV. Recommended Actions

Based on our research and the resources available to the town, we recommend the following steps, in the order they would happen:

- ⇒ Enlist local livestock in reducing the vegetation mass of the Knotweed, effectively defoliating the plants and making them more vulnerable to additional treatment methods.
- ⇒ Apply herbicide to the remaining stems and stumps.
- ⇒ Smother the area with woodchips, textile fabric, and organic materials.

V. Potential Costs

This list is not meant to be exhaustive, but rather to give an idea of up-front costs of implementing this project.

Livestock – Hours and Transport	Compensation TBD
Herbicide application <i>*Estimate from Oxbow Associates, October 2024</i>	\$2500
Textile Fabric – 1 acre of DeWitt Pro5 Weed Barrier	\$4500
Woodchips, Organic Materials	Free via DPW
Staff Hours	Goat monitoring ~30hrs (not including volunteer time) DPW Hours ~25hrs

VI. Timeline

Fall 2025:

1. October 2025: Filing submitted to Natural Heritage and Endangered Species Program by wetlands scientist.
2. November 2025: MESA hearing following NHESP approval.

3. November/December 2025: Filing submitted to Conservation Commission for hearing and approval.
4. Spring/Summer 2025: So long as NHESP approves the methodology, the goats will begin the initial clearing of the Knotweed from the area. The goats will graze on the vegetation for approximately one to two weeks.

Summer/Fall 2026:

5. After the goats have cleared the vegetation, the herbicide will be applied to the remaining Knotweed.

Fall 2026 - 2030

6. Following herbicide application, the Knotweed will be smothered with black landscape fabric, wood chips, and soil. Staff will periodically check the area to ensure there is no regrowth or disturbance to the site.
7. Compost and other organic materials will continue to be added over time.
8. Native plants will be planted, re-establishing a native plant community.

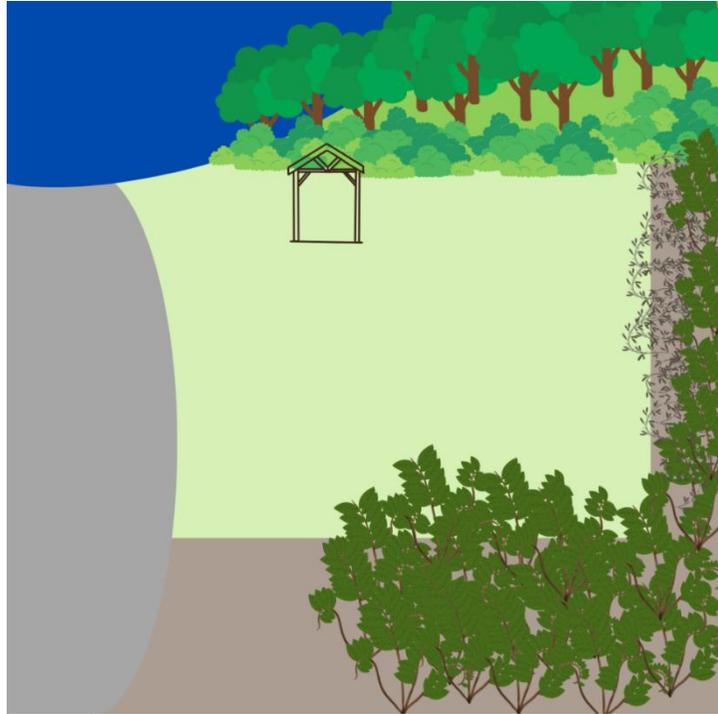


Figure 2: A graphic illustration of the area as it stands today (2025).



Figure 3: A graphic illustration of what the area might look like after the initial steps outlined in this report (Summer 2026).

VII. Sources

1. Town of Carlisle website: www.carlislema.gov/279/Greenough-Land
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11. Tarr, M. (2021, February 16). *Herbicide-Free Japanese Knotweed Control – A Case Study*. University of New Hampshire Cooperative Extension. www.youtube.com/watch?v=Oc_oJ2tuJ6Q&t=1057s

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: _____ City/Town: _____ Sampling Date: _____

Applicant/Owner: _____ Sampling Point or Zone: _____

Investigator(s): _____ Latitude / Longitude: _____

Soil Map Unit Name: _____ NWI or DEP Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? (If yes, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes _____ No _____	Is the Sampled Area within a Wetland?	Yes _____ No _____
Hydric Soils criterion met?	Yes _____ No _____		Yes _____ No _____
Wetlands hydrology present?	Yes _____ No _____		Yes _____ No _____
Remarks, Photo Details, Flagging, etc.:			

HYDROLOGY

Field Observations:		
Surface Water Present?	Yes _____ No _____	Depth (inches) _____
Water Table Present?	Yes _____ No _____	Depth (inches) _____
Saturation Present (including capillary fringe)?	Yes _____ No _____	Depth (inches) _____
Wetland Hydrology Indicators		
Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
<input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Evidence of aquatic fauna <input type="checkbox"/> Iron deposits <input type="checkbox"/> Algal mats or crusts <input type="checkbox"/> Oxidized rhizospheres/pore linings <input type="checkbox"/> Thin muck surfaces <input type="checkbox"/> Plants with air-filled tissue (aerenchyma) <input type="checkbox"/> Plants with polymorphic leaves <input type="checkbox"/> Plants with floating leaves <input type="checkbox"/> Hydrogen sulfide odor	<input type="checkbox"/> Hydrological records <input type="checkbox"/> Free water in a soil test hole <input type="checkbox"/> Saturated soil <input type="checkbox"/> Water marks <input type="checkbox"/> Moss trim lines <input type="checkbox"/> Presence of reduced iron <input type="checkbox"/> Woody plants with adventitious roots <input type="checkbox"/> Trees with shallow root systems <input type="checkbox"/> Woody plants with enlarged lenticels	<input type="checkbox"/> Direct observation of inundation <input type="checkbox"/> Drainage patterns <input type="checkbox"/> Drift lines <input type="checkbox"/> Scoured areas <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Surface soil cracks <input type="checkbox"/> Sparsely vegetated concave surface <input type="checkbox"/> Microtopographic relief <input type="checkbox"/> Geographic position (depression, toe of slope, fringing lowland)
Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):		

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

<u>Tree Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
				_____ = Total Cover			
<u>Shrub/Sapling Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
				_____ = Total Cover			
<u>Herb Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
				_____ = Total Cover			

VEGETATION – continued.

<u>Woody Vine Stratum</u>		Plot size _____		Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
				_____ = Total Cover			

Rapid Test: Do all dominant species have an indicator status of OBL or FACW? Yes _____ No _____				
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants	Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes _____ No _____	
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	=
	FACW species		X 2	=
	FAC species		X 3	=
	FACU species		X 4	=
	UPL species		X 5	=
	Column Totals	(A)		(B)
Prevalence Index		B/A =		Is the Prevalence Index ≤ 3.0? Yes _____ No _____
Wetland vegetation criterion met? Yes _____ No _____				

Definitions of Vegetation Strata

- Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
- Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
- Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
- Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: _____ City/Town: _____ Sampling Date: _____

Applicant/Owner: _____ Sampling Point or Zone: _____

Investigator(s): _____ Latitude / Longitude: _____

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Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? (If yes, explain in Remarks)

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SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes _____ No _____	Is the Sampled Area within a Wetland?	Yes _____ No _____
Hydric Soils criterion met?	Yes _____ No _____		
Wetlands hydrology present?	Yes _____ No _____		
Remarks, Photo Details, Flagging, etc.:			

HYDROLOGY

Field Observations:		
Surface Water Present?	Yes _____ No _____	Depth (inches) _____
Water Table Present?	Yes _____ No _____	Depth (inches) _____
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Wetland Hydrology Indicators		
Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
<input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Evidence of aquatic fauna <input type="checkbox"/> Iron deposits <input type="checkbox"/> Algal mats or crusts <input type="checkbox"/> Oxidized rhizospheres/pore linings <input type="checkbox"/> Thin muck surfaces <input type="checkbox"/> Plants with air-filled tissue (aerenchyma) <input type="checkbox"/> Plants with polymorphic leaves <input type="checkbox"/> Plants with floating leaves <input type="checkbox"/> Hydrogen sulfide odor	<input type="checkbox"/> Hydrological records <input type="checkbox"/> Free water in a soil test hole <input type="checkbox"/> Saturated soil <input type="checkbox"/> Water marks <input type="checkbox"/> Moss trim lines <input type="checkbox"/> Presence of reduced iron <input type="checkbox"/> Woody plants with adventitious roots <input type="checkbox"/> Trees with shallow root systems <input type="checkbox"/> Woody plants with enlarged lenticels	<input type="checkbox"/> Direct observation of inundation <input type="checkbox"/> Drainage patterns <input type="checkbox"/> Drift lines <input type="checkbox"/> Scoured areas <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Surface soil cracks <input type="checkbox"/> Sparsely vegetated concave surface <input type="checkbox"/> Microtopographic relief <input type="checkbox"/> Geographic position (depression, toe of slope, fringing lowland)
Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):		

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VEGETATION – Use both common and scientific names of plants.

<u>Tree Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
				_____ = Total Cover			
<u>Shrub/Sapling Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
				_____ = Total Cover			
<u>Herb Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
				_____ = Total Cover			

VEGETATION – continued.

<u>Woody Vine Stratum</u>		Plot size _____		Indicator	Absolute	Dominant?	Wetland
Common name		Scientific name		Status	% Cover	(yes/no)	Indicator?
							(yes/no)
1.							
2.							
3.							
4.							
				_____ = Total Cover			

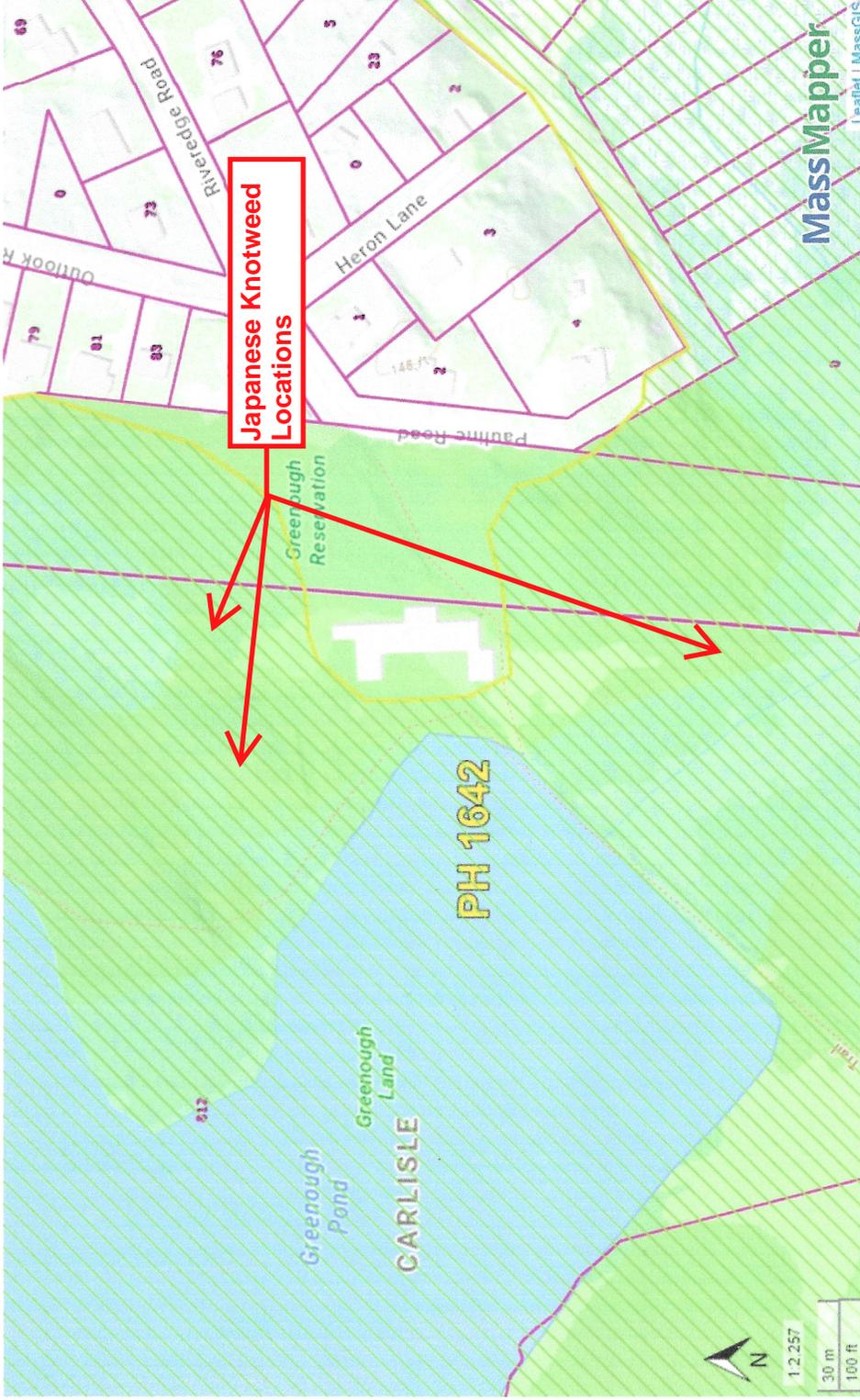
Rapid Test: Do all dominant species have an indicator status of OBL or FACW?			Yes _____ No _____	
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species?
				Yes _____ No _____
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	=
	FACW species		X 2	=
	FAC species		X 3	=
	FACU species		X 4	=
	UPL species		X 5	=
	Column Totals	(A)		(B)
Prevalence Index		B/A =		Is the Prevalence Index ≤ 3.0?
				Yes _____ No _____
Wetland vegetation criterion met?			Yes _____ No _____	

Definitions of Vegetation Strata

- Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
- Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
- Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
- Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Greenough Pond



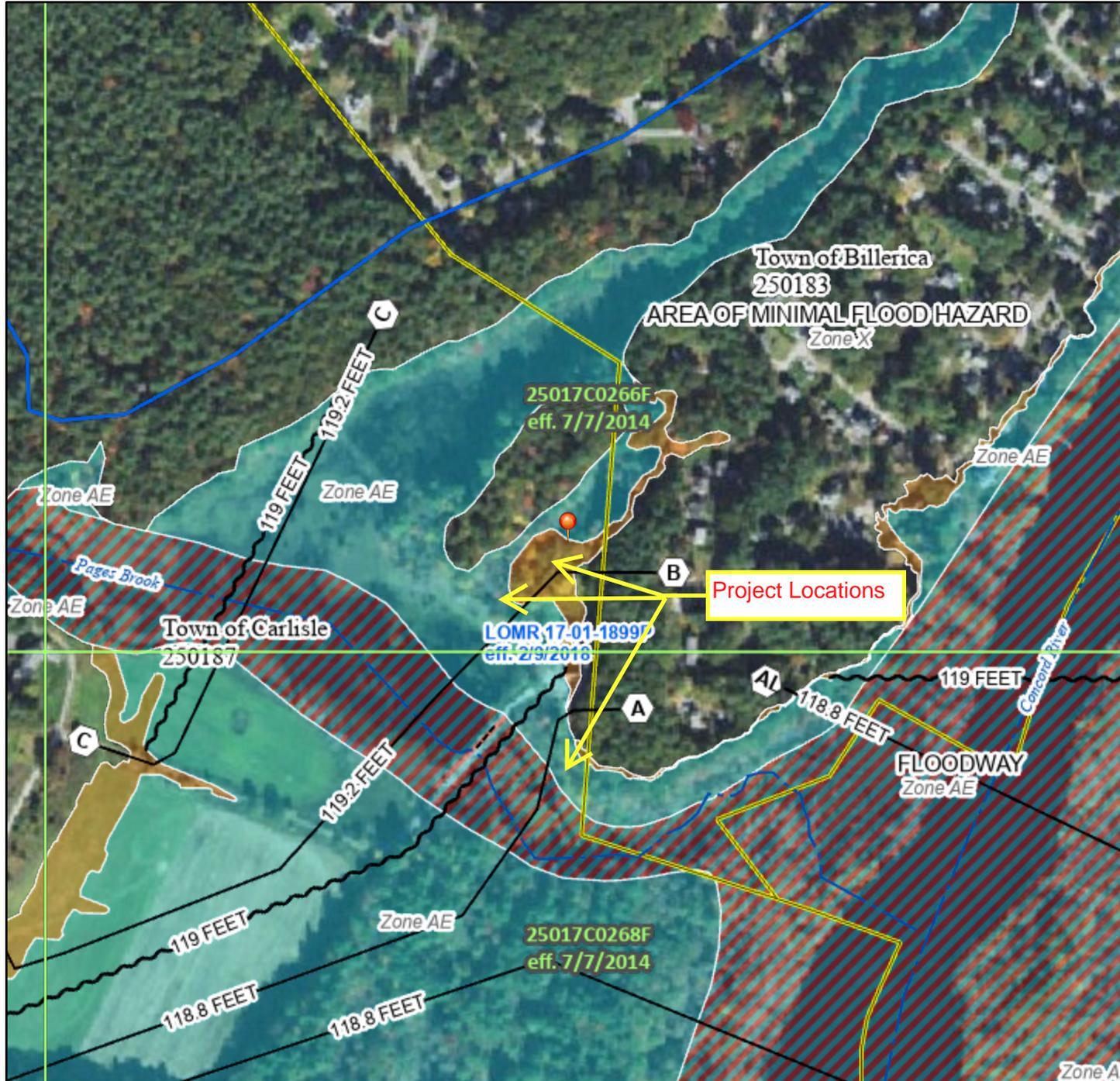
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Priority Habitats of Rare Species
- NHESP Certified Vernal Pools
- Potential Vernal Pools
- Property Tax Parcels

Endangered Species & Priority Habitats

National Flood Hazard Layer FIRMMette



71°18'46"W 42°32'8"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway

		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD	NO SCREEN	Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

OTHER AREAS	GENERAL STRUCTURES	
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

OTHER FEATURES	
	Digital Data Available
	No Digital Data Available
	Unmapped

MAP PANELS	
	The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



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The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/2/2024 at 6:38 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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