



CITY OF WATERTOWN

Conservation Commission

The Conservation Commission of Watertown will hold a public meeting on Wednesday, September 14, 2022 at 7:00 PM. This meeting has only remote opportunities for participation with public access provided as follows:

CONSERVATION COMMISSION MEETING WEDNESDAY, SEPTEMBER 14, 2022 AT 7:00 PM AGENDA

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television):
<https://linkprotect.cudasvc.com/url?a=http://vodwcatv.org/CablecastPublicSite/?channel=1>
 - B. The Public may join the virtual meeting online: <https://watertown-ma.zoom.us/j/99597080710>
 - C. Public may join the virtual meeting audio only by phone: (877) 853-5257 or (888) 475-4499 (Toll Free) and enter Webinar ID: 995 9708 0710
 - D. Public may comment through email: lschwab@watertown-ma.gov
-

1. Public Hearing-

- A. (Continuance was requested to October meeting)- **Notice of Intent- O Arlington St. (Williams Pond Parcel)**- to construct a 2 story commercial building and parking lot on property known as the Williams Pond parcel: Max Hatziliades, Applicant/Owner, Mickey Marcus, Representative

2. Public Hearing-

- A. (Continuance was requested to October meeting)- **Request for Determination of Applicability**- for the proposed parking lot improvements and utility upgrades located at 10-30 Manley Way, Watertown, Massachusetts. PPF Industrial 20 Saylor, LLC, Owner, Christopher M. Lucas, Representative/Applicant

3. Public Hearing-

- A. **Notice of Intent- Charles River Vegetation Management Plan**- to conduct general vegetation maintenance within the Charles River Reservation as well as invasive plant management within specific focus areas. Filed by SWCA Environmental Consultants on behalf of the Department of Conservation and Recreation. Danielle Mellett, Applicant/Naomi Valentine, Representative (SWCA)

4. Informational Update
 - A. 57 Coolidge Ave (OOC DEP# 321-0175)- updated work plan for existing pedestrian bridge across stream that bisects property.
5. Agent Report
 - A.
 1. CPC Update- Jamie O'Connell
 2. Climate and Energy Plan
 3. Pollinators
 4. Ongoing Orders of Conditions
 5. Arsenal Park
6. Acceptance of Minutes
 - A. Review and Acceptance of Minutes from the July 13, 2022 Conservation Commission Meeting



ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.®

15 Research Drive
Amherst, Massachusetts 01002
Tel 413.256.0202 Fax 413.256.1092
www.swca.com

August 18, 2022

Watertown Conservation Commission
149 Main Street
3rd Floor
Watertown, MA 02472-4410

Re: Charles River Vegetation Management Plan Notice of Intent

Dear Conservation Commission Members:

SWCA Environmental Consultants (SWCA) is submitting the enclosed Notice of Intent (NOI) on behalf of the Massachusetts Department of Conservation and Recreation (DCR) for continued general maintenance within the Charles River Reservation as well as a specific focus area for invasive plant management within the project work area. The proposed work is being submitted as an Ecological Restoration Limited Project and DCR is requesting a 5-year Order of Conditions to conduct this long-term vegetation management and restoration project.

All vegetation management activities will be carried out in a manner which will avoid and minimize any potential impacts to the maximum extent practicable. These activities are limited to mowing, cutting, and pruning of vegetation as well as the removal of invasive vegetation. Any alteration associated with the proposed work includes the augmentation and sometimes destruction of vegetation (e.g., in the case of invasive plant removal). The following vegetation management activities are proposed in this NOI.

- Continued general maintenance: routine vegetation maintenance within landscaped areas, lawn, woodland, circulation, green infrastructure, DCR structures, meadow, and river's edge areas to be performed on a periodic basis (as has been performed in the past) to maintain valuable habitat, provide continued safe access to the public, and maintain recreational resources within the Charles River Reservation. (Note: lawn mowing and existing landscape bed trimming is not jurisdictional. Also, this aspect of the work does not meet the requirements of an Ecological Restoration Limited Project. Impacts from general maintenance have been separated in the NOI for this reason.)
- Invasive plant management focus areas: DCR has identified a total of four focus areas for invasive plant management, that align with their broader goals for the CRVMP, to restore the natural capacity of the existing wetland resource areas to sustain the interests of the Wetlands Protection Act through the restoration of native vegetation and ecological integrity of the Charles River Reservation.

This filing includes a check for the municipal portion of the filing fee (\$387.50) and all required filing documents. Please reach out with any questions.

Sincerely,

Naomi Valentine
Ecological Restoration Team Lead

Charles River Vegetation
Management Plan
Notice of Intent Submittal
Watertown, Massachusetts

AUGUST 2022

PREPARED ON BEHALF OF
**Massachusetts Department of
Conservation and Recreation**

PREPARED BY
SWCA Environmental Consultants

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 #:

eDEP Transaction #:1415260

City/Town:WATERTOWN

A.General Information

1. Project Location:

a. Street Address	CHARLES RIVER ROAD	c. Zip Code	02472
b. City/Town	WATERTOWN	e. Longitude	71.16307W
d. Latitude	42.35918N	g.Parcel/Lot #	MULTIPLE
f. Map/Plat #	MULTIPLE		

2. Applicant:

☐ Individual ☒ Organization

a. First Name	DANIELLE	b.Last Name	MELLETT
c. Organization	DEPARTMENT OF CONSERVATION AND RECREATION		
d. Mailing Address	251 CAUSEWAY STREET, SUITE 900		
e. City/Town	BOSTON	f. State	MA
g. Zip Code	02114	j. Email	danielle.mellett@state.ma.us
h. Phone Number			

3.Property Owner:

☐ more than one owner

a. First Name	PRISCILLA	b. Last Name	GEIGIS
c. Organization	DEPARTMENT OF CONSERVATION AND RECREATION		
d. Mailing Address	251 CAUSEWAY STREET, SUITE 900		
e. City/Town	BOSTON	f.State	MA
g. Zip Code	02114	j.Email	priscilla.geigis@mass.gov
h. Phone Number			

4.Representative:

a. First Name	NAOMI	b. Last Name	VALENTINE
c. Organization	SWCA ENVIRONMENTAL CONSULTANTS		
d. Mailing Address	15 RESEARCH DRIVE		
e. City/Town	AMHERST	f. State	MA
g. Zip Code	01002	j.Email	nvalentine@swca.com
h.Phone Number	413-658-2012	i.Fax	

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

a.Total Fee Paid	750.00	b.State Fee Paid	362.50	c.City/Town Fee Paid	387.50
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6.General Project Description:

VEGETATION MANAGEMENT PLAN WITHIN THE CHARLES RIVER RESERVATION IN WATERTOWN. THE VEGETATION MANAGEMENT PLAN INCLUDES CONTINUED PARK MANAGEMENT AS WELL AS SPECIFIC INVASIVE PLANT MANAGEMENT WITHIN A FOCUS AREA.

7a.Project Type:

- | | |
|---|--|
| 1. ☐ Single Family Home | 2. ☐ Residential Subdivision |
| 3. ☐ Limited Project Driveway Crossing | 4. ☐ Commercial/Industrial |
| 5. ☐ Dock/Pier | 6. ☐ Utilities |
| 7. ☐ Coastal Engineering Structure | 8. ☐ Agriculture (eg., cranberries, forestry) |
| 9. ☐ Transportation | 10. ☒ Other |

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

1. ☒ Yes ☐ No

If yes, describe which limited project applies to this project:

2. Limited Project

INVASIVE PLANT MANAGEMENT

8. Property recorded at the Registry of Deeds for:

a. County:

b. Certificate:

c. Book:

d. Page:

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

1. Buffer Zone & Resource Area Impacts (temporary & permanent):

☐ This is a Buffer Zone only project - 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)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
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a. ☒ Bank

30

1. linear feet

2. linear feet

b. ☐ Bordering Vegetated Wetland

1. square feet

2. square feet

c. ☐ Land under Waterbodies and Waterways

1. Square feet

2. square feet

3. cubic yards dredged

d. ☒ Bordering Land Subject to Flooding

39340

1. square feet

2. square feet

3. cubic feet of flood storage lost

4. cubic feet replaced

e. ☐ Isolated Land Subject to Flooding

1. square feet

2. cubic feet of flood storage lost

3. cubic feet replaced

f. ☒ Riverfront Area

Charles River

1. Name of Waterway (if any)

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:

134895

128324

6571

a. total square feet

b. square feet within 100 ft.

c. square feet between 100 ft. and 200 ft.

□ **Massachusetts Department of Environmental Protection**
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If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

a. number of new stream crossings

b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage of Endangered Species program (NHESP)?

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:FROM MAP VIEWER

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18)....

c. Submit Supplemental Information for Endangered Species Review * (Check boxes as they apply)

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

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

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

b. ☐ Photographs representative of the site

c. ☐ MESA filing fee (fee information available at: <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/mesa-fee-schedule.html>)

Make check payable to "Natural Heritage & Endangered Species Fund" and **mail to NHESP** at above address

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

d. ☐ Vegetation cover type map of site

e. ☐ Project plans showing Priority & Estimated Habitat boundaries

d. OR Check One of the following

1. ☐ Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <http://www.mass.gov/eea/agencies/dfg/dfw/laws-regulations/cmr/321-cmr-1000-massachusetts-endangered-species-act.html#10.14>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing.

a. NHESP Tracking Number

b. Date submitted to NHESP

Page 4 of 7 * ELECTRONIC COPY

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Bureau of Resource Protection - Wetlands

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3. ☐ Separate MESA review completed.

Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...

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

a. ☒ Not applicable - project is in inland resource area only

b. ☐ Yes ☐ No

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

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

North Shore - Hull to New Hampshire:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 S. Rodney French Blvd
New Bedford, MA 02744

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

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

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

a. ☐ Yes ☒ No

If yes, provide name of ACEC (see instructions to WPA Form 3 or DEP Website for ACEC locations). **Note:** electronic filers click on Website.

b. ACEC Name

4. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

a. ☐ Yes ☒ No

5. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L.c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L.c. 130, § 105)?

a. ☐ Yes ☒ No

6. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

a. ☐ Yes, Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol.2, Chapter 3)

2. A portion of the site constitutes redevelopment

3. Proprietary BMPs are included in the Stormwater Management System

b. ☒ No, Explain why the project is exempt:

1. ☐ Single Family Home

☐ **Massachusetts Department of Environmental Protection**
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Provided by MassDEP:
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- ☐ 2. Emergency Road Repair
- ☐ 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

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

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

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the
☐ Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland
☐ [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.
3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s).
☐ Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
4. List the titles and dates for all plans and other materials submitted with this NOI.
☐

a. Plan Title: **b. Plan Prepared By:** **c. Plan Signed/Stamped By:** **c. Revised Final Date:** **e. Scale:**

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

Massachusetts Department of Environmental
Protection
Bureau of Resource Protection - Wetlands
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Provided by MassDEP:
MassDEP File #:
eDEP Transaction #:1415260
City/Town:WATERTOWN

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.

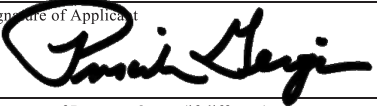
Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number	3. Check date
4. State Check Number	5. Check date
6. Payer name on check: First Name	7. Payer name on check: Last Name

F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant 	2. Date 8/12/2022
3. Signature of Property Owner(if different)  Naomi Valentine Digitally signed by Naomi Valentine Date: 2022.08.12 18:17:19 -04'00'	4. Date 8/16/22
5. Signature of Representative (if any)	6. Date 8/12/2022

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 Section C, Items 1-3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

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

Provided by MassDEP:
MassDEP File #:
eDEP Transaction #:1415260
City/Town:WATERTOWN

A. Applicant Information

1. Applicant:

a. First Name	DANIELLE	b. Last Name	MELLETT
c. Organization	DEPARTMENT OF CONSERVATION AND RECREATION		
d. Mailing Address	251 CAUSEWAY STREET, SUITE 900		
e. City/Town	BOSTON	f. State	MA
g. Zip Code	02114		
h. Phone Number	i. Fax	j. Email	danielle.mellett@state.ma.us

2. Property Owner:(if different)

a. First Name	PRISCILLA	b. Last Name	GEIGIS
c. Organization	DEPARTMENT OF CONSERVATION AND RECREATION		
d. Mailing Address	251 CAUSEWAY STREET, SUITE 900		
e. City/Town	BOSTON	f. State	MA
g. Zip Code	02114		
h. Phone Number	i. Fax	j. Email	priscilla.geigis@mass.gov

3. Project Location:

a. Street Address	CHARLES RIVER ROAD	b. City/Town	WATERTOWN
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Are you exempted from Fee? ☐

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than \$100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total
H.) CONTROL VEGETATION IN DEVELOPMENT;	1	500.00	RFA MULTIPLIER 1.5	750.00
		City/Town share of filling fee \$387.50	State share of filing fee \$362.50	Total Project Fee \$750.00



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

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

Eligibility Checklist

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

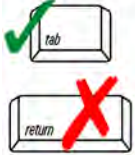
Watertown

City/Town

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:

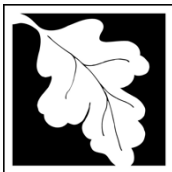
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



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.



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

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

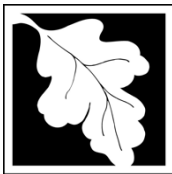
Eligibility Criteria - Coastal Ecological Restoration Limited Projects (310 CMR 10.24(8))

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.



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

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

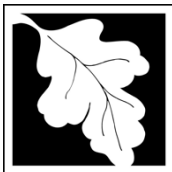
- ☐ A project to restore tidal flow that will not significantly increase flooding or storm damage impacts to the built environment, including without limitation, buildings, wells, septic systems, roads or other man-made structures or infrastructure.

☐ 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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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)) (Cont.)

Provided by MassDEP:

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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 considered 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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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)) (Cont.)

Provided by MassDEP:

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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): Invasive Vegetation Management



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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:

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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).



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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:

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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:

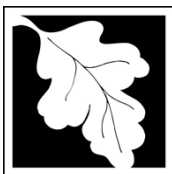
- ☐ Meeting the eligibility criteria set forth in 310 CMR 10.13 would result in significant stream instability or flooding hazard that cannot otherwise be mitigated, and site constraints make it impossible to meet said criteria.
- ☐ The project design ensures that the stability of the bank is NOT impaired.
- ☐ 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

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

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

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- ☒ **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.



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Bureau of Resource Protection - Wetlands

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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.)

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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.



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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)

Provided by MassDEP:

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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

Percentage/acreage

b. Outside Wetland Resource Area

Percentage/acreage

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

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

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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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: _____



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

Required Actions (310 CMR 10.11) (cont.)

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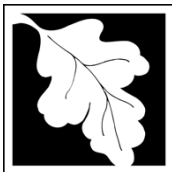
City/Town

- ☐ 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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Required Actions (310 CMR 10.11) (cont.)

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Send the request for a written or electronic determination to:

South Shore – Cohasset 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 – Hull 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.



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Appendix A: Ecological Restoration Limited Project Checklists

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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.

Figures 1 through 6

a. Plan Title

SWCA Environmental Consultants

b. Prepared by

8/12/22

d. Final Revision Date

c. Signed and Stamped by

e. Scale

f. Additional Plan or Document Title

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

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Minimum Required Documents (310 CMR 10.12)

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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.



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Certification that the Ecological Restoration Project Meets the Eligibility Criteria

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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.

Danielle Mellett

Printed Name of Applicant or Authorized Agent

8/12/22

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.

CHARLES RIVER VEGETATION MANAGEMENT PLAN NOTICE OF INTENT SUBMITTAL

Prepared on Behalf of

Danielle Mellett
Massachusetts Department of Conservation and Recreation
251 Causeway Street
Boston, Massachusetts 02114

Prepared by

SWCA Environmental Consultants
15 Research Drive
Amherst, Massachusetts 01002
(413) 256-0202
www.swca.com

SWCA Project No. 70690-000-AMH

August 2022

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1 INTRODUCTION

SWCA Environmental Consultants (SWCA) has prepared this Notice of Intent (NOI) on behalf of the Massachusetts Department of Conservation and Recreation (DCR) to implement the Charles River Vegetation Management Plan (CRVMP) along the bank of the Charles River in Watertown, Massachusetts (the project). Specifically, the project area is located between the Watertown Dam to the Grove Street and Greenough Boulevard intersection. This is part of a greater CRVMP project, which spans various sections of bank and adjacent DCR properties within Boston, Cambridge, Watertown, and Newton. DCR has established the following goals for the CRVMP:

1. Ensure all routine maintenance is carried out in a manner that has no potential for damage to the environment and all vegetation management activities will be performed to avoid and minimize any potential impacts to the maximum extent practicable.
2. Restore the natural capacity of the *existing* Wetland Resource Areas to protect and sustain the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40) (WPA) and provide for stable and sustainable shorelines; historic vistas; climate resiliency; and a safe, stable tree canopy.
3. Develop strategies that protect the properties' ecological, recreational and cultural integrity and consistently implement such strategies across all public/private uses of the property (leases, [Memorandums of Agreement [MOAs], special use permits, easements, etc.).
4. Provide public access to outstanding opportunities for passive and active recreation along and adjacent to the riverbank.
5. Steward parklands that reflect the cultural value and 100-year history of the Charles River Reservation.
6. Engage a cooperative network of parkland stakeholders who both enjoy the many recreational opportunities and provide volunteer assistance in managing the CRVMP area.
7. Provide a framework to guide future capital restoration projects.

This NOI has been developed in accordance with the WPA and its implementing regulations (310 Code of Massachusetts Regulations [CMR] 10.00 et seq.) as well as the Watertown Wetlands Protection Ordinances (the Ordinances). The proposed project is filed as an Ecological Restoration Limited Project under 310 CMR 10.53(4). The Ecological Restoration Limited Project Checklist (WPA Form 3 Appendix A) is included at the beginning of this filing. The project area has been degraded by anthropogenic influences and this project aims to improve the ecological capacity of the bank and riparian zone of the River. The Charles River Reservation was created within filled tidelands and has since been altered with ornamental plantings (many of which are now considered invasive), lawn and meadow areas, and infrastructure that require maintenance for safe and accessible recreational use. However, the goals of this project are to improve all resources to the extent practicable and restore a more resilient native vegetative community over time.

The proposed project seeks to manage vegetation within the following resource areas jurisdictional under the WPA and the Ordinances and implementing regulations: Bank, including the associated 100-foot buffer zone; Bordering Vegetated Wetland (BVW), including the associated 100-foot buffer zone; Isolated Wetland (IVW), locally regulated 150-foot Buffer Zone to wetlands and bank, Bordering Land Subject to Flooding (BLSF); and 200-foot Riverfront Area (RFA). The three types of vegetation management proposed within these resource areas include: 1) routine maintenance and 2) invasive plant management and restoration (see Section 5.3). All wetland resource areas within the project area are designated as inland resources, as this section of the Charles River is not tidally influenced. All impacts

are temporary in nature and no adverse impact will occur to any of the wetland resource areas within or near the project work area (see Section 3).

Two hard copies and a digital copy of this NOI and associated documents have been submitted to the Watertown Conservation Commission. The NOI application and documents have also been filed with the Massachusetts Department of Environmental Protection (DEP) using the eDEP online filing site. A hard copy has also been mailed to DEP Northeast Region.

This project is being filed under Category 2h, which includes a fee of \$500. Since the work will take place within RFA, this fee is multiplied by 1.5 for a total state fee of \$750. The State portion of this fee is \$362.50, and the Municipal portion is \$387.50.

Section III E(1) of the Watertown Ordinance states that abutters within 300-feet of the property need to be notified. The project area is a continuous tract of land along the Charles River, composed of multiple parcels, some greater than 50 acres. In accordance with 310 CMR 10.05(4), projects within lots greater than 50 acres notify abutters within 100-feet from the Project Site. Therefore, SWCA has notified abutters within 300 feet of the project area, including those in neighboring municipalities and across waterbodies. Appendix B includes a list of certified abutters and a copy of the notification letter.

2 SITE DESCRIPTION

The CRVMP project area in Watertown extends from the Watertown Dam to the Grove Street and Greenough Boulevard intersection (Figure C1). Project activities will be completed within the Charles River Reservation, specifically in the riparian area where the terrestrial portions of the parkland meet the Charles River, and immediately adjacent parklands. Figures of the project area are included in Appendix C. Site photographs are included in Appendix D.

The Charles River Reservation provides a vibrant mixture of recreational resources serving adjacent urban neighborhoods and institutions as well as visitors from the metropolitan area and beyond. The banks of the river support a wide range of activities from lawn sports, picnicking, sunbathing, scenic walks, and dog walking to playgrounds, wading pools, tennis courts, and athletic fields. The 18-mile Dr. Paul Dudley White Bicycle Path is used for distance biking, commuting, inline skating, running and walking, as well as road races and walkathons. The river itself supports sailing, rowing, yachting, canoeing, kayaking, boat tours, and fishing.

A vegetative riparian buffer separates the Charles River from the passive recreation areas that include recreational and public use lawns, bikeways, natural surface trails, buildings, parking lots, and other park infrastructure. The vegetative buffer is mainly comprised of scattered pockets of dense vegetation including trees, shrubs, grasses, wildflowers, and vines. Soils are compacted and the vegetation is frequently disturbed by anthropogenic changes in water level, extreme weather events, and recreational activities on the land and water. As a result, the predominant vegetative layer is populated by non-native nuisance species such as false indigo (*Amorpha fruticosa*) and mugwort (*Artemisia vulgaris*), and non-native invasive plant species such as tree of heaven (*Ailanthus altissima*), common reed (*Phragmites australis*), shrub honeysuckle (*Lonicera* spp.), yellow flag iris (*Iris pseudacorus*), and Japanese knotweed (*Reynoutria japonica*). However, native species with high pollinator and wildlife values such as goldenrods (*Solidago* spp.), poison ivy (*Toxicodendron radicans*), jewelweed (*Impatiens capensis*), stinging nettle (*Urtica dioica*), American pokeberry (*Phytolacca americana*), sedges (*Carex* spp.), sensitive fern (*Onoclea sensibilis*), button bush (*Cephalanthus occidentalis*), speckled alder (*Alnus incana*), common yarrow (*Achillea millefolium*), and staghorn sumac (*Rhus typhina*) have persisted through the disturbances.

Other than athletic fields, playgrounds, trails, and parking areas, the project area between the vegetated riparian buffer and the closest DCR Parkway mainly consists of open lawn, lawn with tree canopy, and pockets of woodlands with mature trees. A strip of trees and shrubs is present between the Parkway and the park land. Vegetation along this strip is considered part of the Parkway's historic character and maintain in accordance with DCR's Parkway Master Plan (Toole Design, 2021).

2.1 Routine Vegetation Management Landscape Types

DCR maintains hundreds of thousands of acres of recreational space across the Commonwealth of Massachusetts. It is necessary to maintain these recreational spaces to ensure safe and enjoyable access to these valuable public spaces. The DCR property around the Charles River is no exception.

As part of their park lands, DCR conducts various types of regular maintenance along the Charles River Reservation. Vegetation maintenance is conducted to maintain recreational use, accessibility of pathways and public space, health of specific ecosystems, scenic vistas, landscaping, etc. Routine maintenance within the project area is classified into eight Landscape Types (Table 1; Figure C4). Each Landscape Type falls under one of two Landscape Designations: Naturalized Area (NA) or Reservation Facility (RF). Additionally, there are Activity and Use Limitation (AUL) areas within the project work area, which require specific management (see Section 4.1).

Table 1. Routine Maintenance Landscape Types within the Project Area

Landscape Type	Key	Area Description	Designation	Size and Location within the Project Area
Lawn	L	Mown turf, natural surface athletic fields, day-use areas	RF	11.20 ac
River's Edge	RE	Managed rivers edge (special events and other)	NA	241 ft
Woodland	T	Mature canopy trees, woodland ground plane with possible shrub understory	NA	26.13 ac
Wetland*	W	Wetland resources	NA	0.38 ac
Landscaped Areas	LA	Vistas, maintenance areas, community gardens, cultural landscape types, etc.	RF	0.39 ac
Structures	S	Buildings, gates, fences, shoreline infrastructure, utility infrastructure, etc.	RF	623 ft
Circulation	C	Pathways, roads, bridges	RF	2.43 ac; 23,464 ft

Note: NA = Naturalized Area; RF = Reservation Facility; ac = acre; ft = linear feet.

* No routine maintenance occurs within wetland resources, but they are noted as a Landscape Type so landscaping contractors their bounds and do not perform maintenance within wetland resources.

2.2 Invasive Plant Focus Area

Although there are many invasive plants present within the full project area, DCR has identified one specific focus area for invasive plant management. This area has been prioritized based on its proximity to high-traffic areas, feasibility of management within the next three to five years, and presence of high-concern plant species. This focus area is described in Table 2. These areas extend throughout BLSF, RFA, IVW, and the 150-foot buffer to Bank and IVW. Additionally, there are Activity and Use Limitation (AUL) areas within the project work area, specifically the invasive plant management focus area, which require specific management. See Section 4.1 for more detail on these areas and the vegetation management to be conducted within them.

Table 2. Invasive Plant Focus Areas

Focus Area Location	Area Description	Invasive and Nuisance Plant Species (sf)
Watertown Focus Area	Extends 586 feet along southern edge of N Beacon St across river from Harry Parker Boathouse. This focus area is within and adjacent to an AUL. See Section 4.1 for more information regarding this AUL.	European Buckthorn (5,142) Japanese Knotweed (7,786) Multiflora Rose (trace) Shrub Honeysuckle (33) Tree of Heaven (30)

Note: Square footage of invasive plants is determined by absolute percent cover within species-specific field delineated polygons. Invasive plant coverage is overlapping and do not represent cumulative impacts to resource areas. See Table 3 for the total impact to resource areas. "Trace" indicates that there is less than 1 square foot of total coverage of the invasive plant described.

3 REGULATED WETLAND RESOURCE AREAS

A desktop analysis of environmental constraints was performed using Massachusetts Geographic Information System (MassGIS) data layers, U.S. Geological Survey (USGS) StreamStats, and other publicly available data. SWCA also reviewed recent resource area delineations, including unpublished data related to the Herter Park Master Plan (Halverson, 2022). In addition, SWCA conducted a site delineation between January 12 and January 26, 2022, to confirm the presence of previously delineated resource areas throughout the project area.

The proposed CRVMP project area contains BVW, Bank, RFA, BLSF, IVW and buffer zone, as these resource areas are defined by 310 CMR 10.00 and the Ordinances. Representative photographs of the project area depicting existing conditions are included in Appendix D.

The following sections define the on-site regulated resource areas. Table 3 includes a breakdown of which resource areas will be temporarily impacted by each type of proposed vegetation management.

Table 3. Types of Vegetation Management within Jurisdictional Resource Areas

Resource Area	Routine Maintenance							Invasive Plant Management
	L	RE	T	W	LA	C	S	
BVW			X*			X*		
IVW			X*			X*		XX
Bank		X	X*		X*	X*	X	XX
RFA		X	X		X	X	X	X
BLSF		X	X		X	X	X	X

Note: X = impact present within resource area; X* = impact present within buffer zone only; XX = impact within resource area and buffer zone.

3.1 Inland Bank (310 CMR 10.54)

As defined in 310 CMR 10.54 (2)(a and c), a Bank is "the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland. A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel or stone.... The upper boundary of a Bank is the first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level."

The majority of the project area extends along the Bank and its buffer zone. Portions of the proposed vegetation management activities will occur within the Bank of the Charles River. The Charles River has been actively managed since the 1700s and water levels have been under anthropogenic control since 1910. Along the project area, the Bank consists of a combination of natural (soil) and engineered (stone armored) embankment that is partially vegetated with native, nonnative, and invasive species. The majority of the Bank in the project area is steep (>15% slope) and provides an abrupt change from river to upland area. The Bank generally contains a wooded/high shrub riparian edge and abrupt transition from water's edge to a relatively flat, gently sloping upland area. Some of the shorelines with low herbaceous/passive recreation areas have gradual (<5%) slopes (Weston and Sampson 2019).

Existing engineered structures include revetments and riprap. The predominant plant community in these areas are false indigo (along the shore edge), evening primrose (*Oenothera biennis*), New England aster (*Symphyotrichum novae-angliae*), and goldenrod. Common invasive plants present are phragmites, Japanese knotweed, and others. There are also various sections of Bank with bulkheads, which are an engineered structure to protect vulnerable shorelines and working waterfront. They do not commonly house vegetation.

Natural Banks throughout the project area predominantly contain shrubs and herbaceous plants with some sections of intermittent to dense tree canopy. The predominant tree community in these areas of Bank include red maple (*Acer rubrum*), oaks (*Quercus* spp.), beech (*Fagus* spp.), ash (*Fraxinus* spp.), and white pine (*Pinus strobus*) as well as invasive trees such as tree of heaven and Norway maple (*Acer platanoides*). The understory in these areas commonly include poison ivy and various invasive plant species (buckthorn, barberry, multiflora rose, Asiatic bittersweet, etc.).

Portions of the Bank have eroded because of wake action from water-based recreation, stormwater overflow across the Reservation, and human disturbance associated with land-based recreation. Several wildlife species have been observed utilizing the Bank for basking (e.g., turtles and snakes) and shelter (e.g., aquatic animals, rabbits [*Sylvilagus floridanus*], squirrels [*Sciurus* spp.] and chipmunks [*Tamias striatus*]). The vegetation present along the Bank also provides forage for insects, birds, fish, other aquatic animals and small mammals as well as nesting sites for birds, rabbits and other small mammals. Bank vegetation helps provide shade, cooling the river's shoreline, and helps to prevent Bank erosion and improve stormwater water permeability.

3.2 Bordering Vegetated Wetland (310 CMR 10.55)

As defined in 310 CMR 10.55(a–c), BVW are “area(s) where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants, 50% or more of the vegetative community consists of wetland indicator species, and the ground surface water regime and the vegetative community which occurs in each type of freshwater wetland area specified in [the WPA]” The boundaries of the on-site wetlands were determined in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation (Environmental Laboratory 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (USACE 2011), as well as in accordance with the WPA and 310 CMR 10.55(2)(c) and further described in MassDEP's Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act (1995).

VHB identified one BVW (Wetland W1) approximately 300 feet east of the Arsenal Street Bridge along the Greenough Boulevard. This BVW was originally delineated in 2014 and the delineation was updated in 2019 and 2020 by DCR staff. This BVW delineation was previously approved in the “Greenough Boulevard Greenway Expansion” Project (DEP File No. 321-0158). W1 is classified as a palustrine persistent emergent wetland (PEM1). The wetland is a narrow vegetated wetland along the west side of Greenough Boulevard and separated from the Charles River by an upland island. This wetland receives

drainage from three intermittent streams, which drain to the west and to the Charles River. The vegetation found within this wetland consists of mostly common reed (*Phragmites australis*) and tree of heaven (*Ailanthus altissima*).

3.3 Isolated Vegetated Wetland (Ordinances)

SWCA delineated one Isolated Vegetated Wetland (IVW) on January 24, 2022 off North Beacon Street within Squibnocket Park. IVW W1 is a palustrine scrub shrub (PSS) wetland located down gradient of the paved roadway and northeast of Charles River. This IVW is jurisdictional under the Ordinances. The wetland consists primarily of silky dogwood (*Cornus amomum*) and eastern poison ivy (*Toxicodendron radicans*). Hydrology indicators consisted of saturation, water-stained leaves, high water table, and geomorphic position. Soils consist of a silt loam material with hydric soil indicators of redox dark surface and evidence of redoximorphic features (concentrations and depletions) observed within the upper soil profiles. The surrounding upland area consists of forested area dominated by northern red oak (*Quercus rubra*) and Japanese knotweed.

3.4 Bordering Land Subject to Flooding (310 CMR 10.57)

As defined in 310 CMR 10.57(2)(a), BLSF is “an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland...The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm. Said boundary shall be that determined by reference to the most recently available flood profile data prepared for the community within which the work is proposed under the National Flood Insurance Program (NFIP, currently administered by the Federal Emergency Management Agency, successor to the U.S. Department of Housing and Urban Development). Said boundary, so determined, shall be presumed accurate.”

BLSF extends intermittently throughout the project area adjacent to Bank. The work to be performed within this area includes invasive plant management within the focus area as well as continued general maintenance, as described in the Landscape Types section (Sections 2.1 and 5.1). Although these areas are identified as 100-year floodplain, it is unlikely that the area will flood at the projected 100-year frequency due to the active management of the dam.

3.5 Riverfront Area (310 CMR 10.58)

As defined in 310 CMR 10.58 (2)(a), a RFA is “the area of land between a river’s mean annual high water line and a parallel line measured horizontally. The [RFA] may include or overlap other resource areas or their buffer zones.” Mean annual high water line (MAHWL) is defined under 10.58 (2)(a)(2) as the line apparent “from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water... Field indicators include changes in slope, changes in vegetation...”, etc. SWCA identified the MAHWL as concurrent with the first break in slope as the delineation of Bank, which was used to measure the extent of RFA within the project bounds. 10.58 (2)(a)3.a. indicates that the horizontal setback for RFA in Watertown is 200 feet from the MAHWL (or Bank, as defined above).

The RFA along the project area consists mostly of a naturally vegetated 3- to 5-foot strip adjacent to the mean low water line that transitions into an actively used park area with grass, trails, typical park infrastructure, and scattered trees. In addition, the Charles River Reservation (including the project area)

was developed in 1910. As such, for purposes of the WPA and the River's Protection Act, all of the RFA is considered altered and disturbed.

4 OTHER ENVIRONMENTAL CONSTRAINTS

SWCA reviewed MassGIS to determine if this site was within or near other sensitive environmental areas that protect rare species, important watersheds, or other special environmental characteristics. The proposed project is not within Natural Heritage & Endangered Species Program (NHESP) Priority and Estimated Habitat, Certified Vernal Pools, Areas of Critical Environmental Concern, nor Outstanding Resource Waters were identified within the project area (MassGIS 2021a, 2021b, 2021c, 2013, 2009, and 2010). There are also no DEP Tier Classified 21E Sites located within the proposed work area (MassGIS 2021d and 2021e). There are AUL sites within the project work area, which are described below.

4.1 Activity and Use Limitation Site

As established by DEP, property owners with AUL sites need to be aware of the nature and location of contamination remaining on their property and the appropriateness of certain uses and activities and ensure that the requirements of the AUL continue to be met. Per the 2021 AUL report prepared by Corporate Environmental Advisors on behalf of DCR, the AULs within the project limits are located at the Charles River Park Parcel (CRPP) and are separated into two areas: an open area and wooded area (Corporate Environmental Advisors 2021).

All activities within this AUL align with these restrictions, including the proposed invasive plant management activities in this area.

Table 4. AUL Prescribed Management Activities by Routine Maintenance Landscape Type

Property Name	Size	Location	Landscape Type*	Restricted Site Activities and Uses
Charles River Park Open Area	3.3 acres	Directly south of North Beacon Street (near the intersection of North Beacon Street and Charles River Road)	Lawn (L) Wooded (T)	1. Residential, daycare, or school activities (except for daycare or school activities incidental to recreational park activities) 2. Reduction in the grade below the surface grade 3. Excavation, drilling, or otherwise disturbing the soils located two (2) feet or more below the surface grade
Charles River Park Wooded Area	1.7 acres	Along the south side of North Beacon Street, abutting the Charles River Park Open Area to the west	Wooded (T)	1. Residential, daycare, or school activities (except for daycare or school activities incidental to recreational park activities)
Watertown Yacht Club Open Area and Building Structures	1.4 acres	Along the south side of North Beacon Street near the western-most intersection of North Beacon Street and Charles River Road	Wooded (T)	1. Residential, daycare, or school activities (except for daycare or school activities incidental to recreational park activities) 2. Reduction in the grade below the surface grade 3. Excavation, drilling, or otherwise disturbing the soils located two (2) feet or more below the surface grade

Property Name	Size	Location	Landscape Type*	Restricted Site Activities and Uses
North Beacon Street Area	3.6 acres	Begins near the intersection of North Beacon Street and Charles River Road to the west and runs in an easterly direction to just beyond the point at which North Beacon Street again intersects Charles River Road, north of the Charles River Park Open Area.	Structure (S)	1. Residential, daycare, or school activities (except for daycare or school activities incidental to recreational park activities) 2. Disturbance of the building foundations and slabs which would compromise their integrity in a manner that would or would be likely to result in human contact with the underlying soils 3. Excavation drilling, or otherwise disturbing the soil underlying building foundations and slabs
North Beacon Street Wooded Area	1,236 sqft	At the eastern corner of North Beacon Street and Charles River Road	Circulation (C)	1. Residential, daycare, or school activities (except for daycare or school activities incidental to recreational park activities)
	3,428 sqft	Runs underneath the Charles River		

Notes: * Anticipated management activities for each landscape type are listed in Table 5.

5 PROPOSED WORK

The proposed scope of work associated with this NOI submission includes all planned vegetation management under the updated CRVMP within the City of Watertown. That management is divided into three categories: 1) routine maintenance, 2) specific vegetation management, and 3) restoration. Each of these vegetation management types have specific associated areas of focus, timing, and scope. The proposed work has been designed to minimize impact as much as practicable and does not include any soil disturbance, fill, or other alteration other than management of vegetation. Furthermore, the invasive plant species management will target specific plant species.

Although this NOI is being submitted as an Ecological Restoration Limited Project (ER Limited Project), SWCA and DCR recognize that the full scope of work do not qualify as an ER Limited Project. Therefore the project calculations have been broken out by traditional (non-ER Limited Project filing) and ER Limited Project filing. All impact from routine maintenance (Table 6) will be temporary in nature and minimized to the extent practicable. However, the scope does not meet all requirements of an ER Limited Project. All impact from invasive plant management and restoration (Table 8) do qualify as ER Limited Project and as such, do not need to meet all performance standards of the resources impacted. This is discussed further in Section 6 of this narrative.

5.1 Routine Maintenance

Table 5 includes a list of each Landscape Type as described in Section 2.3 and a description of the prescribed management activities for that Landscape Type. Table 6 includes the total impact of each Landscape Type by resource area and buffer.

Table 5. Summary of Prescribed Management Activities by Routine Maintenance Landscape Type

Landscape Type	Key	Area Description	Management Description
Lawn	L	Mown turf, natural surface athletic fields, day-use areas (Total of 11.20 acres in Watertown)	<u>Active Management:</u> Bimonthly mowing to 4 inches during growing season. Restored as needed with compost/clean soil and seeding* <u>Avoidance/Minimization:</u> only mown when ground is firm and dry; avoided near trees, shrubs, and plantings <u>Purpose:</u> provide safe recreational resources to the public
River's Edge	RE	Managed rivers edge (special events and other) (Total of 241 feet in Watertown)	<u>Minimal management:</u> once a year (trim tree branches) <u>Purpose:</u> Provide access to views of the river – predominantly prior to special events and across from installed benches
Woodland	T	Mature canopy trees, woodland ground plane with possible shrub understory? (Total of 26.13 acres in Watertown)	<u>Periodic maintenance:</u> tree pruning* and removal are performed following arborist review of trees*. Other vegetation management is conducted with mowers, weedwhackers, and chainsaws. <u>Purpose:</u> ensure safe access to all portions of the project area and enhance aesthetics and health of vegetation in question
Wetland	W	Jurisdictional wetlands (Total of 0.38 acres in Watertown)	No management.
Landscaped Areas	LA	Vistas, maintenance areas, community gardens, cultural landscape types, etc. (Total of 0.39 acres in Watertown)	<u>Regular management:</u> maintenance includes raking, weeding, clearing fallen branches, removal of dead plant material, and shrub pruning. Areas are replanted and reseeded as necessary* <u>Purpose:</u> maintain aesthetics and safety within planned landscaped areas
Circulation	C	Pathways, roads, bridges, (Total of 2.43 acres and 23,464 feet in Watertown)	<u>Active management:</u> bimonthly during growing season to maintain a +/- 5-foot lawn buffer on each side of circulation areas. A +/- 10-foot buffer is managed adjacent to bridges and ramps for woody vegetation. Includes trimming vegetation that encroach on public parkways, sidewalks, paths, bridges, and trails. <u>Purpose:</u> provide safe access and promote favorable conditions for public use.
Structures	S	Buildings, gates, fences, shoreline infrastructure, utility infrastructure, etc. (Total of 623 feet in Watertown)	<u>Minimal management:</u> only performed as needed to remove unwanted vegetation from structures. <u>Purpose:</u> safety for pedestrians and structure maintenance access, and aesthetics

Notes: * DCR has developed approved seed and planting lists as well as tree assessment and management details (Appendix E).

Table 6. Total Resource Area Impacts within Landscape Types (Traditional Filing)

Resource Area	Routine Maintenance						
	L	RE	T	W	LA	C	S
BVW (sf)	-	-	-	-	-	-	-
150-ft Buffer (sf)			13,474	-	-	215	-
IVW (sf)	-	-	-	-	-	-	-
150-ft Buffer (sf)			4,350	-	-	70	-
Bank (LF)	-	24	-	-	-	-	6
150-ft Buffer (sf)	-	24	104,400	-	1,579	22,162	-
RFA (sf)	-	24	109,237	-	1,714	23,909	6

Resource Area	Routine Maintenance						
	L	RE	T	W	LA	C	S
BLSF (sf)	-	24	32,635	-	17	6,664	6

Note: IS = Invasive Plant Species; † = Ordinance-regulated only.

5.2 Invasive Plant Management

In addition to general operations and maintenance, DCR plans to conduct invasive plant management. DCR strives to manage non-native invasive plant species throughout their properties. However, invasive plants are widespread and can be difficult to manage without a specific plan of action. DCR has identified one focus area within Watertown in which invasive plant management will be prioritized over the next 3 to 5 years. The focus area was surveyed by SWCA between January 12 and January 26, 2022. The full extent of invasive plants and each plant's total footprint within each focus area can be seen in Figure C5. Table 7 includes the details of all specific vegetation management associated with this proposed project.

Table 7. Invasive Plant Management*

Special Event/Project	Location	Vegetation	Management Description
Invasive Plant Management	Southern edge of North Beacon St across river from Harry Parker Boathouse.	Buckthorn spp. Japanese Knotweed Multiflora Rose Shrub Honeysuckle Tree of Heaven	Vegetation in this area includes woody invasive plant species and Japanese knotweed. Woody shrub invasive plants will be hand-removed where possible and where not possible, they will be managed through cut-stem herbicide application and other methods detailed in Appendix F. Japanese knotweed will be managed through selective foliar herbicide application. Tree of heaven will be girdled or treated via cut-stem herbicide application.

Management Notes: * See Appendix F for more details on invasive plant management strategies. This table is intended as a brief overview of likely management methods. Foliar herbicide application should be conducted with a systemic herbicide (e.g., glyphosate, triclopyr), which should be carefully sprayed onto the foliage of the plant during its time of flowering or as close to it as possible without impacting pollinators. Cut-stem herbicide application involves cutting the target vegetation at or very close to the ground surface and applying a concentrated solution of herbicide to the freshly cut stem. Girdling involves cutting the bark and cambium in a circle around the trunk and should be conducted in the spring.

Table 8 includes the total impact of each specific vegetation management type by each wetland resource and its buffer. Refer to Figure C4 for the locations of the overlap in these resource areas and specific management areas.

Table 8. Impact Calculations within Invasive Plant Management Focus Area

Resource Area	Watertown Invasive Plant Focus Area
BVW (sf)	-
100-ft Buffer (sf)	-
IVW (sf)	277
100-ft Buffer (sf)	2,528
Bank (LF)	-
100-ft Buffer (sf)	3,510
RFA (sf)	3,513
BLSF (sf)	795

5.3 Restoration Goals

While DCR has not yet developed a full restoration plan for this proposed vegetation management program, Table 9 details ongoing restoration goals across various sections of the Charles River Reservation. DCR has developed a seed and planting pallet to be used consistently throughout the Reservation. The seed mix was developed to emphasize the use of native as well as cultural/historic plantings in the park. It is DCR's intent to encourage the use of the seed/planting pallet for all DCR and partner projects. The planting pallet and planting specifications are attached in Appendix E.

Table 9. Restoration Goals

Proposed Site	Restoration Goal
General Site Restoration (Routine Maintenance)	Monitor and vegetate exposed soils and other areas of concern using plant/seed material from the Charles River Seed mix and knowledge gained from the test plots. Stabilize using straw mulch and/or all-natural fiber erosion control blanket as necessary. Restoration areas larger than 10 square feet may require the installation of temporary bird deterrent fencing. If rutting and soil compaction results from vegetation management activities, the area shall be returned to pre-existing conditions, and comparable to the surrounding area, by light hand raking or back blading with machinery (bank excluded). Deep ruts (>10-inches) shall be filled using available loose soil from the general area. Implement CRVMP: framework to guide future restoration projects. Mention the seed/plant mix and refer to appendix?
Invasive Plant Focus Areas	Monitor and revegetate with seed as needed; practice adaptive management and use various methods of management and active restoration when needed.

Note: Test plots were previously permitted through the Boston and Watertown Conservation Commissions and DEP (DEP File Nos. 006-1780 and 321-0170, respectively). DCR implemented various bank restoration methods to determine which are the most successful to inform future bank stabilization projects.

5.4 Proposed Impact Calculations

The two types of proposed vegetation management are proposed throughout the project footprint but occur at different times of year and at different intervals. Therefore, there is overlap in the total impact of each type of vegetation. The total impact for the entire project is presented in Table 10 by each jurisdictional resource area. These total impact calculations were determined in ArcGIS based on the overlap of each delineated resource area and the total proposed footprint of all aspects of the CRVMP.

As stated in Section 5, these calculations can be broken into traditional and ER Limited Project filings. The impact calculations in Table 10 represent the total impact (overlapping in some areas) for the entire project and reflect what has been submitted on the WAP Form 3. However, Tables 6 and 8 break out the impacts related to the two filing types.

Table 10. Total Resource Area Impact Calculations

Resource Area	Total Impact	Impact to Buffer Zone
BVW	0 square feet	13,690 square feet
IVW	277 square feet	6,948 square feet
Bank	30 linear feet	128,142 square feet
RFA	134,895 square feet	N/A
BLSF	39,340 square feet	N/A

Note: Some resource area calculations overlap and not all impacts are not cumulative.

BVW = Bordering Vegetated Wetland; IVW = Isolated Vegetated Wetland; RFA = Riverfront Area; BLSF = Bordering Land Subject to Flooding.

6 GENERAL PROVISIONS AND PERFORMANCE STANDARDS REVIEW

Proposed projects that are subject to the WPA and its implementing regulations must demonstrate how they comply with the general provisions and applicable performance standards. Table 11 and the following sections detail the general provisions and performance standards under the WPA associated with the jurisdictional resource area in which the proposed work would occur.

Table 11. General Provisions of the Wetlands Protection Act (310 CMR 10.03)

Citation	Regulation	Compliance
310 CMR 10.03(1)(a)1.	The area is not significant to the protection of any of the interests identified in the WPA.	There are no permanent impacts proposed as part of the proposed work. Temporary impacts associated with vegetation management will be targeted and means to minimize impact.
310 CMR 10.03(1)(a)2.	Work within a resource area will contribute to the protection of the interests of the WPA.	The proposed work that is the subject of this NOI will be located within an area subject to regulation but will not adversely affect any resource areas.
310 CMR 10.03(1)(a)3.	Work within the buffer zone will contribute to the protection of the interests of the WPA.	Work within the buffer zone is necessary to maintain existing recreational properties and the needs of those properties (active and passive recreation). No work will result in any adverse impacts to regulated resource areas and will not diminish the ability of the project area to contribute to the interests of the WPA.
310 CMR 10.03(1)(b)	Claims of work outside of any jurisdictional area impacting a jurisdictional area must demonstrate the work has had an adverse impact.	Not applicable.
310 CMR 10.03(2)	Credible evidence from a competent source to support the position taken when contesting DEP's position.	Not applicable.
310 CMR 10.03(3)	Installation of subsurface sewage disposal systems.	Not applicable.
310 CMR 10.03(4)	Presumption concerning point-source discharges.	Not applicable.
310 CMR 10.03(5)	Each resource area is presumed to be significant to the interests of the WPA.	All impacts are temporary and furthermore are either part of an active ecological restoration initiative or general maintenance. Furthermore, all properties proposed for vegetation management are already actively managed by DCR to maintain recreational use.
310 CMR 10.03(6)	Presumption concerning the application of herbicides.	Herbicide application will be minimized to the extent possible and will be limited to the management of invasive and nuisance vegetation within the project area. The selective use of herbicides will be lawfully conducted and will further the protection of wildlife habitat (interest of the WPA) through the elimination of invasive plants and restoration of native vegetation.
310 CMR 10.03(7)(a)	Filing fees for NOIs pursuant to the WPA.	Copies of checks are included in Appendix A.

6.1 Bank (310 CMR 10.54(4))

Impacts to Bank are temporary and *de minimis* in nature and consist of trimming nuisance shrubs and invasive species from river's edge structures. Vegetated areas will remain vegetated thus not limiting the Bank's ability to protect the interests specified in 310 CMR 10.54(1), including wildlife habitat. Provisions under 310 CMR 10.54[4]b–c are not included here, as they are not applicable. There are no structures proposed within the project area and there are no features of concern under Massachusetts Endangered Species Act mapped by NHESP within the project area.

(a) *Where the presumption set forth in 310 CMR 10.54(3) is not overcome, any proposed work on a Bank shall not impair the following:*

1. the physical stability of the Bank, 2. the water carrying capacity of the existing channel within the Bank, 3. ground water and surface water quality 4. the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries, 5. the capacity of the Bank to provide important wildlife habitat functions. A project... that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the Bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions.

Maintenance along the Bank will be minimal and will only include as-needed trimming of structures along the bank of the Charles. This activity will not affect the Bank's physical stability, carrying capacity, or capacity to provide breeding habitat. These project activities will not have long term or adverse effect and will not reduce the Bank's capacity to provide important wildlife habitat functions. As an Ecological Restoration Limited Project, the project is not subject to the requirement to complete a wildlife habitat evaluation under 310 CMR 10.60.

6. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.54(4) (a)(b)(c)

The proposed work does not include any stream crossings.

6.2 Bordering Vegetated Wetland (310 CMR 10.55(4))

The only BVW within the project area includes an emergent wetland (BVW W1), which will not be impacted by any proposed vegetation management.

6.3 Bordering Land Subject to Flooding (310 CMR 10.57(4)(a))

Impacts to the BLSF are temporary in nature and consist of invasive plant management within the identified focus area. Vegetated areas will remain vegetated and there will be no change in topography, flood storage or ground infiltration. Project activities are not anticipated to limit the floodplain's ability to protect the interests specified in 310 CMR 10.57(2)(a)(3).

8. *Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows.*

This is not applicable as there is no proposed fill associated with this project.

9. *Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.*

This is not applicable, as there is no proposed fill associated with this project.

10. *Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions.*

As explained above, the proposed project activities should not result in an alteration to any habitat characteristics. Where they do, there will be an improvement to habitat through the elimination of invasive vegetation and restoration of native plant communities. In addition, impacts from the project activities are temporary in nature. As an Ecological Restoration Limited Project, the project is not subject to the requirement to complete a wildlife habitat evaluation under 310 CMR 10.60.

6.4 Riverfront Area (310 CMR 10.58(4))

Impacts to the RFA are temporary in nature and consists of invasive plant management within the Focus Area. Vegetated areas will remain vegetated. Therefore, the proposed work will not limit the RFA's ability to protect the interests specified in 310 CMR 10.58(4).

(a) Protection of Other Resource Areas. The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (Coastal Bank), 10.32 (Salt Marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding).

A small portion of the project is located within BLSF. However, the project will not result in any impacts to topography or change in flood storage. The performance standard for this resource area has been taken into consideration and is addressed in Sections 6.4 and 6.2, respectively.

(b) Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent.

Not applicable. The project does not occur within any mapped habitat for rare species as identified by the most recent mapping provided by NHESP (NHESP 2021)

(c) Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40.

There is no practicable or equivalent alternative that would achieve the goals of the proposed project. Furthermore, a portion of the project includes restoration through invasive and nuisance vegetation management to establish a flourishing native vegetative community. As such, this project will result in an improvement to overall quality of habitat within RFA. A brief alternatives analysis is included in Appendix A of this NOI submittal.

7 AVOIDANCE, MINIMIZATION, AND MITIGATION

DCR will minimize all impacts the extent practicable and will mitigate for any impacts through systematic restoration practices. DCR has specific minimization strategies for all general activities and invasive plant management minimization practices and BMPs to avoid and reduce impact. Additional restoration information is included in Appendix E.

7.1 General Minimization Strategies

The following minimization strategies are applicable to all activities associated with the proposed work presented in this NOI.

- Vegetation management activities shall adhere to the following stipulations
 - o Inspect all equipment prior to arrival onsite
 - Ensure all are properly functioning, all hoses are in good condition (no leaks)
 - o Conducted during dry conditions only to as to avoid rutting
 - Does not apply to hand pruning and cutting activities
- Equipment storage, use, and maintenance shall adhere to the following stipulations
 - o Conduct all equipment travel along finished grade and on parkland, avoiding exposed tree roots
 - E.g., turf grass, trails, paths, and the Paul Dudley White Greenway
 - o Store spill kit(s) near areas where fueled maintenance equipment is being used
 - Spill kit shall include absorbent pads and disposable bags.
 - DCR's Spill Prevention and Control Plan (Appendix G) will be implemented in the event of a spill.
 - o Store fueled equipment outside of resource areas and buffers, or in existing paved parking areas when not in use
 - o Conduct all equipment maintenance and fueling outside of resource areas and buffers or in paved parking areas
 - o Clean equipment that has been placed or used within areas containing invasive species prior to leaving those invasive areas
 - Clean all plant matter (stems, flowers, roots, etc.), soil, or other deleterious materials

7.2 Invasive Plant Management

All of the above-detailed BMPs also apply to invasive plant management. In addition, DCR will ensure that the following overall BMPs are implemented.

Cutting and Removal of Invasive Vegetation

Invasive plant material cut as part of the invasive plant management shall be disposed consistent with the following by vegetation type.

- Woody material without flowers or seeds: create small stockpiles away from wetlands and recreational facilities (to be coordinated with operations)
- Non woody material: bag and dispose of appropriately

- Flower or seed heads: dead head, bag and dispose of appropriately

Herbicide Application

Only individuals appropriately licensed and certified by the Massachusetts Department of Agricultural Resources Pesticide Bureau will be allowed to apply herbicides. Herbicide applications must comply with all applicable local, state, and federal regulations. DCR must approve all herbicides and surfactants prior to their application.

Additionally, herbicides will not be applied during the following adverse weather conditions.

- High wind velocity, per 333 CMR 11.03(6)
- During periods of dense fog, or moderate to heavy rainfall
- During periods of high temperatures and low humidity (applications of volatile herbicides only)
- When rain is forecast within the 24-hour period after a scheduled application

When applying herbicides, the contractor will follow all labeled restrictions. All plant control treatments will follow all applicable federal and state laws and regulations. The contractor shall provide DCR with copies of any forms/reports filed regarding herbicide application covered under this effort.

The contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The contractor shall take necessary precautions to prevent pollution of streams, wetlands, and ponds with fuels, oils, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

The storage or disposal of fuels, oils, chemicals, or other harmful materials on any project sites or neighboring property is strictly prohibited.

The contractor shall provide to DCR a written record (log) of all work done, including herbicide applications showing dates and times of application, names and license numbers of applicators, weather conditions, volumes, concentrations, types of herbicide solutions used, and locations treated.

Manual Management

Presently, Charles River Watershed Association (CRWA) volunteers have been approved to conduct manual management of invasive species along the Watertown portion of the Charles River. If management activities are completed by CRWA volunteers, or through other partnership agreement with DCR, Volunteer Stewardship Agreement shall be in place for the proposed activities.

8 SUMMARY

SWCA is submitting this NOI as an Ecological Restoration Limited Project under 310 CMR 10.53(4) to implement an updated CRVMP within the Charles River Reservation within Watertown, Massachusetts. The proposed project seeks to control invasive plant species and maintain current vegetation management practices within the Reservation within Bank, IVW, BLSF, and RFA, as well as the 150-foot buffer zones associated with Bank, BVW, and IVW. The goal of the proposed project is to reduce and systematically eliminate invasive plant species from the site and improve restoration and sustainable management practices during general maintenance. This will be conducted improvements/refinement to general maintenance practices (Section 5.1), the application of herbicide and manual removal (invasive plant management, Section 5.2), and systematic restoration (reseeding and/or revegetation of affected Bank and

BVW with native wetland species, Section 5.3). Once implemented, the proposed management plan will increase native biodiversity and increase the habitat for native wildlife species, such as nesting birds.

All work performed within sensitive resource areas discussed in this NOI submission will be performed with the utmost care and selectivity. Sedimentation controls will not be necessary, as soil disturbance will not occur. Pesticides proposed for use are certified for aquatic use and will be applied with caution to non-target species. We are seeking a 5-year Ecological Restoration Order of Conditions to implement the CRVMP that focuses on annual monitoring and adaptive management.

9 LITERATURE CITED

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APPENDIX A

Supporting Materials

THE RED THERMO SECURED "SP" LOGO IN THE LOWER CORNER OF THIS CHECK MUST FADE TEMPORARILY WHEN WARMED BY TOUCH OR FRICTION, SEE BACK FOR ADDITIONAL FEATURES.

SWCA, INC.
IMPREST ACCOUNT
15 RESEARCH DRIVE
AMHERST, MA 01002

DATE August 24 2022 020290
11-24/1210

PAY TO THE ORDER OF Watertown Conservation Commission

\$ 1000.00

One Thousand Dollars + 0/100 DOLLARS



MEMO 70069010212.4 NOI
filing fee - city portion

⑈020290⑈



THE RED THERMO SECURED "SP" LOGO IN THE LOWER CORNER OF THIS CHECK MUST FADE TEMPORARILY WHEN WARMED BY TOUCH OR FRICTION, SEE BACK FOR ADDITIONAL FEATURES.

SWCA, INC.
IMPREST ACCOUNT
15 RESEARCH DRIVE
AMHERST, MA 01002

DATE August 18, 2022 020287
11-24/1210

PAY TO THE ORDER OF The City of Watertown

\$ 387.50

Three hundred eighty seven + 50/100 DOLLARS



MEMO 700690/2/2.4
NOI Filing Fee City Portion

⑈020287⑈



**Legal Notice
of
Wetlands Hearing
with the
Watertown, Massachusetts
Conservation Commission**

**For work proposed by
The Massachusetts Department of Conservation and
Recreation
Multiple State-Owned Parcels
(not all assessed with maps and parcel numbers)**

In accordance with the Massachusetts Wetland Protection Act, MGL Chapter 131, section 40 (as amended), the Watertown Conservation Commission (the Commission) will hold Notices of Intent hearings for the management of vegetation within DCR property along the Charles River in Bank, Bordering Vegetated Wetland (BVW), Bordering Land Subject to Flooding, and Riverfront Area, as well as the associated buffer zones to Bank and BVW.

The Public Hearing date will be posted at least two weeks prior to its scheduled date and time. This information can be found by visiting the Commissions website or by phoning the Commissions Office. Contact information is provided below.

Watertown:

<https://www.watertown-ma.gov/199/Conservation-Commission>

(617) 972-6426

Alternatives Analysis

As required by the General Performance Standards for Riverfront Area at 310 CMR 10.58(4)(c)(1-3), there must be no practicable and substantially equivalent economic alternative to the proposed Project with less adverse effect on the interests identified in MGL c. 131 s 40. An alternative is practicable and substantially equivalent economically if it is available and capable of being done after taking into consideration costs, existing technology, proposed use, and logistics, in light of overall Project purposes. “Available and capable of being done” means the alternative is attainable and feasible.

Based on the alternative analysis herein, it has been determined that, in light of the Project’s goals, no practicable and substantially equivalent economic alternative to the current proposed project exists with less adverse effects on the interests identified in the Wetland’s Protection Act and the Watertown Ordinances, or DCR’s Mission, habitat enhancement initiatives and the future vision of vegetation management along the Charles River. DCR’s vision for the Charles River includes the implementation of a vegetation management plan that addresses the following goals:

1. Restore a healthy riverbank ecology that provides for stable and sustainable shorelines, beautiful vistas, climate resiliency, and a safe, stable tree canopy;
2. Provide public access to outstanding opportunities for passive and active recreation along and adjacent to the riverbank;
3. Steward parklands that reflect the cultural value and 100- year history of the Charles River Reservation;
4. Engage a cooperative network of parkland stakeholders who both enjoy the many recreational opportunities and provide volunteer assistance in managing the CRVMP area; and
5. Provide a framework to guide future capital restoration projects.

5.1 Overall Project Purpose

General DCR Parks Maintenance

DCR is required to maintain the Charles River Reservation lands to maintain recreation use, accessibility of pathways and public space, health of specific ecosystems, scenic vistas, landscaping, etc. There are eight different Landscape Types that require specific levels of management on specific types of vegetation. See Section 5.1 of the Watertown Notice of Intent submission narrative for details on the management within each Landscape Type.

Invasive Plant Management

DCR has defined four Focus Areas for invasive plant management within the Charles River Reservation. Throughout the course of the proposed project, DCR will prioritize both invasive plant management and eradication as well as native plant restoration to increase climate resilience and improve native species habitat within the Charles River Reservation in the City of Watertown.

5.2 Alternatives Considered

5.2.1 *No Management Scenario*

General DCR Parks Maintenance

A no-maintenance scenario is not feasible for DCR parklands. DCR is required to provide safe and equitable access to the Charles River Reservation. In order to provide the intended active and passive

recreation within the Reservation, DCR needs to maintain vegetation. This includes some degree of management regulated wetland resource areas.

Invasive Plant Management

The no management scenario for invasive plant management is not a feasible option the native ecological integrity of the Reservation. Invasive plants will continue to spread and populate in currently uninfested areas of the Reservation and the greater community without management. This will reduce available native species habitat, create monocultures of non-native invasive plants, and result in the reduction and potentially elimination of rare and native plant species throughout the reservation.

5.2.2 Full Impact Management Scenario

General DCR Parks Maintenance

This scenario allows for the continuation of general maintenance as is required for the safety and accessibility needs of the Reservation. This would result in continued mowing at the historic frequencies and trimming, pruning, and cutting of vegetation as-needed. While some of these activities are assuredly required for park maintenance, there are some areas that DCR may be able to reduce maintenance activities through native restoration. One goal of the CRVMP is to work toward a more climate-resilient landscape management strategy.

Invasive Plant Management

DCR views a full-impact invasive plant management strategy as utilizing a single management method, such as excavation, herbicide application across the entirety of the Reservation. This is not an ecologically sound means of invasive plant management, nor is it often effective. The overall goal of invasive plant management is not only to eradicate non-native invasive plant species from the Reservation, but also to restore with native vegetation.

Large-scale mechanical or manual removal of vegetation would destabilize areas of the Reservation (particularly concerning in Bank and riparian areas) and result in fresh disturbance of soil, which could easily be established by additional aggressive invasive plant species. Similarly, utilizing only herbicide application throughout the entire reservation without selectivity could result in non-target impacts and slow the natural restoration of managed areas. Neither of these options are an ecologically suitable approach.

5.2.3 Adaptive Management and Systematic Restoration (Chosen for All Management Categories)

General DCR Parks Maintenance

The adaptive management and systematic restoration of general maintenance throughout the Reservation entails identification of under-utilized lawn areas (areas that do not get much public use and do not need to be maintained as lawn). Once identified, these underutilized lawn areas will be restored into native meadows and require only once-annual mowing. Meadow habitat is limited in the Commonwealth, particularly in the greater Boston area, and these restored areas will greatly increase the wildlife habitat value of the Reservation as a whole.

Systematic restoration of riparian areas is another large component of this scenario of general maintenance. The installation of resilient native vegetation will improve the ecological integrity of riparian areas throughout the Reservation and decrease the need for frequent landscaped area, river's edge, and other landscape type management. These restoration activities align with DCR's goals for the CRVMP and broader parkland management and will not negatively effect the safety and utility of the

parkland to the public.

Invasive Plant Management

Adaptive plant management is extremely key to effective invasive plant management. No single management method is both effective and ecologically sound over the entire span of a management program. Invasive plants are dynamic and require different methods of management at different stages of growth, population size, time of year, ecological setting, etc. This scenario of invasive plant management involves assessing the invasive plant as well as its environment and overall population to determine the best management technique needed in any given year. It is critical that this be able to adapt and change with changing scenarios. Furthermore, restoration is a key component of this scenario. Whether by natural regeneration or active seeding and planting, invasive plant management cannot be successful without restoration of native vegetation.

APPENDIX B

Abutter Notification Letters

Watertown Conservation Commission

ABUTTER NOTIFICATION LETTER

In accordance with the second paragraph of the Massachusetts General Laws Chapter 131, Sec. 40 and the Watertown Conservation Commission, you are hereby notified of the following:

Name of Applicant: Massachusetts Department of Conservation and Recreation

The applicant has filed a request for a Notice of Intent with the Watertown Conservation Commission. Applicant is seeking a permit for the following project:

The proposed project is for the updated Charles River Vegetation Management Plan, which includes the continuation of routine maintenance of the Charles River Reservation (lands, landscaped areas, green infrastructure, structures, circulation, woodland, meadow and river's edge) and proposed invasive plant management in four specific focus areas within the Watertown portion of the Reservation.

Project Location: The Charles River Reservation

Copies of the application can be examined and updated information about the date, time and place of the hearing can be obtained at the Conservation Commission office at 149 Main St., or by contacting the Conservation Commission by phone at 617.972.6426.

The public hearing is scheduled for September 14, 2022. Please verify this date with the Conservation Commission at the above-listed contact information or on their website at

<https://www.watertown-ma.gov/199/Conservation-Commission>

Notice of the public hearing, including the date, time and place, will be published in the Environmental Monitor and a local publication in advance of the tentatively scheduled hearing date.

You may also contact the Northeast Region of the Massachusetts Department of Environmental Protection for more information about this application of the Wetlands Protection Act: 978.694.3200.

MAP_PAR_ID	SITE_ADDR	OWNER	OWN_ADDRESS	City	State	ZIP
204 14 0	63 PLEASANT ST	63 PLEASANT STREET LLC	25 MYOPIA RD	WINCHESTER	MA	01890
301 10A 0	41 MAIN ST	BAYBANK MIDDLESEX	NC1-001-03-81	CHARLOTTE	NC	28255
205 1A 0	81 PLEASANT ST	CAMERON MARIANNE GUGGINA	81 PLEASANT ST	WATERTOWN	MA	02472
301 6B 0	29 MAIN ST	WATERMAIN REALTY OWNER LLC	1400 PROVIDENCE HIGHWAY, STE 1000	NORWOOD	MA	02062
203 4 0	60 MAIN ST	WATERTOWN SAVINGS BANK	60 MAIN ST	WATERTOWN	MA	02472
1401 29C 0	225 COOLIDGE AV	CHESTERTON THOMAS W. JR.	225 COOLIDGE AVE #101	WATERTOWN	MA	02472
205 29 0	67 PLEASANT ST	FRISOLI LEONARD M TRUSTEE	3991 GULF SHORE BLVD N	NAPLES,	FL	34103
205 28 0	75 PLEASANT ST	LE KEVIN H	75 PLEASANT ST	WATERTOWN	MA	02472
1002 4 0	16 24 MT AUBURN ST	FARESE JOHN K TRUSTEE	300 WAVERLEY AV	NEWTON	MA	02458
202 1E 0	64 PLEASANT ST	BERKELEY PLEASANT ST OWNER, LLC	125 HIGH STREET SUITE 531	BOSTON	MA	02110
301 2 0	9 MERCHANTS ROW	HAWES DONALD O TRUSTEE	ONE MERCHANTS ROW	WATERTOWN	MA	02472
202 2 6865	7 9 GALEN ST	RMR OPFCP LP	255 WASHINGTON ST SUITE 300	NEWTON	MA	02458
301 3 0	15 25 MAIN ST	GHASSEMI BAHRAM TRUSTEE	OTIS BUILDING RE TRUST II	WATERTOWN	MA	02472
201 14 1	96 PLEASANT ST	CHO DOOYON	96 PLEASANT ST	WATERTOWN	MA	02472
201 25 0	106 PLEASANT ST	DARVIRIS NICHOLAS ET GEORGIA TRS	31 HOLT ST	BELMONT	MA	02478
1002 3 2	6 14 MT AUBURN ST	THOMSON WARWICK TRUSTEE	14 MT AUBURN STREET	WATERTOWN	MA	02472
201 13 2	98 PLEASANT ST	LEE HSUEH-TZE	98 PLEASANT ST	WATERTOWN	MA	02472
201 11A 0	102 PLEASANT ST	RAZIS DENNIS	88 ADENA RD	NEWTON	MA	02465
201 12 3	100 PLEASANT ST	O'DETTE DAVID & LINDA J L/E	O'DETTE IRREV TRUST 2017	WATERTOWN	MA	02472
1001 1 0	0 MAIN ST	WATERTOWN, TOWN OF ISLAND IN SQUARE	149 MAIN STREET		MA	02472
202 5 1	1 BROOK ST	CROSSRAM LLC	315 FRANKLIN ST	NEWTON	MA	02458
1002 1 0	5 MAIN ST	BENINCASA CARMEN	90 WALKER RD	WESTWOOD	MA	02090
1401 9E 0	151 COOLIDGE AV	ZHELEVA TEODORA	151 COOLIDGE AV 101	WATERTOWN	MA	02472
1002 2 0	2 4 MT AUBURN ST	MT AUBURN/MAIN ST REALTY LLC	333 WASHINGTON ST #612	BOSTON	MA	02108
202 6 2	3 BROOK ST	PEIRCE G. MICHAEL, TRUSTEE	315 FRANKLIN ST	NEWTON	MA	02458
906 58 2	6 RIVERSIDE ST	MACDONALD JOSEPH A. ET	6 RIVERSIDE ST	WATERTOWN	MA	02472
906 61 A	11 NO BEACON ST	11 NORTH BEACON ST LLC	57 CYPRESS ST	WATERTOWN	MA	02472
906 62 B	15 NO BEACON ST	FELEGIAN SEIFEL D LUCINE TRUSTEE	2A CARTER DR	FRAMINGHAM	MA	01701
906 2 0	21 NO BEACON ST	21 NORTH BEACON ST LLC	20 APPLE RIDGE DRIVE	NATICK	MA	01760
906 4 0	8 RIVERSIDE ST	SHANNON TRUSTEE TIMOTHY L	150 PRIDES CROSSING	SUDBURY	MA	01776
124 25A 0	39 WATERTOWN ST	DECINA LIMITED PARTNERSHIP	73 DALBY ST	NEWTON	MA	02158
124 24D 0	51 WATERTOWN ST	DESALVO CHARLES J TRUSTEE	C/O CENTURY TIRE	PEABODY	MA	01960
124 21C 0	30 CALIFORNIA ST	WON-BUDDHISM OF BOSTON	30 CALIFORNIA ST	WATERTOWN	MA	02472
124 20 25	36 CALIFORNIA ST	GREENWELL PATRICK S	36 CALIFORNIA ST U1	WATERTOWN	MA	02472
124 19 24	42 CALIFORNIA ST	PYSELL HOLLY	42 CALIFORNIA ST- U1	WATERTOWN	MA	02472
124 17 23	44 46 CALIFORNIA ST	RICE LAURA G	44-46 CALIFORNIA ST	WATERTOWN	MA	02472
124 15 22	48 50 CALIFORNIA ST	MCDERMOTT MARY E L/E	50 CALIFORNIA ST	WATERTOWN	MA	02472
124 13E 0	52 54 CALIFORNIA ST	ANTONELLIS DOMENICO TRUSTEES	ANTONELLIS REALTY TRUST	NEWTONVILLE	MA	02160
124 11D 0	56 CALIFORNIA ST	PISELLI POMPEO & PAULINE L/E	56 CALIFORNIA ST	WATERTOWN	MA	02472
124 9A C	60 CALIFORNIA ST	BACCARI LUIGI TRUSTEE	LMB REALTY TRUST	WATERTOWN	MA	02472

124 9B 0	64 CALIFORNIA ST	GUILMET STEPHANIE L	64 CALIFORNIA STREET	WATERTOWN	MA	02472
124 2A 0	68 70 CALIFORNIA ST	GEBEYAN ROBERT	136 PLEASANT ST	LEXINGTON	MA	02421
124 1 17	2 FIFTH AV	BONILLA MAXIMILIANO A	2 FIFTH AV	WATERTOWN	MA	02472
107 1A 1	20 30 WATERTOWN ST	ASN WATERTOWN LLC	C/O EQR - RE TAX DEPT	CHICAGO	IL	60680
107 2 0	31 GALEN ST	TOMARAS TINA TR	180 RIVER ST UNIT B -4	WALTHAM	MA	02453 -650
124 26C 0	65 WATERTOWN ST	ARAZIAN SETA TRUSTEE	36 RAFFAELE DR	WALTHAM	MA	02452
123 5C 0	74 CALIFORNIA ST	LEONOR ESDRAS R	74 CALIFORNIA ST	WATERTOWN	MA	02472
106 2 0	0 WATER ST	MASSACHUSETTS BAY TRANSPORTATI	45 HIGH ST	BOSTON	MA	02122
107 1 6	50 WATERTOWN ST	HAROUTUNIAN RICHARD A	50 WATERTOWN ST U-104	WATERTOWN	MA	02472
124 3F 0	6 FIFTH AV	SPIRIDIGLIOZZI DONATA	6 FIFTH AV	WATERTOWN	MA	02472
906 47 3	0 ALFRED RD	0 ALFRED ROAD LLC	20 APPLE RIDGE DR	NATICK	MA	01760
124 18 7	77 79 WATERTOWN ST	DEVARDO LOREDANA	77-79 WATERTOWN ST.	WATERTOWN	MA	02472
124 16 8	81 83 WATERTOWN ST	DELANEY JOHN	81-83 WATERTOWN ST	WATERTOWN	MA	02472
124 14 9	87 89 WATERTOWN ST	SAAD MARK	87-89 WATERTOWN ST, UNIT 87	WATERTOWN	MA	02472
124 4G 0	12 FIFTH AV	EVANS HARRISON I TRUSTEE	14 GULLY LANE	E SANDWICH	MA	02537
124 12 10	91 WATERTOWN ST	RENEAU MICHAEL	91 WATERTOWN STREET	WATERTOWN	MA	02472
107 30A 0	68 70 WATERTOWN ST	DALLAS ROBERT A TRUSTEE	68 WATERTOWN ST	WATERTOWN	MA	02472
123 6B 1	11 13 FIFTH AV	TAYLOR JEFFREY E.	13 FIFTH AVE	WATERTOWN	MA	02472
124 10 11	95 97 WATERTOWN ST	D'ATTILIO JAMES P	220 MAPLE ST	FRANKLIN	MA	02038-1584
1301 1 1	311 ARSENAL ST	ARE-MA REGION NO. 75 LLC	PO BOX 847	CARLSBAD	CA	92018
1401 3A B2	0 COOLIDGE AV	ARE-MA REGION NO. 77, LLC	PO BOX 847	CARLSBAD	CA	92018
124 8 12	99 101 WATERTOWN ST	COLLINS JOHN	99 - 101 WATERTOWN ST	WATERTOWN	MA	02472
124 5H 2	16 FIFTH AV	ZOLADZ MARK	16 FIFTH AVE	WATERTOWN	MA	02472
107 21 6	29 ALDRICH RD	ABILDGAARD, JR WILLIAM C	29 ALDRICH RD, UNIT #1	WATERTOWN	MA	02472
911 1 0	175 NO BEACON ST	PERKINS SCHOOL FOR THE BLIND	175 NO BEACON ST	WATERTOWN	MA	02472
118 2A 0	0 WATERTOWN ST	WATERTOWN, TOWN OF CASEY FIELD	149 MAIN ST	WATERTOWN	MA	02472
916 22 1	4 WHEELER LN	WHITE TRUSTEE JULIE L	4 WHEELER LN	WATERTOWN	MA	02472
1401 1E 0	48 COOLIDGE AV	AGGREGATE INDUSTRIES -	6211 ANN ARBOR ROAD	DUNDEE	MI	48131
916 1 1	37 RIVERSIDE ST	ANTINARELLI WATERTOWN LLC	P O BOX 540601	WALTHAM	MA	02454-0601
105 6E 0	66 GALEN ST	GALEN STREET OWNER, LLC	93 UNION ST, SUITE 315 FGR CORP	NEWTON CENTRE	MA	02459
916 2 2	43 RIVERSIDE ST	MCCORMACK VERONICA TRUSTEE	43 RIVERSIDE ST	WATERTOWN	MA	02472
916 21 2	10 WHEELER LN	LEMAIRE ADRIANA	10 WHEELER LN	WATERTOWN	MA	02472
916 3 3P	45 RIVERSIDE ST	BARBA, LINDA ANN	45 RIVERSIDE ST	WATERTOWN	MA	02472
916 4 4	51 RIVERSIDE ST	RED BALL REAL ESTATE LLC	59 RIVERSIDE ST	WATERTOWN	MA	02472
916 11A 2	12 WHEELER LN	BOVAN MILJANA	19 CLELLAND RD	LEXINGTON	MA	02421
916 6 5	59 RIVERSIDE ST	RED BALL REAL ESTATE LLC	444 WASHINGTON ST	BRIGHTON	MA	02135
1301 2D 2	485 ARSENAL ST	ARSENAL YARDS HOLDING LLC	800 BOYLSTON ST, STE 1390	BOSTON	MA	02199
1401 24C 0	662 ARSENAL ST	MCVEY III THOMAS ET JOAN TRUSTEES	662 ARSENAL ST	WATERTOWN	MA	02472
916 20B 0	16 WHEELER LN	MURPHY TRUSTEES TERRANCE PATRICK TIMOT	16 WHEELER LANE	WATERTOWN	MA	02472
106 4B 0	0 WATER ST	MASSACHUSETTS BAY TRANSPORTATI	45 HIGH ST	BOSTON	MA	02122
916 5 4P	53 RIVERSIDE ST	RED BALL REAL ESTATE LLC	59 RIVERSIDE ST	WATERTOWN	MA	02472

1401 25D 0	660 ARSENAL ST	MCVEY JOAN TRUSTEE	660 ARSENAL ST	WATERTOWN	MA	02472
916 19B 2	20 WHEELER LN	PLAZA CRISTINA	20-22 WHEELER LN	WATERTOWN	MA	02472
105 11 0	51 57 WATER ST	51 WATER STREET LLC	93 UNION ST-STE 315	NEWTON CENTRE	MA	02459
1401 20F 0	640 ARSENAL ST	RMG FOUR-FOURTEEN LLC	414 MAIN ST	WATERTOWN	MA	02472
916 9 0	9 11 THURSTON RD	ROMANOS KINDA	9-11 THURSTON RD	WATERTOWN	MA	02472
1301 2 1	615 ARSENAL ST	WATERTOWN HOME IMPROV EXCH	PROP TAX DEPT #2602	ATLANTA	GA	30348
916 13 2	34 36 CHARLES RIVER RD	BADLISSI HAYAT	34-36 CHARLES RIVER RD	WATERTOWN	MA	02472
916 12 1	30 CHARLES RIVER RD	KARIO RAYMOND K	535 SCHOOL ST	BELMONT	MA	02478
916 14 3	38 CHARLES RIVER RD	CATARUZOLO MICHAEL & PATRICIA L/E	38 CHARLES RIVER RD	WATERTOWN	MA	02472
916 9A 0	15 THURSTON RD	DALEY JOHN T	15 THURSTON RD	WATERTOWN	MA	02472
915 13 15A	3 5 BAY ST	MCGUIRK TIMOTHY J	93 GOODENOUGH ST	BRIGHTON	MA	02135
916 8A 0	21 THURSTON RD	BRENNAN GINA M	21 THURSTON RD	WATERTOWN	MA	02472
915 15 14A	293 NO BEACON ST	RODRIGUES MAURICIO S	P O BOX 124	GRANDVIEW	MO	64030
917 16 4	16 THURSTON RD	DEGUGLIELMO PACIFICO P	51 GARFIELD ST	WATERTOWN	MA	02472
915 16 145A	303 NO BEACON ST	CARRASQUILLO JOSE A	303 NO BEACON ST	WATERTOWN	MA	02472
915 18 106A	311 NO BEACON ST	CARRASQUILLO, JOSE A.	311 NO. BEACON ST	WATERTOWN	MA	02472
916 15B 0	25 THURSTON RD	CENTOLA PETER R	25 THURSTON RD	WATERTOWN	MA	02472
915 12 97	9 BAY ST	TSUI KATHERINE	9 BAY ST	WATERTOWN	MA	02472
917 6 12	21 PRIEST RD	KISIEL, HELEN R.	21 PRIEST ROAD	WATERTOWN	MA	02472
917 15 5	20 THURSTON RD	QUINLAN JENNIFER S	20 THURSTON RD	WATERTOWN	MA	02472
915 3 150	12 PALMER ST	MELKISSETIAN VAHE H ETUX CHRISTINE	12 PALMER STREET	WATERTOWN	MA	02472
916 16C 0	44 46 CHARLES RIVER RD	BERG ARTHUR B	44-46 CHARLES RIVER RD	WATERTOWN	MA	02472
917 7 13	25 27 PRIEST RD	PEACOCK AMANDA B	25-27 PRIEST RD	WATERTOWN	MA	02472
917 14 6	22 THURSTON RD	MANZELLI LEAH D	15 BONAIR AV	BEDFORD	MA	01730
915 11 98	13 BAY ST	CIRO MARCIA L	13 BAY ST	WATERTOWN	MA	02472
915 20 105	396 CHARLES RIVER RD	ESTRIN ALEX Y	71 BRANDEIS RD	NEWTON	MA	02459
915 4 149	16 18 PALMER ST	VALITON BRIAN E	18 PALMER ST	WATERTOWN	MA	02472
915 21 104	390 CHARLES RIVER RD	HONG HUICONG	390 CHARLES RIVER RD U1	WATERTOWN	MA	02472
917 13 7	26 THURSTON RD	CHRISTINA, RENZO J.	26 THURSTON RD	WATERTOWN	MA	02472
917 8 14	29 PRIEST RD	KOSTIKIAN KHACHATOUR	29 PRIEST RD	WATERTOWN	MA	02472
914 18 119	19 PALMER ST	BOCH DALE	501 CANTON ST	WESTWOOD	MA	02090
915 10 99	17 BAY ST	P J MCCARRICK LLC	193 BROADMEADOW ROAD	NEEDHAM	MA	02492
918 4B 0	22 PRIEST RD	GASCOIGNE JANET	22 PRIEST ROAD	WATERTOWN	MA	02472
915 5 148	20 22 PALMER ST	TURNER ROBERT ET LESLIE J/T	20-22 PALMER ST	WATERTOWN	MA	02472
917 12 8	74 CHARLES RIVER RD	O'BRIEN PAUL J	201 GODEN ST	BELMONT	MA	02478
917 9 15	35 PRIEST RD	ACETO BARRIOS DIANE	35 PRIEST RD	WATERTOWN	MA	02472
914 17 120	23 PALMER ST	EVANS THOMAS P	23 PALMER ST	WATERTOWN	MA	02472
918 11E 0	149 IRVING ST	CADY III WALTER M	149 IRVING ST	WATERTOWN	MA	02472
915 9 100	380 CHARLES RIVER RD	NEILAN HENRY G	380 CHARLES RIVER RD	WATERTOWN	MA	02472
917 11 17	78 CHARLES RIVER RD	WOODS AUDREY A.	78 CHARLES RIVER RD	WATERTOWN	MA	02472
914 8 73	28 PAUL ST	PAPADOGIANNIS PETER	28 PAUL ST	WATERTOWN	MA	02472

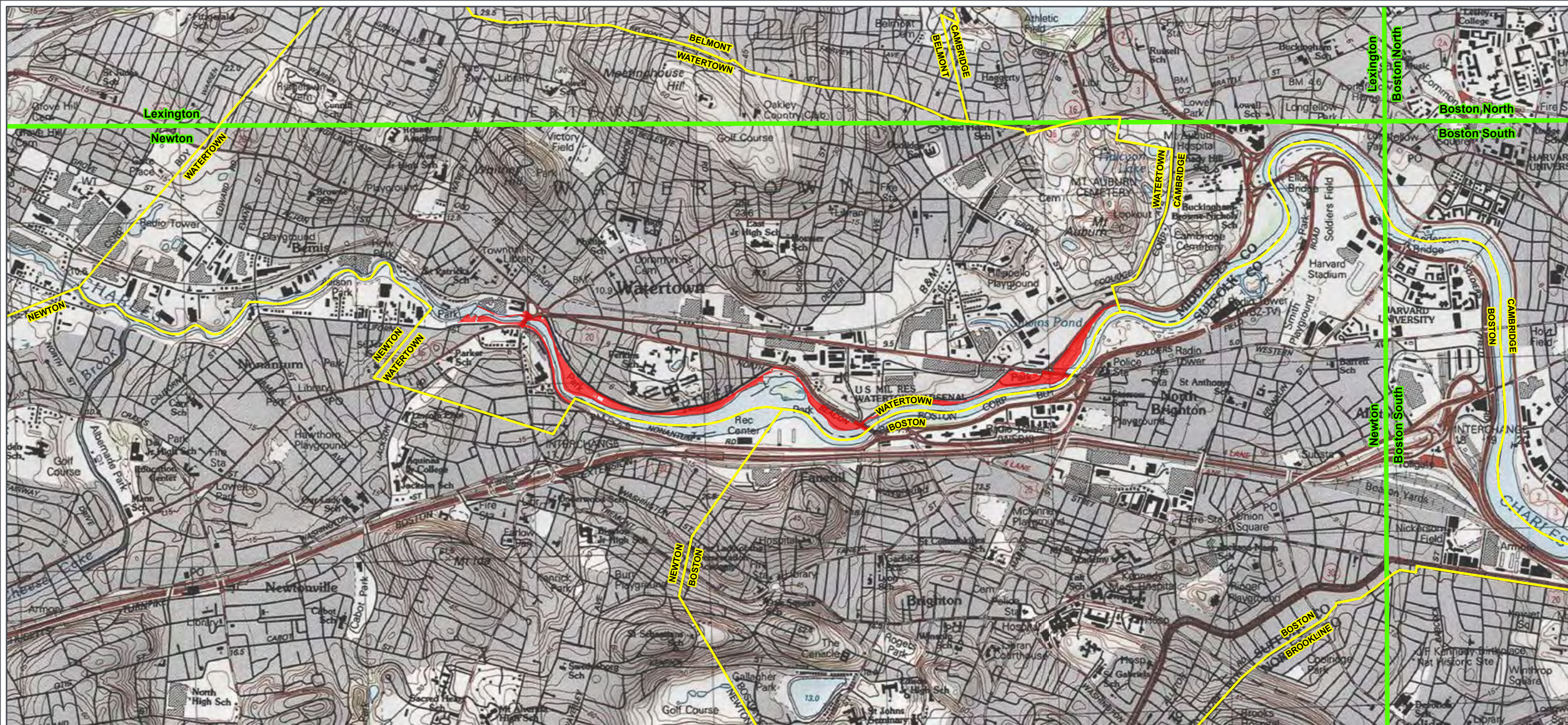
915 7 128	26 PALMER ST	YUSAM JONATHAN	26 PALMER ST	WATERTOWN	MA	02472
914 16 121	25 PALMER ST	GALIANO ELIZABETH S	25 PALMER ST	WATERTOWN	MA	02472
917 10 16	82 CHARLES RIVER RD	ALEXANDRIDES CHRISTINA N	82 CHARLES RIVER RD	WATERTOWN	MA	02472
1301 2A 0	551 REAR ARSENAL ST	WATERTOWN, TOWN OF PARK	149 MAIN ST	WATERTOWN	MA	02472
918 6A A	32 PRIEST RD	LYONS JEFFREY	32 PRIEST RD	WATERTOWN	MA	02472
920 1 1	148 IRVING ST	CLAIR XAVIER	148 IRVING ST	WATERTOWN	MA	02472
914 9 74	32 PAUL ST	BURNS VIRGINIA G	32 PAUL ST	WATERTOWN	MA	02472
915 14 94B	372 374 CHARLES RIVER RD	ANDREWS LAURENCE H	372 CHARLES RIVER RD U1	WATERTOWN	MA	02472
915 8 94A	368 370 CHARLES RIVER RD	TOSCANO WILLIAM M	370 CHARLES RIVER RD	WATERTOWN	MA	02472
914 15 122	29 PALMER ST	HOFFMAN GEORGE J	29 PALMER ST	WATERTOWN	MA	02472
105 13C 0	85 WATER ST	51 WATER STREET LLC	93 UNION STREET SUITE 315	NEWTON CENTRE	MA	02459
918 10C 0	157 IRVING ST	DOHERTY ANNE	157 IRVING ST	WATERTOWN	MA	02472
920 2 2	9 FIFIELD ST	GRAVELINE CHRISTOPHER	9 FIFIELD ST	WATERTOWN	MA	02472
913 10 62	37 PAUL ST	FOOKS ELINA	37 PAUL ST	WATERTOWN	MA	02472
918 7D 0	96 CHARLES RIVER RD	CHARLES RIVER ROAD LLC	897 BELMONT ST	WATERTOWN	MA	02472
914 14 123	35 PALMER ST	WEARLY GREGORY D.	35 PALMER ST	WATERTOWN	MA	02472
914 10 75	36 PAUL ST	MILLS JASON	36 PAUL ST	WATERTOWN	MA	02472
920 3 3	13 15 FIFIELD ST	PENNINGTON MARK	13 FIFIELD ST	WATERTOWN	MA	02472
920 8 14	150 IRVING ST	ROSENTHAL KARIN	150 IRVING ST	WATERTOWN	MA	02472
918 7A F	92 94 CHARLES RIVER RD	BLACK GEORGEIANNA G	92 CHARLES RIVER RD	WATERTOWN	MA	02472
920 13 2	19 21 FIFIELD ST	WOJCIK JOANNE DOLLER	21 FIFIELD ST	WATERTOWN	MA	02472
918 8 0	165 IRVING ST	BOCKIAN JONATHAN M TRUSTEE	J BOCKIAN & S TEITELBAUM REV TR	WATERTOWN	MA	02472
914 23 87B	360 CHARLES RIVER RD	JAY DAVID	360 CHARLES RIVER RD	WATERTOWN	MA	02472
913 11 63	41 PAUL ST	41 PAUL STREET REALTY LLC	3 KING'S GRANT RD	WESTON	MA	02493
920 6 0	112 114 CHARLES RIVER RD	MINASIDIS GEORGIOS	43 MONTFERN AVE	BRIGHTON	MA	02135
914 11 76	40 PAUL ST	MELANSON HONORA A.	40 PAUL ST	WATERTOWN	MA	02472
913 18 49	48 PEQUOSSETTE ST	PERKINS SCHOOL FOR THE BLIND	175 NO. BEACON ST	WATERTOWN	MA	02472
914 13 87A	358 CHARLES RIVER RD	MAHUAD JAMIL	358 CHARLES RIVER RD	WATERTOWN	MA	02472
920 14 4	23 FIFIELD ST	NEWELL FRANCIS J.	23 FIFIELD ST	WATERTOWN	MA	02472
920 5C 0	116 118 CHARLES RIVER RD	VASQUEZ THOMAS V L/E	164 IRVING ST	WATERTOWN	MA	02472
104 2 0	40 HUNT ST	CHARLES RIVER REALTY LLC	6747 DIVERSITY RD	MIDDLETON	WI	53562
920 15 6	27 FIFIELD ST	BRODY LISE	27 FIFIELD STREET	WATERTOWN	MA	02472
920 4D 0	120 122 CHARLES RIVER RD	MAZZEO GERARD	34 BAILEY RD	WATERTOWN	MA	02472
913 12 64	43 PAUL ST	RYAN SARAH T	43 PAUL STREET	WATERTOWN	MA	02472
914 25 77B	352 CHARLES RIVER RD	PINTO JORGE B	352 CHARLES RIVER RD U352	WATERTOWN	MA	02472
920 7A 0	164 IRVING ST	VASQUEZ THOMAS R. ET UX	164 IRVING ST	WATERTOWN	MA	02472
104 18 0	108 WATER ST	FARBRO REALTY LIMITED	120 ADAMS ST	NEWTON	MA	02460-0003
913 17 50	50 PEQUOSSETTE ST	MIELE JR GEORGE F	50 PEQUOSSETTE ST	WATERTOWN	MA	02472
914 12 77A	348 CHARLES RIVER RD	CASE APRIL W	348 CHARLES RIVER RD	WATERTOWN	MA	02472
920 16 8	31 FIFIELD ST	TANCREDO SAVIO CAMPOS	31 FIFIELD ST	WATERTOWN	MA	02472
912 12 35A	53 55 PEQUOSSETTE ST	WHEATLEY CAROLYN E	53-55 PEQUOSSETTE ST	WATERTOWN	MA	02472

912 20 27	90 BEECHWOOD AV	STODDARD HARRY G.	90 BEECHWOOD AVE	WATERTOWN	MA	02472
920 17 10	35 FIFIELD ST	PERKINS SCHOOL FOR THE BLIND	175 NORTH BEACON ST	WATERTOWN	MA	02472
1301 1 2	440 TALCOTT AV	WATERTOWN, TOWN OF COMMANDERS MANSIC	149 MAIN ST	WATERTOWN	MA	02472
913 13 65	47 PAUL ST	47 PAUL STREET LLC	58 BLACK BURNIAN RD	WESTON	MA	02493
920 18 1	126 CHARLES RIVER RD	AVANESOV ARKADIY ET	126 CHARLES RIVER RD	WATERTOWN	MA	02472
913 16 51	54 PEQUOSSETTE ST	BOLTON IV GEORGE D TRUSTEE	54 PEQUOSSETTE STREET	WATERTOWN	MA	02472
912 13 36	57 PEQUOSSETTE ST	EPSTEIN CAROL S	57 PEQUOSSETTE ST	WATERTOWN	MA	02472-2762
920 9 3	130 CHARLES RIVER RD	HEATON RONALD K	130 CHARLES RIVER RD	WATERTOWN	MA	02472
912 19 28	96 BEECHWOOD AV	DALEY JR JAMES T TRUSTEE	96 BEECHWOOD AV	WATERTOWN	MA	02452
920 10A 0	136 CHARLES RIVER RD	AVANESOV ARKADIY ETUX NONNA	136 CHARLES RIVER RD	WATERTOWN	MA	02472
913 14 66	55 PAUL ST	GEMMATO L/E SOPHIE L	C/O LORI MACDONALD, TRUSTEE	READING	MA	01867
920 11B 0	140 CHARLES RIVER RD	LAZARUS DOUGLAS D.	140 CHARLES RIVER RD	WATERTOWN	MA	02472
912 14A 37A	63 65 PEQUOSSETTE ST	TOPITZIS ANDRIA TRUSTEE	65 PEQUOSSETTE ST	WATERTOWN	MA	02472
912 18 29	100 BEECHWOOD AV	KELLY JOSEPH P. ET UX	100 BEECHWOOD AVE	WATERTOWN	MA	02472
920 12C 0	146 CHARLES RIVER RD	PERKINS SCHOOL FOR THE BLIND	175 NORTH BEACON STREET	WATERTOWN	MA	02472
913 15 52B	330 332 CHARLES RIVER RD	43 WABAN HILL LLC	43 WABAN HILL RD NORTH	NEWTON	MA	02467
913 28 52A	326 328 CHARLES RIVER RD	MATTOS STEVEN W	326-328 CHARLES RIVER RD	WATERTOWN	MA	02472
104 7 7	22 24 HUNT ST	MCDERMOTT MICHAEL J	24 HUNT ST	WATERTOWN	MA	02472
912 14 37B	69 67 PEQUOSSETTE ST	TOPITZIS ANDRIA	65 PEQUOSSETTE ST	WATERTOWN	MA	02472
104 8 8	28 HUNT ST	RAPPAPORT RUTH	28 HUNT ST	WATERTOWN	MA	02472
912 17 30	104 BEECHWOOD AV	CZAJKOWSKI JOHN	104 BEECHWOOD AVE	WATERTOWN	MA	02472
912 15 38A	318 320 CHARLES RIVER RD	SAVARESE FRANCES T	320 CHARLES RIVER RD	WATERTOWN	MA	02472
912 16 31A	312 CHARLES RIVER RD	NUGENT LOUISE M L/E	KADISON, CHRISTINE R/M	WATERTOWN	MA	02472
912 16A 31B	308 CHARLES RIVER RD	MELETIADIS MIKE	308 CHARLES RIVER RD	WATERTOWN	MA	02472
103 4 13	27 HUNT ST	PHILLIPS PROPERTIES INC	43 NORTH ST	UPTON	MA	01568
103 3 12	29 HUNT ST	PHILLIPS PROPERTIES INC	43 NORTH ST	UPTON	MA	01568
103 2 11	33 HUNT ST	SORGI MARK	33 HUNT ST	WATERTOWN	MA	02472
104 16A 0	50 HUNT ST	50 HUNT ST PROPERTY LLC	C/O EASTPORT REAL EST. SRV	WAKEFIELD	MA	01880
103 1 10	37 HUNT ST	KARIOTIS GEORGE	37 HUNT ST	WATERTOWN	MA	02472
104 12 0	48 MAPLE ST	LYONS RICHARD TRUSTEE	48 MAPLE ST	WATERTOWN	MA	02472
103 13 19	26 MAPLE ST	MUNROE JOHN M	26 MAPLE ST	WATERTOWN	MA	02472
104 11 0	52 MAPLE ST	LYONS RICHARD TRUSTEE	48 MAPLE ST	WATERTOWN	MA	02472
103 14 20	30 32 MAPLE ST	ORFANIDIS ELENI, TRUSTEE	12 GARDNER ST	NEWTON	MA	02458
104 14 22	40 MAPLE ST	CATIPOVIC BOJAN	40 MAPLE ST	WATERTOWN	MA	02472
104 17 B2	0 MAPLE ST	LEDOYT JOHN BRUCE	62 MAPLE ST	NEWTON	MA	02458
102 5 0	35 MAPLE ST	BRYANT JEFFREY A	35 MAPLE ST	WATERTOWN	MA	02472
102 6 0	41 MAPLE ST	HUNT MARCIA R. TRUSTEE	41-43 MAPLE ST U41	WATERTOWN	MA	02472
102 7 0	47 MAPLE ST	BRUSA CONSTRUCTION CORP	337 TURNPIKE RD	SOUTHBOROUGH	MA	01772
102 8 0	53 MAPLE ST	GORMAN MATTHEW	53 MAPLE ST	WATERTOWN	MA	02472
1401 1 B	199 COOLIDGE AV	DOLAN BRYAN	199 COOLIDGE AVE UNIT 102	WATERTOWN	MA	02472
124 6A 103	103 WATERTOWN ST	CHEN ZIFAN	190 PLEASANT STREET	MALDEN	MA	02148

1003 12 1 1 MT AUBURN ST WATCOM REALTY LIMITED PART. 1234 BOYLSTON ST CHESTNUT HILL MA 02467

APPENDIX C

Figures



CHARLES RIVER VMP PERMITTING
AND IMPLEMENTATION PROJECT
**Figure 1. USGS Topographic
Map**

- Project Area
- Municipal Boundary
- 7.5' USGS Quadrangle Boundary

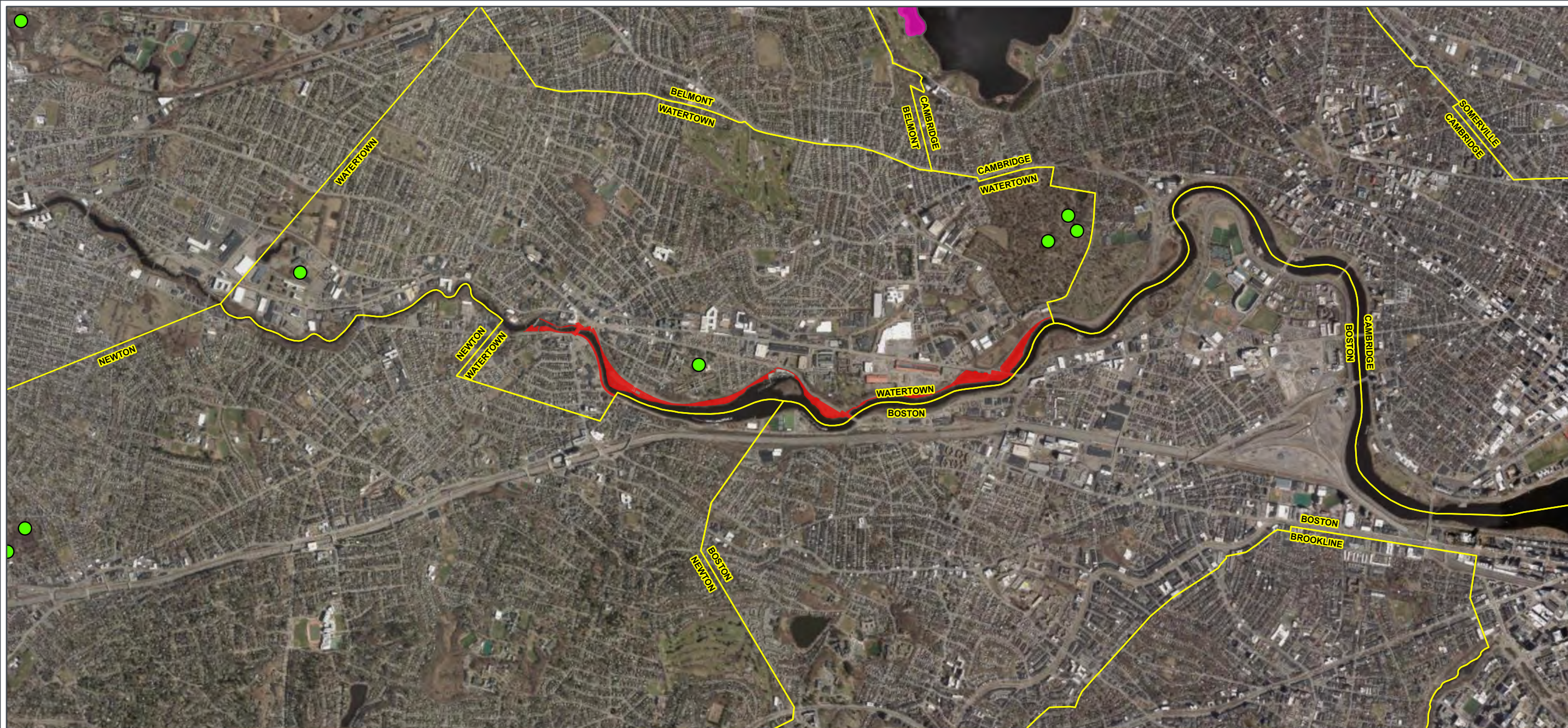


CHARLES RIVER VMP PERMITTING
AND IMPLEMENTATION PROJECT
**Figure 2. Outstanding
Resource Waters**

- Outstanding Resource Waters
- Project Area
- Municipal Boundary

Watertown, MA
USGS 7.5' Quadrangles: Newton and Boston South
NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet
71.1671°W 42.3622°N



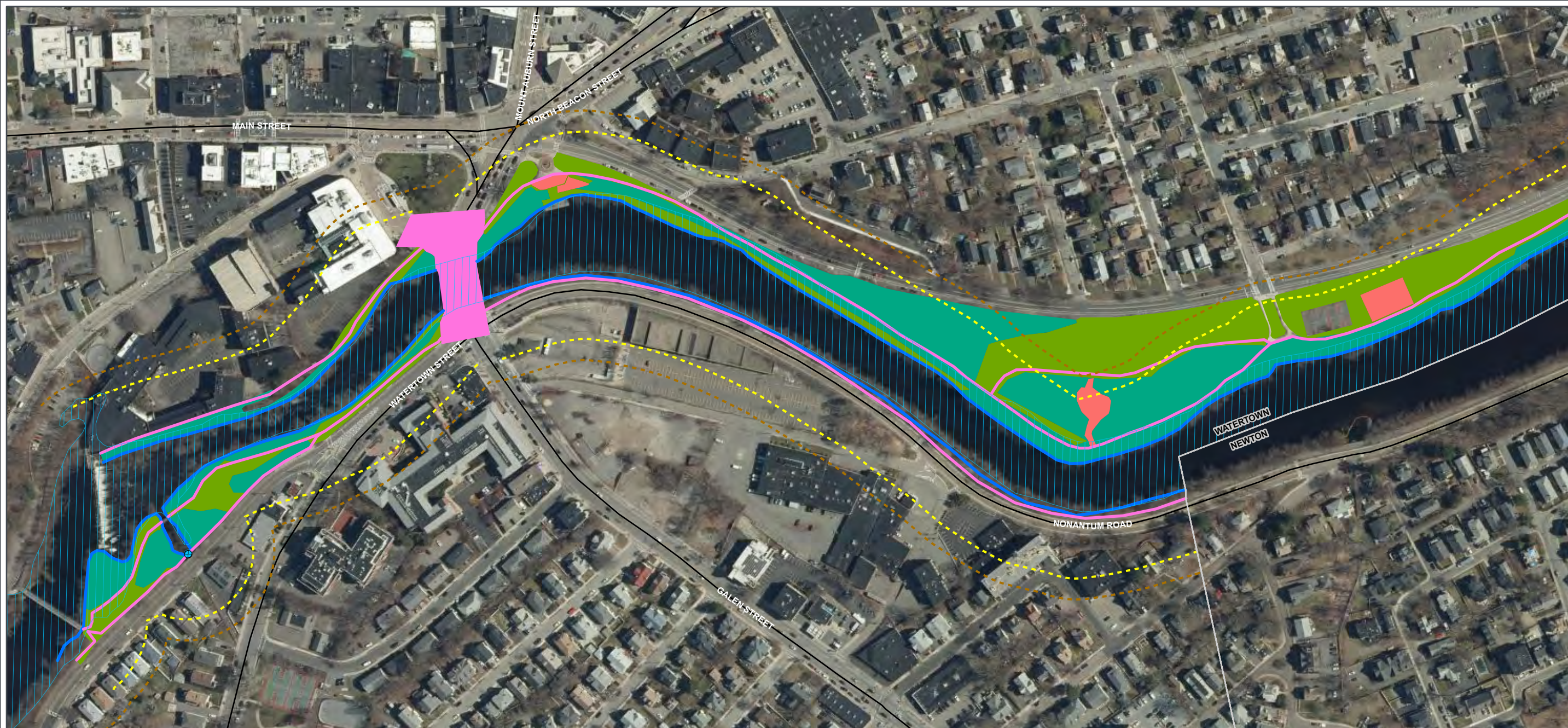


CHARLES RIVER VMP PERMITTING AND IMPLEMENTATION PROJECT
Figure 3. NHESP

- Certified Vernal Pool
- Potential Vernal Pool
- Priority Habitats of Rare Species
- Project Area
- Municipal Boundary

Watertown, MA
 USGS 7.5' Quadrangles: Newton and Boston South
 NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet
 71.1671°W 42.3622°N





CHARLES RIVER VMP PERMITTING AND IMPLEMENTATION PROJECT
Figure 4. Routine Maintenance
 Map 1 of 4

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> Culvert 150' Buffer Zone 200' Riverfront Area Delineated Bank Major Road Activity and Use Limitation (AUL) Bordering Land Subject To Flooding | <ul style="list-style-type: none"> Municipal Boundary Delineated Wetland <ul style="list-style-type: none"> Isolated Vegetated Wetland Bordering Vegetated Wetland | Landscape Type <ul style="list-style-type: none"> CI - Circulation L - Lawn LA - Landscape Area RE - River's Edge S - Structure T - Woodland |
|--|---|---|



CHARLES RIVER VMP PERMITTING AND IMPLEMENTATION PROJECT
Figure 4. Routine Maintenance
 Map 2 of 4



- Culvert 150' Buffer Zone 200' Riverfront Area - Delineated Bank - Major Road - Activity and Use Limitation (AUL) - Bordering Land Subject To Flooding	- Municipal Boundary Delineated Wetland - Isolated Vegetated Wetland - Bordering Vegetated Wetland	Landscape Type - CI - Circulation - L - Lawn - LA - Landscape Area - RE - River's Edge - S - Structure - T - Woodland
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Watertown, MA
 USGS 7.5' Quadrangles: Newton and Boston South
 NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet
 71.1734°W 42.3608°N

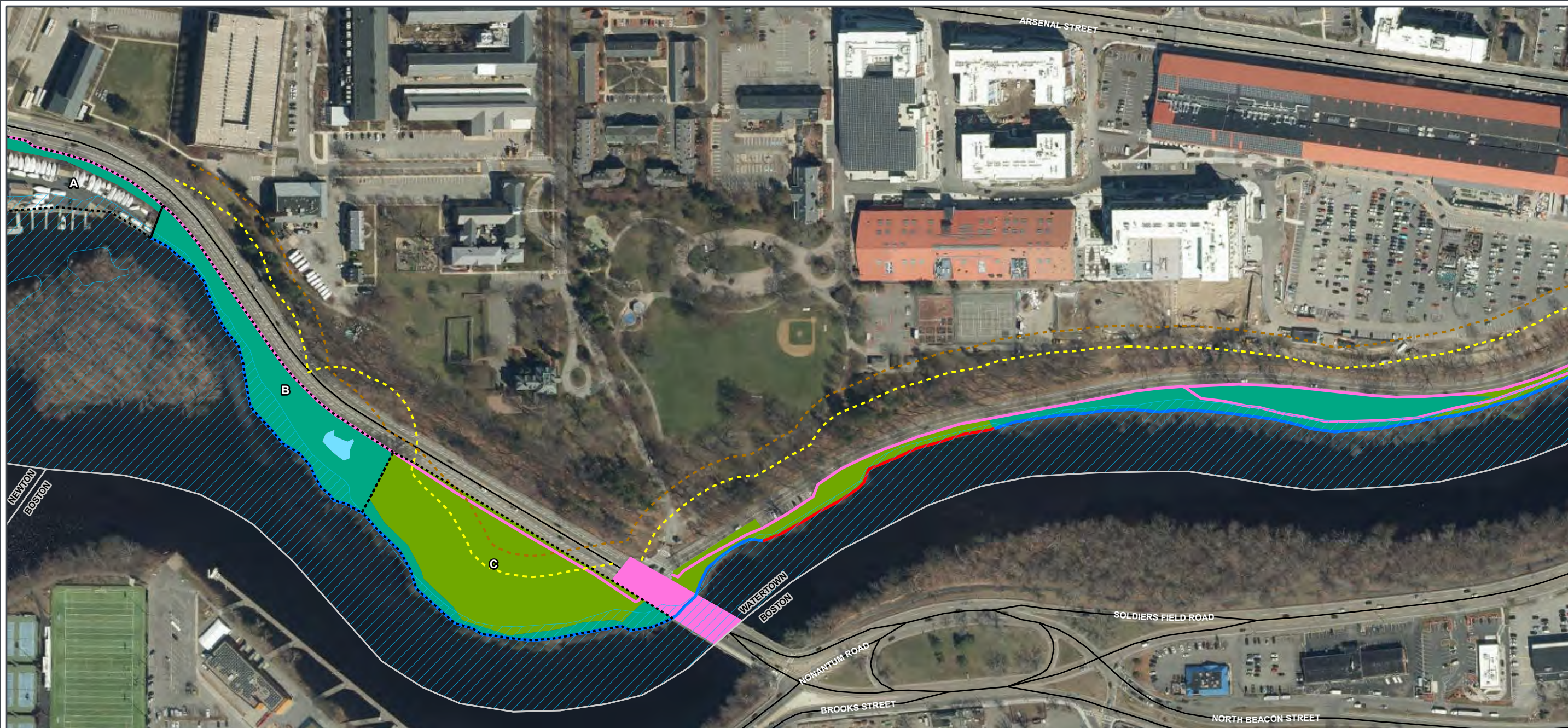
Base Map: ESRI ArcGIS Online, accessed August 2022

0 120 240 Feet
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Date: 02/20/2022
 Project No. 70690



CHARLES RIVER VMP PERMITTING AND IMPLEMENTATION PROJECT
Figure 4. Routine Maintenance
 Map 3 of 4



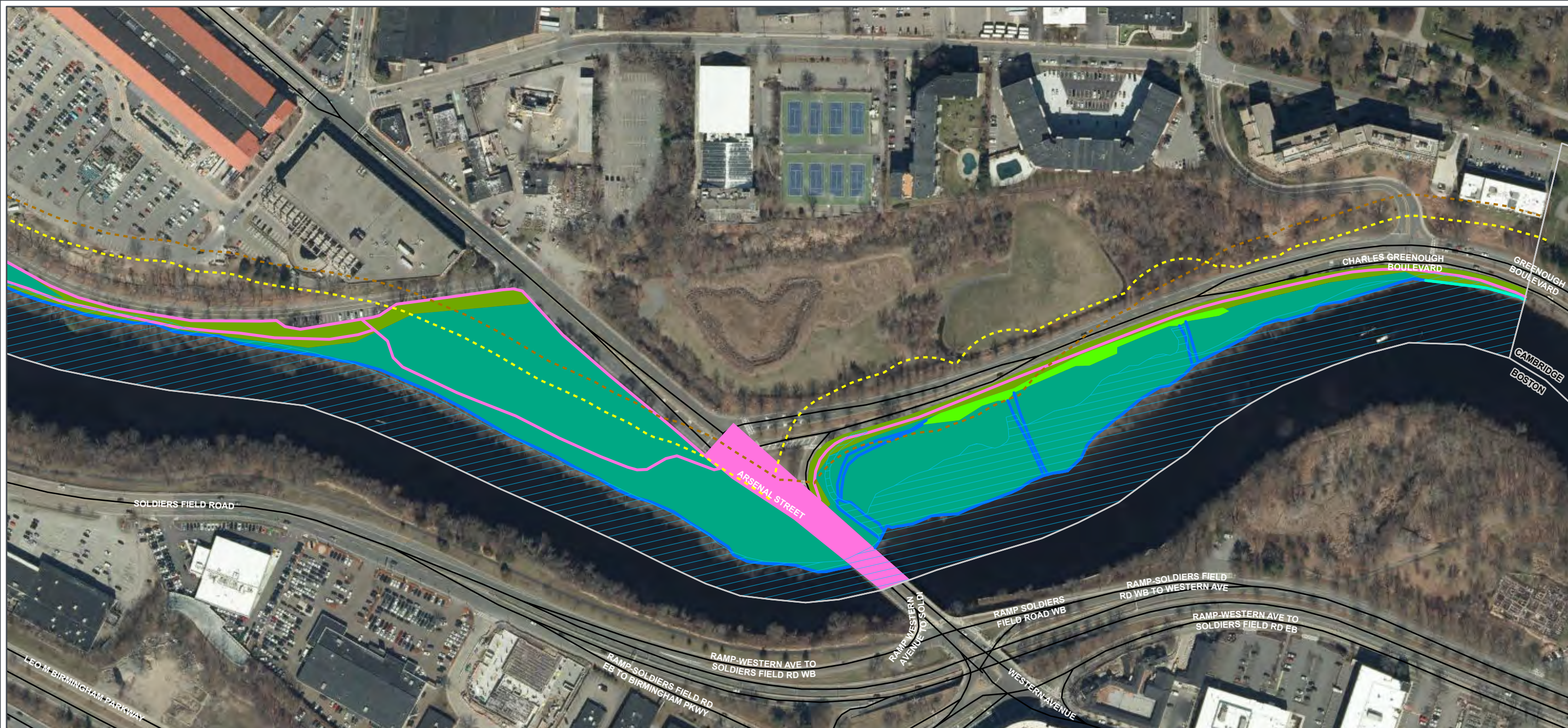
- | | | |
|--|--|--|
| <ul style="list-style-type: none"> Culvert 150' Buffer Zone 200' Riverfront Area Delineated Bank Major Road Activity and Use Limitation (AUL) Bordering Land Subject To Flooding | <ul style="list-style-type: none"> Municipal Boundary <p>Delineated Wetland</p> <ul style="list-style-type: none"> Isolated Vegetated Wetland Bordering Vegetated Wetland | <p>Landscape Type</p> <ul style="list-style-type: none"> CI - Circulation L - Lawn LA - Landscape Area RE - River's Edge S - Structure T - Woodland |
|--|--|--|

Watertown, MA
 USGS 7.5' Quadrangles: Newton and Boston South
 NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet
 71.161°W 42.3607°N

Base Map: ESRI ArcGIS Online, accessed August 2022

0 120 240 Feet
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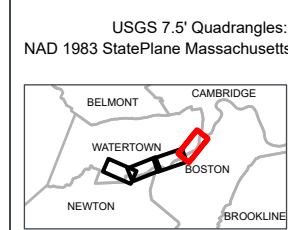


CHARLES RIVER VMP PERMITTING
AND IMPLEMENTATION PROJECT
Figure 4. Routine Maintenance
Map 4 of 4

- Culvert
- 150' Buffer Zone
- 200' Riverfront Area
- Delineated Bank
- Major Road
- Activity and Use Limitation (AUL)
- Bordering Land Subject To Flooding

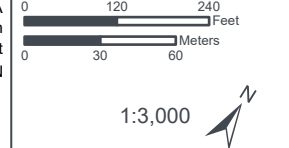
- Municipal Boundary
- Delineated Wetland**
- Isolated Vegetated Wetland
- Bordering Vegetated Wetland

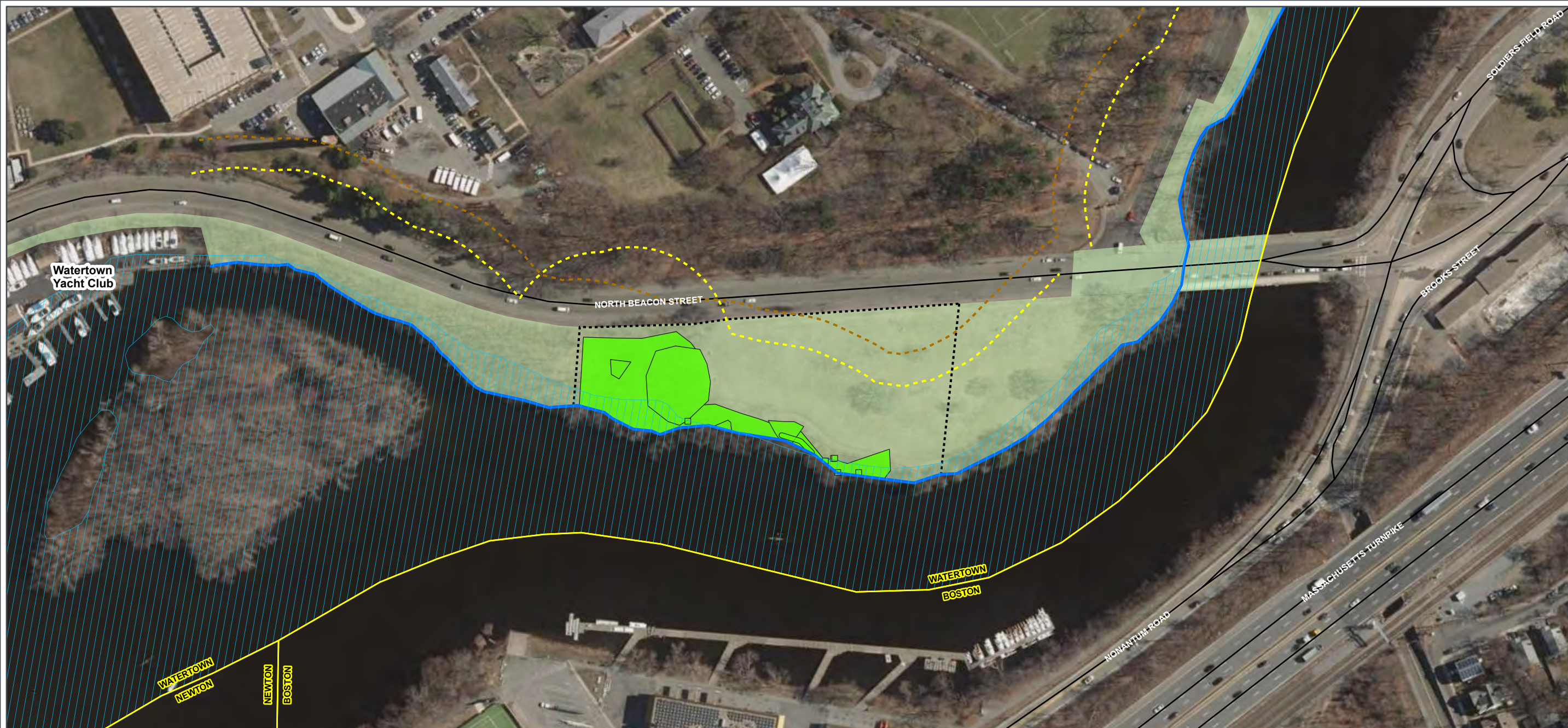
- Landscape Type**
- CI - Circulation
 - L - Lawn
 - LA - Landscape Area
 - RE - River's Edge
 - S - Structure
 - T - Woodland



Watertown, MA
USGS 7.5' Quadrangles: Newton and Boston South
NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet
71.149°W 42.3625°N

Base Map: ESRI ArcGIS Online,
accessed August 2022



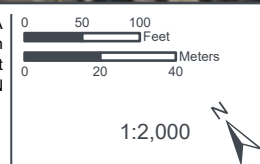


CHARLES RIVER VMP PERMITTING
AND IMPLEMENTATION PROJECT
**Figure 5. Wetland Resources
and Invasive Plant
Management Areas**



- 150' Buffer Zone
- 200' Riverfront Area
- Delineated Bank
- Major Road
- Bordering Land Subject To Flooding
- Invasive Plant Management Focus Area
- Invasive Plant Population
- Project Area
- Municipal Boundary

Watertown, MA
USGS 7.5' Quadrangles: Newton and Boston South
NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet
71.1641°W 42.3598°N



Base Map: ESRI ArcGIS Online,
accessed July 2022



CHARLES RIVER VMP PERMITTING
AND IMPLEMENTATION PROJECT
**Figure 6. Wetland Resources
and Hazardous Sites**

- 150' Buffer Zone
- 200' Riverfront Area
- Delineated Bank
- Major Road
- Activity and Use Limitation (AUL)
- Bordering Land Subject To Flooding
- Municipal Boundary
- Project Area

Watertown, MA
USGS 7.5' Quadrangles: Newton and Boston South
NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet
71.1651°W 42.3607°N



APPENDIX D

Site Photographs



Photo #1: View of Squibnocket Park, located northwest of North Beacon Street Bridge in Watertown. Charles River is located to the south (left) beyond the strip of deciduous trees. Invasive plant management is proposed within the park, specifically along the bank. The southern portion of the park consists primarily of open area. *Facing northwest.*



Photo #2: View of northern section of Squibnocket Park where the park transitions from an open area into a wooded area. The edge of the forested area contains large patches of Japanese knotweed (indicated with arrow) along with other invasive plant species. *Facing northwest.*



Photo #3: View Charles River bank within the wooded area of Squibnocket Park. An actively used foot path winds along the bank. *Facing north.*



Photo #4: View of Isolated Vegetated Wetland located within the wooded area of Squibnocket Park, between the Charles River and North Beacon Street. A patch of Japanese knotweed grows along the edge of the wetland. *Facing northwest.*

APPENDIX E

Restoration Specifications

LANDSCAPE RESTORATION PLANT LISTS

The following plant lists have been developed for the Department of Conservation and Recreation (DCR) Charles River Basin Riverbank Vegetation Management Plan. Deviations from this plant and seed list should be approved by DCR's Landscape Architects and/or Ecologist. Any additions or modifications shall be presented to the Conservation Commission for review and authorization prior to implementation.

As defined by BioMap 2 and 'The Vascular Plants of Massachusetts' handbook, plants native to the Boston Basin shall be given priority selection. Plants native to Southern New England Coastal Plains and Hills may follow as secondary preference.¹

Lawn—

Low-Mow Grass Seed Mixes

The following low-mow grass seed mixes (or equal substitutions) are recommended to be utilized for overseeding passive recreation areas that need to stay at a low height. Mix shall be selected from those included below by required site conditions

- Natural Perfection Mix, by Lavoie Horticulture- A low-mow mix that includes native fescues intended to be mowed 1x per year after seed establishment, with no requirement for fertilizer or water after establishment.
- Fleur De Lawn (PT 755)- Developed by Oregon State University, a mix of low-growing flowers, clovers and grasses. The clovers naturally self-feed the lawn with nitrogen and the low growing flowers provide pollinator habitat. Maintain as high as 5" for a mini-meadow look, or 3" for a more manicured lawn.
- ["Dog Park Eco-Lawn Mix"](#) -Tall fescue provides high salt tolerance and rhizomatous 'self-repairing' growth patterns to counter effects of pet urine. Naturally nitrogen-fixing clover and a bit of vigorous perennial ryegrass round out the mix. Wear and drought-tolerant. Dappled shade to full sun. A great choice for any high traffic area where drought tolerance and Rhizomatous Tall Fescue attributes are desired. Mow about once a month to maintain between 3 and 5 inches.
- [Eco-Turf Mix](#): Tolerant grasses and Microclover® holds up well to wear—for high traffic areas. Low maintenance and low input, more shade tolerant than many other lawn alternatives. Once established this mix requires little supplemental irrigation or fertilizer and tolerates acidic and shady sites. Microclover feeds the companion grasses with nitrogen. The extremely drought-tolerant Microclover maintains a nice dark green color once established and should not require irrigation in most climates. Its inclusion with the grasses allows the soil to retain more moisture in dry periods which sustains an overall green appearance of grass through the summer. Mow about once a month to maintain this lawn at a height between 2 and 5 inches.
- [Verdant Lawn](#): Richly vegetative, this lawn is multi-textured with Microclover and white yarrow to enhance wear tolerance and provide year-round green cover. Performs well in both sun and shade. Diversity without flowers.
- [VT Wildflower Farm – No Mow Mix](#) Blend of low-mow grasses, Festuca rubra (Creeping Red Fescue), Festuca brevipila 'Charlot' (Hard Fescue 'Charlot'), Festuca ovina var. duriuscula 'Heron' (Hard Fescue 'Heron').

¹Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife. (2011). *BioMap2 Technical Report - Building a Better BioMap*. Boston: Massachusetts Department of Fish & Game.

- [VT Wildflower Farm- Eco Lawn](#) Salt tolerant blend of fine fescue grasses that create a somewhat clumping appearance: Shoreline Creeping Red Fescue, Class One Creeping Red Fescue, SR3150 Hard Fescue, Quatro Sheep Fescue, Carson Chewings Fescue
- [American Meadows – Low Mow](#) - This cool season grass mix contains 6 different fescues - Jamestown Chewing, Quatro Sheep, Sea Link Slender, Sword, Aurora and Kent Creeping. Mixture of low-growing, fine-textured turf grasses, mixture only requires mowing every four to six weeks. All six grass varieties are also drought-resistant and withstand most growing conditions.
- [American Meadows – Creeping Red Fescue](#) or [Ernst Seeds – Festuca rubra ‘Pennlawn’](#) - low-maintenance grass ground cover. It is beneficial for erosion control and will attract wildlife. Single variety, less resilient if seed doesn't take.

Middlesex County Native Restoration Seed and Planting Lists

Where Heights up to 36" can be tolerated in passive recreation areas, it is suggested that passive turf areas be eliminated and seeded with the following mixes, selected per site conditions:

Low Growing Upland Mix

This seed mix is a lower growing, primarily native mix for general use (including roadsides and edges of paths) where little bluestem is desired or where conditions are unknown. It is tolerant of partial shade. Appropriate locations are where no mowing or infrequent mowing will occur: woodland edges, clearings, and locations where habitat and long-term soil stabilization are desired.

Little Bluestem and Virginia Wild Rye, growing to 1.5-2 feet, are intended to be the long-term dominant species, depending on sun/shade. Herbaceous species may grow 2-4 feet in height.

Herbaceous Species may be substituted with similar species under 2' HT native to Massachusetts 'Bio Basin' or 'Southern New England Coastal Plains and Hills' if those specified are not available.

	<u>Botanical Name</u>	<u>Common Name</u>	<u>% PLS By Weight</u>
Grasses			
	<i>Schizachyrium scoparium</i>	Little Bluestem	67.0%
	<i>Elymus Virginicus</i>	Virginia Wild Rye	25.0%
	<i>Panicum clandestinum 'Tioga'</i>	Deer Tongue	5.00%
	<i>Agrostis perennans</i>	Upland Bentgrass	4.00%
	<i>Juncus tenuis</i>	Path Rush	1.00%
			92.00%
Herb/Forb			
	<i>Chamaecrista fasciculata</i>	Partridge Pea	4.30%
	<i>Penstemon digitalis</i>	Beard-tongue	2.00%
	<i>Solidago nemoralis</i>	Grey Goldenrod	0.50%
	<i>Solidago caesia</i>	Woodland Goldenrod	0.50%
	<i>Aster cordifolius</i>	Blue Wood Aster	0.30%
	<i>Aster laevis</i>	Smooth Aster	0.20%
	<i>Pycnanthemum tenuifolium</i>	Slender Mountain Mint	0.20%
			8.00%
			100.00%

Seeding Rate

Apply this mix at 20 lbs. PLS/acre on areas of less than 3:1 slope and 60 lbs. PLS on areas of greater than 3:1 slope.

Add 30 lbs./acre of a cover crop. For a cover crop use either grain oats (1 Jan to 31 July) or grain rye (1 Aug to 31 Dec). Cover crop shall be incidental to seeding item. Cover crops must be properly cut and managed after plant establishment to prevent them from reseeding.

Low Growing Upland Mix- Full Sun

This seed mix is intended for full sun and drier soils and locations. It would be appropriate for limited mow (once year or less) medians, traffic islands, and other roadside locations where low naturalized grasses are desired.

Little Bluestem and Sheep Fescue, growing 1.5-2 feet, are intended to be the long-term dominant grass. Sheep Fescue is a low growing (12 inches) non-native, drought tolerant, cool season bunch grass. Herbaceous species may grow 2-3 feet in height.

Herbaceous Species may be substituted with similar species under 2' HT native to Massachusetts 'Bio Basin' or 'Southern New England Coastal Plains and Hills' if those specified are not available.

	<u>Botanical Name</u>	<u>Common Name</u>	<u>% PLS By Weight</u>
Grass			
	Festuca ovina	Sheep Fescue	80.00%
	Schizachyrium scoparium	Little Bluestem	10.70%
	Elymus virginicus	Virginia Wild Rye	5.30%
	Agrostis perennans	Upland Bentgrass	0.30%
	Juncus tenuis	Path Rush	0.70%
			97.0%
Herb/Forb			
	Chamaecrista fasciculata	Partridge Pea	1.80%
	Asclepias tuberosa	Butterfly Milkweed	0.50%
	Lespedeza capitata	Round Headed Bush Clover	0.30%
	Aster laevis	Smooth Aster	0.10%
	Euthamia caroliniana	Slender Goldentop	0.20%
	Pycnanthemum tenuifolium	Slender Mountain Mint	0.10%
			3.00%
			100.00%

Seeding Rate:

Apply this mix at 75 lbs. PLS/acre on areas of less than 3:1 slope and 175 lbs. PLS on areas of greater than 3:1 slope.

Add 30 lbs./acre of a cover crop. For a cover crop use either grain oats (1 Jan to 31 July) or grain rye (1 Aug to 31 Dec). Cover crop shall be incidental to seeding item. Cover crops must be properly cut and managed after plant establishment to prevent them from reseeding.

Seeding –Low Upland Native Mix – Full Sun

This seed mix is intended for areas where a lower grass is desired. Mix is intended for areas that will not be mowed or will be mowed once a year or less. Little Bluestem, which grows 1.5-3 feet in height, is intended to be the long-term dominant grass. Herbaceous species may grow 2-4 feet in height.

This mix is all native species, tolerant of dry to mesic condition and is intended for full sun locations. Appropriate for meadows, roadside slopes and shoulders, and locations where habitat and long-term soil stabilization are desired. This mix does not include fescues and should only be used where slow rate of establishment, other than nurse crops, is acceptable.

Herbaceous Species may be substituted with similar species under 36" HT native to Massachusetts 'Bio Basin' or 'Southern New England Coastal Plains and Hills' if those specified are not available

	<u>Botanical Name</u>	<u>Common Name</u>	<u>% PLS By Weight</u>
Grasses			
	<i>Schizachyrium scoparium</i>	Little Bluestem	63.30%
	<i>Elymus virginicus</i>	Virginia Wild Rye	20.00%
	<i>Panicum clandestinum 'Tioga'</i>	Deer Tongue	5.00%
	<i>Agrostis perennans</i>	Upland Bentgrass	3.00%
	<i>Juncus tenuis</i>	Path Rush	1.00%
			<u>92.30%</u>
Herb/Forb			
	<i>Chamaecrista fasciculata</i>	Partridge Pea	4.50%
	<i>Asclepias tuberosa</i>	Butterfly Milkweed	1.50%
	<i>Lespedeza capitata</i>	Roundhead Bush Clover	1.00%
	<i>Pycnanthemum tenuifolium</i>	Slender Mountain Mint	0.30%
	<i>Euthamia caroliniana</i>	Slender Goldentop	0.30%
	<i>Aster laevis</i>	Smooth Aster	0.10%
			<u>7.70%</u>
			100.00%

Seeding Rate:

Apply this mix at 10 lbs. PLS/acre on areas of less than 3:1 slope and 25 lbs. PLS on areas of greater than 3:1 slope.

Add 30 lbs./acre of a cover crop. For a cover crop use either grain oats (1 Jan to 31 July) or grain rye (1 Aug to 31 Dec). Cover crops must be properly cut and managed after plant establishment to prevent them from reseeding.

Northeast Showy Mix- Full Sun

This seed mix is intended for full sun where pollinator habitat is desirable. It would be appropriate for limited mow (once year or less) locations.

Herbaceous Species may be substituted with similar species under 36" HT native to Massachusetts 'Bio Basin' or 'Southern New England Coastal Plains and Hills' if those specified are not available.

	<u>Botanical Name</u>	<u>Common Name</u>	<u>% PLS By Weight</u>
Grass			
	<i>Schizachyrium scoparium</i>	Little Blue Stem	39.50%
	<i>Bouteloua curtipendula 'Butte'</i>	Sideoats Grama 'Butte'	23.10%
	<i>Elymus virginicus</i>	Virginia Wild Rye	14.00%

76.60%

Herb/Forb

<i>Echinacea purpurea</i>	Purple Coneflower	7.00%
<i>Chamaecrista fasciculata</i>	Partridge Pea	5.00%
<i>Penstemon digitalis</i>	Beard-tongue	3.50%
<i>Asclepias tuberosa</i>	Butterfly Milkweed	2.50%
<i>Rudbeckia triloba</i>	Brown Eyed Susan	1.00%
<i>Aster laevis</i>	Smooth Aster	1.00%
<i>Zizia aurea</i>	Golden Alexanders	0.50%
<i>Senna hebecarpa</i>	Wild Senna	0.50%
<i>Tradescantia ohimensis</i>	Ohio Spiderwort	0.50%
<i>Aster novae-angliae</i>	New England Aster	0.40%
<i>Aster pilosus</i>	Heath Aster	0.40%
<i>Pycnanthemum tenuifolium</i>	Slender Mountain Mint	0.30%
<i>Solidago nemoralis</i>	Grey Goldenrod	0.30%
<i>Aster prenanthoides</i>	Zig Zag Aster	0.20%
<i>Solidago juncea</i>	Early Goldenrod	0.20%
<i>Baptisia tinctoria</i>	Wild Indigo	0.10%
		<u>23.40%</u>
		100.00%

Seeding Rate:

Apply this mix at 20 lbs PLS/acre on areas of less than 3:1 slope and 25 lbs PLS on areas of greater than 3:1 slope.

Add 30 lbs/acre of a cover crop. For a cover crop use either grain oats (1 Jan to 31 July) or grain rye (1 Aug to 31 Dec). Cover crops must be properly cut and managed after plant establishment to prevent them from reseeding.

Upland Shade Mix

Mix of native species and annual rye for more densely shaded areas of roadside or bike paths. Intended for no mow or minimal mow conditions. Height of grasses and forbs ranges from 1-3 feet.

Herbaceous Species may be substituted with similar species under 30" HT native to Massachusetts 'Bio Basin' or 'Southern New England Coastal Plains and Hills' if those specified are not available

<u>Botanical Name</u>	<u>Common Name</u>	<u>% PLS By Weight</u>
Grass		
<i>Elymus virginicus</i>	Virginia Wild Rye	32.00%
<i>Panicum clandestinum</i>	Deer Tongue	30.00%
<i>Agrostis perennans</i>	Upland Bentgrass	20.00%
<i>Juncus tenuis</i>	Path Rush	5.00%
<i>Carex vulpinoidea</i>	Fox Sedge	<u>3.00%</u>
		90.0%
Herb/Forb		

<i>Chamaecrista fasciculata</i>	Partridge Pea	5.00%
<i>Aster divaricatus</i>	White Wood Aster	3.00%
<i>Solidago caesia</i>	Woodland Goldenrod	<u>2.00%</u>
		<u>10.00%</u>
		100.00%

Seeding Rate:

Apply this mix at 30 lbs. PLS/acre on areas of less than 3:1 slope and 25 lbs. PLS on areas of greater than 3:1

slope. No cover crop is recommended.

Roadside Riverbank - Part Shade Mix

This mix contains species tolerant of sun – part shade conditions and very dry to moist soils. Grasses are relatively low-growing. Good for roadside edge or banks that may be periodically mowed.

Herbaceous Species may be substituted with similar species under 30" HT native to Massachusetts 'Bio Basin' or 'Southern New England Coastal Plains and Hills' if those specified are not available.

<u>Botanical Name</u>	<u>Common Name</u>	<u>% PLS By Weight</u>
Grass		
<i>Elymus virginicus</i>	Virginia Wild Rye	30.00%
<i>Elymus canadensis</i>	Canada Wild Rye	25.00%
<i>Schizachyrium scoparium</i>	Little Bluestem	22.00%
<i>Dichanthelium clandestinum</i>	Deertongue grass	8.00%
<i>Agrostis perennans</i>	Upland Bentgrass	6.00%
<i>Carex vulpinoidea</i>	Fox Sedge	2.00%
<i>Juncus tenuis</i>	Path Rush	2.00%
<i>Juncus effusus</i>	Soft Rush	<u>0.10%</u>
		<u>95.10%</u>
Herb/Forb		
<i>Penstemon digitalis</i>	Beard-tongue	2.00%
<i>Aster novae-angliae</i>	New England Aster	1.00%
<i>Solidago caesia</i>	Woodland Goldenrod	0.50%
<i>Aster cordifolius</i>	Blue Wood Aster	0.50%
<i>Eupatorium maculatum</i>	Joe-pye Weed	0.30%
<i>Geum canadense</i>	White Avens	0.30%
<i>Solidago rigida</i>	Rigid Goldenrod	0.30%
		<u>4.90%</u>
		100.00%

Seeding Rate:

Apply this mix at 20 lbs PLS/acre on areas of less than 3:1 slope and 25 lbs PLS on areas of greater than 3:1 slope.

Add 30 lbs/acre of a cover crop. For a cover crop use either grain oats (1 Jan to 31 July) or grain rye (1 Aug to 31 Dec). Cover crops must be properly cut and managed after plant establishment to prevent them from reseeding.

Roadside Riverbank – Full sun

This mix contains native species tolerant of dry to mesic conditions. Good for slopes or riverbanks where soils range from dry to moist, that will not be mowed and where a tall, dense grass stand is desired.

Herbaceous Species may be substituted with similar species under 30" HT native to Massachusetts 'Bio Basin' or 'Southern New England Coastal Plains and Hills' if those specified are not available.

<u>Botanical Name</u>	<u>Common Name</u>	<u>% PLS By Weight</u>
Grass		
Andropogon gerardii 'Niagara	Big Bluestem 'Niagara	24.00%
Sorghastrum nutans	Indiangrass	22.00%
Elymus virginicus	Virginia Wild Rye	20.00%
Panicum virgatum	Switchgrass	8.00%
Dichanthelium clandestinum 'Tioga'	Deertongue grass 'Tioga'	10.00%
Agrostis perennans	Upland Bentgrass	4.00%
Carex vulpinoidea	Fox Sedge	2.00%
Juncus tenuis	Path Rush	1.00%
Juncus effuses	Soft Rush	<u>1.00%</u>
		92.00%
Herb/Forb		
Verbena hastata	Blue Vervain	6.0%
Desmodium canadense	Showy Tick Trefoil	1.40%
Aster novae-angliae	New England Aster	0.50%
Asclepias incarnata	Swamp Milkweed	0.50%
Eupatorium maculatum	Joe-pye Weed	0.30%
Solidago juncea	Early Goldenrod	0.20%
Solidago rigida	Rigid Goldenrod	0.20%
Rudbeckia hirta	Black-eyed Susan	<u>0.10%</u>
		<u>8.0%</u>
		100.00%

Seeding Rate:

Apply this mix at 20 lbs PLS/acre on areas of less than 3:1 slope and 25 lbs PLS on areas of greater than 3:1 slope.

Add 30 lbs/acre of a cover crop. For a cover crop use either grain oats (1 Jan to 31 July) or grain rye (1 Aug to 31 Dec). Cover crops must be properly cut and managed after plant establishment to prevent them from reseeding.

Conversion to Meadows of primarily forbs:

See Type C Lists

Trees for use in Turf Areas

Acer rubrum – Red Maple

Amelanchier canadensis - Serviceberry

Celtis occidentalis – Hackberry

Fagus grandifolia – American Beech

Nyssa sylvatica- Black Tupelo

Platanus occidentalis - Sycamore

Quercus alba – White Oak

Quercus coccinea – Scarlet Oak

Quercus velutina – Black Oak

Quercus bicolor – Swamp White Oak

Swida florida – Flowering Dogwood

Tilia americana – Basswood

Ulmus americana ‘Homestead’ – Homestead Elm

Ulmus americana ‘Valley Forge’ – American Elm

Meadows and River's Edge

Upland meadow appropriate species can be chosen by utilizing the following indicator categories:

OBL – Obligate Wetland; commonly found in wetlands-near the water

FACW – Facultative Wetland; commonly found in wetlands; but may occur in areas other than wetlands

FAC – Facultative; found in wetlands and non-wetlands

FACU – Facultative Upland; commonly found in non-wetlands but may occur in wetlands

Grasses, Sedges & Rushes

Agrostis perennans – Autumn Bentgrass – FACU – shade tolerant

Andropogon gerardii– Big Bluestem - FACU

Andropogon virginicus – Broom Sedge - FACU

Calamagrostis canadensis – Canada Bluejoint Grass – OBL

Carex amphibola - Creek sedge- FAC– shade tolerant

Carex lurida – Lurid Sedge - OBL

Carex utriculata – Common Beaked Sedge - OBL

Danthonia spicata – Poverty Grass

Deschampsia flexuosa - Wavy Hairgrass – FACU - Shade Tolerant

Elymus hystrix – Bottlebrush – FACU - Shade Tolerant

Elmus virginicus – Virginia Wildrye - FACW

Elymus riparius – Riverbank Wildrye

Festuca subverticillata - Nodding fescue- FACU– shade tolerant

Glyceria striata – Fowl Mannagrass - OBL

Juncus canadensis – Canada Rush - OBL

Juncus effusus – Soft Rush - OBL

Juncus effuses var. solutus – Lamp Rush

Juncus tenuis – Path Rush - FAC

Leersia oryzoides – Rice Cutgrass - OBL

Panicum virgatum– Switchgrass - FAC

Schizachyrium scoparium – Little Bluestem

Scirpus cyperinus – Woolgrass - OBL

Sorghastrum nutans – Indiangrass - FACU

Perennials & Ferns

Actaea pachypoda - White Baneberry- UPL – shade tolerant

Actaea rubra- Red Baneberry- FACU– shade tolerant

Ageratina altissima) - White Snakeroot- UPL– shade tolerant

Anaphalis margaritace - Pearly Everlasting- FACU

Anemone virginiana - Thimbleberry- FACU– shade tolerant

Apocynum androsaemifolium - Spreading Dogbane- UPL

Apocynum cannabinum – Dogbane - FAC

Aquilegia canadensis – Red Columbine – FACU - Shade Tolerant

Asclepias incarnata – Swamp Milkweed – OBL

Asclepias purpurescens - Purple Milkweed- FACU

Asclepias tuberosa – Butterfly Weed

Asclepias verticillate - Whorled Milkweed- UPL

Aster novae-angliae – New England

Aster Baptisia tinctorial - Yellow Wild Indigo- UPL

Bidens frondosa – Devil's Pitchfork - FACW

Chamaecrista fasciculata - Partridge Pea – FACU

Chelone glabra - White turtlehead – OBL– shade tolerant
Coreopsis rosea – Rose Coreopsis - FACW
Coreopsis tinctorial – Plains Coreopsis
Desmodium canadense – Showy Ticktrefoil – FAC
Eragrostis spectabilis – Purple Lovegrass – UPL
Eupatorium dubium ‘Little Joe’ – Little Joe Pyeweed
Eschscholzia californica - California poppy (Annual, for pollinators)
Eupatorium maculatum - Spotted Joe Pye Weed – FACW
Eupatorium perfoliatum – Common Boneset – FACW
Eurybia divaricata - White Wood Aster – Shade Tolerant
Eurybia macrophylla - Bigleaf aster- UPL– shade tolerant
Euthamia graminifolia- Flat topped Goldenrod- FAC
Geranium maculatum - Wild Geranium – FACU
Geranium x. magnificum – Purple Cranesbill
Gratiola aurea – Golden Pert - OBL
Helianthus decapetalus - Thinleaf Sunflower- FACU
Hieracium spp. – Hawkweed
Hierochloa odorata - Sweetgrass-UPL
Hypericum mutilum – Dwarf St. John’s Wort - FACW
Iris versicolor – Blue Flag Iris - OBL
Lechea intermedia var. *intermedia* – Largepod Pinweed
Lechea maritima – Beach Pinweed
Lechea mucronata – Hairy Pinweed
Lechea spp. – Pinweed
Lechea tenuifolia - Slender Pinweed
Lupinus perennis – Wild Blue Lupine
Oenothera biennis - Evening Primrose- FACU
Onoclea sensibilis - Sensitive fern - FACW– shade tolerant
Penstemon digitalis – Beard Tongue - FAC
Pycnanthemum muticum – Short-toothed Mountain Mint – FAC
Pycnanthemum flexuosum – Appalachian Mountain Mint - FACW
Pycnanthemum tenuifolium – Narrow-leafed Mountain Mint
Pycnanthemum virginiana – Virginia Mountain Mint
Solidago bicolor – Silverrod – Shade Tolerant
Solidago caesia – Bluestem Goldenrod – FACU - Shade Tolerant
Solidago nemoralis – Grey Goldenrod – Shade Tolerant
Solidago sempervirens - Seaside goldenrod- FACW
Solidago speciose - Showy Goldenrod- UPL
Symphyotrichum leave -Smooth Blue Aster- FACU
Symphyotrichum cordifolium – Blue Wood Aster – Shade Tolerant
Thalictrum dioicum - Early Meadow Rue- FACU– shade tolerant
Verbena hastata – Blue Vervain - FACW
Zizia aurea – Golden Alexander – Shade Tolerant – FAC

Circulation

* Salt and pollution tolerant trees and shrubs

Street Trees

Celtis occidentalis – Hackberry

Liquidambar styraciflua - Sweetgum

Ulmus americana ‘Homestead’ – Homestead Elm

Ulmus americana ‘Valley Forge’ – American Elm

Shoreline Trees

Acer negundo – Box Elder

Acer saccharinum – Silver Maple

Betula papyrifera – Paper Birch

Betula populifolia – Grey Birch

Carpinus caroliniana – American Hornbeam

Juniperus virginiana – Eastern Red Cedar

Prunus serotina – Black Cherry

Quercus bicolor – Swamp White Oak

Quercus rubra – Red Oak

Salix caroliniana – Coastal Plain Willow

Salix interior - Sandbar Willow

Salix nigra – Black Willow

Shrubs

Ilex glabra - Inkberry

Morella pennsylvanica – Bayberry

Prunus maritima – Beach Plum

Rubus flagellaris – Northern Dewberry

Salix discolor – Pussy Willow

Spiraea alba – Meadowsweet

Spiraea tomentosa – Steeplebush

Vines

Parthenocissus quinquefolia – Virginia Creeper

*existing woodlands only – will overtop new plantings

*See Type A Seed lists for seed mixes appropriate to roadsides

River's Edge

Shrubs

Arctostaphylos uva-ursi – Bearberry
Ceanothus americanus - New Jersey Tea
Comptonia peregrina – Sweet Fern
Dasiphora fruticosa – Shrubby Cinquefoil
Fragaria virginiana - Wild Strawberry
Gaylussacia baccata – Black Huckleberry
Kalmia angustifolia – Sheep-Laurel
Rosa virginiana – Virginia Rose
Rubus flagellaris – Northern Dewberry
Spiraea alba – Meadowsweet
Spiraea tomentosa – Steeplebush
Vaccinium angustifolium - Lowbush blueberry

Perennials & Ferns

Asclepias tuberosa – Butterfly Weed
Campanula rotundifolia – Harebell
Capnoides sempervirens – Pink corydalis
Dennstaedtia punctilobula - Hay-scented Fern
Geranium maculatum - Wild Geranium
Gratiola aurea – Golden Pert
Iris versicolor – Blue Flag Iris
Lupinus perennis – Wild lupine
Lycopus americanus – American Water Horehound
Matteuccia struthiopteris – Ostrich Fern
Melampyrum lineare – Common Cow-Wheat
Nuttallanthus canadensis – Blue Toadflax
Onoclea sensibilis – Sensitive Fern
Osmundastrum cinnamomea – Cinnamon Fern
Osmunda claytonia – Interrupted Fern
Osmunda regalis – Royal Fern
Packera aurea - Golden Groundsel- FACW
Plantago rugelli – American Plantain
Pteridium aquilinum – Bracken Fern
Pycnanthemum muticum - Short-toothed Mountainmint
Rudbeckia laciniata – Tall Coneflower
Sabatia kennedyana – Plymouth Rose Gentian
Silene caroliniana - Wild Pinks/ Catchfly
Verbena hastata – Blue Vervain
Viola pedate - Bird's Foot Violet

Grasses, Rushes & Sedges

Carex amphibola – Creek Sedge
Deschampsia flexuosa - Common Hair Grass
Elymus hystrix – Bottlebrush Grass
Eragrostis spectabilis – Purple Love Grass
Juncus tenuis - Poverty Rush
Sisyrinchium angustifolium - Blue-Eyed Grass

Sporobolus vaginiflorus - Poverty Grass

Vines/ Groundcovers

Parthenocissus quinquefolia – Virginia Creeper

Type F: Medium to High Shrub with Overstory

Trees

Amelanchier arborea – Tall Shadbush

Benthamidia florida – Flowering Dogwood

Betula papyrifera – Paper Birch

Carya cordiformis – Bitternut Hickory

Carya ovata – Shagbark Hickory

Carya tomentosa – Mockernut Hickory

Juniperus virginiana – Eastern Red Cedar

Quercus ilicifolia – Bear Oak

Shrubs

Amelanchier spicata – Thicket Shadbush

Amelanchier stolonifera – Running Serviceberry

Aronia arbutifolia – Red Chokeberry

Aronia melanocarpa – Black Chokeberry

Cephalanthus occidentalis – Buttonbush

Clethra alnifolia – Summersweet Clethra

Cornus amomum - Silky Dogwood

Cornus racemose - Gray Dogwood

Corylus americana – American Hazelnut

Hamamelis virginiana - American Witchhazel

Ilex verticillate - Common Winterberry

Lindera benzoin – Spicebush

Prunus maritima – Beach Plum

Rubus allegheniensis - Common Blackberry

Rhus glabra - Smooth Sumac

Rhus typhina – Staghorn Sumac

Rubus odoratus - Purple-flowering Raspberry

Salix bebbiana - Bebb Willow

Salix discolor - Pussy Willow

Salix nigra - Black Willow

Sambucus canadensis – Elderberry

Spiraea alba - Meadowsweet

Spiraea tomentosa – Steeplebush

Swida alternifolia – Pagoda Dogwood

Swida amomum – Silky Dogwood

Swida racemosa – Gray Dogwood

Swida rugosa – Round-leaved Dogwood

Viburnum acerifolium – Mapleleaf Viburnum

Vaccinium angustifolium – Lowbush Blueberry

Vaccinium corymbosum – Highbush Blueberry

Viburnum dentatum – Arrowwood Viburnum

Viburnum lantanoides – Hobblebush

Viburnum lentago – Nannyberry

Viburnum nudum – Smooth Witherod
Viburnum trilobum - American Cranberrybush

Perennials

Asclepias tuberosa – Butterfly Weed
Eutorchium fistulosum – Joe Pye Weed
Senna hebecarpa - Wild Senna
Symphotrichum novae-angliae – New England Aster
Symphyotrichum novi-belgii - New York Aster
Teucrium canadense - American Germander
Verbena hastata - Swamp Verbena
Vernonia noveboracensis - New York Ironweed

Grasses

Eragrostis spectabilis – Purple Love Grass

Wooded

Trees

Acer pensylvanicum – Striped Maple
Acer rubrum – Red Maple
Acer saccharinum – Silver Maple
Amelanchier laevis – Allegheny Serviceberry
Amelanchier canadensis – Serviceberry
Betula alleghaniensis – Yellow Birch
Betula lenta- Black Birch
Betula papyrifera- Paper Birch
Betula populifolia- Grey Birch
Carpinus caroliniana— American Hornbeam
Carya ovata – Shagbark Hickory
Cornus alternifolia- Pagoda Dogwood
Nyssa sylvatica - Black Tupelo
Ostrya virginiana – American Hop Hornbeam
Platanus occidentalis – American
 Sycamore *Pinus strobus* – White Pine
Populus grandidentata – Big-toothed Aspen
Populus tremuloides – Quaking Aspen
Prunus serotina – Black Cherry
Quercus bicolor - Swamp White Oak
Quercus coccinea – Scarlet Oak
Quercus rubra – Red Oak
Quercus velutina – Black Oak
Sassafras albidum – Sassafras
Salix nigra – Black Willow
Tilia americana – American Basswood

Shrubs

Alnus incana – Speckled Alder
Alnus serrulata – Smooth Alder
Aronia arbutifolia– Red chokeberry
Aronia melanocarpa – Black Chokeberry

Clethra alnifolia – Summersweet
Corylus americana – American Hazelnut
Diasphora floribuda – Shrubby cinquefoil
Hamamelis virginiana – American Witchhazel
Hypericum canadense – Canadian St. John's Wort
Hypericum mutilum - Dwarf St. John's Wort
Hypericum punctatum – Spotted St. John's Wort
Ilex verticillata – Common Winterberry
Lindera benzoin – Spicebush
Prunus virginiana – Choke Cherry
Rubus allegheniensis - Common Blackberry
Rubus odoratus – Purple-flowering Raspberry
Viburnum lantanoides – Hobblebush
Viburnum lentago – Nannyberry
Viburnum nudum L. var. *cassinoides* – Witherod Viburnum
Viburnum trilobum – American Cranberrybush

Perennials & Ferns

Actaea pachypoda – White Baneberry
Actaea rubra – Red Baneberry
Adiantum pedatum – Maidenhair Fern
Ageratina altissima (*Eupatorium rugosum*) – White Snakeroot
Apocynum cannabinum – Dogbane
Aralia racemosa – Spikenard
Asplenium platyneuron – Ebony Spleenwort
Asplenium trichomanes ssp. *trichomanes* – Maidenhair Spleenwort
Athyrium filix-femina – Lady Fern
Carex amphibola – Creek sedge
Carex appalachica – Appalachian Sedge
Carex pensylvanica – Pennsylvania sedge
Carex platyphylla – Silver Sedge
Dendrolycopodium dendroideum – Ground Pine
Dryopteris marginalis – Marginal Shield Fern
Dennstaedtia punctilobula – Hay-scented fern
Dryopteris marginalis – Wood Fern
Eurybia divaricata - Whitewood Aster
Eurybia macrophylla – Bigleaf aster
Fragaria virginian – Wild Strawberry
Gaultheria procumbens – Wintergreen
Gentiana andrewsii – Closed Gentian
Geranium maculatum – Wild Geranium
Ionactis linariifolia – Flaxleaf whitetop aster
Maianthemum canadense – Canada Mayflower
Maianthemum stellatum – Star-Flowered False Solomon Seal
Matteuccia struthiopteris – Ostrich fern
Mitchella repens – Partridge Berry
Onoclea sensibilis – Sensitive fern
Osmundastrum cinnamomeum – Cinnamon Fern
Osmunda claytoniana – Interrupted fern
Osmunda regalis – Royal fern
Packera aurea (*Senecio aureus*) – Golden Groundsel

Polystichum acrostichoides – Christmas fern
Pteridium aquilinum - Bracken fern
Sanguinaria canadensis – Bloodroot
Symphytichum cordifolium – Blue Heart-Leaf Aster
Thelypteris noveboracensis – New York Fern
Tiarella cordifolia – Foam Flower

Vines/ Groundcovers

Clematis virginiana – Wild Clematis
Parthenocissus quinquefolia – Virginia Creeper
Vitis riparia – Riverbank Grape

1.0 RESTORATION OF INVASIVE PLANT MANAGEMENT AREAS

Once DCR has defined a specific invasive plant management area, they will submit an invasive plant management plan to the Conservation Commission for approval. This plan will include the specifics regarding invasive plant management, removal, and disposal. If necessary, the plan will also include sediment and erosion control barrier installation, maintenance, and removal plans (following EPA Construction General Permit best management practices) as well as temporary stabilization measures, if applicable. The management plan will also include the goals of the invasive plant management plan. Goals will include both management success goals as well as native restoration landscape type goals.

The *Landscape Restoration Plant List* submitted with the original NOI filing is organized by landscape cover type (mirroring the Landscape Types present throughout the Charles River Reservation). DCR will identify what Landscape Type is to be restored in a given invasive plant management area. This will define which plant pallet will be utilized from the *Landscape Restoration Plant List*.

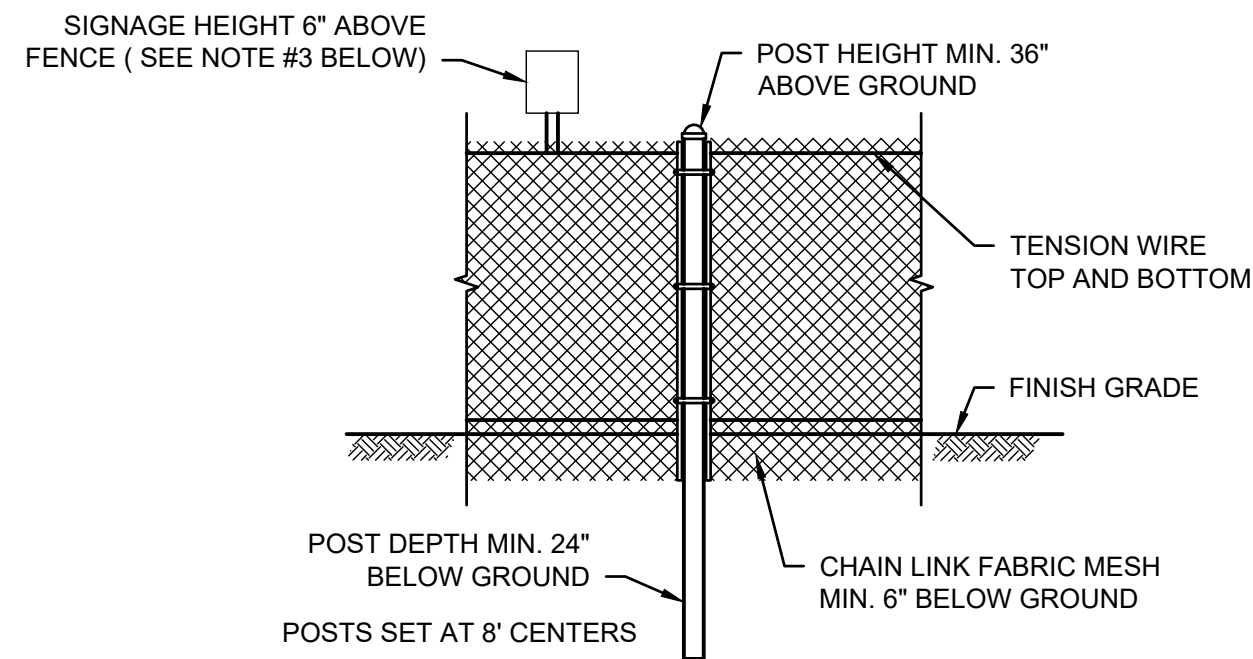
As described at the July 21, 2022 Conservation Commission hearing, DCR plans to focus on adaptive plant management practices. Invasive plants are dynamic and require varying methods of management based on their placement, density, and environment surrounding. Therefore, it is important to allow flexibility in the management plan and rely on regular monitoring to determine the exact timing of various management methods, including restoration. Furthermore, previous invasive plant management projects in the Charles River Reservation and across the Commonwealth have taught us that native plants will readily repopulate an area once the competition of invasive plants has been reduced or eliminated. Conditions are sure to change from year to year and DCR's plan for restoration will need to be equally adaptable.

The following points will be considered during adaptive management and native plant restoration:

- No areas are planned to be cleared to the ground surface or to have all vegetation removed by other means. So, there should be no bare areas as a result of invasive plant management. However, should any bare areas be observed immediately following management, DCR will seed with a native restoration seed mix appropriate for the Landscape Type to be restored.
 - Seeding will occur in these scenarios within two weeks of soil disturbance.
 - All seeded/restored areas will be enclosed with goose deterrent fencing (Attachment A)
 - Can also double as pedestrian exclusion fencing at the start of management if desired
 - Other site stabilization measures (erosion control blanket, etc.) will be considered as well as needed.
- Invasive plant management takes continued management efforts and will require more than one growing season to reach most management and restoration goals.
 - DCR will not revegetate with containerized material until 80% or more of the targeted invasive plants are controlled.
 - DCR will allow for one full growing season to pass before planning any restoration planting or large-scale seeding (not including bare soil seeding, as described above).
- Monitoring and reporting each year will focus on the progress made toward invasive plant management and restoration goals.
 - Additional management and potentially seeding will continue until all defined restoration goals are met.
 - The Conservation Commission will receive reports on invasive plant management and restoration goals in each year-end report for this project.

ATTACHMENT A

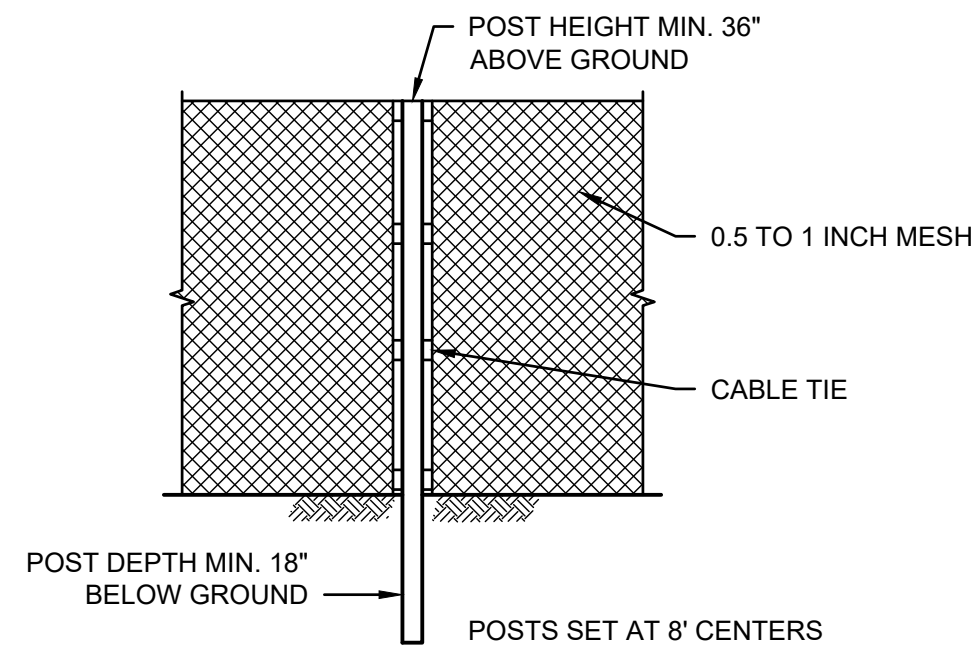
Goose Deterrent Fencing and Signage



CHAIN LINK FENCE

NOTES:

1. THE PLASTIC MESH FENCE SHALL BE PLACED ON THE UPLAND SIDE OF ALL RESTORATION AREAS AND ON THE WATER SIDE.
2. THE CHAIN LINK FENCE WILL BE UTILIZED IN LOCATIONS WHERE PLASTIC MESH FENCING IS DETERMINED TO BE INADEQUATE FOR PROTECTION.
3. SIGNAGE, SPACED 50' O.C., SHALL STATE "INVASIVE PLANT MANAGEMENT AREA: HERBICIDE APPLICATION IN PROGRESS - DO NOT DISTURB".

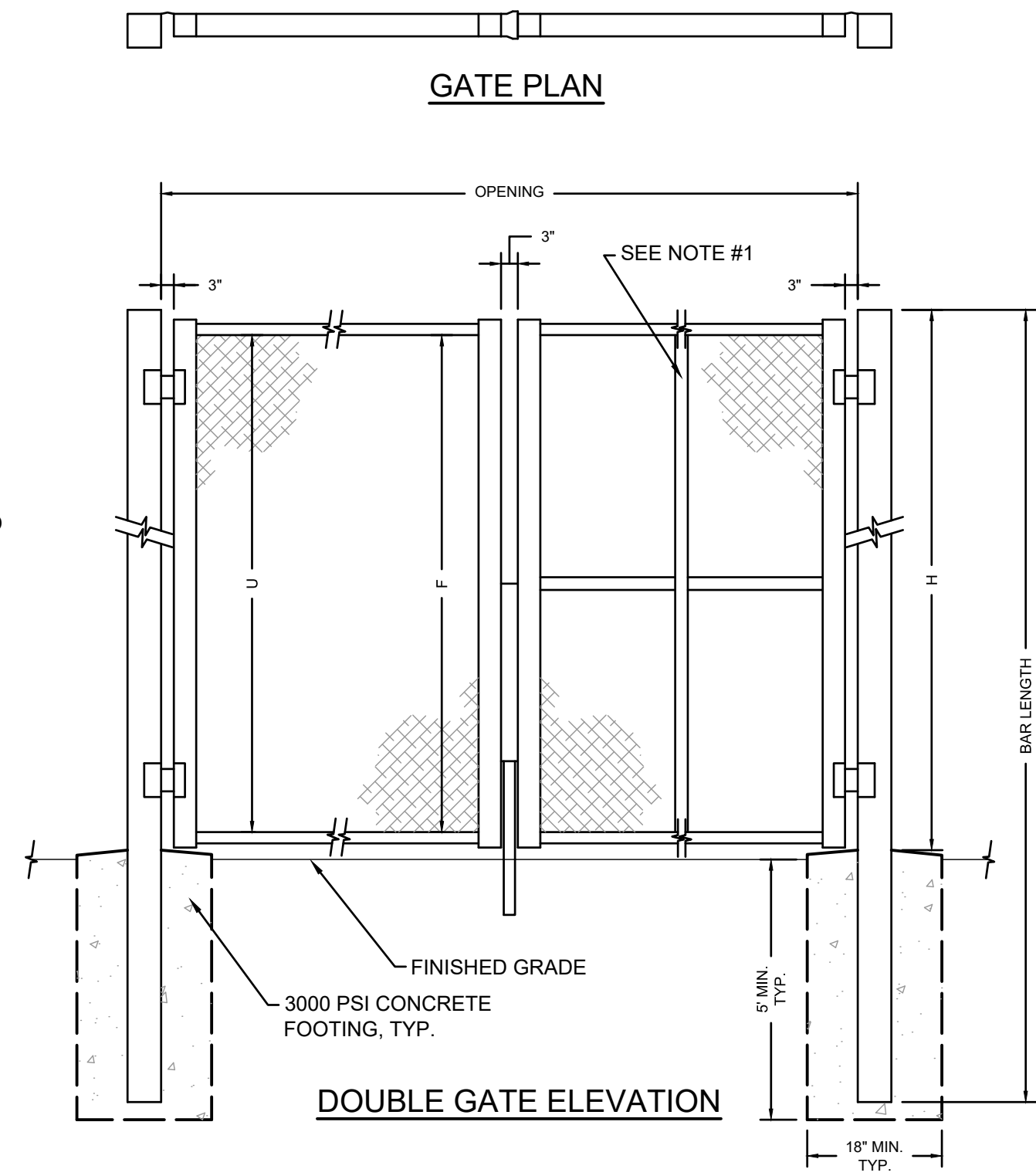


PLASTIC MESH FENCE

NOTES:

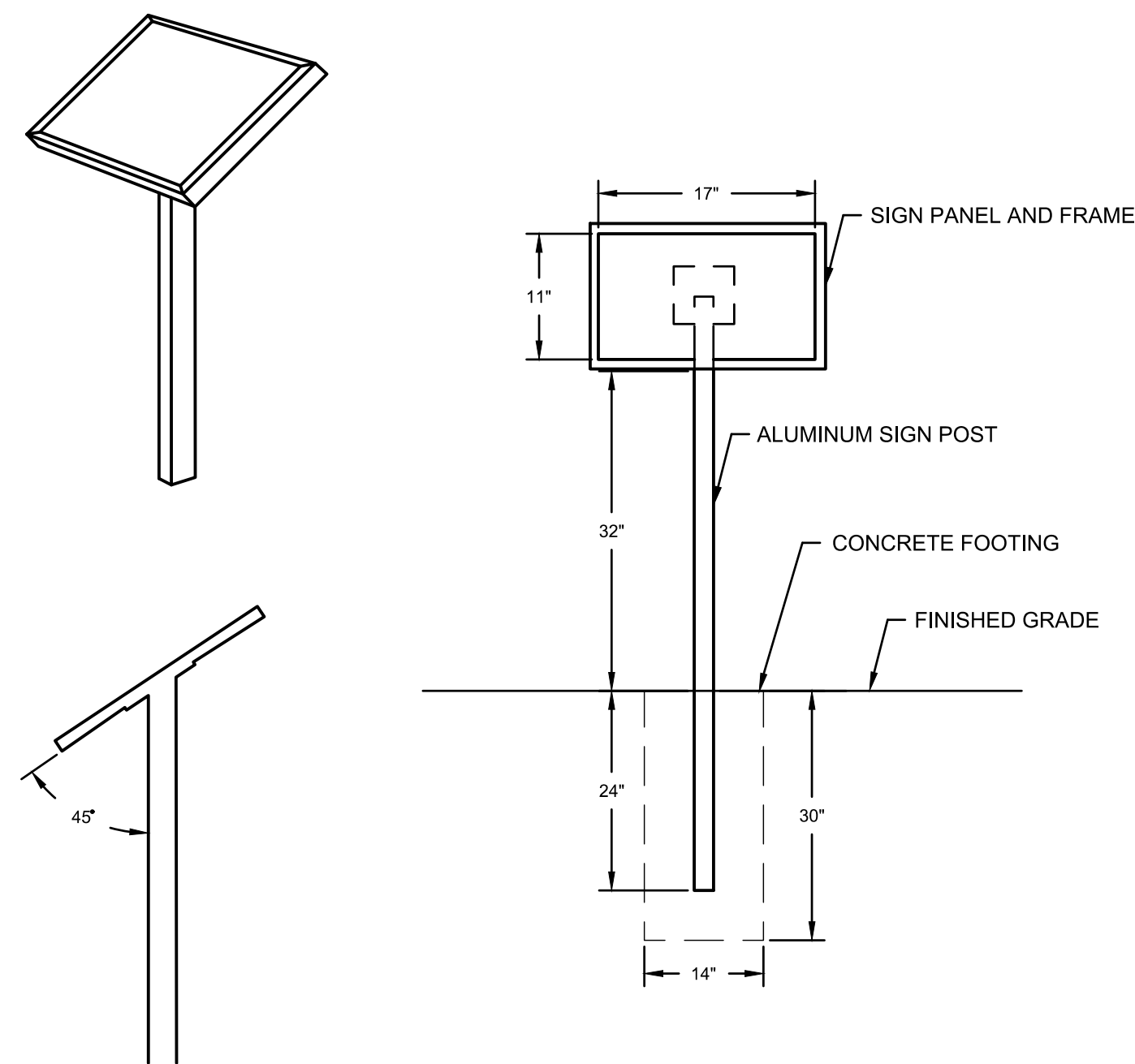
1. CENTER UPRIGHT REQUIRED ON GATE LEAVES 8'-0" AND WIDER. CENTER RAIL REQUIRED ON GATE LEAVES 10'-0" AND HIGHER.
2. PROVIDE MEANS OF HOLDING GATE(S) OPEN DURING SITE USE HOURS.
3. PROVIDE ZINC COATED LOCKS WITH MATCHING KEYS FOR ALL GATES TO OWNER.
4. SUBMIT SHOP DRAWINGS.

SINGLE OR DOUBLE LEAF GATES		
NOM. HEIGHT (H) (WITHOUT BARBED WIRE)	UPRIGHT HEIGHT (U) (ACTUAL DIMENSION)	FRAME HEIGHT (F) (ACTUAL DIMENSION)
3'-0"	2'-10"	2'-8 1/2"



DOUBLE GATE ELEVATION

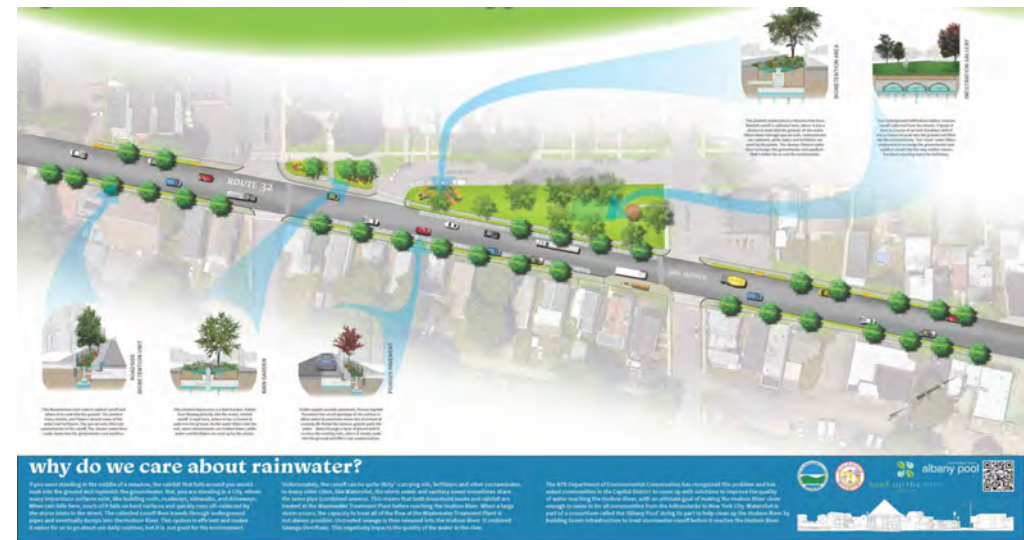
1 HERBIVORE DETERRENT FENCING DETAIL
SCALE: N.T.S.



INFORMATIONAL SIGNAGE TYPE "A"

NOTES:

1. POSTS TO BE 2" X 4" RECTANGULAR ALUMINUM WITH STAINLESS STEEL HARDWARE.
2. SIGN PLATE TO BE WELDED AT 45 DEGREES IN ALL INSTANCES.
3. POSTS TO BE INSTALLED A MINIMUM OF 24" BELOW GRADE IN CONCRETE FOOTING PER MANUFACTURER'S RECOMMENDATIONS.
4. SIGN POST AND FRAME TO BE TEXTURE POWDER COATED "FOREST GREEN" IN COLOR.
5. SIGN FRAMES TO ALLOW FOR A PANEL THICKNESS OF .125".
6. SIGN FRAME WIDTH TO BE 3/4" AND PROVIDE A REMOVABLE TOP RAIL FOR PANEL INSTALLATION.
7. SIGN FRAME TO ALLOW FOR 11" BY 17" GRAPHIC PANEL.
8. SIGN MATERIALS TO BE AS MANUFACTURED BY FOSSIL INDUSTRIES INC., PANNIER GRAPHICS, IZONE IMAGING OR APPROVED EQUIVALENT.



TYPICAL INFORMATIONAL SIGN GRAPHIC

NOTE: GRAPHIC TO BE PROVIDED BY OWNER'S REPRESENTATIVE.

2 CHAIN LINK FENCE GATE DETAIL
SCALE: N.T.S.

3 INFORMATIONAL SIGN DETAIL
SCALE: N.T.S.

Consultants:

Revisions:

No.	Date	Description

Seal:

Issued For:

FOR PERMITTING USE ONLY -
NOT FOR CONSTRUCTION

Scale: AS NOTED

Date: MARCH 2021

Drawn By: RAM

Reviewed By: DPB

Approved By: CFR

W&S Project No: P18-3241-S1A

W&S File No:

Drawing Title:

PLANTING
DETAILS

Sheet Number:

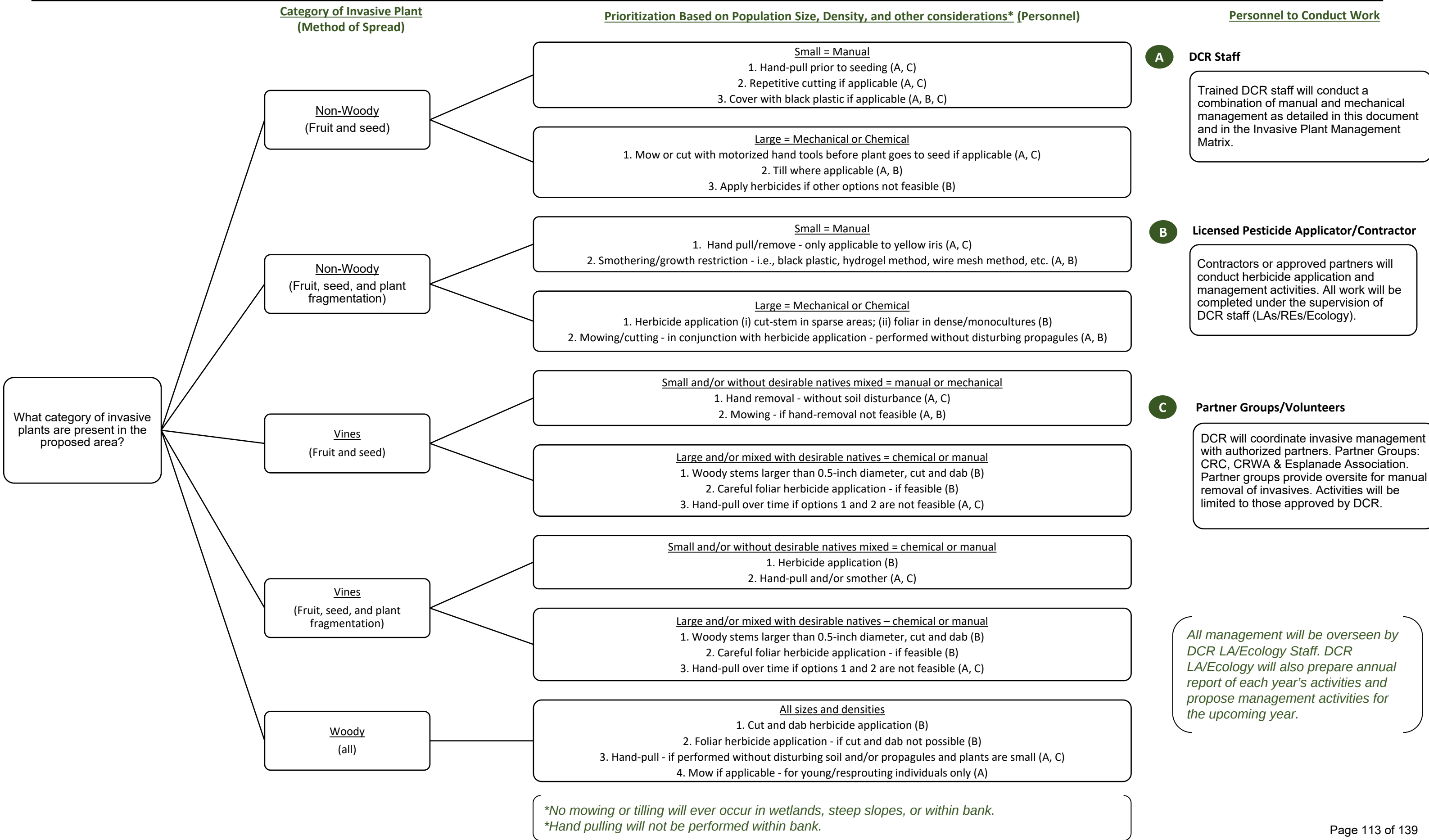
C504

APPENDIX F

Invasive Plant Management Details

CRVMP Invasive Plant Management Decision Tree

DCR-proposed invasive plant management will be completed by DCR staff, partner groups, or state contractors



		Methods of Management				Methods of Disposal
Category	Invasive Plant Name	Mechanical	Manual	Chemical	Species-Specific Notes	
Non-woody; Fruit and seed	Garlic Mustard (<i>Alliaria petiolata</i>)		-Hand pull (small infestations): do not put pulled plants in piles where roots can stay moist -Mulching: several inches of wood chips -Cutting: repetitive for multiple growing seasons prior to seed set; cut a few inches above soil after flower stalks elongate but before flowers open. Do not cut first year rosettes.	- Foliar Application: 1-3% Glyphosate (or approved alternative solution - see notes) directly to foliage prior to seed set	Herbicide application: most effective in fall and/or early spring	Prior to flowering: Depends on scale of infestation <u>Small infestation</u> • Pull or cut plant and leave on site with roots exposed. <u>Large infestation</u> • Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting). • Monitor. Remove any re-sprouting material. During and following flowering Do nothing until the following year or remove flowering heads and bag and let rot. <u>Small infestation</u> • Pull or cut plant and leave on site with roots exposed. <u>Large infestation</u> • Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting). • Monitor. Remove any re-sprouting material.
	Purple Loosestrife (<i>Lythrum salicaria</i>)		-Hand pull small/manageable infestations before flowering/seed		Herbicide application: after flowering but before seeds form (June - August)	
	Broad-Leaved Pepperweed (<i>Lepidium latifolium</i>)	-Tilling/mowing (herbicide follow-up required): disk in fall, mow when flowers bud in spring. Allow plants to reach flower bud stage once more before applying herbicide. Further spraying likely needed in future.			Herbicide Application: should be timed to be at the period when carbohydrate root reserves are at lowest during early flowering or bud stage.	
	Greater Celandine (<i>Chelidonium majus</i>)				Safety note: Sap can cause skin irritation. Wear gloves when handling.	
	Ground Elder/ Bishops Weed/Goutweed (<i>Aegopodium podagraria</i>)	-Mowing: frequent mowing at short heights, early in year just after plant has reached full leafout -Covering: cover with black plastic sheeting			Covering: covering after mowing can exhaust energy reserves	
	Lesser Celandine (<i>Ficaria verna</i>)				Safety note: Sap can cause skin irritation. Wear gloves when handling.	
	Japanese Stiltgrass (<i>Microstegium vimineum</i>)	-Cutting: cut to ground with weed whacker in September, shortly before they produce seed			Herbicide application: 1-2% Fusion/surfactant solution recommended -June to August)	
	Horned Poppy (<i>Glaucium flavum</i>)				Hand pull in spring/early summer	
	Tyrol Knapweed (<i>Centaurea nigrescens</i>)	-Mowing: mow when plants are in late bud to early bloom stage, 2-4 times a year		- Foliar Application: 3% solution of triclopyr herbicide/water to leaves in early spring or fall	Herbicide application: most effective when combined with hand pulling or mowing	
	Spotted Knapweed (<i>Centaurea biebersteinii</i>)				Safety note: Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling.	
	Wild Chervil (<i>Anthriscus sylvestris</i>)	-Mowing: repeatedly before seed set	-Hand pulling -Digging: Dig up seedling plants and root before flowering	- Foliar Application: Broadleaf selective herbicides more effective than nonselective herbicides	Hand pulling: remove entire rosette and taproot Herbicide application: can be enhanced with tilling one week after application, then mid-September seeding of perennial native grasses Safety note: Can cause skin irritation. Wear gloves when handling.	
	Leafy Spurge (<i>Euphorbia esula</i>)	-Mowing	-Cutting		Cutting/mowing: seed formation can be prevented by repeated cutting/mowing, but root system will remain viable. Cut plants within 4 inches from ground before seed set and repeat through growing season.	
	Giant Hogweed (<i>Heracleum mantegazzianum</i>)	-Plowing: must be done for multiple years; best after mechanical and chemical control	-Hand pulling: (young plants in April-May) -Flower/seed head removal: when flowers are no longer visible but before seeds mature -Cut and Cover- cut plants to ground level and cover soil with black plastic (multiple years)	- Foliar Application: systemic herbicide between April-June and again in July-August	Root removal: cut taproot about 6 inches below ground level in early spring, remove cut pieces, follow up visit 2 weeks after root cut.	

		Methods of Management				Methods of Disposal
Category	Invasive Plant Name	Mechanical	Manual	Chemical	Species-Specific Notes	
Non-woody; Fruit, seed, and plant fragment	Common Reed (<i>Phragmites australis</i>)		-Pulling/cutting (not very effective and can lead to spread of propagules) -Hydrogel: cut stalks to ground surface, cover with biodegradable material, place hydrogel and planting medium, and install native vegetation.	Foliar Herbicide Application Cut-Stem Application (isolated stems only)	<u>Pulling/cutting</u> : cut stems below lowest leaf, leaving a stump 6 in or shorter during the flowering stage or boot stage (developed seed head) -typically July <u>Herbicide application</u> : Glyphosate or Imazapyr foliar application during flowering or boot stage.	Small infestation • Bag all plant material and let rot. • Never pile and use resulting material as compost. • Burn. Large infestation • Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile. • Monitor and remove any sprouting material. • Pile, let dry, and burn.
	Chinese Silvergrass (<i>Miscanthus sinensis</i>)		-Grubbing (small infestations)	Foliar Application: Spot treatments of 2% glyphosate/water solution in late spring or fall	<u>Grubbing</u> : ensure ALL roots are removed	
	Japanese Knotweed (<i>Polygonum cuspidatum</i>)	-Cutting/mowing: Early June or after plant has bloomed out	-Wire mesh: install after cutting vegetation flush to ground. Tightly secure and ensure mesh remains tightly affixed to ground surface.	- Foliar application: apply to foliage - Cut-stem: apply concentrated herbicide to exposed stem (thick stems only)		
	Reed Canary Grass (<i>Phalaris arundinacea</i>)	Mowing	-Cutting: Cut as close to the ground as possible to prevent seeding or as part of integrated approach -Shading: Cover with shade cloth and secure tightly; mulching with thick cardboard and wood mulch -Restoration Planting: install native trees and shrub to shade out and compete	- Glyphosate or Imazapyr spot spraying		
	Yellow Iris (<i>Iris pseudacorus</i>)		- Pulling/Digging: Hand pull seedlings; dig up mature plants			
	Mugwort (<i>Artemisia vulgaris</i>)			- Foliar application: apply glyphosate or triclopyr in late summer or early fall	Mow in early summ and early fall	
Vine; Non-woody; Fruit and seed	Mile-A-Minute (<i>Polygonum perfoliatum</i>)	Mowing	-Hand pulling: when soil is wet prior to fruit formation	Foliar application: apply systemic herbicide in summer before fruiting; use surfactant	Mowing must be repetative to prevent flowering and fruit/seed production	Prior to flowering: Depends on scale of infestation Small infestation • Pull or cut plant and leave on site with roots exposed. Large infestation • Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting). • Monitor. Remove any re-sprouting material. During and following flowering Do nothing until the following year or remove flowering heads and bag and let rot. Small infestation • Pull or cut plant and leave on site with roots exposed. Large infestation • Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting). • Monitor. Remove any re-sprouting material.
	Swallow-wort (<i>Cynanchum spp.</i>)		-Digging: Dig up plants so that root crown and rhizomes can be removed, before seeds mature.	- Cut and dab Triclopyr treatment	Mowing can reduce spread, bu must be done every year to be effective. Conduct before seed pods mature.	
	Japanese Hops (<i>Humulus japonicus</i>)	-Mechanized cutting early and throughout growing season	-Hand pulling (small infestations)	- Foliar treatment: ideally two systemic s a year after germination but before extensive growth and again before seed production		
	Porcelain Berry (<i>Ampelopsis brevipedunculata</i>)			- systemic prior to seed set		
	Dodder (<i>Cuscuta spp.</i>)		-Hand pulling: remove if seedlings found before attaching to host -Pruning -Restoration Planting: install non-host species such as grasses and monocots	<u>Herbicide application</u> : Pre-emergent herbicides such as trifluralin applied before seed germination	<u>Pruning</u> : after attachment to host, prune part of host plant 1/4 to 1/8 of an inch below infected area	

		Methods of Management				Methods of Disposal
Category	Invasive Plant Name	Mechanical	Manual	Chemical	Species-Specific Notes	
Vine; Non-woody; Fruit, seed, and plant fragment	Hedge Bindweed (<i>Calystegia sepium</i>)		-Hand pulling: pull young plants 3-4 weeks following germination -Deep cultivation -Covering: cover using landscape fabric or cardboard to prevent light (up to 3 years)	- Fall treatment with glyphosate preferably when there are few flowers but not full bloom	<u>Deep cultivation</u> : use wide sweeps to cut roots and rhizomes 16-18 inches below the surface in dry soil <u>Herbicide application</u> : avoid treatments in time of drought	Prior to fruit/seed ripening <u>Small infestation/Seedlings</u> • Bag all plant material and let rot. • Never use resulting material as compost. • Burn. <u>Larger infestations</u> • Make a brush pile. • Burn. After fruit/seed is ripe Don't remove from site. • Burn. • Make a covered brush pile. • Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.
	Japanese Honeysuckle (<i>Lonicera japonica</i>)		-Hand pulling (small infestations)	Apply a 2% glyphosate or triclopyr solution to leaves from spring through fall. Use 25% solution if using cut-stump method		
	Kudzu (<i>Pueraria montana</i> spp. <i>Lobata</i>)		-Mowing/Digging	Utilize cut-stem treatments with systemic chemicals	<u>Mowing/Digging</u> : Use shovel or pick axe to expose base of root crowns and cut the root below crown with axe or handsaw. Preferably done during hottest parts of summer. <u>Herbicide application</u> : try to remove vines from native plant species prior to application	
	Bittersweet Nightshade (<i>Solanum dulcamara</i>)		-Hand pulling: pull young plants, taking care not to break pieces Cut/cover: can be cut to ground and covered with heavy-duty geotextile fabric for at least 2 years		<u>Herbicide application</u> : must effective when temperatures are between 50-80 °F; and no rain expected; should be applied before native plants emerge. Retreat for 1-2 years may be necessary. Physical removal should only be done after herbicide has been in place long enough for nightshade to be brown and dead.	
Vine; Woody; Fruit, seed, and plant fragment	Hardy Kiwi (<i>Actinididia arguta</i>)		-Cutting: cut large vines in winter/early spring	Foliar or cut-stem herbicide treatment with glyphosate. -Foliar treatment apply directly to leaves with 3% solution (Foliar when cut stem is not possible due to access or too small stem width) This treatment is possible throughout the growing season and usually most effective when flowering/fruiting.	Herbicide application should be conducted in late summer - early fall	
	Asiatic Bittersweet (<i>Celastrus orbiculatus</i>)	Brush mow large infestations of smaller vines when not overtopping desirable vegetation.	-Hand pulling (small infestations) -Cutting: cut climbing vines near ground	-Cut stem cut vine stems and apply 20%-50% solution immediately -Basal Bark apply concentrated herbicide directly to tree/shrub bark. (fall or early winter)	<u>Herbicide application</u> : apply immediately after cutting, repeat applications preferably in fall and winter. Basal bark method with Garlon 4 can be done if temperatures are above 50 degrees F.	
Vine; Woody; Fruit and seed	Morning Glory/Bindweed (<i>Convolvulus arvensis</i>)		-Hand pulling: pull up to 3-4 weeks following germination -Deep cultivation -Covering: cover using landscape fabric or cardboard (up to 3 years)	- Fall treatment with glyphosate preferably when there are few flowers but not full bloom	<u>Deep cultivation</u> : use wide sweeps to cut roots and rhizomes 16-18 inches below surface in dry soil <u>Herbicide treatment</u> : avoid treatments in times of drought	Prior to fruit/seed ripening <u>Seedlings and small plants</u> • Pull or cut and leave on site with roots exposed. No special care needed. <u>Larger plants</u> • Use as firewood. • Make a brush pile. • Chip. • Burn. After fruit/seed is ripe <u>Don't remove from site.</u> • Burn. • Make a covered brush pile. • Chip once all fruit has dropped from branches. • Leave resulting chips on site and monitor.

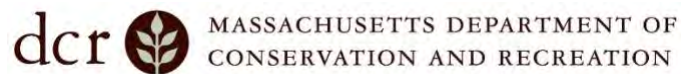
		Methods of Management				Methods of Disposal
Category	Invasive Plant Name	Mechanical	Manual	Chemical	Species-Specific Notes	
Woody; Fruit and seed	Autumn Olive (<i>Elaeagnus umbellata</i>)	Mowing (when small enough resprouts are present)	-Hand pulling/digging: pull or dig small seedlings and sprouts -Cutting: remove saplings with weed wrench, cut large plants and dig out stump if possible	Foliar or cut-stem herbicide treatment with glyphosate. -Foliar treatment apply directly to leaves with 3% solution (Foliar when cut stem is not possible due to access or too small stem width) This treatment is possible throughout the growing season and usually most effective when flowering/fruiting. -Cut stem cut vine stems and apply 20%-50% solution immediately -Basal Bark apply concentrated herbicide directly to tree/shrub bark. This treatment can occur in fall or early winter	Herbicide application to occur in the late growing season (July-September)	Prior to fruit/seed ripening <u>Seedlings and small plants</u> • Pull or cut and leave on site with roots exposed. No special care needed. <u>Larger plants</u> • Use as firewood. • Make a brush pile. • Chip. • Burn. After fruit/seed is ripe <u>Don't remove from site.</u> • Burn. • Make a covered brush pile. • Chip once all fruit has dropped from branches. • Leave resulting chips on site and monitor.
	Common Buckthorn (<i>Rhamnus cathartica</i>)				herbicide application in fall or early winter	
	Burning Bush (<i>Euonymus alatus</i>)				<u>Digging</u> : large plants can be dug up with spading fork, pulled with weed wrench, or cut. Stump must be ground out or regrowth clipped.	
	Cypress Spurge (<i>Euphorbia cyparissias</i>)				Hand pulling must be conducted frequently and repeatedly	
	Glossy Buckthorn (<i>Frangula alnus</i>)					
	Shrub Honeysuckles (<i>Lonicera morrowii</i> , <i>L. tatarica</i> <i>L.x bella</i> , <i>L. maackii</i>)				Utilize a 25% solution when conducting cut-stem application	
	Japanese Barberry (<i>Berberis thunbergia</i>)				Herbicide application to occur in late summer during fruiting	
	Norway Maple (<i>Acer platanoides</i>)	-Hand pulling: pull seedlings from moist soils, dig up larger plants -Girdling: cut through bark and cambium in circle around trunk in the spring Cutting: cut trunks 2-3' from ground prior to spring sap	-Herbicide application: for trees smaller than 4 inches in diameter: apply Triclopyr mixed with horticultural oil to the bark, a foot from base of trunk in early spring or from June-September Cut stem treatments should be applied to outer			
	Sycamore Maple (<i>Acer pseudoplatanus</i>)					
	Multiflora Rose (<i>Rosa multiflora</i>)	-Mowing (when small with regular mower, when larger with brush mower)	-Hand pulling/cutting (small populations)		Mowing: 3-6 times per year when performed for partial control	
Woody; Fruit, seed, and plant fragment	False Indigo Bush (<i>Amorpha fruticosa</i>)		Hand-pull plants when feasible, dig to remove all roots when possible. Cut and continue to trim regularly.	Foliar or cut-stem with systemic herbicide (glyphosate or approved alternative)	-Repeated defoliation can limit regrowth, but mowing can encourage growth. - <u>Digging</u> : Dig and sever root 3-4 inches below the crown; repeat as necessary	Prior to fruit/seed ripening <u>Seedlings and small plants</u> • Pull or cut and leave on site with roots exposed. No special care needed. <u>Larger plants</u> • Make a brush pile. • Burn. After fruit/seed is ripe <u>Don't remove from site.</u> • Burn. • Make a covered brush pile. • Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.
	Tree of Heaven (<i>Ailanthus altissima</i>)	-Grubbing: for young trees or saplings	Hand pulling: pull or dig very young seedlings Cutting: cut trees while small, in early summer when root reserves are at lowest. Cut regrowth frequently.	-Foliar application apply 3% solution directly to leaves -Cut stem application cut as close to the ground as possible and apply 20%-50% solution as quickly as possible after cutting -Basal Bark application apply concentrated herbicide directly to bark as directed by herbicide label	<u>Herbicide application</u> : Basal bark application is most effective for trees 4-8 inches in diameter. Apply when tree is fully leafed but before it begins to show fall color	
	Large Gray Willow/Rusty Willow (<i>Salix atrocinerea</i> / <i>S. cinerea</i>)	Girdling: cut through bark and cambium layers			<u>Herbicide application</u> : best method for willows is bore and fill application: suitable for willows with branches larger than 50mm in diameter. Cut stem method for smaller trees and branches in summer-fall.	

APPENDIX G

Spill Prevention Plan

OIL SPILL PREVENTION, CONTROL
AND
COUNTERMEASURE PLAN
FOR
VEGETATION MANAGEMENT ALONG CHARLES RIVER
CHARLES RIVER RESERVATION, BOSTON MA

PREPARED: AUGUST 28, 2021



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INTRODUCTION

This Oil Spill Prevention, Control and Countermeasure Plan (OSPCCP) has been developed by the Massachusetts Department of Conservation & Recreation (DCR) as a required supplement for DCR's Vegetation Management project along the Charles River to be conducted in Boston, Massachusetts (Project Site).

Approximate location:

Latitude: 42.3643 N

Longitude: 71.1378 W

The purpose of the Oil Spill Prevention, Control and Countermeasure Plan is to prepare DCR and their contractor and its employees for emergency situations which may occur. Typical emergencies for which we need to be prepared include spills and leaks, personal injuries, fires, weather-related emergencies and other situations which require operational response.

The content of this Oil Spill Prevention, Control and Countermeasure Plan includes:

- Descriptions of expected emergencies, their hazards, and the recommended plan of action to combat their effects.
- Procedures for reporting employee injuries, motor vehicle accidents, spills, product contamination or any other emergencies which may occur.
- Emergency contact phone numbers
- Decision making infrastructure with defined action steps that can be executed quickly.

DESCRIPTION OF PROJECT

In anticipation of the Head of the Charles, DCR is proposing to manage (trim) vegetation along the riparian buffer to provide views of the water for event spectators, organizers and emergency personnel (Project). As part of the Project, nuisance shrubs such as false indigo, and invasive shrubs and perennials growing along the riparian buffer will be trimmed to a minimum height of 18-inches from the Reservation's finished grade at an approximate width of 6-feet. Care will be used to minimize the possibility of trimmed vegetation falling into the River. Any vegetation that enters the River will be removed if it is safe to do so. Trimmed vegetation will be raked and stockpiled on the finished grade for removal and disposal upon completion of the activities and prior to the Head of the Charles

PLAN MAINTENANCE AND DISTRIBUTION

Copies of the Oil Spill Prevention, Control and Countermeasure Plan will be distributed as follows:

- DCR Project Manager
- Contractor Project Manager
- Contractor Field Managers

Designated recipients of the Oil Spill Prevention, Control and Countermeasure Plan will be offered training in the plan.

Requests for changes to Oil Spill Prevention, Control and Countermeasure Plan should be submitted in writing to the Project Safety Officer.

If there are any questions concerning changes to the plan, or if other revisions are required, contact the Project Safety Officer.

MOTOR VEHICLE ACCIDENTS

Immediate action steps:

1. Determine extent of the accident and any injuries.
2. If spill response assistance is required due to the size of the spill, location, or inability to immediately control it, or there is potential for the spill to impact the environment, immediately notify the Project Safety Officer who will then make the determination to contact our Insurance and/or Environmental Response Vendor.
3. Determine if immediate assistance is required at the accident scene that has not already been initiated (e.g. ambulance, police, tow truck, agency reporting, other vehicle to transfer cargo, etc.).
4. Verbally report accident to the Project Safety Officer.
5. Provide periodic feedback and/or status reports as often as required or necessary.
6. Should a motor vehicle accident result in personal injury, fatality, or any vehicle being towed or a product release to the ground, sewer, or navigable waterway, the Project Safety Officer will make an immediate verbal report to ownership.

OIL AND HAZARDOUS INCIDENT REPORTING

A "Hazardous Material Reportable Incident" is an occurrence during the course of transporting a hazardous material by truck, rail or air (including during loading, unloading and temporary storage) in which, as a direct result of the hazardous material:

- A person is killed;
- A person receives injuries requiring hospitalization;
- Estimated carrier or other property damage exceeds \$50,000 (excluding vehicle/property damage unless caused by the material/product itself);
- An evacuation of the general public occurs lasting one or more hours;
- One or more major transportation arteries or facilities are closed or shut down for one hour or more; or
- The operation, flight pattern or routine of an aircraft is altered.

Or

- A situation exists of such a nature (i.e., a continuing danger to life at the scene) that, in the judgment of the Project Safety Officer, should be reported even though it does not meet the criteria above.

Or

- An unintentional release of a hazardous material from a container (i.e., tank truck) caused by failure of the container or operator.

Incidents meeting the above definition(s) must be reported to the Project Safety Officer. If the incident meets any of the criteria in the first two paragraphs above, reporting must be immediate by telephone to the National Response Center (800-424-8802). The Project Safety Officer will make the report which will include the following information:

- Name of reporter;
- Name and address of the carrier represented by the reporter;
- Phone number where the reporter can be contacted;
- Date, time and location of the incident;
- Extent of injuries if any;
- Classification, name and quantity of hazardous material involved; and
- Type of incident and whether a continuing danger to life exists at the scene.

In the case of property damage greater than \$50,000, it may take some time to obtain estimates that are reliable and accurate enough to determine the total cost. If that's the only trigger for "immediate" reporting; telephonic notification, even days later, is acceptable. A telephone report must be followed within 30 days by a written report.

If the incident meets only the third item above, the report does not need to be immediate, but must be submitted in writing within 30 days of the incident.

Local Procedures: Field Staff must notify the Project Safety Officer for the following examples but not limited to these examples. Product spills, all motor vehicle accidents involving injuries significant property damage over one thousand dollars or if either vehicle is towed or if any party is taken to the hospital or if you are issued a citation, and any personal injury. **All spills regardless of quantity, must be reported immediately to the Project Safety Officer.**

Licensed Site Professional (LSP): A LSP has responsibility for issues associated with Oil and Hazardous Materials Releases that occur pursuant to Massachusetts Department of Environmental Protections (MassDEP) Massachusetts Contingency Plan (MCP) at 310 CMR 40.0000. The LSP is a hazardous waste consultant, as defined in M.G.L. C 21A paragraph 19 and holds a valid license issued by the Board of the Registration of Hazardous Waste Site Cleanup Professionals pursuant to M.G.L. C21A, paragraph 19-19J. In the event of a release of hazardous materials to soil or water, a LSP will be employed to provide necessary reporting to DEP or other appropriate regulatory agencies, and to coordinate any necessary site remediation activities.

The Licensed Site Professional (LSP) is required to provide the services necessary to comply with the requirements of the MCP. These services may include sampling, analysis and characterization of potentially contaminated media, preparation of Immediate Response Action (IRA) Plans, Utility-Related Abatement Measure (URAM) and Release Abatement Measure (RAM) Plans, Imminent Hazard Evaluations, status reports, transmittal forms, release notification forms, risk assessments, completion statements, and related documents required pursuant to the Massachusetts Contingency Plan (MCP).

The LSP shall evaluate soil and/or sediment with discoloration, odor, and presence of petroleum liquid or sheening on the groundwater surface, or any abnormal gas or materials in the ground which are known or suspected to be oil or hazardous materials.

NOTIFICATION OF RELEASES

The LSP is responsible for generating and submitting all soil tracking logs, daily field reports, analytical results, and MCP related reports (i.e. IRAs, URAMs, RAMs). These reports or logs will contain all field observations relevant to MCP issues, all data generated, and justification for all actions taken. The Contractor's LSP will be available to meet with DCR or its agents to discuss, clarify, or justify actions taken and data generated, and to accommodate comments or requests made by DCR or its agents.

RELEASES THAT REQUIRE NOTIFICATION TO MASSDEP

This section discusses release(s) that require notification to the MassDEP, as specified in 310 CMR 40.0310. If a 120-day reportable condition is encountered during characterization of soil that has not previously reported under RTN 3-1283. All work related to this "new" condition would be completed in accordance with requirements of the MCP. The Site is currently closed under the MCP and as such, reporting of a new release will only be required if a 2 or 72-hour condition is identified; or a contaminant not previously identified as a contaminant of concern is detected above reportable concentrations.

120-day notification conditions include, but are not limited to, the following:

- OHM detected in soil and/or groundwater at concentrations exceeding the applicable Reportable Concentrations
- The presence of Non-Aqueous Phase Liquid (NAPL) having a measured thickness equal to or greater than 1/8 inch and less than 1/2 inch.

A RAM, URAM, or other feasible MCP option, cannot be initiated or continued in the area where a two (2)-hour or seventy-two (72)-hour release or threat of release has been identified, as described in 310 CMR 40.0311 through 40.0314, until an Immediate Response Action (IRA) has been undertaken and an IRA Completion Statement has been submitted to the MassDEP. Remedial activities that are scheduled to take place in areas bordering other remedial area boundaries will be structured and monitored to assure they do not impact the conditions of other Remedial Activities.

Two (2)-hour notification conditions include, but are not limited to, the following:

- A release, or threat of release, of OHM over a 24-hour period that is equal to, greater than, or likely to be greater than, the MCP Reportable Quantity of that material
- Sudden release to water producing a sheen
- Release to a storm drain, or sanitary sewer posing an Imminent Hazard (as defined in 310 CMR 40.000)
- OHM detected in a private drinking water well at a concentration greater than or equal to the applicable MCP GW-1 RC.

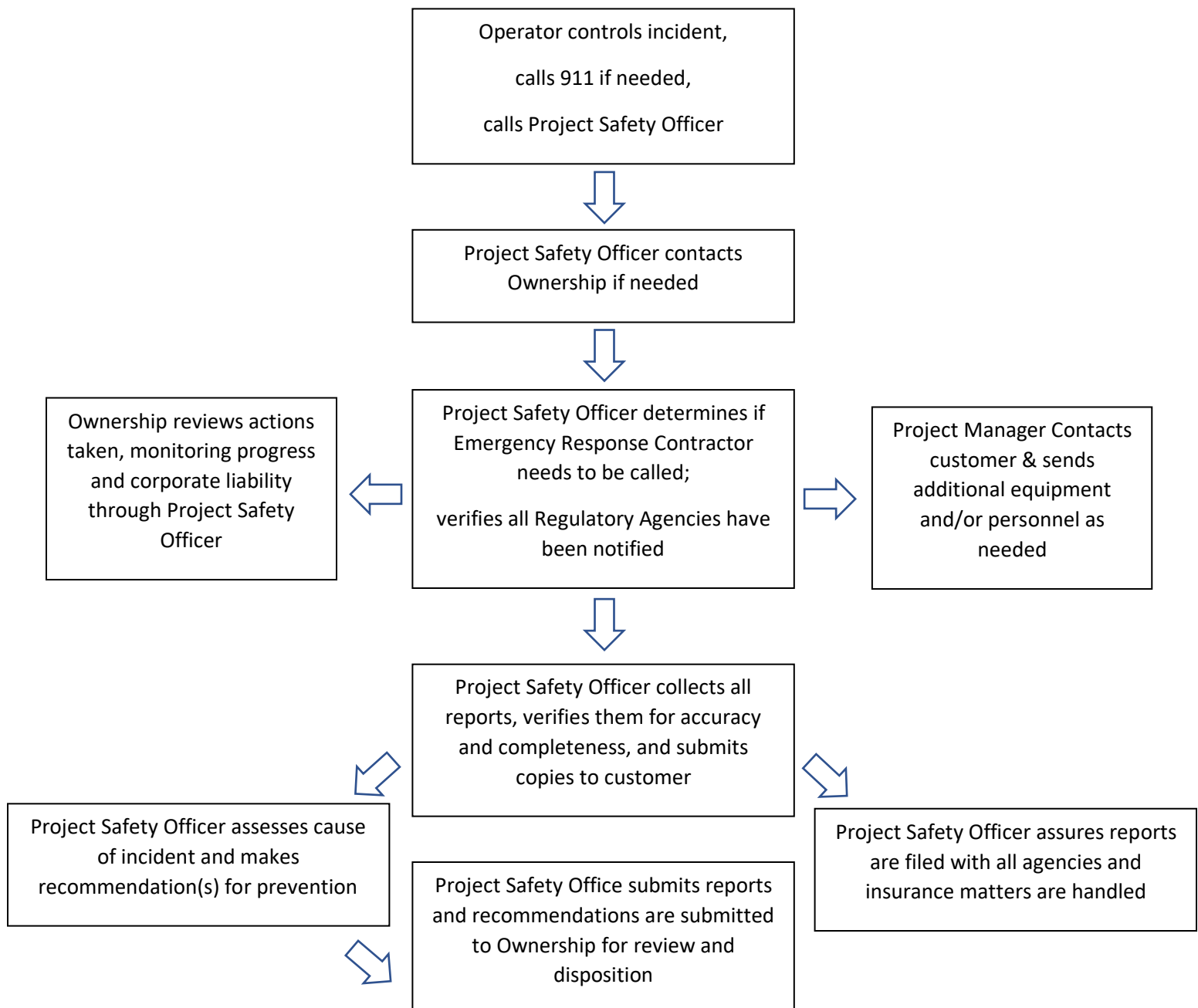
Seventy-two (72)-hour notification conditions include, but are not limited to, the following:

- Identification of non-aqueous phase liquid (NAPL) on groundwater or surface water, with a thickness equal to or greater than 1/2 inches.
- OHM detected in the Zone I of a public water supply or within 500-feet of a private drinking water well at concentrations greater than or equal to the applicable MCP GW-1 Reportable Concentration
- Release or threat of release from an underground storage tank.

If these, or other conditions requiring two (2) or seventy-two (72)-hour notification, are found on-site it is Newport Construction Corporation's responsibility to notify DCR, and to conduct the appropriate IRA activities. DCR will contact the MassDEP on behalf of the Contractor.

EMERGENCY PROCEDURES AND SAFETY PRECAUTIONS

EMERGENCY RESPONSE FLOW CHART



GENERAL SPILL PROVISIONS

In the event of a spill, surface terrain, direction and velocity of the prevailing wind, and proximity to possible ignition sources shall be observed by the Contractor or DCR Project Managers or their designees and roadblocks to be set up immediately, if necessary.

Trucks, hand tools, and equipment should not be moved into the spill area until precautions have been taken. When equipment is moved into the spill area it shall be removed as soon as its task is completed. Only personnel vital to the cleanup effort will be allowed in the spill area.

No ignitable materials (matches, lighter, smoking materials) will be allowed into the spill area.

Minor Spill (< 10 GALLONS)

All efforts will be made to contain the spill by erecting an earthen berm or barrier. The area will be remediated in accordance with all applicable state and federal regulations.

Large Spill (>10 GALLONS)

The spill will be contained to the smallest area possible using booms, berms, or other effective barriers. DCR and the Contractor Project Manager, Contractor project contact, and the MassDEP will be notified immediately.

The Project Safety Officer and/or onsite representatives will notify the following agencies depending on the nature of the response:

- Boston Conservation Commission
 - o 617-635-3850 from 9:00 am to 5:00 pm Monday thru Friday
 - o 617-635-4500 all other items
 - o Nicholas Moreno via email at cc@boston.gov
- Emergency Response Contractor(s)
- Boston Police Department
- Boston Fire Department
- Local Hospital: Massachusetts General Hospital
55 Fruit Street
Boston, MA

EMERGENCY CONTACTS

EMERGENCY SERVICES Fire

Emergency	911
Medical Emergency Police	911
Emergency	911
Poison Control	(800) 542-4225
National Response Center	(800) 424-8802

DCR Contacts

DCR Project Manager/ DCR	Ginna Johnson	(857)324-1424
Deputy Chief Engineer DCR		
Deputy Commissioner of Operations	Nick Gove	(617) 875-1984
Environmental Director	Thomas Valton	(339) 368-2930
MassDEP	(Day)	(978) 694-3200
	(Night)	1-888-304-1133

INJURIES AND ILLNESSES

Immediate action steps:

1. Determine extent of injuries or illness;
2. Determine if immediate assistance is required at the scene, which has not already been initiated (e.g. ambulance, police, agency reporting etc.);
3. Do Not attempt any treatment unless trained to do so;
4. Be aware of the location of the First Aid Kit (use only if trained);
5. Take appropriate precautions to avoid exposure to blood/bodily fluids
6. Verbally report incident to Project Safety Officer
7. In the case of a serious injury or illness requiring hospitalization, arrangements to provide family transportation to the hospital/treating facility should be considered.
8. Provide periodic feedback and/or status reports on-line as often as required or necessary.

FUEL AND OIL SPILLS

If an oil or fuel release occurs, act quickly to ensure the following has been completed as appropriate.

Immediate action steps:

- De-activate equipment;
- Stop Work in area of Spill;
- Deploy a bucket to catch oil or fuel;
- Deploy sorbents to ground surface; and
- Bag spent sorbents.
- As appropriate, coordinate contractor pump-out and Emergency Response with Project Safety Officer
- Provide periodic feedback and/or status reports on-line as often as required.

FIRES

In a fire emergency, primary concern is for the safety of all employees, followed by protection of physical assets. The role of terminal/fleet employees is:

- Extinguish minor fires;
- Promptly notify the local Fire Department;
- Assist in the orderly and safe evacuation of the facility;
- Render assistance to the Fire Department, as required; and
- Notify appropriate management personnel.

If an employee observes or discovers a fire, or sees visible smoke, their first action is to alert employees, evacuate the building and notify the Fire Department.

Do not attempt to fight a fire if you are alone!

If an employee has been trained in the use of hand-portable fire extinguishers, attempt to extinguish the fire, or investigate the cause of smoke. In no event should the employee put themselves in jeopardy!

If an employee has not been trained in the use of fire extinguishers, remain at a safe distance and direct the responding response team or local Fire Department to the location of the fire or smoke.

If evacuation is required, all employees should immediately leave the building via the nearest

emergency exit and proceed away from the facility.

Verbally report incident to:

a) Ownership

- Operations Manager
- Project Safety Officer
- Provide periodic feedback and/or status reports as often as required.

WEATHER

During severe weather conditions, it is ultimately the Field Staff's decision whether or not it is safe to drive during icy and or snowy conditions.

- If the Field Staff makes a determination that it is unsafe to enter or drive into the Site, they must continue to the closest area available that they determine is safe to stop and call the Project Safety Officer.
- When inclement weather conditions are forecast that may ultimately result in unsafe conditions (ice, snow, hurricane, etc.) it is the responsibility of the Operations Manager to constantly stay updated with these conditions through local weather reports.
- The Operations Manager may ultimately make different decisions pertaining to different geographical areas that we service, it will ultimately be the Operations Manager and/or Ownership determining what areas will be serviced.

OTHER EMERGENCIES (SECURITY, BOMB THREAT, CIVIL DISTURBANCE, ETC.)

In an emergency as listed above, the primary concern is for the safety of all employees, followed by protection of physical assets. The role of the employees is to:

- Secure the premises immediately;
- Promptly notify the local Fire and/or Police Departments;
- Assist in the orderly and safe evacuation of the facility/premises;
- Render assistance to the Civil Departments responding; and
- Notify appropriate management personnel.

In no event should the employee put himself or herself in jeopardy!

In an emergency as listed above, the primary concern is for the safety of all employees, subcontractors and protection of physical assets. The role of the employee is:

- Avoid situations that have a potential to become an emergency;
- Contact dispatch using your cell-phone providing them with your location and description of your emergency;
- Contact the local authorities; and
- Once you have located a safe haven, call the Operations Manager, Ownership and/or Project Safety Officer.

EMPLOYEE RESPONSIBILITIES

In the event of an emergency, immediately (or as soon as practical and necessary) notify management who will assist employees handling the incident. Management will be responsible for directing corrective actions, coordinating clean-up operations and/or monitoring the use of emergency equipment by outside services, as required.

Additional Responsibilities:

- a) Assure that local police, fire, ambulance, National Response Center, EPA and Coast Guard, if dictated by the emergency, have been notified of the following:
 - Exact location of the incident
 - Nature and extent of injuries, if any
 - Specific products on board
 - Apparent condition of the vehicle
 - Need to apply foam (if volatile products have been released)
 - Any other real or potential hazards that are known at that time
- b) Contact the Project Safety Officer for emergency information/assistance regarding Federal/State reporting requirements, environmental remediation and/or employee safety and health issues.

TRAINING

Training on the Emergency Response Plan, including a review of potential emergency situations, individual roles/responsibilities, reporting requirements and appropriate sections of this Plan should be conducted for all employees immediately upon assignment. Refresher training will be required on an annual basis, or whenever changes or updates to the Plan are made.

EMERGENCY TELEPHONE NUMBERS

- Steve Cyr, 617-304-6164
- Nick Gove, 617-875-1984
- Ale Echandi, Ecologist, 617-850-2398

ATTACHMENT A–ACCIDENT, SPILL & CONTAINMENT REPORTING FORM

Purpose

To provide managers and field staff with a procedure to properly report an accident, spill/contamination and safety incident and eliminate the need for personal decisions regarding the reporting procedures. This procedure helps ensure uniformity throughout the organization regarding accurate, timely and complete safety incident reporting. The procedure is written to maximize safety response and minimize injury.

Scope

The safety incident report must be completed each time an/accident, spill/contamination or work injury occurs within the organization. This includes the reporting requirements from initial notification to the completion of the report.

Responsibility

The field staff is responsible to call the Project Safety Officer's 24-hour cell phone number immediately to accurately report information regarding all aspects of the safety incident. The field staff must also complete the written incident report form and other documents, as necessary, provided in the accident report kit.

The Project Safety Officer will assist and administrate the field staff to handle the safety incident and in preparation of the written accident report. The Project Safety Officer will also complete the Contamination/Spill Report and Manager's Report of Injury to Employee when necessary.

Procedure

Every safety incident must be reported immediately to the Project Safety Officer by calling the 24/7 emergency number. An emergency phone list is provided in the Emergency Response Procedure section of this manual in case the emergency number is out of service. Contractor contact information will be provided following the hiring of said contractor. Field Staff must call unless injury or safety precautions prevent him from doing so.

- An accident is defined as any unplanned event that may result in injury or interrupt the completion of an activity, and which may (or may not) include property damage.
- A spill is defined as a release of fluids from tanks, containers or vessels accidentally or unintentionally.
- Contamination is defined as any substance or reaction that causes the original product to be altered from its original state or purity.

The field staff involved in the safety incident is responsible for documenting pertinent facts and information relating to the cause and disposition of the incident. The field staff must properly complete the accident report kit provided. This includes:

- Taking photographs of the accident site, specific damage and for evidence of cause. Use your best judgment and when in doubt, take the photograph.
- Two witness cards are provided to be completed by up to two individuals who witness the

incident. One courtesy card is included for use if the field staff cannot leave the accident site. The card may be given to an individual on site to call and report the safety incident.

- A note card is included to write down any facts or statements that provide evidence pertinent to the safety incident.
- The completed documentation in the accident report kit must be turned into the office before completion of scheduled shift. If not able to do so other arrangements will be made. In the event of injury to the field staff, the Project Safety Officer is responsible to see that the accident report is completed to the best of his/her ability. This may include going to the site or authorizing company personnel on site to obtain necessary disposition.
- The Project Safety Officer will administer the reporting and claims processes and maintain required files.

Emergency Response Procedures

In the event of an accident, equipment breakdown, malfunction or human error, which results in the release of any oil, fuel, hazardous or non-hazardous product, the field staff should attempt to implement the following procedures.

APPROACH THE SCENE CAUTIOUSLY

Do not rush in to assist, or you may be added to the list of casualties. Prevent others from doing the same. DO NOT attempt any action beyond your level of training. DO call for help.

Identify The Hazards

Consult placards, container labels, MSDS, shipping papers, Emergency Response Guidebook and/or knowledgeable persons at the scene. Evaluate all available information before concluding on a course of action. Do not assume the material is harmless because it lacks a color or odor. If limited information is available, err on the side of caution; as more specific information becomes available, the response can be tailored to the hazard.

Secure The Area

Establish an exclusion zone that will keep non-emergency personnel well out of danger. It may be necessary to patrol the area to keep spectators at a safe distance.

Obtain Help

Contact the appropriate local emergency services and your Project Safety Officer as soon as possible. Be prepared to provide as much of the following information as possible:

- Location of release - a physical site address, town/city and state/providence, mile marker along a highway, direction of travel, or any other information, which will direct a responding emergency response cleanup crew.
- Details of release - what was released, what time it occurred, cause of the release, how much has been released, measures taken to prevent the release, and what media or mediums have been impacted by the release (i.e., storm drains, streams, roads, or soils.)

Communications - provide the following if available: names and phone numbers of authorities contacted or at the scene, contact person and phone number if at a client's facility, and ensure that the MSDS is available to responding authorities. In a hazardous material incident, the transmittal of TIMELY and ACCURATE information is essential. This is especially true when determining the identity of the material(s) involved.

Emergency Response Priorities

- Prevent or reduce the loss of lives or injury to responders and the public. Prevent or reduce the loss of property or damage to property. Prevent or reduce the effects of the release upon the environment. Restore the area to normal (operational) conditions.

Emergency Spill Response Telephone Notification Procedure

- Field Staff reports the incident to the Project Safety Officer and to the local police and fire departments by dialing 911.
- The Project Safety Officer will coordinate with an emergency responder when required.

Depending on the nature of the release; the Project Safety Officer will report the incident to all appropriate authorities including the PHMSA's National Response Center and will need the following information:

1. Name, address and telephone number of the company and call back number
2. Location of spill (physical address, country and state)
3. Time and duration of release
4. Cause of release
5. Chemical identity of material released/ DOT identification number
6. Estimated amount of release (gallons, pounds)
7. Medium or media into which the release occurred
8. Hazard classification of released material
9. Containment efforts
10. Distance to nearest water body or storm drain
11. Name of cleanup contractor called and estimated time of arrival
12. Shipper and consignee information
13. Manufacturer, if known
14. Bill of lading number/waybill number

DCR - SPILL OR INCIDENT REPORT FORM

Instructions: Complete for any type of petroleum product or hazardous materials/waste spill or incident. Provide a copy of this report to management.

1. DCR Personnel Involved in Spill Reporting:

Project Supervisor: Name, Title, and Phone Number: _____

DCR Project Safety Officer: Name, Title, and Phone Number: _____

2. Contractor

Name and Title of Person Responsible for Spill Response: _____

Phone Number: _____

3. General Spill Information:

Common Name of Spilled Substance: _____

Quantity Spilled (Estimate): _____

Describe Concentration of Material (Estimate): _____

Date of Spill: ____/____/____

Time Spill Started: ____ AM ____ PM

Time Spill Ended: ____ AM ____ PM

4. Spill Location and Conditions:

Project Title: _____

Street Address and City /or District & Park Name: _____

Weather Conditions: _____

If Spill to Water,

Name of Water Body (if ditch or culvert, identify the water body that the structure discharges to):

Identify the Discharge Point: _____

Estimate the Depth and Width of the Water Body: _____

Estimate Flow Rate (i.e. slow, moderate, or fast): _____

Describe Environmental Damage (i.e., fish kill?): _____

5. Actions taken:

To Contain Spill or Impact of Incident: _____

To Cleanup Spill or Recover from Incident: _____

To Remove Cleanup Material: _____

To Document Disposal: _____

To Prevent Reoccurrence: _____

6. Reporting the Spill:

Spills to water & soil that may be an immediate threat to health or the environment (i.e., explosive, flammable, toxic vapors, shallow groundwater, nearby creek, etc.):

Immediately call DCR Environmental Director Thomas Valton - cell# 339.368.2930

Note: Project specific permits may have additional reporting requirements.

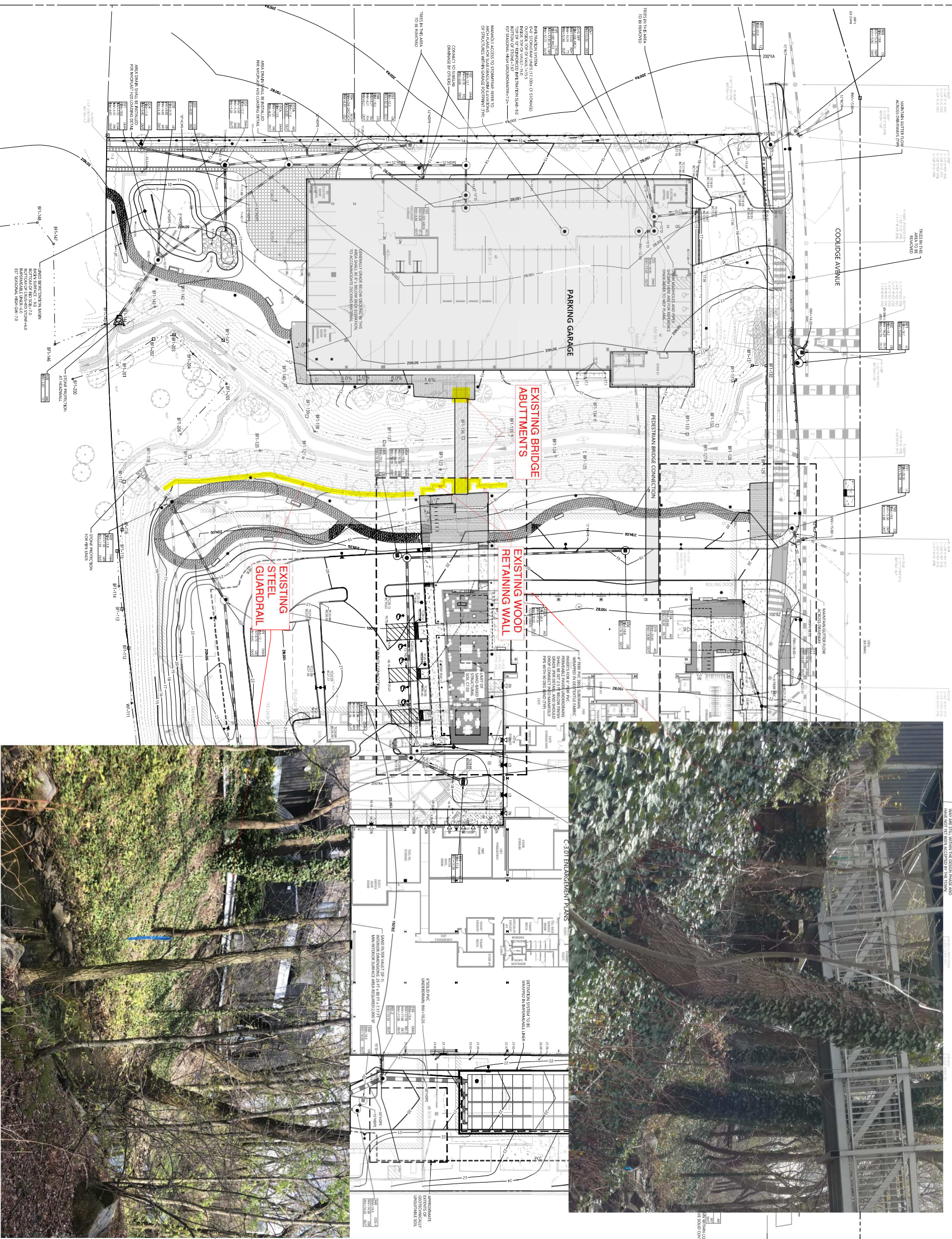
List all agencies contacted; include names, dates, and phone numbers for people you spoke with:

7. Person Responsible for Managing Termination/Closure of Incident or Spill:

Name and Phone: _____

Address and Fax: _____

8. Additional Notes/Information (if necessary):





August 3, 2022

Ref: 14844.01

Laurel Schwab
Senior Environmental Planner & Conservation Agent
Watertown Community Development & Planning
149 Main St Watertown, MA 02474

Re: 57 Coolidge Ave – DEP 321-0175 WWO-2021-02 (the "Project")
Stream Corridor Clean up

Dear Laurel:

On behalf of the Applicant, ARE-MA Region No. 77, LLC, I am submitting the following for your review:

- Approved plan with highlighting for illustration
- Existing condition site photos

Since the issuance of the Order of Conditions in June 2021, the Project Team has concluded that it would be prudent and beneficial for the naturalization of the stream corridor to remove certain existing man-made structures from along the stream banks. These items include:

- A length of deteriorating steel guardrail along top of slope on the eastern bank, south of the existing bridge. The guardrail will serve no purpose in the proposed condition.
- Two wooden retaining walls adjacent to the bridge abutment on the eastern end of the existing bridge. The retaining walls are currently leaning. the area will be graded consistent with the surrounding slope.
- Existing bridge abutments. It was originally planned to reuse the abutments for the bridge replacement. However, from a structural perspective, this is no longer feasible. New abutments will be placed out-board of the existing abutments.

The Notice of Intent, approved under the file number referenced above, contemplated improvements within the locally-regulated 50' No-Build Zone (NBZ). These improvements above are consistent with the performance standards of the Watertown ordinance: The aesthetic value of Watertown's wetland resources depends on maintenance of the natural scenery and appearance, including natural vegetation, of any Resource Area subject to the jurisdiction of the Ordinance that is visible to the public.

Senior Environmental Planner & Conservation Agent
Ref: 14844.01
August 3, 2022
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This work is consistent with the performance standards for Riverfront Area (RFA). Work proposed in the RFA will improve existing conditions of the capacity of the RFA on the Site to protect the interests described in the WPA by creating more contiguous open and pervious surfaces, enhancing vegetated areas, promoting biodiversity, stabilizing the stream Bank, and improving water quality.

While I consider these improvements to be minor and consistent with the current Order of Conditions, I would appreciate your input as to whether this can be administratively approved by your department, or if a formal request of the Conservation Commission is warranted.

Please don't hesitate to contact me at cnagle@vhb.com or (617) 999-0845 if you have any questions on this minor revision.

Sincerely,

VHB

A handwritten signature in black ink that reads "Conor Nagle". The signature is fluid and cursive, with the first name "Conor" and last name "Nagle" clearly distinguishable.

Conor Nagle
Project Manager

cc: Leo Martin, Chair – Watertown Conservation Commission
Katie Snyder, National Development