



CITY OF WATERTOWN

Conservation Commission

The Conservation Commission of the City of Watertown, will hold a public meeting on the 4th day of May, 2022 at 7:00 p.m. in accordance with Chapter 20 of the Acts of 2021. This meeting has only remote opportunities for participation with public access provided as follows:

CONSERVATION COMMISSION MEETING WEDNESDAY, MAY 4, 2022 AT 7:00 PM AGENDA

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television): <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:
- D. Public may comment through email: lschwab@watertown-ma.gov

-
- 1. Public Hearing-
 - A. **(Continuance has been requested to June meeting)- Notice of Intent- 0 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 and Owner.
 - 2. Public Hearing-
 - A. **(Continuance has been requested to June 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 Seylon LLC, Owner, Christopher M. Lucas, Representative/Applicant
 - 3. Public Hearing-
 - A. **Notice of Intent-** for the monitoring and removal of aquatic invasive species in the Lakes District of the Charles River (west of the Watertown Dam). Department of Conservation and Recreation, Owner/ SOLitude Lake Management, Representative

4. Massachusetts Association of Conservation Commissions Certificate of Achievement
 - A. Maria P. Rose received a Certificate of Achievement for her completion of the Conservation Commission Certificate Training Program.
5. Agent Report
 - A.
 - a. CPA
 - b. Climate and Energy Plan
 - c. Ongoing Orders of Condition
 - d. Arsenal Park
6. Acceptance of Minutes
 - A. Review and Accept Minutes from the April 6, 2022 Conservation Commission Meeting

Notice of Intent Application Charles River Aquatic Management Program

Watertown, MA

2022

Prepared for:

**DCR Lakes and Ponds
% Kara Sliwoski
251 Causeway Street, Suite 800
Boston, Ma 02114**

Prepared by:

**SOLitude Lake Management
590 Lake Street
Shrewsbury, MA 01545**



TABLE OF CONTENTS

◆ NOI Application Form	
▪ Wetlands Protection Act Form 3	
▪ Appendix A: Ecological Restoration Limited Project Checklists	
◆ NOI Wetland Fee Transmittal Form	
◆ ATTACHMENT A – Abutter Notification	
Environmental Monitor	
Affidavit of Service	
Abutters Notice	
Abutters Lists	
◆ ATTACHMENT B - Project Description	
1.0 Introduction	1
2.0 Site Description	1-4
3.0 Problem Statement	4
4.0 Proposed Management Program	4-14
5.0 Phase II -Contingent Management Techniques for Future Consideration	14-19
6.0 Alternatives Analysis	19-20
7.0 Compliance	20-21
8.0 Impacts of the Proposed Management Plan Specific to the Wetlands Protection Act	21-22
◆ ATTACHMENT C – Figures	
▪ Charles River Lakes District Work Area by Town	
▪ Watertown - Distribution of Non-Native Species	
▪ Site Locus	
◆ ATTACHMENT D – Herbicide/Algaecide Information	



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

Important:

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



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

A. General Information

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

a. Street Address

b. City/Town

c. Zip Code

Latitude and Longitude:

d. Latitude

e. Longitude

f. Assessors Map/Plat Number

g. Parcel /Lot Number

2. Applicant:

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

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

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

a. First Name

b. Last Name

c. Company

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

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

a. Total Fee Paid

b. State Fee Paid

c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

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

- | | |
|---|---|
| 1. ☐ Single Family Home | 2. ☐ Residential Subdivision |
| 3. ☐ Commercial/Industrial | 4. ☐ Dock/Pier |
| 5. ☐ Utilities | 6. ☐ Coastal engineering Structure |
| 7. ☐ Agriculture (e.g., cranberries, forestry) | 8. ☐ Transportation |
| 9. ☐ Other | |

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

1. ☐ Yes ☐ No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)
- 310 CMR 10.53(4) Controlling non-native vegetation and improving the natural capacity of a resource area
2. Limited Project Type to protect the interests of the Wetland Protection Act

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

a. County

b. Certificate # (if registered land)

c. Book

d. Page Number

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

- ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

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



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WPA Form 3 – Notice of Intent

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

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	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 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 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	1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

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

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

4. Proposed alteration of the Riverfront Area:

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

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

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

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

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



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

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet _____ 2. cubic yards dredged _____	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet _____	2. cubic yards beach nourishment _____
e. ☐ Coastal Dunes	1. square feet _____	2. cubic yards dune nourishment _____
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. ☐ Coastal Banks	1. linear feet _____	
g. ☐ Rocky Intertidal Shores	1. square feet _____	
h. ☐ Salt Marshes	1. square feet _____	2. sq ft restoration, rehab., creation _____
i. ☐ Land Under Salt Ponds	1. square feet _____	
	2. cubic yards dredged _____	
j. ☐ Land Containing Shellfish	1. square feet _____	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	1. cubic yards dredged _____	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet _____	
4. ☐ Restoration/Enhancement		
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.		
a. square feet of BVW _____	b. square feet of Salt Marsh _____	
5. ☐ Project Involves Stream Crossings		
a. number of new stream crossings _____	b. number of replacement stream crossings _____	



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C. Other Applicable Standards and Requirements

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

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

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

08/0/2021

b. Date of map

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

- c. Submit Supplemental Information for Endangered Species Review*

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

(a) within wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

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

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

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

(b) ☐ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

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



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

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MassDEP File Number

Document Transaction Number

City/Town

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

- (c) ☐ MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/ mesa/ mesa_fee_schedule.htm).
Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

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

- (d) ☐ Vegetation cover type map of site
- (e) ☐ Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/ mesa/ mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

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

- a. ☐ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

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

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

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

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

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



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

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City/Town

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

Online Users:

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

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

D. Additional Information

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

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

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

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



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

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City/Town

D. Additional Information (cont'd)

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

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

a. Plan Title

b. Prepared By

c. Signed and Stamped by

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

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

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

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

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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Provided by MassDEP:

MassDEP File Number

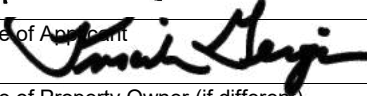
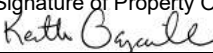
Document Transaction Number

City/Town

F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant		4/08/2022
2. Date		
3. Signature of Property Owner (if different)		4/12/2022
4. Date		
5. Signature of Representative (if any)		6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

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

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



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

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



A. Applicant Information

1. Location of Project:

a. Street Address

b. City/Town

c. Check number

d. Fee amount

2. Applicant Mailing Address:

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

3. Property Owner (if different):

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

B. Fees

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.

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



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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 2e			

Step 5/Total Project Fee:

Step 6/Fee Payments:

Total Project Fee:

a. Total Fee from Step 5

State share of filing Fee:

b. 1/2 Total Fee **less** \$12.50

City/Town share of filing Fee:

c. 1/2 Total Fee **plus** \$12.50

C. Submittal Requirements

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

Department of Environmental Protection
Box 4062
Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

Eligibility Checklist

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

Important:

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



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

Regulatory Features of All Coastal and Inland Ecological Restoration Limited Projects

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

City/Town

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.



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

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

Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

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

Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

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

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

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

General Eligibility Criteria for All Inland Ecological Restoration Limited Projects

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

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

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

General Eligibility Criteria for All Inland Ecological Restoration Limited Projects

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

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

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.



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

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

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

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

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

Required Actions (310 CMR 10.11)

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

- ☐ **Massachusetts Environmental Policy Act (MEPA) / Environmental Monitor**
<http://www.mass.gov/eea/agencies/mepa/submitting-notice-to-the-environmental-monitor.html>

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

http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm)



WPA Form 3 – Notice of Intent

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:

MassDEP File Number

Document Transaction Number

City/Town

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, <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/>; 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: <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review>

☐ 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: _____



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

Required Actions (310 CMR 10.11) (cont.)

- ☐ 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 <http://www.nae.usace.army.mil/Portals/74/docs/regulatory/StateGeneralPermits/NEGP/MADMFTTR-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: <http://www.mass.gov/eea/agencies/dfg/dmf/publications/technical.html>]
- ☐ 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.



WPA Form 3 – Notice of Intent

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:

MassDEP File Number

Document Transaction Number

City/Town

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** – <http://www.mass.gov/eea/agencies/dfg/dfw/>
- ☐ Projects that involve silt-generating, in-water work that will impact a non-tidal perennial river or stream and the in-water work will not occur between May 1 and August 30.
- ☐ Obtain a written determination from the Division of Fisheries and Wildlife (DFW) as to whether the proposed work requires a TOY restriction.
- ☐ The proposed work does NOT require a TOY restriction.
- ☐ The proposed work requires a TOY restriction. The DFW determination with TOY restriction and other conditions is attached.
- ☐ **MassDEP Water Quality Certification**
- ☐ Project involves dredging of 100 cubic yards or more in a Resource Area or dredging of any amount in an Outstanding Resource Water (ORW). A copy and proof of the MassDEP Water Quality Certification pursuant to 314 CMR 9.00 is attached to the NOI.
- ☐ This project is a Combined Permit Application for 401 Dredging and Restoration (BRP WW 26).
- ☐ **MassDEP Wetlands Restriction Order**
- Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
- ☐ Yes ☐ No
- ☐ **Department of Conservation and Recreation**

Office of Dam Safety

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

Required Actions (310 CMR 10.11) (cont.)

Areas of Critical Environmental Concern (ACECs)

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

☐ Yes

☐ No

If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations).

Name of ACEC

Minimum Required Documents (310 CMR 10.12)

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

- ☐ This Notice of Intent meets all applicable requirements outlined in for Ecological Restoration Projects in 310 CMR 10.12. Use the checklist below to insure 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.

a. Plan Title

b. Prepared by

c. Signed and Stamped by

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

- ☐ 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.



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

Minimum Required Documents (310 CMR 10.12)

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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

City/Town

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

Certification that the Ecological Restoration Project Meets the Eligibility Criteria

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.

Signature of Applicant or Authorized Agent

Printed Name of Applicant or Authorized Agent

Date

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

ATTACHMENT A

Abutter Notification

To: The Environmental Monitor

From: SÖLitude Lake Management

Date:

Re: Notification of filing an NOI for Charles River in Newton, Waltham, Watertown, and Weston

Anticipated date of submission:

The proposed project is seeking approval to initiate an Aquatic Management Program for the Charles River located in Newton, Waltham, Watertown, and Weston, MA. USEPA/State registered herbicides will be applied/used to manage invasive aquatic vegetation to protect the interests of the Wetlands Protection Act by impeding eutrophication and improving habitat value.

Reviewing Conservation Commission(s):

Watertown Conservation Commission
149 Main Street
Watertown, MA 02472

Copies of the NOI may be examined or acquired from the Conservation Commission, or by contacting the applicant's representative, SÖLitude Lake Management, at info@solitudelake.com, or 508-865-1000, Monday - Friday between 9AM and 4PM.

See Conservation Commission website for the meeting schedule for exact dates and agendas.

**NOTIFICATION TO ABUTTERS UNDER THE
MASSACHUSETTS WETLANDS PROTECTION ACT
CHAPTER 131, SECTION 40**

In accordance with the 2nd paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

- A. The name of the applicant is: DCR Lakes and Ponds % Kara Sliwoski
- B. The Applicant has filed a Notice of Intent with the Watertown Conservation Commission, seeking to work within an Area Subject to Protection under the Massachusetts Wetlands Protection Act (General Laws Chapter 131, Section 40).

Description of Project: An integrated Aquatic Management Program at the Charles River in Newton, Waltham, Watertown, and Weston to monitor, assess and implement measures for control of non-native/nuisance aquatic vegetation and algae growth, specifically with the use of USEPA/State registered aquatic herbicides.

- C. The location where the activity is proposed at the Charles River in Newton, Waltham, Watertown, and Weston.
- D. Copies of the Notice of Intent may be examined at the Watertown Conservation Commission office during their normal business hours. For more information, call the Conservation Commission at 617-972-6486. Copies of the Notice of Intent are available (for a fee) from the applicant's representative (SOLitude Lake Management) by calling (508) 865-1000 between the hours of 8 AM and 4 PM (Monday through Friday).
- E. Questions regarding this Notice of Intent may be directed to the applicant's representative (SOLitude Lake Management) by calling (508) 865-1000 between the hours of 8 AM and 4 PM (Monday through Friday)
- F. The Watertown Conservation Commission will hold a public hearing on May 4th, 2022 at or after 7:00pm in the Phillip Pane-Lower Hearing Room in City Hall

NOTE: Notice of this public hearing, including date, time and place:

- 1) Will be published at least five (5) days in advance in the local newspaper
- 2) Will be posted in the City Hall not less than forty-eight (48) hours in advance of the public hearing.

NOTE: You may also contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call the Northeast Regional Office at (978) 694-3200.

TOWN OF ISLAND IN SQUARE
149 MAIN STREET
WATERTOWN MA 02472

HAROUTUNIAN RICHARD A
50 WATERTOWN ST U-104
WATERTOWN MA 02472

GILES MATTHEW L
50 WATERTOWN ST-UNIT 105
WATERTOWN MA 02472

BHALERAO TRUSTEE RISHIKESH B
50 WATERTOWN ST U-106
WATERTOWN MA 02472

YANG JACK
50 WATERTOWN ST U107
WATERTOWN MA 02472

CICCONI DANIEL J
50 WATERTOWN ST #606
WATERTOWN MA 02472

RILEY MICHAEL H TRUSTEE
C/O CONSTANCE HOLMES
WATERTOWN MA 02472

ENGLAND ROBERT
50 WATERTOWN ST U-109
WATERTOWN MA 02472

ISHKANIAN ELLEN S
5 LILAC CR
WELLESLEY MA 02181

MONCRIEFF BROOKE
75 CAPTIOL ST
WATERTOWN MA 02472

WU HAO
50 WATERTOWN STREET #112
WATERTOWN MA 02472

BELSCHNER BRIANNE C.
50 WATERTOWN ST U-113
WATERTOWN MA 02472

RAJENDRAPRASAD SANU SREEJA
50 WATERTOWN ST U201
WATERTOWN MA 02472

PORGES DONALD F
50 WATERTOWN ST U202
WATERTOWN MA 02472

BARSOUMIAN ANNI
50 WATERTOWN ST-UNIT 204
WATERTOWN MA 02472

CHOW CHOK WING
50 WATERTOWN ST #205
WATERTOWN MA 02472

SITTHICHAI RUNGSAN
50 WATERTOWN ST U206
WATERTOWN MA 02472

DYMKOVA GALINA
65 WOODCLIFF ROAD
CHESTNUT HILL MA 02467

VAN CRISTINA M
50 WATERTOWN ST U208
WATERTOWN MA 02472

YU XINGXING
5225 COCHRANE AVE
OAKLAND CA 94618

WAN PHILIP TRUSTEE
50 WATERTOWN ST U210 TRUST
BELMONT MA 02478

KAHN ROBIN
50 WATERTOWN ST - U211
WATERTOWN MA 02472

CHARI RAJAGOPAL & SHOBHNA
50 WATERTOWN ST #212
WATERTOWN MA 02472

BARSHTEYN SVETLANA
342 GREEN ST
NORTHBOROUGH MA 01532

GU JOANN Z
50 WATERTOWN ST #214
WATERTOWN MA 02472

LI DARREN
50 WATERTOWN ST- U301
WATERTOWN MA 02472

KEUSSEYAN KRIKOR
50 WATERTOWN ST U302
WATERTOWN MA 02472

MAYUR TRUSTEE RANJANA
50 WATERTOWN ST U303
WATERTOWN MA 02472

THUMITH EDWARD R
22 BENEDICT RD
BOURNE MA 02532

WAGH ADITI M
50 WATERTOWN ST U-305
WATERTOWN MA 02472

DEMERS SUSAN A
50 WATERTOWN ST U-306
WATERTOWN MA 02472

NEMATALLAH NADER Y
50 WATERTOWN ST U307
WATERTOWN MA 02472

ZHOU LILI
50 WATERTOWN ST U-308
WATERTOWN MA 02472

ELVIN FRANK J & ANN TRUSTEES
2 PIN OAK ESTATES DR
BELLAIRE TX 77401

KHOREVA YELENA
50 WATERTOWN ST U 310
WATERTOWN MA 02472

MELAMED YURY & RADA TRUSTEES
50 WATERTOWN ST U-311
WATERTOWN MA 02472

HILL SHAWN TRUSTEE
58 MYRTLE ST. APT 2
SOMERVILLE MA 02145

LEMOINE CAROLINE A
50 WATERTOWN ST U-313
WATERTOWN MA 02472

MAYSTROVSKAYA MARIA
50 WATERTOWN ST #314
WATERTOWN MA 02472

SESNOVICH BRUCE A
50 WATERTOWN ST #401
WATERTOWN MA 02472

FONTAINE PAULINE
50 WATERTOWN ST U-402
WATERTOWN MA 02472

YOUNG BENJAMIN
50 WATERTOWN ST U403
WATERTOWN MA 02472

FIKSLER SVETLANA
50 WATERTOWN STREET
WATERTOWN MA 02472

GESY REALTY TRUST
50 WATERTOWN ST U-405
WATERTOWN MA 02472

DOLL SUSAN K.
50 WATERTOWN ST-UNIT 406
WATERTOWN MA 02472

BAGHDOYAN VALENTINE Y TRUSTEE
50 WATERTOWN ST U407
WATERTOWN MA 02472

WONG PATRICIA
50 WATERTOWN ST #408
WATERTOWN MA 02472

FARKAS GEORGE TRUSTEE
50 WATERTOWN ST-UNIT 409
WATERTOWN MA 02472

CHAN LIN JOYCE
140 WISWALL RD
NEWTON MA 02459

RARDIN ROBERT LYNN
50 WATERTOWN ST U-411
WATERTOWN MA 02472

ARMANIOUS NADINE
50 WATERTOWN ST #412
WATERTOWN MA 02472

LAI ANDY
50 WATERTOWN ST U 413
WATERTOWN MA 02472

PISTOFTZIAN ANGELO
50 WATERTOWN ST #414
WATERTOWN MA 02472

CHIOTASSO TRUSTEE CHRISTINA M
50 WATERTOWN ST #501
WATERTOWN MA 02472

FARKAS TRUSTEE GEORGE
50 WATERTOWN ST #502
WATERTOWN MA 02472

KIDDER STEPHEN L
3740 MORRISON WAY
DOYLESTOWN PA 18902

WONG JOAN LAI MING TRUSTEE
68 LOS ANGELES ST U 102
NEWTON MA 02458

CONNELLY PETER J
50 WATERTOWN ST U505
WATERTOWN MA 02472

VANPEE TRUSTEE MARTINE A
50 WATERTOWN ST U506
WATERTOWN MA 02472

KOMINS LAUREN JILL
193 OAK ST UNIT #206E
NEWTON MA 02464

KAYAL DANIELLE
50 WATERTOWN ST U508
WATERTOWN MA 02472

CHANG SANDRA
94 MARY ELLEN ROAD
NEWTON MA 02468

SOCKUT GARY
50 WATERTOWN ST #510
WATERTOWN MA 02472

BARSOUMIAN ARMENOUHIE
50 WATERTOWN ST #601
WATERTOWN MA 02472

ADOMAT RACHEL N
50 WATERTOWN STU602
WATERTOWN MA 02472

ZOUKIS MARY LOUISE
50 WATERTOWN ST U-603
WATERTOWN MA 02472

TSUKAMOTO HIRONORI
50 WATERTOWN ST U604
WATERTOWN MA 02472

CARR JEAN A TRUSTEE
50 WATERTOWN ST U605
WATERTOWN MA 02472

WEBER ROBERT P
50 WATERTOWN ST #607
WATERTOWN MA 02472

LIU TE-CHUN
50 WATERTOWN ST U608
WATERTOWN MA 02472

GROSSO JAMES F.
50 WATERTOWN ST #609
WATERTOWN MA 02472

HALLAM STEPHANIE
3301 206TH PL SW
LYNNWOOD WA 98036

ASN WATERTOWN LLC
P O BOX 87407
CHICAGO IL 60680

TOMARAS TINA TR
180 RIVER ST UNIT B -4
WALTHAM MA 02453 -6500

MAI THANH
3 CALIFORNIA PK
WATERTOWN MA 02472

KENNEY TRUSTEE NORMAN E
49 CEDAR STREET
WALTHAM MA 02453

PURI BIREN KUMAR
108 CALIFORNIA STREET
WATERTOWN MA 02472

BRIGHTMAN MATTHEW R
52 MADISON ROAD
WALTHAM MA 02453

TIBERIO ADELE L/E
120 PINE KNOLL DR
LUDLOW MA 01056

LEONOR ESDRAS R
74 CALIFORNIA ST
WATERTOWN MA 02472

MAZZOLA EMILIO
92 CALIFORNIA ST
WATERTOWN MA 02472

BONILLA MAXIMILIANO A
2 FIFTH AV
WATERTOWN MA 02472

PISELLI POMPEO & PAULINE L/E
56 CALIFORNIA ST
WATERTOWN MA 02472

ANTONELLIS DOMENICO TRUSTEES
ANTONELLIS REALTY TRUST
NEWTONVILLE MA 02160

MCDERMOTT MARY E L/E
50 CALIFORNIA ST
WATERTOWN MA 02472

RICE LAURA G
44-46 CALIFORNIA ST
WATERTOWN MA 02472

PYSELL HOLLY
42 CALIFORNIA ST- U1
WATERTOWN MA 02472

CABEZAS MICHAEL
40 CALIFORNIA ST- U2
WATERTOWN MA 02472

ELLISON SUEVIA CLAUDIA
36 CALIFORNIA ST U1
WATERTOWN MA 02472

MA JING
38 CALIFORNIA ST-UNIT 2
WATERTOWN MA 02472

WON-BUDDHISM OF BOSTON
30 CALIFORNIA ST
WATERTOWN MA 02472

DESALVO CHARLES J TRUSTEE
C/O CENTURY TIRE
PEABODY MA 01960

DECINA LIMITED PARTNERSHIP
73 DALBY ST
NEWTON MA 02158

GEBEYAN ROBERT
136 PLEASANT ST
LEXINGTON MA 02421

BACCARI LUIGI TRUSTEE
LMB REALTY TRUST
WATERTOWN MA 02472

GUILMET STEPHANIE L
64 CALIFORNIA STREET
WATERTOWN MA 02472

KENNEDY LAURIE
66 CALIFORNIA STREET
WATERTOWN MA 02472

ZEVITAS CHRISTOPHER
93 CALIFORNIA ST
WATERTOWN MA 02472

PHILIP A RAND CO., INC
139 CALIFORNIA ST
NEWTON MA 02458

COMMONWEALTH OF
MASSACHUSETTS
251 CAUSEWAY ST. STE 600
BOSTON MA 02114

RAZIS DENNIS
88 ADENA RD
NEWTON MA 02465

O`DETTE DAVID & LINDA J L/E
O`DETTE IRREV TRUST 2017
WATERTOWN MA 02472

LEE HSUEH-TZE
98 PLEASANT ST
WATERTOWN MA 02472

CHO DOOYON
96 PLEASANT ST
WATERTOWN MA 02472

COMMONWEALTH OF
MASSACHUSETTS
251 CAUSEWAY ST. STE 600
BOSTON MA 02114

AIMCO PLEASANT STREET, LLC
13155 NOEL ROAD #100 LB73
DALLAS TX 75240

RUSSO OLIVIA
208 PLEASANT ST
WATERTOWN MA 02472

SANCHEZ MARIA PIA
182 PLEASANT ST
WATERTOWN MA 02472

KEYS MATTHEW
202 PLEASANT ST
WATERTOWN MA 02472

IQBAL SHEIKH USMAN
196 PLEASANT STREET
WATERTOWN MA 02472

GROTH RYAN
194 PLEASANT ST U2
WATERTOWN MA 02472

HU JINGMING
192 PLEASANT STREET UNIT 3
WATERTOWN MA 02472

DONATIO CELIA A
190 PLEASANT STREET
WATERTOWN MA 02472

DANG LENNY L
188 PLEASANT STREET
WATERTOWN MA 02472

SOBLE DAVID
186 PLEASANT ST
WATERTOWN MA 02472

KUTTEH ROBERT H ETUX CAROLYN H
184 PLEASANT STREET
WATERTOWN MA 02472

DARVIRIS NICHOLAS ET GEORGIA TRS
31 HOLT ST
BELMONT MA 02478

DARVIRIS NICHOLAS ET GEORGIA TRS
31 HOLT ST
BELMONT MA 02478

DIMARCO GREGORY
170 PLEASANT ST
WATERTOWN MA 02472

MICCICHE LINDA
17 JASON DR
SUDBURY MA 01776-3400

GAETA JOSEPH A
162 PLEASANT ST
WATERTOWN MA 02472

COMMONWEALTH OF
MASSACHUSETTS
251 CAUSEWAY ST. STE 600
BOSTON MA 02114

WEI JIE TRUSTEE
66 HIGH STREET U3
CHARLESTOWN MA 02129

WRIGHT PAMELA A
30 EDEN AVE
NEWTON MA 02465-1906

KOUFOS ARI
5 BELLEVUE TERRACE
WATERTOWN MA 02472

SORNKUL EKKASAK
142 PLEASANT ST
WATERTOWN MA 02472

SPITZ MARILYN
144 PLEASANT ST U2
WATERTOWN MA 02472

BERKELEY PLEASANT ST OWNER, LLC
125 HIGH STREET SUITE 531
BOSTON MA 02110

RMR OPFCP LP
9 GALEN ST SUITE 117
WATERTOWN MA 02472

CROSSRAM LLC
315 FRANKLIN ST
NEWTON MA 02458

PEIRCE G. MICHAEL, TRUSTEE
315 FRANKLIN ST
NEWTON MA 02458

ESHRAGHI SHAHROKH
219 PLEASANT ST
WATERTOWN MA 02472

RIVERBEND GARDEN LP, ET AL
999 WATERSIDE DRIVE SUITE 2300
NORFOLK VA 23510

AACS REALTY LLC
320 WATERTOWN ST
NEWTON MA 02458

CRESCITELLI JR EDWARD R
261 PLEASANT STREET
WATERTOWN MA 02472

CRESCITELLI JR EDWARD R
261 PLEASANT ST
WATERTOWN MA 02472

PSCD TRINITY, LLC
O BOX 95025
NEWTON MA 02495

P JOMAR MANUFACTURING CO., INC.
P.O.BOX 202
WATERTOWN MA 02272-0202

ALEKSEEV STAS
31 NORTH AVE
WESTON MA 02493

JOHNSEN KJERSTEN
290 PLEASANT UNIT#102
WATERTOWN MA 02471-0413

SCANLON EDWIN
290 PLEASANT ST UNIT#103
WATERTOWN MA 02471-0413

CHENG KIT MING
290 PLEASANT ST UNIT#104
WATERTOWN MA 02471-0413

SCHAUB PETER
290 PLEASANT ST UNIT#105
WATERTOWN MA 02471-0413

VASILADIS VASILIOS
290 PLEASANT ST U#106
WATERTOWN MA 02471-0413

WONG WARREN
290 PLEASANT ST UNIT #107
WATERTOWN MA 02471-0413

EDWARDS LINDA T
290 PLEASANT ST U108
WATERTOWN MA 02472

FREDERICK JOSEPH W
290 PLEASANT ST U#109
WATERTOWN MA 02471-0413

D`ADDARIO SAMANTHA
290 PLEASANT ST U110
WATERTOWN MA 02472

BADRIGIAN STUART ALAN
290 PLEASANT ST UNIT#112
WATERTOWN MA 02471-0413

HIRD SOSY L
290 PLEASANT ST U113
WATERTOWN MA 02471-0413

GASSEL LARISA
290 PLEASANT ST UNIT#114
WATERTOWN MA 02471-0413

COOKE SANDRA Q
290 PLEASANT ST U115
WATERTOWN MA 02472

WELCH KAREN
290 PLEASANT ST UNIT#116
WATERTOWN MA 02471-0413

PAN WEIWEI
290 PLEASANT ST UNIT#117
WATERTOWN MA 02472

PATTI MICHAEL
290 PLEASANT ST U#201
WATERTOWN MA 02471-0413

ROMM JULIE
290 PLEASANT ST #202
WATERTOWN MA 02472

EHRET JOHN
290 PLEASANT STREET #203
WATERTOWN MA 02472

VALISIADIS MARIA 290
PLEASANT ST 204
WATERTOWN MA 02472

SINAN AMR 290
PLEASANT ST U316
WATERTOWN MA 02472

MAK ELIZABETH 290
PLEASANT STREET #206
WATERTOWN MA 02472

KATZ CAROLE A 290
PLEASANT ST #207
WATERTOWN MA 02472

ANIS SHERIF 290
PLEASANT ST UNIT#208
WATERTOWN MA 02471-0413

CHANDLER SAMUEL L
11901 ABESS BLVD #2201
JACKSONVILLE FL 32225-6034

POORMALEK MEHRAN
290 PLEASANT ST UNIT #210
WATERTOWN MA 02471-0413

CIARAVINO CAROL TRUSTEE
290 PLEASANT ST U-211 NOM TRUST
CHESTNUT HILL MA 02167

ARTINIAN MIHRAN ETUX ALICE T/E
290 PLEASANT ST U212
WATERTOWN MA 02472

LACAVA DANA E
290 PLEASANT ST U213
WATERTOWN MA 02472

BARRIENTOS MARVIN ED
290 PLEASANT ST U214
WATERTOWN MA 02472

MCLAUGHLIN LORA B
290 PLEASANT ST U#215
WATERTOWN MA 02471-0413

SINAN AMR
290 PLEASANT ST U316
WATERTOWN MA 02471-0413

CLAEYS EUGENE F
49 KIRKLAND CIR
WELLESLEY MA 02481

WILDE WILLIAM J
290 PLEASANT ST U218
WATERTOWN MA 02472

TSAIOUN KATHERINE
290 PLEASANT ST #219
WATERTOWN MA 02472

SELWYN BARBARA TRUSTEE
290 PLEASANT ST U220
WATERTOWN MA 02472

ORMSBY SCOTT
290 PLEASANT ST UNIT#301
WATERTOWN MA 02471-0413

LIU LUCAS Y
61 GRAND ST APT. 3F
JERSEY CITY NJ 07302

BARASCH RETA
290 PLEASANT ST UNIT#303
WATERTOWN MA 02471-0413

AMOROSI ALEXANDER J
290 PLEASANT ST U304
WATERTOWN MA 02472

SHAHIN ALI
290 PLEASANT ST U305
WATERTOWN MA 02472

COUGHLIN MICHAEL
290 PLEASANT ST U#306
WATERTOWN MA 02471-0413

SVEC CHRISTOPHER
290 PLEASANT ST UNIT#307
WATERTOWN MA 02471-0413

ELIAS JOSEPH J
290 PLEASANT ST UNIT#308
WATERTOWN MA 02471-0413

MERKL JEAN F
290 PLEASANT ST U309
WATERTOWN MA 02472

MOSCALU LILIA
290 PLEASANT ST UNIT#310
WATERTOWN MA 02471-0413

SCHULTE, TRUSTEE JEAN ANN
290 PLEASANT ST U311
WATERTOWN MA 02472

METREBIAN, NINA N BARSAMIAN,
ANTHONY TRUSTEES
4 MCCALL RD
WINCHESTER MA 01890

SHIN BRIAN
290 PLEASANT STREET UNIT 313
WATERTOWN MA 02472

JOENG CHO JR TRUSTEE
290 PLEASANT ST U314
WATERTOWN MA 02472

SCHWARTZ BRIAN
290 PLEASANT ST U315
WATERTOWN MA 02472

SINAN AMR
290 PLEASANT ST
WATERTOWN MA 02472

RAZZAQ MUHAMMAD K
290 PLEASANT ST UNIT#317
WATERTOWN MA 02471-0413

FULLERTON MICHAEL
17 PINEBROOK RD
WAYLAND MA 01778

WALKER ANNA MARIE
290 PLEASANT ST U319
WATERTOWN MA 02472

KING ANDREW
290 PLEASANT ST UNIT#320
WATERTOWN MA 02471-0413

RIVERBEND GARDEN LP, ET AL
999 WATERSIDE DRIVE SUITE 2300
NORFOLK VA 23510

RIVER PATH LLC
P O BOX 230
NEWTON MA 02460

MUNCHKIN REALTY LLC
149 ARSENAL ST
WATERTOWN MA 02172-2610

FHP, LLC
400 PLEASANT ST
WATERTOWN MA 02472

NILAN MARK & EDWARD M
370 PLEASANT ST
WATERTOWN MA 02472

MAMC LLC
380 PLEASANT ST UNIT 1
WATERTOWN MA 02472

TBK LLC
380 PLEASANT ST
WATERTOWN MA 02472

COMMONWEALTH OF
MASSACHUSETTS
251 CAUSEWAY ST. STE 600
BOSTON MA 02114

NEW WATERTOWN LODGE LAND TRUST
520 PLEASANT ST
WATERTOWN MA 02472

SEMENTELLI JENNIFER D TRUSTEE
24 MARION ST
NEWTON MA 02465

COMMONWEALTH OF
MASSACHUSETTS
251 CAUSEWAY ST. STE 600
BOSTON MA 02114

GRE RIVERWORKS, LLC
900 NORTH MICHIGAN AVE
CHICAGO ILL 60611

GRE RIVERWORKS, LLC
900 NORTH MICHIGAN AVE
CHICAGO ILL 60611

GRE RIVERWORKS, LLC
900 NORTH MICHIGAN AVE
CHICAGO ILL 60611

BDPF PLEASANT STREET OWNER LLC
C/O ALTUS GROUP
SOUTHLAKE TX 76092

G&I X/GP4 580 PLEASANT LLC
3 BURLINGTON WOODS DRIVE
BURLINGTON MA 01803

WATERTOWN, TOWN OF SKATING RINK
149 MAIN ST
WATERTOWN MA 02472

HSRE-WATERBIO, LLC
444 WEST LAKE STREET STE 2100
CHICAGO IL 60606

WCV-610 PLEASANT, LLC
C/O GCP MANAGEMENT LLC
NEWTON MA 02458

AMERICAN VENTURE 594 CORP
2 PARK PLAZA, SUITE 415
BOSTON MA 02116

BREM SIMBA 700 PLEASANT, LLC
20 PICKERING STREET SUITE 200
NEEDHAM MA 02492



ATTACHMENT B

Project Description

1.0 INTRODUCTION

The “Applicant”, the Massachusetts Department of Conservation and Recreation - Lakes and Ponds Program (DCR), is seeking approval to initiate a single all-encompassing Aquatic Vegetation Management Program throughout the Lakes District (Commonwealth Ave Bridge in Newton to the Watertown Dam in Watertown) of the Charles River.

The primary objective of the management program is to provide site specific control of submersed non-native and invasive aquatic plant species and also to restore and maintain the natural capacity of the Charles River to provide suitable open water and native plant habitat. Based on the type, distribution, and density of the current vegetation assemblage within the Lakes District, it has been concluded that the restoration goals of the Applicant can best be achieved through an integrated management program focused on monitoring, the prudent use of USEPA/MA Department of Agricultural Resources (MDAR) registered aquatic herbicides, and mechanical control strategies.

The secondary objective of this plan is to provide a single comprehensive management program that will replace/supersede the other individual (Wares Cove, Purgatory Cove, mechanical harvesting) programs that have preceded it. A single plan, unified under one Order of Conditions, will not only allow for better system level management, but will create a more consistent set of regulatory conditions for the project. Consistent regulatory conditions will simplify ongoing monitoring, reporting, and general regulatory compliance and oversight. As such the proposed program works to incorporate the successes of other and/or prior management efforts, while at the same time incorporating advances in technology and approach that have been realized more recently. Once new Orders of Conditions are issued in all municipalities for this Notice of Intent filing, Certificates of Compliance will be requested for the respective existing Orders of Conditions that will be replaced.

The proposed project has been filed as an Ecological Restoration Limited Project under 310 CMR 10.53(4)e(5) as it will improve the natural capacity of the resource area to protect and sustain the interests identified in the Wetland Protection Act (MGL c.131 s.40). However, this project is not eligible for consideration for a Restoration Order of Conditions as it does not meet the project type criteria outlined in 310 CMR 10.13. As such we have filed WPA form 3 and included a completed Appendix A. The control/removal of nuisance and invasive aquatic vegetation will slow system eutrophication and help improve water quality and fisheries habitat.¹ The presence of invasive species within the Lakes District of the Charles River likely results from direct anthropogenic influences including the River's high recreational use via boats which spread invasive aquatic plant species, unintended but increased nutrient input from surrounding developed land and roadways, and the possible innocent dumping of aquarium trade plant species.

It is important to remember that “no amount of watershed management will control an existing infestation of rooted macrophytes”.

- Rooted aquatic plant growth are not controlled by clean water
- Increased water clarity may extend plant growth

¹ Department of Environmental Protection. Guidance for Aquatic Plant Management in Lake and Ponds as it Relates to the Wetlands Protection Act: April 2004, 1p.

- Watershed management complements in-lake management.²

2.0 SITE DESCRIPTION

The Charles River begins in Hopkinton and flows generally eastward through 23 cities and towns, over approximately 80 miles in total, before reaching the Atlantic Ocean in Boston Harbor. The Lakes District, which is the focus of this Notice of Intent, is being defined as the area from the Commonwealth Avenue (Route 30) Bridge in Newton to the Watertown Dam in Watertown (Appendix B – Figure 1). This section of the Charles River is an urban/suburban waterway with varying densities of submersed and floating leaf aquatic vegetation growing in the shallower cover areas of the ponded section and along the sides of the main water flow channel. Although the River flows slowly overall, the shallow littoral areas of the Lakes District provide optimal growing conditions (near quiescent water flow, shallow water depths, abundant nutrient rich sediment, etc.) for the abundant growth of both non-native and native submersed vegetation.

The shoreline along the Lakes District supports high density development beyond the parks system and other undeveloped open space along the immediate edge of the river. The Lakes District is frequently used for boating, fishing, and passive wildlife viewing.

In late May of 2021, a vegetation survey, utilizing point-intercept methods, was conducted throughout the Lakes District of the river. A list of the plant species documented during that survey is provided in the following table (listed in order of relative abundance). Species maps depicting location and abundance are attached.

² Practical Guide to Lake Management in Massachusetts, Commonwealth of Massachusetts, Executive Office of Environmental Affairs, 2004, p. 22.

Macrophyte Inventory for Charles River Lakes District – 2021		
Common Name	Scientific Name	Frequency of Occurrence
Eurasian Watermilfoil	<i>Myriophyllum spicatum</i>	60%
White Waterlily	<i>Nymphaea odorata</i>	57%
Fanwort	<i>Cabomba caroliniana</i>	21%
Coontail	<i>Ceratophyllum demersum</i>	22%
Yellow Waterlily	<i>Nuphar variegata</i>	12%
Variable Watermilfoil	<i>Myriophyllum heterophyllum</i>	12%
Curly-leaf Pondweed	<i>Potamogeton crispus</i>	11%
Duckweed	<i>Lemna minor</i>	10%
Water Bulrush	<i>Schoenoplectus subterminalis</i>	9%
Common Waterweed	<i>Elodea canadensis</i>	8%
Tapegrass	<i>Vallisneria americana</i>	8%
Purple Loosestrife	<i>Lythrum salicaria</i>	6%
Water Chestnut	<i>Trapa natans</i>	6%
Water Starwort	<i>Callitriche</i> sp.	4%
Smartweed	<i>Polygonum</i> sp.	3%
Large-leaf Pondweed	<i>Potamogeton amplifolius</i>	3%
Slender Naiad	<i>Najas flexilis</i>	1%
Leafy Pondweed	<i>Potamogeton foliosus</i>	<1%
Ribbon-leaf Pondweed	<i>Potamogeton epihydrus</i>	<1%

Red indicates invasive status

Overall, the subject area was well vegetated, with vegetation present at 77% (278 of 361) of the sample sites accessed within the Lakes District section. Of the 19 species observed within this area of the river, six are considered invasive species (~32%). Vegetation distribution maps by individual species are provided in Attachment B. Based on the frequency of occurrence for the sites sampled, Eurasian watermilfoil (EWM) and white

waterlily are the two most dominant species, occurring at 60% and 57% at the sample sites, respectively. However, at the 278 sites where vegetation growth was recorded, 215 of them supported EWM growth (77%). The top 10 most abundant species identified make up more than 67% of the vegetation documented throughout the Lakes District section indicating that although species diversity is good (19 different species) the species richness is impacted by the presence of invasive plants. In fact, EWM, fanwort, variable watermilfoil (VWM), and curly-leaf pondweed make up nearly 50% of the top 10 vegetation abundance.

The water chestnut infestation within the Lakes District has been the focus of ongoing management for decades. In fact, at its peak, water chestnut occupied nearly all open water area in this section of the river. During the May 2021 survey, however, water chestnut growth was recorded at only 6% of the sites sampled. It is important to note that this frequency of occurrence may likely be somewhat underrepresented from actual mature growth conditions, as full nut germination and plant emergence had likely not occurred at the time the survey was conducted.

In addition to the submersed invasive plant growth, scattered growth of purple loosestrife occurred sporadically along much of the Lakes District shoreline.

General Site Characteristics - Lakes District of the Charles River³	
Surface Area (acres)	Approximately 246
Estimated Mean Depth (feet)	4
Estimated Volume	1060 ac-ft 345 million gallons
Dominant Plant Species	Eurasian Watermilfoil White Waterlily Fanwort Coontail Yellow Waterlily Variable Watermilfoil

3.0 PROBLEM STATEMENT

Based on the results of a 2021 vegetation survey, the invasive macrophyte assemblage dominates the aquatic plant growth within the project area. This abundance of invasive plant species and their aggressive colonization habits pose a significant threat to native plant populations, recreational access/useability, and general water quality conditions within the river. In fact, due to the increasing colonization by these invasive species and the resulting increase in overall plant abundance, many of the user and advocate groups associated with the Charles River have expressed concerns over long-term ecological impacts and potential boating and safety hazards. For these reasons DCR believes that a comprehensive and immediate management intervention is necessary to enhance native

³ Estimates based on observed and reported conditions

species diversity/richness and mitigate future degradation of the resource; though individual areas of the Lakes District (mentioned previously) have historically been managed, the project area should be managed as a whole.

4.0 PROPOSED MANAGEMENT PROGRAM

4.1 Program Overview:

Multiple (5) - year approval is requested for the implementation of an integrated Aquatic Management Program within the Lakes District of the Charles River. The goal of the management program is to control growth of invasive, non-native plant species to improve and maintain open water habitat, promote the growth of less pervasive plant species, and provide safe recreational access throughout the river. This management program has been developed to be compatible with the long-term preservation of the resource area, the regulatory interests of the Wetlands Protection Act, and the individual communities (Newton, Watertown, Waltham and Weston) affected by the project. All of the proposed management strategies presented in this filing are approved methodologies in the Commonwealth and are included within the document *Eutrophication and Aquatic Plant Management in Massachusetts Final Generic Environmental Impact Review* (FGEIR, EOEA 2004).

As the jurisdiction of this project spans four municipalities, the following management options sought for approval are applicable for all towns based on the species present throughout the entire Lake District. However, community specific information is provided to illustrate the scope of the initial management phase within each specific community (Section 4.3.2). Additionally, the management options included in this filing remain as consistent as possible, based on conditions, with the recent filing and approved Orders of Conditions for management of the Lower Basin of the Charles River, in an effort to truly manage the river as a whole entity. Effective long-term management of dynamic aquatic systems requires program modifications to best address evolving target plant and environmental conditions. For this reason, we have included an outline of contingent strategies for future review and consideration by the Commissions should conditions warrant their use beyond the initial phase of management.

4.2 Project Monitoring:

Effective monitoring is the cornerstone of any successful aquatic management program, as the data collected provides the foundational basis on which to evaluate the feasibility of available management strategies. However, beyond initial program design, repeatable and quantifiable monitoring data is critical to evaluating the program impacts on target and non-target species. This information is critical to adaptive long-term management and ensuring that the established goals of the project are being achieved as site conditions change over time.

4.2.1 Vegetation Surveys

During each management season, at least one pre-management survey of the Lakes District will be conducted within the early part of the growing season to assess the overall aquatic invasive species growth. This visual survey will focus on accurately determining the areal extent of the targeted invasive plant species. WAAS enabled GPS will be used to geospatially reference the perimeter of various invasive plant beds within the project area. This information will culminate into target plant bed and management area maps.

These data will be used to inform the annual management effort throughout the program.

Throughout the course of annual management activities, interim surveys will be conducted to qualitatively document the progress of the annual management effort and confirm no unintended non-target impacts have or are occurring. Additionally, by conducting interim surveys during different times of the growing season, data can be gathered on the full seasonal spectrum of species, which may not have been fully reflected in previous survey findings.

At or near the conclusion of active management and the growing season, a post-management survey of the Lakes District will be conducted. This survey will replicate the 423 point-intercept survey established during the 2021 survey effort. This survey methodology allows for the collection of a repeatable and quantifiable data set excellent for monitoring changes and identifying trends in species distribution and density over time. This aquatic plant survey method was developed by the US Army Corp of Engineers and Cornell University specifically for monitoring aquatic vegetation and has long been the industry standard. In fact, this survey methodology is preferred by management project stakeholders and regulatory agencies.

The Point-Intercept Method (PIM) is designed to determine the extent of submersed aquatic plant growth within an area of concern. The total number of survey points is typically based on the total acreage of a waterbody, where one sample location per acre is surveyed at a given site. According to the 2021 survey effort, much of the Lakes District can be considered littoral zone, with rooted plant growth being documented at most all point locations. Point-intercept locations within the river were previously determined by a 60-meter grid data layer placed over an orthophoto of the Lakes District. The Lakes District point-intercept survey has approximately 1.7 points per acre of survey area.

Two rake tosses will be conducted at each site for enhanced detection of target species and other less frequently occurring species. Each species collected will be identified and categorized using the relative abundance scale (below) defined by this methodology.

- Z Zero: No plants on rake
- T Trace: Fingerful on rake
- S Sparse: Handful on rake
- M Medium: Rakeful of plants
- D Dense: Difficult to bring into boat

As is the practice on all of DCR's aquatic vegetation management programs, the Lakes and Ponds program staff will routinely inspect site conditions throughout the course of the project. DCR Lakes and Ponds staff will also use best professional judgment when conducting spot checks of consultant/contractor vegetation survey and treatment results to ensure the data reported are of the highest accuracy possible.

4.2.2 Water Quality Monitoring

The Lakes District of the Charles River is under the jurisdiction of the Massachusetts Division of Marine Fisheries (DMF) because of anadromous fish migration and spawning.

DCR will abide by and conduct all DMF required pre- and post- treatment water quality monitoring. Based on the recent Lower Basin filings, it is anticipated that requirement of a monitoring program will be dependent on whether treatment work is being requested during their prescribed Time of Year (TOY) restrictions (February 15 -July 15 & September 1- November 15) for this project. At present, we anticipate that effective target plant control can be achieved using the proposed strategies while abiding by the DMF TOY restrictions. However, DCR and its contractor will look to consult other available water quality data being gathered by other groups (e.g., Charles River Watershed Association) to best inform ongoing management practices. In the event that active management is to take place within the DMF TOY restrictions, requiring a water quality monitoring program, the approved DMF monitoring program will be shared with the Commissions during the pre-management meetings in early summer.

4.3 Phase I Aquatic Vegetation Management

The initial phase of management will be comprised of a 2-3 year effort consisting of whole basin treatment with Sonar (fluridone) to manage the entire invasive plant assemblage within the project area (2022 and/or 2023) as well as area-selective control of invasive milfoil growth with ProcellaCOR EC (florpyrauxifen-benzyl) as required in subsequent years. The Phase I larger scale management effort is anticipated to include the Lower Basin portion of the river that was permitted in the fall of 2021.

The proposed Phase I herbicides specifically affect the target species to be controlled and have a negligible effect on the non-target species and wildlife when applied in accordance with the label directions. All products will be applied at low doses (below maximum label rate) intended to provide the greatest impact on target species while minimizing the effects on native non-target species. Prior to the initial application each year, a License to Apply Chemicals permit will be obtained from MA Department of Environmental Protection.

Management of water chestnut in the Lakes District during Phase I will continue to be a combination of mechanical harvesting and manual hand-pulling. These strategies have affected a positive reduction in water chestnut occurrence in the Lakes District over the last decade and more. The focus of these non-chemical removal efforts will be dictated by pre-management survey information related to the location and density of the water chestnut growth. As with previous programs mechanical harvesting will be employed to address larger contiguous areas of growth, while manual hand-pulling will be reserved for smaller, low density patches or individual plants. Also hand-pulling will be used in areas that are deemed inaccessible to mechanical harvesting equipment (shallow).

No significant alteration to the wetland resource areas will occur as a result of the proposed aquatic plant management program; instead, the resource areas will be enhanced by controlling non-native, invasive aquatic plant species, improving water quality, and improving wildlife habitat.

4.3.1 Anticipated Project Schedule

Year	Phase	Timing	Task
2022	I	Spring	Application and issuance of OOCs for management of the Lakes District
		May/June	Pre-management vegetation survey (Lakes District & Lower Basin)
		May/June	Meeting with Conservation Commissions to give update on tentative management plan based on survey results Mechanical and manual harvesting to control designated water chestnut growth, as required
		July	Initiate low-dose whole-river Sonar treatment program to comply with DMF time of year restrictions. Mechanical and manual harvesting to control designated water chestnut growth, as required
		August	Sonar booster applications, as necessary based on results and monitoring Mechanical and manual harvesting to control designated water chestnut growth, as required
		September	Post-management point-intercept survey
		December	Year-end reporting

Year	Phase	Timing	Task
2023	I	May/June	Pre-management vegetation survey
		May/June	Meeting with Conservation Commission to give update on tentative management plan based on survey results Mechanical and manual harvesting to control designated water chestnut growth, as required
		July	Initiate low-dose whole-river Sonar treatment program to comply with DMF time of year restrictions Mechanical and manual harvesting to control designated water chestnut growth, as required
		August	Sonar booster applications, as necessary based on results and monitoring Mechanical and manual harvesting to control designated water chestnut growth, as required
		September	Post-management point-intercept survey
		December	Year-end reporting
2024-2026	II	May/June	Pre-management vegetation survey
		May/June	Meeting with Conservation Commission to give update on project and present any proposed modifications to the management plan based on survey results Mechanical and manual harvesting to control designated water chestnut growth, as required
		July/August	Spot treatment applications likely with ProcellaCOR and/or Sonar for milfoil and/or fanwort control, respectively, to comply with DMF time of year restrictions Mechanical and manual harvesting to control designated water chestnut growth, as required
		September	Post-management point-intercept survey
		December	Year-end reporting

4.3.2 Anticipated Management Area(s)

The following table provides management areas for each community and the specific invasive species as recorded in the 2021 point intercept survey (see attached maps). The extent of specific management areas will be confirmed and/or modified annually based on the current year pre-management survey results.

Community (Town/City)	Target Invasive Species	Total Area (acres)
Newton	Max. Treatment Area¹	51.7
	Eurasian watermilfoil	39.0
	Fanwort	17.0
	Variable watermilfoil	28.0
	Curly-leaf pondweed	13.75
	Water Chestnut	14.75
Watertown	Max. Treatment Area	17.9
	Eurasian watermilfoil	7.25
	Fanwort	0.0
	Variable watermilfoil	0.0
	Curly-leaf pondweed	7.4
	Water Chestnut	1.3
Waltham	Max. Treatment Area	153.8
	Eurasian watermilfoil	121.0
	Fanwort	91.75
	Variable watermilfoil	73.5
	Curly-leaf pondweed	35.75
	Water Chestnut	21.25
Weston	Max. Treatment Area	23.0
	Eurasian watermilfoil	16.25
	Fanwort	6.25
	Variable watermilfoil	11.25
	Curly-leaf pondweed	0.0
	Water Chestnut	0.0

¹- Given that the depths throughout the Lakes District are capable of supporting rooted aquatic vegetation growth, the Maximum treatment area listed in this table represents the entire surface area of the river located in the respective Town.

4.3.3 Proposed Phase I Products and Management Techniques

The use of herbicides to control nuisance aquatic plant and algae growth is the most widely used management strategy for waterbodies with submersed aquatic plant infestations that are beyond effective control with smaller scale non-chemical techniques like suction harvesting and/or bottom barriers. Although these smaller scale techniques are not recommended for

the species composition and current target plant distribution in the Lakes District, non-chemical strategies like hand-pulling and mechanical harvesting remain the best approach for the long-term control of water chestnut under current conditions. Effective removal of the water chestnut plants prior to the development of mature nuts/seeds can and has resulted in the incremental reduction of the infestation through repetitive annual management. As such, these non-chemical strategies will continue to be the focus for water chestnut management in the Lakes District under this program.

Herbicides that are registered for aquatic use must meet strict federal guidelines and demonstrate that there is not an “unreasonable risk” to humans and the environment when applied in accordance with their product label. According to Madsen (2000), “currently no product can be labeled for aquatic use if it poses more than a one in a million chance of causing significant damage to human health, the environment, or wildlife resources. In addition, it may not show evidence of biomagnification, bioavailability or persistence in the environment”. DCR is requesting approval for the use of the following techniques in the Lakes District.

Mechanical & Physical Removal

Mechanical harvesters are paddle-wheel driven barges that cut and/or collect aquatic vegetation. An aquatic harvester uses reciprocating cutters that can be lowered into the water to cut the stems of target vegetation above the bottom substrate. The plant material is then collected and conveyed onboard the harvester barge. The collected plant material is then transported to a designated shoreline location and off-loaded for disposal. This equipment runs on a vegetable-based hydraulic oil that is biodegradable. The machines carry oil containment “booms” and absorbent pads in the unlikely and unforeseen event of a hydraulic or fuel leak. All other necessary precautions are taken while fueling and maintaining the machine.



Mechanical and physical removal has been a staple for the effective control of water chestnut in the Lakes District for decades. Given this track record of effective management, the use of mechanical harvesters to control dense growth of water chestnut would be continued. In the event large contiguous stands of chestnut develop, harvesting would be employed annually, potentially on multiple occasions, to address newly germinated plants resulting from the removal of the dense floating canopy of rosettes.

Staging Areas

Staging areas will be situated along the management area at Charles River Road and Forest Grove Road, Waltham. These locations have been selected based on proximity to the management area and characteristics such as water depth that will minimize impacts to the riverbank. The properties are state-owned (Commonwealth of Massachusetts c/o DCR) and have previously been used as staging areas for mechanical removal projects. The attached Charles River Road and Forest Grove Road Waltham Staging Area documents depict the general set-up of each staging area, including dumpster and off-load locations. Straw wattles will be installed at the shoreline of each off-load area and surrounding each dumpster as it dewateres. Daily inspections of the site will be conducted

by the on-site project manager who will be responsible for ensuring all erosion controls remain secure and effective.

Equipment

All equipment, including harvesters, tending boats, etc. will undergo DCR-approved decontamination procedures prior to their launch in the Charles River. Large pieces of equipment (i.e. harvester(s)) will be launched onto the water body from the Woerd Avenue boat ramp. Once launched, the hydro-rake(s) and harvester(s) will remain on the water for the duration of the project. Refueling will be conducted when equipment is securely anchored at the staging area and best management practices, including use of absorption pads, will be implemented for spill prevention. A petroleum spill response kit will be maintained on each piece of mechanical equipment. The harvester and hydro-rake machines use Bio-HyGARD II hydraulic fluid (manufactured by John Deere), which is biodegradable. As a precaution, absorbent pads and other cleaning material will be maintained onsite in the event of a leak or spill.

Harvesting of Biomass

Removal efforts will progress from upstream to downstream sections of the river to manage the collection of floating plant debris from the harvesting operations. Each piece of equipment will be equipped with a GPS device to track progression. Tracking will also aid in identifying the areas that will require removal via mechanical harvesting and/or hand-harvesting. When harvesters are unable to operate due to shallow water depths (less than approximately 2 feet) they will move to the next area or section. Harvested material will be off-loaded from the harvesters' conveyor with the use of a compact skid-steer loader, which will place the plant material in an onshore container to dewater.

Hand-harvesting (i.e., manual removal of water chestnut plants by staff in small boats) will be conducted in wetland areas and along shorelines that are inaccessible to the mechanical equipment.

As the density and distribution of water chestnut changes with management efforts, the distribution of effort between mechanical harvesting and hand-harvesting may fluctuate.

Disposal of Removed Biomass

Two forty-yard containers will be delivered to the site when work commences. Containers will be filled, removed, and replaced with a new container, as needed. Alternating the piling of plant material into two containers will allow for dewatering and compaction, which reduces the tonnage and disposal cost.

Impacts Specific to the Wetlands Protection Act⁴ using Mechanical Harvesting

- Protection of public and private water supply – Generally neutral (no significant interaction), although reduced plant density may benefit taste and odor control and minimize clogging of intakes
- Protection of groundwater supply – Generally neutral (no significant interaction)
- Flood control – Generally neutral (no significant interaction)
- Storm damage prevention – Generally neutral (no significant interaction)

⁴ Commonwealth of Massachusetts Executive Office of Environmental Affairs. *Practical Guide to Lake Management*: 2004. 106 p.

- Prevention of pollution – Generally neutral (no significant interaction), but could be a detriment if sediment disruption and resultant turbidity are high, or if cut vegetation is left in the water to decay
- Protection of land containing shellfish – Generally neutral (no significant interaction)
- Protection of fisheries – Detriment from mechanical harvesting (direct fish removal), but with potential benefit by habitat improvement (may have benefit and detriment to different species in same lake from same effort)
- Protection of wildlife habitat - Potential benefit by habitat improvement, but may have benefit and detriment to different species in same lake from same effort

Florpyrauxifen-benzyl (ProcellaCOR EC - EPA # 67690-80 or equivalent)

ProcellaCOR (florpyrauxifen-benzyl) is a recently registered herbicide in Massachusetts and is an effective, milfoil selective, systemic herbicide. After receiving its full aquatic registration from the EPA in February 2018, ProcellaCOR was used in numerous locations throughout the country for control of milfoil and other susceptible invasive aquatic plants. In 2018 in New England, SÖLitude applied ProcellaCOR at approximately a dozen locations in New Hampshire and Connecticut for the control of variable milfoil and Eurasian watermilfoil. In 2019, ProcellaCOR was registered for use in Massachusetts and SÖLitude applied ProcellaCOR to many waterbodies in Vermont, New York, New Hampshire, Massachusetts, Maine, and Connecticut. Results of all treatments performed in the Northeast to date by SÖLitude (>100) have been extremely positive, achieving nearly complete control of targeted milfoil growth with little or no impact to non-target native plants.

ProcellaCOR will be applied to the areas of milfoil growth at or below the permissible label dose (maximum label rate is 25 PDU/ac-ft). A PDU is a prescription dose unit, which is a unit of measurement that SePRO developed for ease of calculations in the field. One PDU is equal to 3.17 ounces. Due to the limited contact-exposure time required for control of the target species, concentrations only need to be maintained for hours to several days to achieve management. The anticipated application rates for ProcellaCOR in the Lakes District of the Charles range from 2 to 4 PDU/ac-ft. Each treatment area will be dosed accordingly based on its density of milfoil plants, density of native plants, configuration, amount of surface area, potential for dilution, average depth and any other influencing factors. The ProcellaCOR label indicates that the rate is also determined based on the acreage of the entire “waterbody” as well as area of influence – each of those will be factored into the decision on application rate for each treatment area.

The only water use restrictions listed on the current ProcellaCOR™ EC label are all centered around the use of ProcellaCOR-treated water for irrigation purposes. There are no restrictions on using ProcellaCOR-treated water for drinking water, swimming or fishing. Irrigation restrictions vary depending on what is being irrigated. Turf may be irrigated immediately after treatment without restriction. Irrigation of landscape vegetation and other non-agricultural plants can occur once ProcellaCOR concentrations are determined to be less than 2 ppb or by following a waiting period of 7 days for the use rates being proposed. The shoreline of the waterbody will be posted with signs warning of these temporary water-use restrictions, prior to treatment. Based on ProcellaCOR's Reduced Risk classification profile issued by the US EPA and its overall brief presence within the water (24-48 hours maximum; reported photolytic half-life is 0.07 days or 1.68 hours), there are no cumulative adverse impacts anticipated to affect the river as a resource for its users.

Based on the ecotoxicological testing completed for ProcellaCOR, there was no toxicity observed for avian, fish, or other non-plant species exposed to the product during both short

and long-term studies. It should be noted that these testing efforts included higher concentrations than those available at the maximum label rate.

This herbicide is quickly absorbed by the target vegetation and translocated within the plant. The mode of action of the herbicide causes impacted vegetation to lose structural integrity at growth nodes. Residual levels of the herbicide in treated water decline rapidly and reduction is due to the uptake by the targeted vegetation and degradation.

Following treatment efforts, the plants within the treatment areas would be anticipated to follow a similar decomposition timeline as follows: within a week of treatment – EWM plants are anticipated to be leaning over within the water column; within two weeks of treatment – EWM plants are anticipated to be leaning and more fallen over within the water column, beginning to brown and get discolored, and if touched, the plants would be anticipated to easily break apart, however fragments of these plants are no longer viable; within three weeks of treatment – EWM plants are anticipated to have completely fallen out of the water column and be difficult to find even along the bottom sediment. As a result of the timeframe of decomposition, and minimal amount of area to be managed utilizing ProcellaCOR relative to the overall waterbody acreage, there is no additional concern for an algal bloom beyond that which exists every year for the Lakes District.

Excellent selectivity and minimal impact to non-target species has been demonstrated with ProcellaCOR treatments that have been performed in the Northeast to date. Of the species reported in the Lakes District of the Charles River in 2021, the only plants that may show some impact following treatment are coontail (*Ceratophyllum demersum*), and waterlilies (white & yellow). Coontail is typically not impacted by ProcellaCOR treatments except when using rates of 4+ PDUs/ac-ft, while the waterlilies may show some discoloration (yellowing) and twisting, depending on their proximity to the treatment area(s), before outgrowing the symptoms within a few weeks. Waterlilies are a hardy and resilient species, with significant root systems, and can easily rebound from the typical impacts of a ProcellaCOR herbicide treatment.

It is anticipated that treatment areas would experience multiple years of control following one treatment effort. However, it is understood that any fragments entering the treated area(s) from unmanaged areas in the river may allow for the population to be reestablished within that area.

Impacts Specific to the Wetlands Protection Act using Florpyrauxifen-benzyl

- Protection of public and private water supply – Neutral (no significant interaction)
- Protection of groundwater supply – Generally neutral (no interaction)
- Flood control - Neutral (no significant interaction)
- Storm damage prevention – Neutral (no significant interaction)
- Prevention of pollution – Generally neutral (no significant interaction), but could be a detriment if plant die-off causes low oxygen at the bottom of the river
- Protection of land containing shellfish - Generally neutral (no significant interaction), but reduced algae might reduce food resources for shellfish, and direct toxicity is possible under unusual circumstances
- Protection of fisheries - Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)
- Protection of wildlife habitat – Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)

Fluridone (Sonar – EPA # 67690-4 or equivalent)

Fluridone is a systemic herbicide that offers long-term control on invasive (Eurasian watermilfoil, fanwort) and other nuisance aquatic vegetation. Fluridone also provides annual control of curlyleaf pondweed. Fluridone has also been observed, in some instances, to regulate the growth of water chestnut when the fluridone treatment program is initiated prior to the water chestnut rosettes reaching the water surface.

This herbicide hinders the ability of susceptible plants to produce carotene which functions to protect chlorophyll from photodegradation. If chlorophyll is left unprotected, it breaks down rendering the plant incapable of photosynthesis, ultimately resulting in mortality and long-term control of the targeted species (i.e., directly impacts the standing population and prevents regrowth from viable root stock). This process is known as chlorosis and may be observed visually as the plant begins to lose its green color and take on a white or pink shade. Fluridone requires an extended contact time (45-90 days), so it has historically been used for low-dose, whole-pond treatments where dilution and contact time are more predictable. However, newer granular formulations that release the active ingredient slowly over time, allow for more effective partial or spot treatment scenarios. A series of low-dose applications (booster treatments) would be required to provide the effective contact time within the Lakes District, likely 3-4 depending on water flow and timing.

Fluridone, when applied at recommended dosages, is generally viewed as having one of the most environmentally friendly toxicology profiles of all products currently on the market. The US EPA has approved a limit of 150 ppb to be allowed in water used for drinking. Concentrations in the range of 5-10 ppb will be targeted for the control of the invasive species assemblage present in the Lakes District. Understanding that MA DMF has placed a time-of-year restriction on management activities, the treatment program will not be initiated until after the end of the restricted period - July 15th, unless a water quality monitoring program is approved by DMF and enacted. Additionally, the slow staggered rate of mortality associated with Sonar treatment eliminates the potential for low dissolved oxygen related stress to fish and other aquatic wildlife.

Presently, liquid and slow-release pellet formations of this herbicide are available and included under this management plan. For pellet applications, the herbicide will be placed into a rotary spreader mounted to the bow of the treatment vessel and evenly distributed over the surface of the treatment area. Using the pellet formulations, the active ingredient is gradually released from the clay carrier pellet over a period of several weeks. This allows for a controlled and extended exposure to fluridone concentrations. For liquid applications, the herbicide will be placed into an onboard mixing tank, mixed with river water and evenly distributed throughout the surface of the treatment area via boat. This herbicide will be applied under the water surface through trailing hoses, minimizing the chance of herbicide drift and assuring accurate placement over the target species.

Where this would be a long-duration, low-concentration treatment program, adjustments in the planned treatment protocol may be needed to accommodate changes in plant response or varying water flow and water volume turnover.

Fluridone water use restrictions include no application within one-quarter mile of a potable water intake and no use of treated water for irrigation purposes within 30 days of application. Although there are no restrictions on swimming, boating or fishing, prudent use suggests that we recommend minimal recreational use for the day of treatment. The

shoreline of the river will be posted with signs warning of these temporary water use restrictions, prior to treatment.

Water samples will be collected from multiple locations within the treatment area throughout the treatment program to test for fluridone residues using the manufacturer's FastEST procedure. Results of these analyses will help guide subsequent booster application dosages and timing.

Impacts Specific to the Wetlands Protection Act using Fluridone⁵

- Protection of public and private water supply – Generally neutral, but may have detriment at high doses (prohibition within ¼ -mi. of drinking water intakes at doses >20 ppb)
- Protection of groundwater supply – Generally neutral (no significant interaction)
- Storm damage prevention – Neutral (no significant interaction)
- Prevention of pollution – Generally neutral (no significant interaction)
- Protection of land containing shellfish - Generally neutral (no significant interaction)
- Protection of fisheries - Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)
- Protection of wildlife habitat – Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)

5.0 PHASE II - CONTINGENT MANAGEMENT TECHNIQUES FOR FUTURE CONSIDERATION

Ongoing management of this well-established invasive plant community will most certainly be required beyond the initial Phase I management effort, as true eradication of this infestation is likely not an attainable goal. For this reason, we have included a variety of management strategies that we believe may be necessary to effectively address smaller areas of remaining target plant growth and/or small patches of regrowth or recolonization following Phase I. In this Phase II of the program the annual management approach will be commensurate with the type, location, and abundance of the target vegetation growth; therefore, a level of flexibility on which strategy or combination of strategies will be important to the further reduction of the invasive plants and sustained long-term control.

In Phase II of the program the annual vegetation monitoring will drive the evaluation and ultimate selection of the annual management techniques employed. As such, it would be our intention and expectation to meet with the Commission for their review and approval of the proposed annual plan each time a new strategy becomes necessary. Below is a table outlining the contingent strategies that we believe may be required, in addition to Phase I strategies, at some point during the course of this 5-year program. We have also provided a brief outline of the scenarios where they may likely be needed in future management. Additional general information on these strategies is provided in the sections below.

⁵ Commonwealth of Massachusetts Executive Office of Environmental Affairs. *Practical Guide to Lake Management*: 2004. 133 p.

Contingent Management Strategy	Anticipated Potential Use
Tribune (diquat) herbicide	This product is fast-acting and therefore allows for effective small-scale treatment in a moving water scenario. As a result, this product may be used to provide rapid “emergency” level control in areas where the invasive species growth has potential to interfere with public events and recreational user safety (i.e., Head of the Charles).
Clearcast (imazamox) herbicide	May be used to control water chestnut growth that is too widespread and/or dense for manual hand-pulling and/or inaccessible to larger mechanical harvesting equipment.
Flumigard (flumioxazin) herbicide	This product is the only herbicide that would be effective at selectively managing small areas of fanwort growth in a flowing system like the river. It therefore would be used to manage small areas of fanwort regrowth that cannot be effectively managed with Sonar (due to extended contact time).
Algaecides (copper & peroxide)	These would be employed to address harmful cyanobacteria blooms should they arise.

Diquat (Tribune - EPA # 100-1390 or equivalent)

Tribune (diquat) is an effective herbicide for spot-application treatments due to its rapid mode of action and short herbicide concentration-exposure-time requirements. Even though diquat is classified as a contact herbicide, longer term control may be seen as plants' root crowns will not be allowed to develop.

The USEPA/MA registered herbicide diquat will be applied to the area at or below the permissible label dose. Tribune is a widely used herbicide, applied to greater than 500 lakes and ponds annually throughout the northeast to control nuisance submersed aquatic plants. At this time, there are no immediate plans to utilize diquat within the Lakes District of the Charles River. However, as diquat is a valuable tool in the aquatic plant management toolbox, we are including it in the event an appropriate and justified need arises. Diquat is able to control milfoil, curly-leaf pondweed, and other nuisance submersed plants at the application rate of 1.0-2.0 gal/acre, if necessary. Ultimately, diquat would likely only be used to control curly-leaf pondweed, if necessary, during non-fluridone treatment years (as fluridone is also able to control this species on an annual basis). Milfoil spot-treatments will be conducted using ProcellaCOR.

Temporary water use restrictions for diquat are: 1) No drinking or cooking for 3 days, 2) No irrigation of turf for 3 days and of food crops for 5 days, and 3) No livestock watering for 1 day. There are no restrictions on swimming, boating, or fishing, but prudent herbicide/algaecide management suggests that we recommend avoiding use of the treatment area(s) on the day of treatment. The shoreline will be posted with signs warning of these temporary water use restrictions, prior to treatment.

Diquat is translocated to some extent within the plant. Its rapid action tends to disrupt the leaf cuticle of plants and acts by interfering with photosynthesis. Upon contact with the soil, it is adsorbed immediately and thereby biologically inactivated. Residual levels of diquat in treated water decline rapidly and their reduction is due to the uptake by the targeted vegetation and adsorption to suspended soil particles in the water or on the bottom.

sediment. Photochemical degradation accounts for some loss under conditions of high sunlight and clear waters.

Impacts Specific to the Wetlands Protection Act using Diquat⁶

- Protection of public and private water supply – Benefit (water quality improvement)
- Protection of groundwater supply – Neutral (no interaction as diquat is adsorbed to soil particles)
- Flood control - Neutral (no significant interaction)
- Storm damage prevention – Neutral (no significant interaction)
- Prevention of pollution – Generally neutral (no significant interaction), but could be a detriment if plant die-off causes low oxygen at the bottom of the lake
- Protection of land containing shellfish - Generally neutral (no significant interaction), but reduced algae might reduce food resources for shellfish, and direct toxicity is possible under unusual circumstances
- Protection of fisheries - Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)
- Protection of wildlife habitat – Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)

Imazamox (Clearcast – EPA # 241-437-67690)

The USEPA/MA registered systemic herbicide imazamox will be applied to a respective area at or below the permissible label dose. Imazamox would be applied to control invasive water chestnut growth at the application rate of 1.5 lbs ai/acre (approximately 1 gal/ac.), if necessary. At this time, there is no immediate plan to utilize Clearcast in the Lakes District as water chestnut growth is anticipated to be managed via a combination of mechanical harvesting and hand-pulling efforts. If water chestnut growth expands to areas that are not accessible to mechanical harvesters and in quantities beyond the feasible capabilities of hand-pulling the use of Clearcast will be considered on a site-by-site basis.

As Clearcast would be applied as a foliar application that is conducted using a hand-held gun sprayer from a low-volume pump system, the herbicide would be diluted onboard the treatment boat with river water and a spray adjuvant would be added to ensure the product adheres to and remains on the water chestnut rosettes for maximum uptake. Treatment is usually conducted between the end of June and the end of August – once the rosettes have surfaced, but prior to the nutlets dropping from the plants into the river. By conducting a foliar application this way, the water chestnut plants can be easily targeted with little to no non-target impacts. Clearcast is quickly absorbed by the water chestnut foliage and rapidly translocated to the growing points within the plant, stopping growth. Treatment would not be conducted when there is any rain forecasted within the day to ensure maximum uptake by the plants. Additionally, if the wind speeds exceed 10 mph, treatment would be rescheduled accordingly to prevent any drift to non-target species.

Temporary water use restrictions for imazamox are: 1) No drinking or cooking using treated waters until residue testing results are below 50 ppb, 2) No irrigation until concentrations are below 50 ppb. There are no restrictions on swimming, boating, fishing, watering of livestock, or domestic use, but prudent herbicide management suggests that we close the treatment

⁶ Commonwealth of Massachusetts Executive Office of Environmental Affairs. *Practical Guide to Lake Management*: 2004. 124 p.

area on the day of treatment. The shoreline will be posted with signs warning of these temporary water use restrictions prior to treatment.

Impacts Specific to the Wetlands Protection Act using Imazamox

- Protection of public and private water supply – Generally neutral, but may have detriment at high doses (setback of treatment required, with distance based on dose and area treated)
- Protection of groundwater supply – Neutral (no interaction)
- Flood control - Neutral (no significant interaction)
- Storm damage prevention – Neutral (no significant interaction)
- Prevention of pollution – Generally neutral (no significant interaction), but could be a detriment if plant die-off causes low oxygen at the bottom of the lake
- Protection of land containing shellfish - Generally neutral (no significant interaction)
- Protection of fisheries - Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)
- Protection of wildlife habitat – Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)

Flumioxazin (Flumigard- EPA #81927-78 or equivalent)

The USEPA/MA registered herbicide flumioxazin (Flumigard) is the only contact herbicide currently approved for use in Massachusetts that can provide effective control of fanwort. Flumioxazin use carries a number of state specific restrictions which limit its use potential. Until flumioxazin is more widely used in the state and more data is collected (which is in process at another waterbody SOLitude currently manages in the state) it is unlikely that these restrictions will change, so its use would be reserved for small spot-treatments in high-use areas of the river. If greater acreages require control, fluridone herbicide would be a better fit.

Currently in the Lakes District of the Charles River, the distribution and density of fanwort are better addressed through the application of fluridone (Sonar). As such, at this time there are no immediate plans to utilize flumioxazin. In the event of small, localized areas of fanwort growth when Sonar (fluridone) herbicide use is not feasible, then flumioxazin would be considered.

Flumioxazin herbicide is classified as a PPO (Protoporphyrinogen oxidase) inhibitor that initiates cell membrane disruption providing control of a broad range of susceptible plants. Flumioxazin is a true contact herbicide that provides quick and effective control of target plant species. Although flumioxazin is not shown to have systemic activity, one or more years of reasonable control have been observed at other projects in New England where it has been applied. Flumioxazin is extremely fast-acting and has a very short half-life so it is well suited for spot/site specific treatments.

Impacts Specific to the Wetlands Protection Act using Flumioxazin

- Protection of public and private water supply – Benefit (water quality improvement)
- Protection of groundwater supply – Neutral (no interaction as flumioxazin has a low leaching potential)
- Flood control - Neutral (no significant interaction)
- Storm damage prevention – Neutral (no significant interaction)
- Prevention of pollution – Generally neutral (no significant interaction), but could be a detriment if plant die-off causes low oxygen at the bottom of the lake

- Protection of land containing shellfish - Generally neutral (no significant interaction), but reduced algae might reduce food resources for shellfish, and direct toxicity is possible under unusual circumstances
- Protection of fisheries - Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)
- Protection of wildlife habitat – Possible benefit (habitat enhancement) and possible detriment (food source alteration, loss of cover)

Algaecides (Captain XTR – EPA # 67690-9, SeClear – EPA # 67690-55, GreenClean PRO – EPA #70299-15, or equivalent)

Approval for the use of a copper or peroxide-based algaecide is requested in the event that hazardous or nuisance algae conditions develop that jeopardize human health or recreation, warranting treatment. Although the Charles River has supported historical cyanobacteria (blue-green algae) blooms, there is no immediate plan to conduct an algaecide treatment in the Lakes District. Algaecides have been included for approval so that if a cyanobacteria bloom is documented around the time of a large recreational event on the Charles River (i.e., Head of the Charles Regatta, or similar), in which human health may be negatively impacted by the bloom, a treatment can be conducted to effectively alleviate the conditions. Although treatment of a cyanobacteria bloom is only a short-term solution, the ability to react accordingly when public health may be at stake is crucial.

Copper based algaecides (i.e., Captain XTR, CuSO₄, SeClear) are widely used and are applied to lakes and ponds throughout North America to control nuisance filamentous and microscopic algae – inclusive of cyanobacteria (blue-green algae) blooms. There are no water use restrictions associated with copper-based algaecides; SŌLitude treats several direct, potable (drinking) water reservoirs and an increasing number of recreational waterbodies in the Commonwealth with these algaecides, on a yearly basis. The concentrated liquid algaecides are first diluted with river water and are then applied subsurface (in the same process as the liquid herbicides mentioned previously) throughout the treatment area. The application rate is generally 0.2 ppm of copper or less for algae control. If applied, treatment will not exceed 50% of the waterbody volume so that dissolved oxygen levels can be preserved as to not impact any aquatic wildlife.

Peroxide based algaecides (i.e., GreenClean PRO, GreenClean Liquid) are a recent addition to algae management. Similar to copper algaecides, there are no water use restrictions. The concentrated products are diluted with river water and then sprayed evenly throughout the treatment area. The application rate is 0.5 – 1.5 gallons per acre-foot for algae control. If applied, treatment will not exceed 50% of the waterbody volume.

Algae management in the Charles River system is a difficult endeavor, as common reactionary strategies like copper and peroxide based algaecides only offer a short-term solution to the problem. Internal and external nutrient reduction offers a longer-term approach, but the potential for success on this scale (large watershed, high density development, significant accumulation of organic sediments, etc.) is likely incapable of producing a nutrient level reduction capable of precluding high phytoplankton production under suitable growing conditions.

Impacts Specific to the Wetlands Protection Act using Copper⁷ and Peroxide Algaecides

- Protection of public and private water supply – Benefit (used to control algae)
- Protection of groundwater supply – Neutral (no significant interaction)
- Flood control - Neutral (no significant interaction)
- Storm damage prevention – Neutral (no significant interaction)
- Prevention of pollution - Generally neutral (no significant interaction), but could be a detriment if algae/plant die-off causes low oxygen at the bottom of the lake or causes release of taste and odor compounds or toxins
- Protection of land containing shellfish - Generally neutral (no significant interaction), but reduced algae might reduce food resources for shellfish, and direct toxicity is possible under unusual circumstances.
- Protection of fisheries - Possible benefit (habitat enhancement) and possible detriment (food source alteration, direct toxicity)
- Protection of wildlife habitat – Possible benefit (habitat enhancement) and possible detriment (food source alteration, direct toxicity)

Management Technique Descriptions

Detailed information on all the approaches proposed in this NOI can be found at the **Massachusetts Department of Conservation and Recreation, Lakes and Ponds Program website**. There are links under the Publications tab to the "Generic Environmental Impact Report for Eutrophication and Lake Management in Massachusetts" and the "Practical Guide to Lake Management in Massachusetts."

<<http://www.mass.gov/eea/agencies/dcr/water-res-protection/lakes-and-ponds/eutrophication-and-aquatic-plant-management.html>>

Additional information on the herbicides and algaecides can be found at the **Massachusetts Department of Agricultural Resources website**:

<<http://www.mass.gov/eea/agencies/agr/pesticides/aquatic-vegetation-management.html>>

6.0 Alternatives Analysis:

Alternatives to the proposed Aquatic Plant Management Plan were considered. SŌlitude and DCR staff evaluated all available strategies for management of the Lakes District of the Charles River. Findings and recommendations are based on direct experience and discussions found in the *Eutrophication and Aquatic Plant Management in Massachusetts Final Generic Environmental Impact Review* (FGEIR, EOE 2004).

Bottom/Benthic Weed Barriers: Not Recommended

Physical controls, such as the use of bottom weed barriers (i.e., Aquatic Weed Net or Palco) can be effective for small dense patches of nuisance vegetation, but are not cost effective or feasible for large areas. Weed barriers are expensive to install and maintain at ~\$2.00+/ft² (material & installation). Semi-annual maintenance to retrieve, clean and re-deploy the barriers would be expensive and time consuming. Additionally, covering expansive areas of the river bottom may also have detrimental impacts on invertebrates or

⁷ Commonwealth of Massachusetts Executive Office of Environmental Affairs. *Practical Guide to Lake Management*: 2004. 122 p.

other types of wildlife. Based on the configuration of the Lakes District, the relatively large distribution of various invasive aquatic plants within the area, and the known presence of contaminated sediment which would be disturbed with the installation/removal, we do not believe bottom barriers are a viable management strategy in this case.

Diver Hand-Pulling or Diver-Assisted Suction Harvesting (DASH): Not Recommended

Diver hand-pulling and/or diver-assisted suction harvesting (DASH) can be a potential management tool for small, scattered growth of species such as milfoil, fanwort, and curlyleaf pondweed. The plants are individually pulled by the stem to gently lift the root from the sediment and placed into a mesh bag (with the diver hand-pulling) or suctioned up to a boat on the surface (with DASH). Unfortunately, due to the presence of contaminated sediment in the Charles River, the high frequency and use of recreational boats, and prohibited swimming, we are not recommending these management strategies for use in the Lakes District in order to protect the safety of the divers.

Mechanical Harvesting: Recommended

Harvesting of water chestnut plants *only* is recommended in the Lakes District. Further information about the proposed mechanical harvesting strategy is provided in section 4.3.3.

It should be noted that harvesting Eurasian watermilfoil, variable watermilfoil and fanwort growth is not recommended because of their ability to reproduce through vegetative fragmentation. As such, this management approach has the potential to increase propagation of these invasive species within and downstream of the Lakes District. Additionally, harvesting would be costly and at best would only provide seasonal relief of these species with little or no long-term benefits. The overall ecological disruption and non-target impacts would be more significant than with spot-treatments using aquatic herbicides.

Biological: Not Recommended

There are no proven biological controls available or approved by the State for the control of the invasive aquatic plant species present in the Lakes District of the Charles River.

Sediment Excavation/Dredging: Not Recommended

Dredging nutrient rich bottom sediment is sometimes used as a strategy to control excessive weed growth. Conventional (dry) or hydraulic dredging would require the expenditure of hundreds of thousands of dollars in design and permitting fees alone. Dredging may also have severe impacts to aquatic organisms (i.e., fish and macroinvertebrates) in the river with no guarantees of elimination of invasive vegetation.

Do Nothing: Not Recommended

If the non-native and nuisance plant growth is allowed to continue unabated, eutrophication and inevitable filling-in at the Lakes District will continue to occur at an accelerated rate due to the annual decomposition of extra plant material. Stagnant conditions will also increase water temperatures promoting both algae and bacterial growth as well as providing extensive mosquito breeding habitat. The river's recreational and aesthetic value would be significantly degraded.

7.0 Compliance

Massachusetts Wetlands Protection Act:

The objective of this project is to control invasive species. Managing densities of non-native species will typically not adversely affect wildlife habitat and will not negatively impact other interests of the Massachusetts Wetlands Protection Act. No significant alteration to wetland resources areas will occur as a result of the proposed management program; instead the resource areas will be enhanced by controlling the nuisance plant and algae growth. The proposed management activities are consistent with the guidelines in the following documents:

- Final Generic Environmental Impact Report: Eutrophication and Aquatic Plant Management in Massachusetts (June 2004)
- Guidance for Aquatic Plant Management in Lakes and Ponds: As it Relates to the Wetlands Protection Act (April 2004 – DEP Policy/SOP/Guideline # BRP/DWM/WW/G04-1)
- The Practical Guide to Lake Management in Massachusetts (2004)

DEP License to Apply Chemicals:

All herbicide applications will be performed by Certified Applicators. A site specific "License to Apply Chemicals" for the proposed treatment will be filed with Massachusetts DEP, Office of Watershed Management. The USEPA/MA registered aquatic herbicides will be applied at recommended label rates, in accordance with the "Order of Conditions" and DEP "License to Apply Chemicals" permits (BRP WM04). Prior to treatment, the shoreline will be posted with signs warning of all temporary water use restrictions.

Massachusetts Environmental Policy Act:

The strategies proposed in this NOI are options approved under the Massachusetts Environmental Protection Act (MEPA) process that was approved in 2004 with the issuance of the FGEIR and the *Practical Guide to Lake and Pond Management in Massachusetts*. These approaches do not require individual MEPA review.

Massachusetts Endangered Species Act:

According to the most recent Natural Heritage maps provided by MA GIS, the Lakes District of the Charles River contains one Priority Habitat (PH1301) as determined by the Massachusetts Natural Heritage & Endangered Species Program (NHESP). As such, a formal review by NHESP will be required. A copy of this program request has been submitted to NHESP for review under MESA.

Chapter 91:

Based on the types of activities that are subject to Chapter 91 authorization (structures, filling, dredging, change in use, and structural alteration), the work proposed in this Notice of Intent application is not classified as any of those activities. These approaches do not require a Chapter 91 authorization.

US Army Corps of Engineers:

The Lakes District of the Charles River falls into the US Army Corps of Engineers jurisdiction. Based on the types of activities that are subject to their approval, we believe filing a Self-Verification will fulfill this regulatory requirement.

8.0 Impacts of the Proposed Management Plan Specific to the Wetlands Protection Act:

Protection of public and private water supply – The Lakes District of the Charles River is not used directly as a drinking water supply. Aquatic herbicide treatment at the river will not have any adverse impacts on the public or private water supply, when used in accordance with the project label and conditions of the MA DEP License to Apply Chemicals.

Protection of groundwater supply – According to available studies, there is no reason to believe that the groundwater supply will be adversely impacted by the proposed management strategies, specifically the application of the herbicides at the proposed rates to the Lakes District of the Charles River, when used in accordance with the product labels. Contamination of groundwater by aquatic herbicides is limited by their low rate(s) of application, rapid rate of degradation, and uptake by target plants. SŌlitude's State licensed applicators take all necessary precautions when mixing and disposing/recycling of all chemical containers.

Flood control and storm damage prevention – No construction, dredging or alterations of the existing floodplain and storm damage prevention characteristics of the river are proposed. However, in some instances, abundant and excessive aquatic plant growth can contribute to high water and flooding. Most commonly this occurs in the vicinity of waterbody outlets or water conveyance channels and structures. The unmanaged annual growth and decomposition of abundant plant growth is also known to increase sediment deposition at an accelerated rate. Therefore, the proposed management approaches may increase the capacity of the resource area over the long-term to provide flood protection.

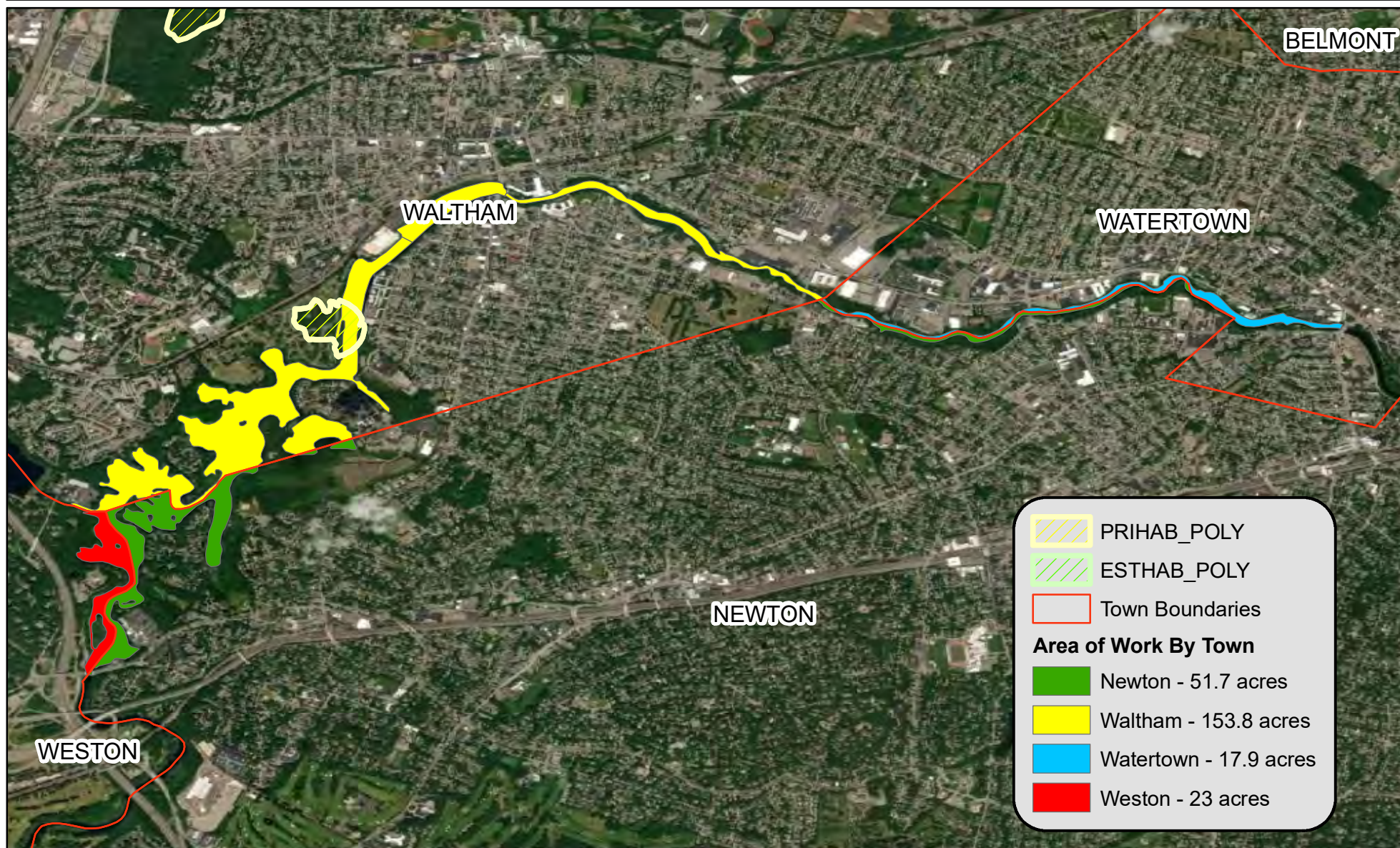
Prevention of pollution – No degradation of water quality or increased pollution is expected by the proposed management approaches. The proposed herbicides are relatively slow acting in controlling the nuisance vegetation. This results in a slow release of nutrients from the decaying plants, reducing the potential for increases in nutrients that can cause algae blooms. Removal of the excessive growth of aquatic vegetation will contribute to improved water circulation and a reduction in the potential for anoxic conditions. The post-management decrease in plant biomass will help to decrease the rate of eutrophication currently caused by the decomposing of excessive plant material.

Protection of fisheries and shellfisheries – Contiguous, dense beds of aquatic vegetation provide poor habitat for most species of fish. Dense plant cover frequently results in significant diurnal fluctuations in dissolved oxygen as well as oxygen depletion during certain times of the year. While temporary effects on some desirable submersed and floating-leaved species may occur following the application of an aquatic herbicide, non-target plants typically rebound quickly. Shoreline emergent plants will not be impacted following the use of aquatic herbicides.

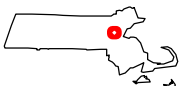
Protection of wildlife and wildlife habitat – In general, excessive and abundant plant growth, especially non-native plants, provides poor wildlife habitat for fish and other wildlife. The proposed management plan is expected to help prevent further degradation of the waterbody through excessive weed growth and improve the wildlife habitat value of the pond in the long-term. Maintaining a balance of open water and vegetated areas is intended.

Figures

Charles River Upper Basin - Lakes District
to Watertown (Route 16) Bridge - Area of Work by Town &
NHESP Habitat Areas



Charles River
Weston, Newton
Waltham, Watertown, MA
[Middlesex/Suffolk County]

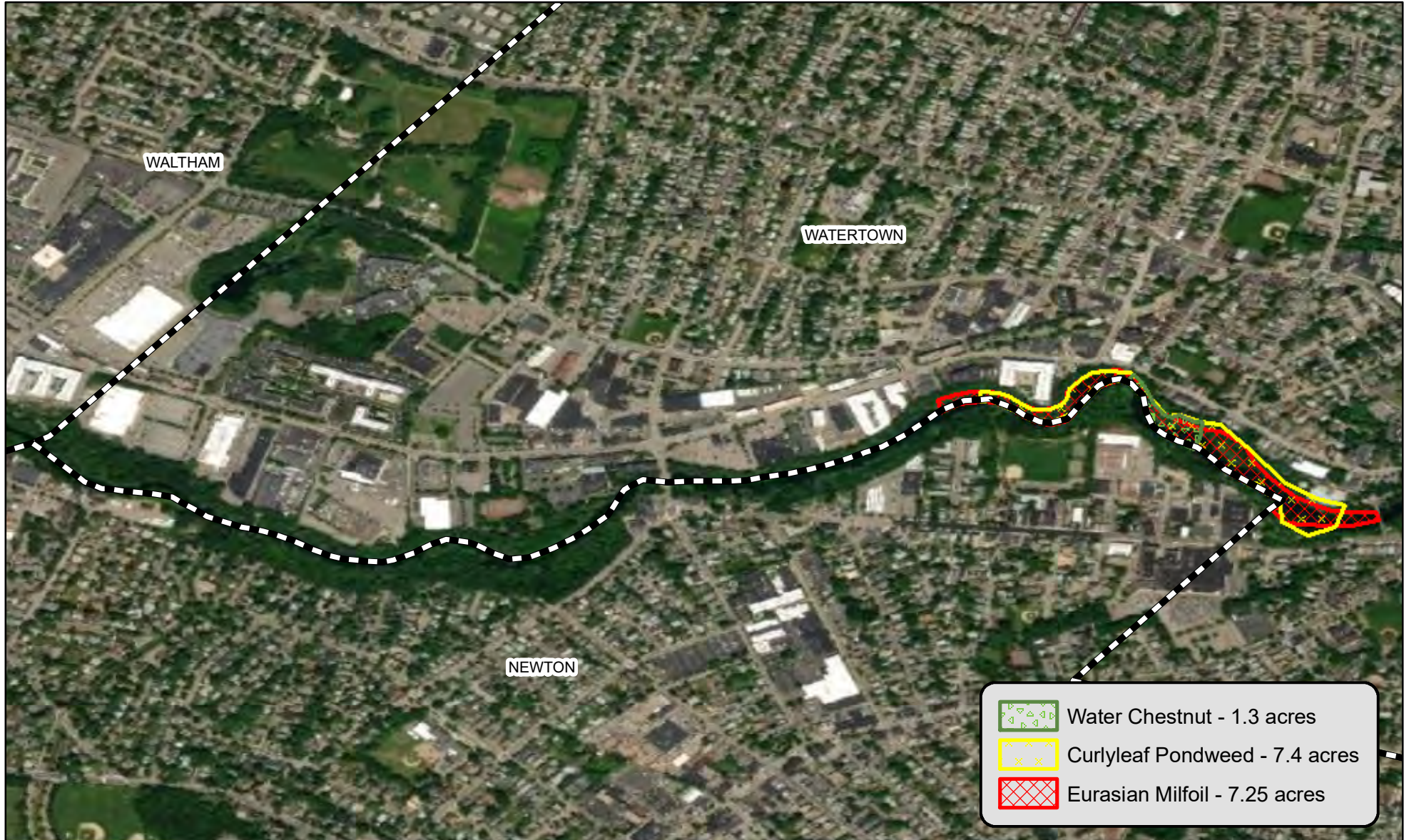


Charles River

0 2,600 5,200 10,400 Feet
1:36,297



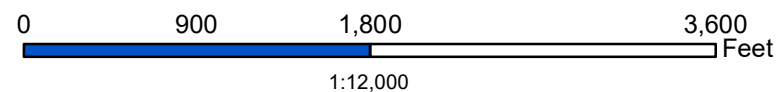
Map Date: 2/16/2022
Prepared by: DMM
Office: Shrewsbury, MA



Charles River
Weston, Newton
Waltham, Watertown, MA
[Middlesex/Suffolk County]



Charles River



Map Date: 1/25/2022
Prepared by: DMM
Office: Shrewsbury, MA



Charles River
Waltham, MA



Charles River Lakes District Area

0

3,900

7,800

Feet

N



Map Date: 01/27/2022
Prepared by: KV
Office: SHREWSBURY, MA

Herbicide/Algaecide Information

Detailed information herbicides proposed in this NOI can be found at the **Massachusetts Department of Conservation and Recreation, Lakes and Ponds Program website**. There are links under the Publications tab to the "Generic Environmental Impact Report for Eutrophication and Lake Management in Massachusetts" and the "Practical Guide to Lake Management in Massachusetts."

<<http://www.mass.gov/eea/agencies/dcr/water-res-protection/lakes-and-ponds/>>

Additional information on these herbicides can be found at the **Massachusetts Department of Agricultural Resources website**

<http://www.mass.gov/eea/agencies/agr/pesticides/aquatic-vegetation-management.html>



Massachusetts Association of Conservation Commissions

protecting wetlands, open space and biological diversity through education and advocacy

April 21, 2022

Thomas Tracy, Watertown City Manager
City of Watertown
Administration Building
149 Main Street
Watertown, MA 02472

Dear Mr. Tracy:

I am very pleased to inform you that Maria Rose associated with the Watertown Conservation Commission successfully completed eight units of the Massachusetts Association of Conservation Commissions (MACC) Fundamentals for Massachusetts Conservation Commissioners training program and has received a Certificate of Achievement for that accomplishment.

The Fundamentals program provides conservation commissioners and others with the basic knowledge and practical tools essential to carry out the many responsibilities of administering the Wetlands Protection Act and open space planning. Such training promotes sound, consistent fact-based decision-making and builds respect for conservation commission decisions. Each person who completes the course validates the wisdom of locally-based protection of wetlands and open space for current and future generations.

We congratulate Maria for undertaking this training, as well as you and the Watertown Conservation Commission for recognizing the value of training in commission work and supporting this important training for your commission. Enclosed is a media release announcing Maria's achievement for forwarding to your local newspaper.

We believe participation in continuing education on wetland and open space issues is an essential aspect of the work of conservation commission members and staff. We hope you will encourage commissioners to participate and assure that the commission budget includes adequate funding for the modest training fees necessary for participation.

Sincerely,

Massachusetts Association of Conservation Commissions

Dorothy A. McGlincy, LSP
Executive Director
Email: dorothy.mcglinchy@macweb.org

Enclosure

cc: Watertown Conservation Commission



Massachusetts Association of Conservation Commissions

protecting wetlands, open space and biological diversity through education and advocacy

FOR IMMEDIATE RELEASE:

Date: April 21, 2022

FOR INFORMATION CONTACT:

Dorothy A. McGlincy

617-489-3930

dorothy.mcglincy@macccweb.org

LOCAL RESIDENT COMPLETES CONSERVATION COMMISSION CERTIFICATE TRAINING PROGRAM

The Massachusetts Association of Conservation Commissions (MACC) announced that it has awarded Maria Rose, associated with the Watertown Conservation Commission, a Certificate of Achievement for successfully completing eight units of MACC's Fundamentals for Conservation Commissioners certificate training program.

The Fundamentals program provides conservation commissioners and others with the basic knowledge and practical tools essential to carrying out many responsibilities of administering the Wetlands Protection Act and for open space planning and protection. Such training promotes sound, consistent fact based decision-making and builds respect for commission determinations. MACC's training program is the only comprehensive program offered to those involved with the Wetlands Protection Act and open space planning.

By achieving her certificate, Maria has shown dedication to the good work of the conservation commission to protect our natural resources for current and future generations.

MACC is a non-profit environmental organization founded in 1961 to support, educate and advocate on behalf of conservation commissions. MACC works for strong, workable, science-based laws and regulations regarding wetlands, other water resources, open space, and biological resources. MACC offers educational programs throughout the state. Call MACC at 617-489-3930 or visit www.maccweb.org for more information.