

**RECEIVED**

*By Mattie VandenBoom at 4:25 pm, Apr 18, 2024*

Notice of Intent for an Aquatic Plant Management Program at Worcester Park Ponds

Worcester, MA

April 2024

Prepared by the City of Worcester Department of Sustainability and Resilience

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## Notice of Intent Application Form



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

Provided by MassDEP:  
MassDEP File Number  
Document Transaction Number  
Worcester  
City/Town

**WPA Form 3 – Notice of Intent**

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.



**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):

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

2. Applicant:

Katie  
a. First Name Liming  
b. Last Name  
City of Worcester Department of Sustainability and Resilience  
c. Organization  
455 Main Street  
d. Street Address  
Worcester MA 01608  
e. City/Town f. State g. Zip Code  
508-929-1300  
h. Phone Number i. Fax Number limingk@worcesterma.gov0  
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):

0 0 0  
a. Total Fee Paid b. State Fee Paid c. City/Town Fee Paid



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**A. General Information (continued)**

6. General Project Description:

The Applicant seeks an Order of Conditions for an Aquatic Plant Management Program at the City of Worcester Park Ponds to control nuisance and invasive aquatic vegetation and algae utilizing treatment with U.S. EPA/MA registered aquatic herbicides and algacides (see Attachment B - Project Description).

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

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Single Family Home                        | 2. <input type="checkbox"/> Residential Subdivision       |
| 3. <input type="checkbox"/> Commercial/Industrial                     | 4. <input type="checkbox"/> Dock/Pier                     |
| 5. <input type="checkbox"/> Utilities                                 | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation                |
| 9. <input checked="" type="checkbox"/> 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)(e)(5) Improving the natural capacity of a Resource Area through the removal of aquatic nuisance vegetation to retard pond and lake eutrophication.

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

_____	_____
a. County	b. Certificate # (if registered land)
_____	_____
c. Book	d. Page Number

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

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet _____	2. linear feet _____
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet _____	2. square feet _____
c. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	357,192 1. square feet _____ 3. cubic yards dredged _____	2. square feet _____

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

2. Width of Riverfront Area (check one):

- 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:

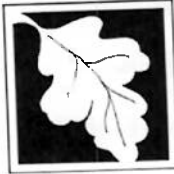
a. total square feet _____	b. square feet within 100 ft. _____	c. square feet between 100 ft. and 200 ft. _____
----------------------------	-------------------------------------	--

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



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**C. Other Applicable Standards and Requirements**

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

**Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review**

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

- a.  Yes  No

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

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

- b. Date of map \_\_\_\_\_

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

- c. Submit Supplemental Information for Endangered Species Review\*

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

(a) within wetland Resource Area

percentage/acreage \_\_\_\_\_

(b) outside Resource Area

percentage/acreage \_\_\_\_\_

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

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

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

(b)  Photographs representative of the site

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

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

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





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

- (c)  MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).  
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, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; 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 - Bourne 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@mass.gov](mailto:dmf.envreview-south@mass.gov)

North Shore - Plymouth to New Hampshire border:

Division of Marine Fisheries -  
North Shore Office  
Attn: Environmental Reviewer  
30 Emerson Avenue  
Gloucester, MA 01930  
Email: [dmf.envreview-north@mass.gov](mailto:dmf.envreview-north@mass.gov)

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.

- c.  Is this an aquaculture project?      d.  Yes     No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



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

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

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

**D. Additional Information**

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

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

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

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



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**D. Additional Information (cont'd)**

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

a. Plan Title

b. Prepared By

c. Signed and Stamped by

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

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

**E. Fees**

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

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

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name



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## F. Signatures and Submittal Requirements

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

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

  
\_\_\_\_\_

1. Signature of Applicant

April 18, 2024

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

### For Conservation Commission:

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

### For MassDEP:

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

### Other:

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

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



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**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:

Worcester Park Ponds  
 a. Street Address Worcester  
 b. City/Town  
 0  
 c. Check number d. Fee amount

2. Applicant Mailing Address:

Katie Liming  
 a. First Name b. Last Name  
 City of Worcester Department of Sustainability and Resilience  
 c. Organization  
 455 Main Street  
 d. Mailing Address  
 Worcester MA 01608  
 e. City/Town f. State g. Zip Code  
 508-929-1300  
 h. Phone Number i. Fax Number limingk@worcesterma.gov  
 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

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

**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.



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**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Cat 2e: Inland Limited Project - Fee exempt (municipality)	1	0	0

**Step 5/Total Project Fee:** \_\_\_\_\_

**Step 6/Fee Payments:**

Total Project Fee:	0
	a. Total Fee from Step 5
State share of filing Fee:	0
	b. 1/2 Total Fee less \$12.50
City/Town share of filling Fee:	0
	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

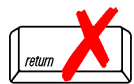
\_\_\_\_\_  
City/Town

### 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

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

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

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

#### General Eligibility Criteria for All Coastal Ecological Restoration Limited Projects

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

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





# WPA Form 3 – Notice of Intent

## Appendix A: Ecological Restoration Limited Project Checklists

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

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

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

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

#### Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

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

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

#### Tidal Restoration Projects

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

#### Shellfish Habitat Restoration Projects

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

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

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



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## Appendix A: Ecological Restoration Limited Project Checklists

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

#### Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

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



Provided by MassDEP:
MassDEP File Number
Document Transaction Number

# WPA Form 3 – Notice of Intent

## Appendix A: Ecological Restoration Limited Project Checklists

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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

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).



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### Appendix A: Ecological Restoration Limited Project Checklists

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

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

#### Additional Eligibility Criteria for Specific Inland Ecological Restoration Limited Project Types

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

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



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## Appendix A: Ecological Restoration Limited Project Checklists

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

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

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



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## Appendix A: Ecological Restoration Limited Project Checklists

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

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

- 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

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

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

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

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

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

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

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

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

Supplemental Information for Endangered Species Review has been submitted.

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





# WPA Form 3 – Notice of Intent

## Appendix A: Ecological Restoration Limited Project Checklists

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

Make check payable to “Commonwealth of Massachusetts - NHESP” and mail to NHESP:

**Natural Heritage & Endangered Species Program**

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

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

OR Check One of the Following:

- 1.  Project is exempt from MESA review.

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

- 2.  Separate MESA review ongoing.

\_\_\_\_\_  
a. NHESP Tracking #

\_\_\_\_\_  
b. Date submitted to NHESP

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

**Estimated Habitat Map of State-Listed Rare Wetlands Wildlife**

If a portion of the proposed project is located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP), complete the portion below. To view habitat maps, see the **Massachusetts Natural Heritage Atlas** or view the maps electronically at: <https://www.mass.gov/guides/masswildlife-publications#-massachusetts-natural-heritage-atlas->

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

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

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

Date of the map: \_\_\_\_\_



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## Appendix A: Ecological Restoration Limited Project Checklists

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



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## Appendix A: Ecological Restoration Limited Project Checklists

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

Send the request for a written or electronic determination to:

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

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

- Division of Fisheries and Wildlife** – <https://www.mass.gov/orgs/division-of-fisheries-and-wildlife>
  - Projects that involve silt-generating, in-water work that will impact a non-tidal perennial river or stream and the in-water work will not occur between May 1 and August 30.
    - Obtain a written determination from the Division of Fisheries and Wildlife (DFW) as to whether the proposed work requires a TOY restriction.
      - The proposed work does NOT require a TOY restriction.
      - The proposed work requires a TOY restriction. The DFW determination with TOY restriction and other conditions is attached.

**MassDEP Water Quality Certification**

- Project involves dredging of 100 cubic yards or more in a Resource Area or dredging of any amount in an Outstanding Resource Water (ORW). A copy and proof of the MassDEP Water Quality Certification pursuant to 314 CMR 9.00 is attached to the NOI.
- This project is a Combined Permit Application for 401 Dredging and Restoration (BRP WW 26).

**MassDEP Wetlands Restriction Order**

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

Yes     No

**Department of Conservation and Recreation**

**Office of Dam Safety**

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



# WPA Form 3 – Notice of Intent

## Appendix A: Ecological Restoration Limited Project Checklists

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

#### Areas of Critical Environmental Concern (ACECs)

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

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

\_\_\_\_\_  
Name of ACEC

#### Minimum Required Documents (310 CMR 10.12)

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

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

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

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

\_\_\_\_\_  
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

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

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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.

*Katherine Liming*

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 B: Project Description

## 1.0 Introduction

The “Applicant,” the City of Worcester Department of Sustainability and Resilience seeks approval to continue an Aquatic Management Program at the City of Worcester Park Ponds. The continued objective of the management program is to control growth of non-native and nuisance aquatic plant species and algae, to improve and maintain open water habitat, maintain water quality, promote growth of less pervasive native plant species, and provide safe recreational access to the pond. Based on the type, distribution, and density of vegetation within the Worcester Park Ponds, the restoration goals of the Applicant can best be achieved through the prudent use of USEPA/MA State registered herbicides and algaecides and harvesting of certain invasive species as appropriate.

The proposed project has been filed as an Ecological Restoration Limited Project under 310 CMR 10.53(4) and will protect the interest of the Wetland Protection Act by controlling nuisance species, improving fish habitat, improving water quality and slowing lake eutrophication.<sup>1</sup>

## 2.0 Problem Statement

The Worcester Park Ponds included in this filing include Lincoln Pond in Elm Park, Crystal Pond in University Park, Wawecus Road Pond, Burncoat Pond, Green Hill Pond, and Green Hill Veterans Memorial Pond in Green Hill Park (Attachment C – Figure 1). The entirety of each pond is littoral area, where sunlight penetrates through the water to the sediment, supporting dense aquatic macrophyte growth. Through regular monitoring and annual treatments utilizing herbicides and algaecides, nuisance vegetation and algae growth has been reduced. If left unmanaged, dense vegetation can degrade water quality and wildlife habitat and reduce recreational access to the ponds. A management program focusing on regular monitoring and as-needed chemical treatment with USEPA/MA State approved herbicides and algaecides and/or harvesting is proposed to control the non-native and nuisance plant and algae species to maintain desirable water quality.

The proposed management program is a continuation of the previously approved Order of Conditions and will continue the objectives of managing moderate to dense nuisance vegetation growth while seeking to improve the water quality of the ponds and maintain open water habitat.

## 3.0 Site Descriptions

### *Crystal Pond, University Park*

Crystal Pond is an approximate 2-acre waterbody located within University Park adjacent to Crystal Street (Attachment C – Figure 2a). The pond has an estimated mean depth of 3-feet and a maximum depth of approximately 8-feet. The pond's watershed is small and its main source of water is surficial runoff from the immediate area. The shoreline is surrounded by walking paths and turf with scattered trees. Historically, Eurasian Milfoil (*Myriophyllum spicatum*) and pondweeds (*Potamogeton sp.*) have occurred throughout the pond in moderate densities. Overgrowth of Duckweed (*Lemna minor*) has become a particular problem in recent years and dense growth led to a fish kill in 2023. Several stands of the invasive reed *Phragmites australis* occur along the edges of the pond. Microscopic and filamentous

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



algae can become problematic due to the lack of water movement within the pond over the course of the summer. An aerating fountain improves circulation in a localized area. A second aerating fountain will be installed in 2024 to further improve circulation.

#### *Wawecus Road Pond*

The Wawecus Road Pond is an approximate 0.4-acre waterbody located within Burncoat Park between the Wawecus Rood School and Burncoat Pond (Attachment C – Figure 2b). The pond has an estimated mean depth of 5-feet and a maximum depth of approximately 8-feet. The pond's watershed is small and its main source of water is surficial runoff from the immediate area. The shoreline is surrounded by walking paths and turf with scattered trees. Sparse floating duckweed (*Lemna minor*) and submersed pondweeds are scattered throughout the pond, with suspected scattered Variable Milfoil (*Myriophyllum heterophyllum*). A healthy vegetated buffer of cattails (*Typha latifolia*) and other common, native wetland species is established. Microscopic and filamentous algae can become problematic due to the lack of water movement within the pond over the course of the summer.

#### *Green Hill Veterans Memorial Pond*

The Green Hill Veterans Memorial Pond is an approximate 0.8-acre waterbody located within Green Hill Park adjacent to the Massachusetts Viet Nam Veterans Memorial (Attachment C - Figure 2c). The pond has an estimated mean depth of 5-feet and a maximum depth of approximately 8-feet. The pond's watershed is small and its main source of water is surficial runoff from the immediate area. Walking paths and turf with scattered trees abut the western half of the shoreline with undeveloped forests and trails along the eastern half. Historically, Eurasian watermilfoil (*Myriophyllum spicatum*), pondweeds (*Potamogeton sp.*), and duckweed (*Lemna minor*) have occurred throughout the pond in moderate densities. Microscopic and filamentous algae can become problematic due to the lack of water movement within the pond over the course of the summer. The pond experiences consistent cyanobacteria bloom conditions throughout the summer months. An aerating fountain assists in circulation, but with localized impact.

#### *Lincoln Pond, Elm Park*

Lincoln Pond is an approximate 5-acre waterbody located within Elm Park adjacent to Park Avenue and Highland Street (Attachment C – Figure 2d). The pond has an estimated mean depth of 3-feet and a maximum depth of approximately 6-feet. The pond consists of three connected basins, or meres. The pond's watershed is small, and its main source of water is surficial runoff from the immediate area. During periods of drought, water levels may become drastically reduced. The shoreline is surrounded by walking paths and turf with scattered trees. The pond has a history of scattered invasive Variable watermilfoil (*Myriophyllum heterophyllum*), but very low water clarity in recent years has hindered identification. Several stands of the invasive reed *Phragmites australis* occur along the edges of the pond, particularly in the northern mere. Microscopic and filamentous algae can become problematic due to the lack of water movement within the pond over the course of the summer. The pond experiences consistent cyanobacteria bloom conditions throughout the summer months. Sedimentation also impacts Lincoln Pond, and a small dredging project is planned for 2024 to improve flow between the northern and central meres.

## **4.0 In-Lake Management Recommendations**

### **4.1 Program Overview**

Five (5) year approval is requested to continue the aquatic management program at Worcester park ponds, which seeks to manage invasive and nuisance aquatic plant and algae species, to improve and maintain open water habitat, promote the growth of less pervasive plant species, and provide safe recreational access to the ponds. This management program seeks to achieve the goals of the Applicant while complying with the regulatory responsibilities of the Worcester Conservation Commission and MA DEP.

The management program is designed to respond to observed conditions. The objectives of improving water quality may be achieved through regular monitoring supplemented by the prudent and as-needed use of USEPA/MA State registered aquatic herbicides and algaecides. Approval is requested for use of diquat herbicide (trade name: Reward), and copper-based algaecides. Conditional approval is requested for fluridone (Sonar), flumioxazin (Clipper), and glyphosate (AquaPro) herbicides if pond conditions require more targeted management techniques. The proposed herbicides and algaecides specifically affect their target species and have a negligible impact on non-target species when applied according to the product label directions. All chemicals are applied at or below suggested doses according to the product label as suggested for plant types and densities. Approval is also requested for the physical removal (hand-pulling or skimming) of invasive or nuisance species which do not reproduce through fragmentation or rhizomes (i.e., water chestnut, duckweed).

No significant negative alteration to the wetland resource areas will occur as a result of the proposed aquatic management program. The management program seeks to enhance the resource areas by controlling invasive aquatic plant species and dense native vegetation and improving water quality.

### **4.2 Proposed Products and Management Techniques**

#### **Diquat (Reward® - EPA # 100-1091 or equivalent)**

Reward (diquat bromide) is a contact herbicide effective for partial-pond treatments due to its rapid effects and short herbicide concentration-exposure-time requirements.

The USEPA/MA registered herbicide diquat dibromide will be applied to the area at or below the product label dose. Reward is a widely used herbicide to control nuisance submersed aquatic plants. Diquat would be applied to control milfoil, curly-leaf pondweed and other invasive or nuisance submersed plants at the application rate of 1.0-2.0 gal/acre in areas deeper than 2 feet, and less than 1.0 gal/acre in areas less than 2 feet deep, for a typical concentration of 0.1 ppm of active ingredient. Temporary water use restrictions 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 the pond be closed on the day of treatment. Prior to treatment, the shoreline of the pond will be posted with signs advising the public of temporary water use restrictions.

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. It is adsorbed onto sediment upon contact and becomes biologically inactivated. Residual levels of diquat in treated water decline rapidly, due to uptake by vegetation and adsorption onto suspended soil particles in the water or on the bottom. Photochemical degradation accounts for some loss under conditions of high sunlight and clear waters.

### **Impacts Specific to the Wetlands Protection Act<sup>2</sup>**

- Protection of public and private water supply – Benefit (water quality improvement)
- Protection of groundwater supply – Neutral no interaction as diquat is absorbed to soil particles
- 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 lake bottom
- 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® – EPA # 67690-9, SeClear – EPA # 67690-55, GreenClean PRO – EPA #70299-15, or equivalent)**

Copper-based algaecides (i.e., CuSO<sub>4</sub>, Captain, SeClear) are widely used and are applied to lakes and ponds throughout North America to control nuisance filamentous and microscopic algae. There are no water use restrictions associated with copper-based algaecides, and they are commonly used in drinking water reservoirs throughout the state. The concentrated liquid algaecides are first diluted with pond water and are then sprayed throughout the pond area. The application rate is generally 0.2 ppm or less for algae control. If applied, treatment will not exceed 50% of the pond volume.

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 pond 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 pond volume.

### **Impacts Specific to the Wetlands Protection Act<sup>3</sup>**

- Protection of public and private water supply – Benefit (used to control algae)
- Protection of groundwater supply – 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

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<sup>2</sup> Commonwealth of Massachusetts Executive Office of Environmental Affairs. *The Practical Guide to Lake Management in Massachusetts*. 2004. p.124. <https://www.mass.gov/doc/the-practical-guide-to-lake-management-in-massachusetts/download>

<sup>3</sup> Commonwealth of Massachusetts Executive Office of Environmental Affairs. *The Practical Guide to Lake Management in Massachusetts*. 2004. p.122. <https://www.mass.gov/doc/the-practical-guide-to-lake-management-in-massachusetts/download>

- 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, toxicity)

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

Fluridone is a broad-spectrum, systemic herbicide that offers long-term control on invasive and nuisance aquatic vegetation. It works well as a selective herbicide to target Eurasian milfoil at relatively low doses. Fluridone targets carotene, a protective pigment in the plant which, when absent, allows the sun to degrade the chlorophyll. With photosynthesis disrupted, the plant starves. Fluridone requires an extended contact time (30-60 days), so it has historically been used for low-dose, whole-pond treatments where dilution and contact time are more predictable, however, new granular formulations do allow for more effective spot-treatment.

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 an application limit of 0.15 ppm. Presently, liquid and granular formations of this herbicide are available. For aqueous applications, this chemical will be placed into an onboard mixing tank, mixed with pond water and evenly distributed throughout the surface of the treatment area via boat at a concentration at or below 0.09 ppm to reduce impacts to non-target species. This herbicide will be injected under the water surface through trailing hoses, minimizing the chance of chemical drift and assuring accurate placement of over the target species. For granular applications, the herbicide will be placed into a Heard spreader mounted to the bow of the treatment vessel and evenly distributed over the surface of the treatment area.

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. There are no restrictions on swimming, boating, or fishing, but prudent herbicide/algaecide management suggests that the pond be closed on the day of treatment. Prior to treatment, the shoreline of the pond will be posted with signs advising the public of temporary water use restrictions.

#### **Impacts Specific to the Wetlands Protection Act<sup>4</sup>**

- Protection of public and private water supply – Generally neutral, but may have detriment at high doses (prohibition within one quarter mile of drinking water intakes at dose >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)

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<sup>4</sup> Commonwealth of Massachusetts Executive Office of Environmental Affairs. *The Practical Guide to Lake Management in Massachusetts*. 2004. p.133. <https://www.mass.gov/doc/the-practical-guide-to-lake-management-in-massachusetts/download>

### **Flumioxazin (Clipper® - EPA # 71368-114 or equivalent)**

The USEPA/MA registered herbicide flumioxazin (Clipper) is the only contact herbicide currently approved for use in Massachusetts that can provide effective control of Variable watermilfoil, duckweed, watermeal, and filamentous algae. Flumioxazin was registered for use in aquatic sites with the US EPA in 2011 and approved for use in Massachusetts in 2013. Though approved, more data could be collected on its use in Massachusetts so use of flumioxazin would be reserved for site-specific spot treatments.

Clipper is classified as a PPO (Protoporphyrinogen oxidase) inhibitor that initiates cell membrane disruption providing control of a broad range of susceptible plants. Flumioxazin is extremely fast-acting and has a very short half-life so it is suitable for site-specific spot 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
- 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)

### **Glyphosate (AquaPro® - EPA # 62719-324-67690, Rodeo – EPA # 62719-324 or equivalent)**

Glyphosate is a broad-spectrum, systemic herbicide and may be used to control floating leaf species such as waterlilies and emergent plants such as the invasive reed *Phragmites australis*. It is typically applied in August/September for control of emergent species. Glyphosate would be applied at or below the recommended rate of 0.2 mg/L. Water use restrictions include a prohibition on application within 0.25 miles of potable water intake. There are no restrictions on swimming, boating, or fishing, but prudent herbicide/algaecide management suggests that the pond be closed on the day of treatment. Prior to treatment, the shoreline of the pond will be posted with signs advising the public of temporary water use restrictions.

Glyphosate is a systemic herbicide and is foliar active. This means the herbicide is active only on contact with the plant and has no activity in surrounding soil or water. The chemical is applied to the leaves of the target plant and is translocated down into the rhizomes or roots of the plant. Once absorbed, glyphosate interrupts the plant's shikimic acid metabolic pathway and prevents synthesis of aromatic amino acids. This metabolic pathway is found only in plants and is not found in humans or wildlife. Glyphosate binds tightly to most types of soil particles and is unavailable for root uptake. There is low

potential for leaching or contamination of groundwater with glyphosate herbicide. Microorganisms in the soil and water break down into its natural components.

#### **Impacts Specific to the Wetlands Protection Act using Glyphosate<sup>5</sup>**

- Protection of public and private water supply – Detriment (prohibition within one quarter mile of surface drinking water supplies due to toxicity), but generally neutral where allowed
- Protection of groundwater supply - Neutral (no 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 – 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)

Proper herbicide application allows for targeted plant control without posing an unreasonable adverse risk to non-target species and wildlife. Written approval from the Commission will be sought should alternate products be considered in future years. All products proposed for use are registered for aquatic use in Massachusetts.

#### **Physical removal of select species (Hand pulling and skimming)**

Hand pulling is the pulling of weeds by hand from shallower portions of the lake or pond. These techniques are most effective on plants that do not reproduce via fragmentation. They are the best recommended techniques to treat water chestnut (*Trapa natans*) since they remove the nut that is produced by the plant for reproduction, and that would otherwise be deposited in the lake sediments, where it could lie dormant for 8-10 years. Another advantage of these techniques is that the organic material is removed from the waterbody, reducing the amount of material that decomposes in the fall when the plants die off, thereby reducing the possibility of decomposition associated hypoxia and sedimentation. Water chestnut does not significantly impact park ponds at this time, but should plants be identified the preferred management method would be hand pulling.

Physical removal of the native nuisance plant duckweed may be done with a skimmer to remove the plants from the water. This technique is labor-intensive and has the potential to increase spread of duckweed if removal disturbs the water and causes plant fragmentation. Physical removal of duckweed may be most effective during the early stages of growth and in concert with herbicide application. Organic material produced through these activities will be sent to a local composter after being dewatered on land (at least 25 ft from the water's edge) for several days.

Physical removal of plants which reproduce via fragmentation or rhizomes, such as *Phragmites australis* and milfoils, has the potential to exacerbate the extent of these invasive species and would not be an effective management technique. Physical removal will only be done on target species.

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<sup>5</sup> Commonwealth of Massachusetts Executive Office of Environmental Affairs. *The Practical Guide to Lake Management in Massachusetts*. 2004. p.128. <https://www.mass.gov/doc/the-practical-guide-to-lake-management-in-massachusetts/download>

### *Management Technique Descriptions*

Detailed information on all the approaches proposed in this NOI can be found in [The Practical Guide to Lake Management in Massachusetts](#), available on the **Massachusetts Department of Conservation and Recreation Lakes and Ponds Program website**.

#### *4.3 Monitoring:*

Regular inspections will be conducted to assess the growth of the target plant species and overall pond conditions to guide management decisions. Post-management inspections will be conducted to assess the efficacy of the management efforts and any impacts on non-target species so future applications can be properly adjusted to minimize non-target impacts. Annual Reports documenting management efforts, observed conditions, management efficacy, and future recommendations will be provided to the Commission.

### **5.0 Alternatives Analysis:**

Alternatives to the proposed Aquatic Plant Management Plan were considered. Below are alternative approaches to algae and weed control at the Worcester park ponds and their predicted effects.

#### *Bottom Weed Barriers*

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 ~\$1.75/ft<sup>2</sup> (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 pond bottom may also have detrimental impacts on invertebrates or other types of wildlife.

#### *Harvesting*

Harvesting of milfoils and *Phragmites australis* is not recommended because of their ability to reproduce through vegetative fragmentation, leading to increased spread into previously un-infested areas or further intensifying growth rates. Additionally, harvesting would be costly and at best would only provide a season of relief from the native vegetation growth with no guarantee of success. The disruption and non-target impacts would be more significant than with spot-treatments using aquatic herbicides.

#### *Biological*

There are no proven biological controls available or approved by the State for the control of the invasive aquatic plant species present at the Worcester Park Ponds.

#### *Sediment Excavation/Dredging*

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 ponds with no guarantees of elimination of invasive vegetation.

#### *Do Nothing*

If the invasive and nuisance plant and algae growth is allowed to continue unabated, eutrophication and filling-in at the pond will continue to occur at an accelerated rate due to the annual decomposition of

excessive plant material. Anoxic conditions would degrade water quality and potentially impact fish and other aquatic organisms. Stagnant conditions will also increase water temperatures, promoting both algal and bacterial growth as well as providing extensive mosquito breeding habitat. The pond's recreational and aesthetic value would be significantly degraded.

## **6.0 Compliance**

### Massachusetts Wetlands Protection Act:

The objective of this project is to continue controlling an invasive species and nuisance vegetation and algae growth. Managing densities of 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 chemical applications will be performed by Certified Applicators. 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. A site-specific License to Apply Chemicals for the proposed treatment will be filed with Massachusetts DEP.

### 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 GEIR 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 (Attachment C - Figure 3), the specified Worcester Park Ponds are not located within area designated as Priority Habitats of Rare Species as determined by the Massachusetts Natural Heritage & Endangered Species Program (NHESP). A formal review by NHESP is not required.

## **7.0 Impacts of the Proposed Management Plan Specific to the Wetlands Protection Act:**

Protection of public and private water supply: The Worcester Park Ponds are not used directly as drinking water supplies. Aquatic herbicide treatment at the ponds 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 chemicals at the proposed rates to the Worcester Park Ponds, when used in accordance with the product labels. Contamination of groundwater by aquatic herbicides is limited by their low rate of application, rapid rate of degradation, and uptake by target plants.



Flood control and storm damage prevention – No construction, dredging or alterations of the existing floodplain and storm damage prevention characteristics of the pond 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-treatment 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-leafed species may occur following the application of an aquatic herbicide, non-target plants typically rebound quickly. Beneficial, 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.

## Attachment C: Figures

Figure 3: Natural Heritage and Endangered Species Program Habitats

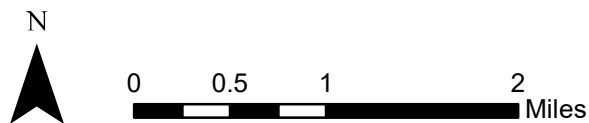
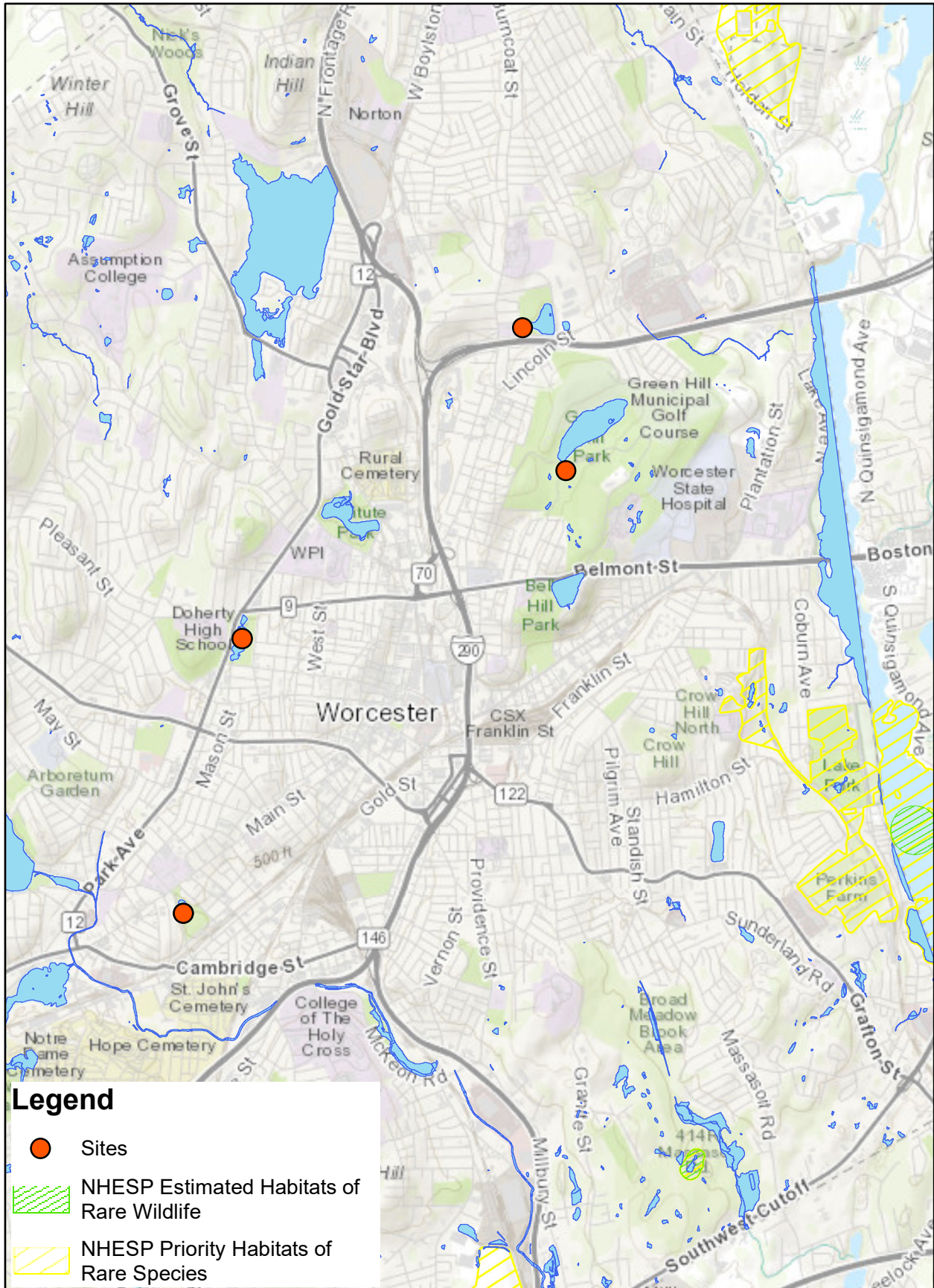


Figure 2d: Lincoln Pond (Elm Park) Site Map



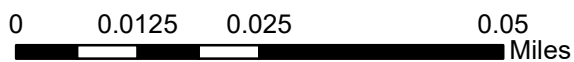
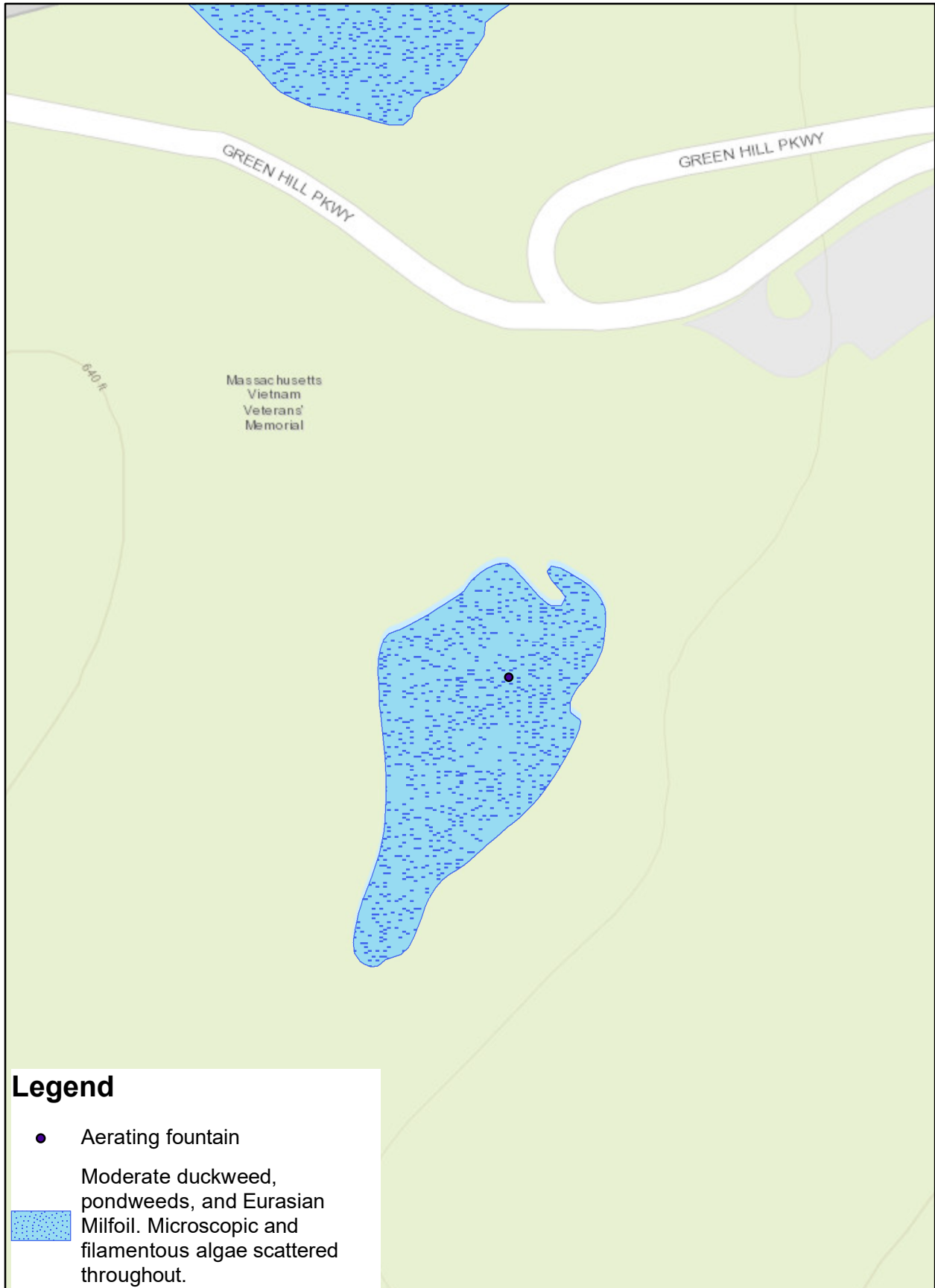
**Legend**

Moderate to dense submerged aquatic macrophytes, stands of *Phragmites australis*, microscopic algae throughout.





# Figure 2c: Green Hill Veterans Memorial Pond Site Map



# Figure 2b: Wawecus Road Pond Site Map



# Figure 2a: Crystal Pond Site Map

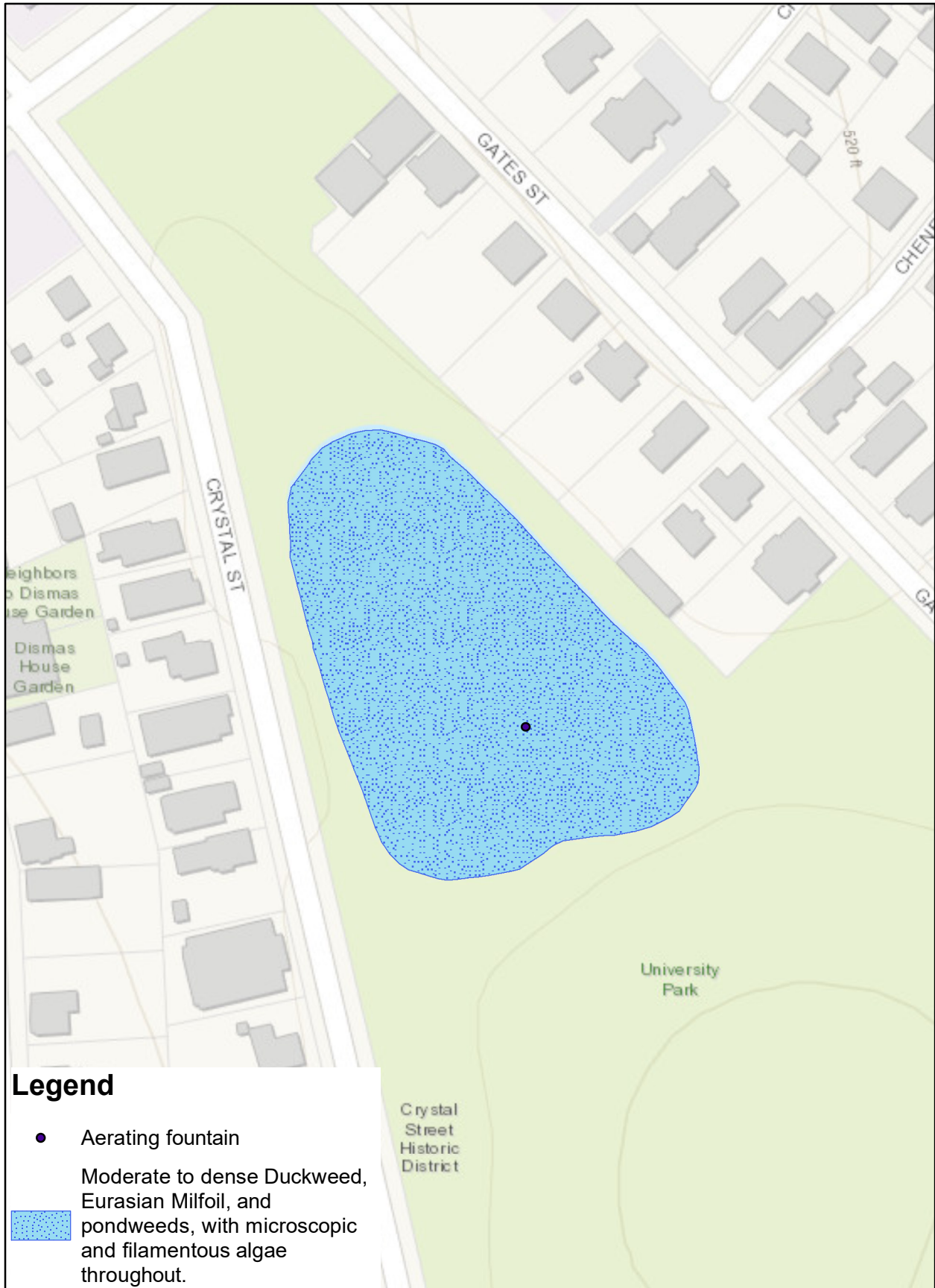
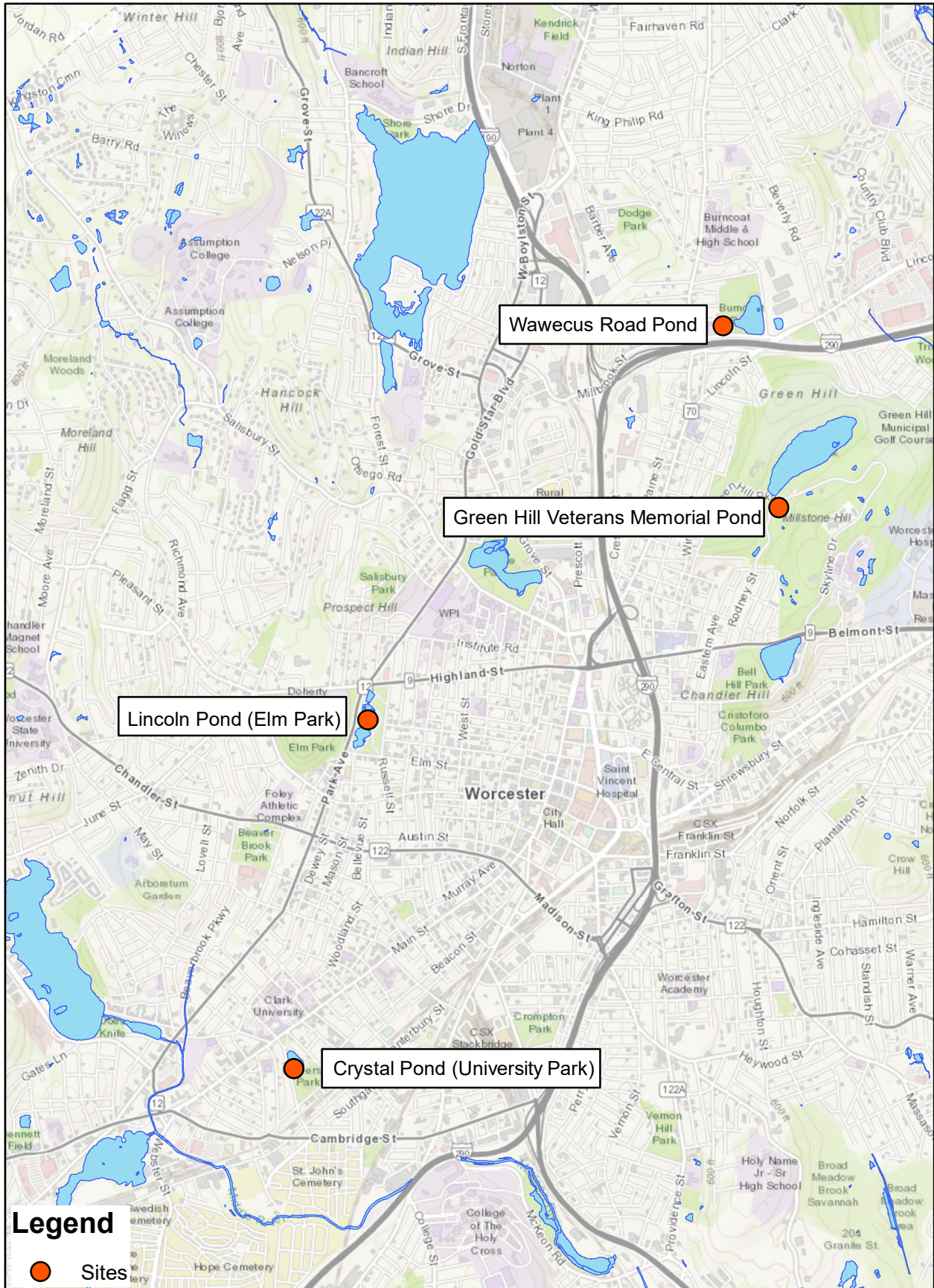




Figure 1: Worcester Park Ponds





## Attachment D: Herbicide/Algaecide Information

Detailed information on herbicides and algaecides proposed in this NOI can be found on the Massachusetts Department of Conservation and Recreation Lakes and Ponds Program webpage at: <https://www.mass.gov/info-details/lakes-and-ponds-program-publications>

The Massachusetts General Environmental Impact Report may be found at the DCR Lakes and Ponds Program webpage and at: <https://www.mass.gov/doc/geir-without-appendices/download>

The Practical Guide to Lake Management in Massachusetts may be found at the DCR Lakes and Ponds Program webpage and at: <https://www.mass.gov/doc/the-practical-guide-to-lake-management-in-massachusetts/download>

Additional information on registered herbicides and algaecides may be found at from the Massachusetts Department of Agricultural Resources Massachusetts Pesticide Product Registration Information, at: <https://www.kellysolutions.com/ma/pesticideindex.htm> and from the Massachusetts Pesticide Program, at: <https://www.mass.gov/orgs/pesticide-program>