



650 Suffolk St., Suite 200
Lowell, MA 01854

T 978.970.5600
TRCcompanies.com

March 21st, 2023

Town of Sturbridge
Conservation Commission
301 Main Street
Sturbridge, MA 01566

**Re: Quacumquasit Pond Alum Treatment
Notice of Intent
Sturbridge, Brookfield, East Brookfield, Massachusetts
TRC Project No. 490437.0000.0000**

Dear Sturbridge Commissioners,

Enclosed, please find an updated Notice of Intent (NOI) application for implementation of an Alum Treatment Plan in Quacumquasit Pond in the towns of Sturbridge, Brookfield, and East Brookfield, Massachusetts. TRC Companies, Inc. (TRC) has prepared this NOI application on behalf of the Town of Sturbridge for compliance with the Massachusetts Wetlands Protection Act (WPA) and the Sturbridge Wetlands Protection Bylaw and its associated Regulations. This application is being filed concurrently in the towns of Brookfield and East Brookfield. A copy of the complete NOI application will be submitted online to the Massachusetts Department of Environmental Protection Central Regional Office.

If you have any questions, please contact me at (401) 524-5108 or CNielsen@TRCcompanies.com. Thank you for your attention to this matter.

Sincerely,

TRC Companies, Inc.

A handwritten signature in blue ink, appearing to read "Carl Nielsen", with a long horizontal flourish extending to the right.

Carl Nielsen, CLM
Sr. Program Manager

cc: Robin Grimm, Town of Sturbridge
MassDEP Central Regional Office

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ACRONYM AND ABBREVIATIONS LIST

ACEC	Area of Critical Environmental Concern
Alum	Aluminum Sulfate
BLSF	Bordering Land Subject to Flooding
BMPs	Best Management Practices
BVW	Bordering Vegetated Wetlands
CMR	Code of Massachusetts Regulations
DFG	Massachusetts Department of Fish and Game
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
g/m²	Grams per meter squared
LUW	Land Under Water Bodies and Waterways
MassDEP	Massachusetts Department of Environmental Protection
MassWildlife	Massachusetts Division of Fish and Wildlife
MEPA	Massachusetts Environmental Protection Act
NHESP	Natural Heritage and Endangered Species Program
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
ORW	Outstanding Resource Water
PAC	Poly aluminum chloride
QQLA	Quaboag/Quacumquasit Lake Association
TMDL	Total Maximum Daily Load
TRC	TRC Environmental
WPA	Massachusetts Wetlands Protection Act and its Regulations
WWTF	Waste Water Treatment Facility

STURBRIDGE NOTICE OF INTENT COVER SHEET/CHECKLIST



**Town of Sturbridge
Conservation Commission
Notice of Intent Application Coversheet/Checklist**

Date	March 14, 2023
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in all white cells completely

Parcel Address Assessors Map/Plat Book & Page	Quacumquasit Pond N/A - no parcel number	Applicant name Address Email Phone	Robin Grimm Town of Sturbridge 301 Main Street, Sturbridge, MA 01566 rgimm@sturbridge.gov 508-347-2500
Owner name Address Email Phone	N/A	Representative Address Email Phone	Carl Nielsen, TRC Companies 650 Suffolk Street, Lowell, MA 01854 CNielsen@trccompanies.com 401-524-5108

FI

Wetland type	LUW	sf/cf affected	30.3 acres	Relevant Perf. Standards	10. _____
Wetland type		sf/cf affected		Relevant Perf. Standards	10. _____
Wetland type		sf/cf affected		Relevant Perf. Standards	10. _____

Components of a Complete NOI Application

State Form: NOI Form 3	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Engineered Plan	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Proof of Mailing to DEP	Included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Online submittal
Narrative	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Proof that all relevant perf. standards are met	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
TOPO Map identifying locus with scale	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
FIRM Map identifying locus with scale	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Natural Heritage Map with WH, PH, & VP data	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Included? <input type="checkbox"/>
Delineation lines (backup material)	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Shown in Figure 2
Tax Form	Included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Not Applicable
Fees	
★ Fee Transmittal form	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
★ Filing Fee Worksheet	Included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No N/A - town is applicant
★ Town portion of state filing fee	Included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fee exempt
★ Sturbridge local filing fee \$_____	Included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fee exempt
Abutter Information	
★ Certified abutters list (within 200')	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
★ Abutter notification form	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
★ Affidavit & proof -- bring to hearing	<i>Present them at the hearing</i>
Other Attachments, e.g.	
Confirmation of submission to NHESP	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable
Planting Plan	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
Floodplain analysis	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
Stormwater analysis	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable

Components of a Complete NOI Application

WPA FORM 3 – NOTICE OF INTENT



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sturbridge

City/Town

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



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

A. General Information

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

Quacumquasit Pond	Sturbridge/Brookfield/East	01566
a. Street Address	Brookfield	c. Zip Code
Latitude and Longitude:	42.16939	-72.07425
	d. Latitude	e. Longitude
N/A	N/A	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

Robin	Grimm	
a. First Name	b. Last Name	
Town of Sturbridge		
c. Organization		
301 Main Street		
d. Street Address		
Sturbridge	MA	01566
e. City/Town	f. State	g. Zip Code
508-347-2500	rgrimm@sturbridge.gov	
h. Phone Number	i. Fax Number	j. Email Address

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

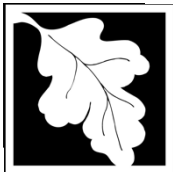
a. First Name		b. Last Name
c. Organization		
d. Street Address		
e. City/Town	f. State	g. Zip Code
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

Carl	Nielsen	
a. First Name	b. Last Name	
TRC Companies, Inc.		
c. Company		
650 Suffolk Street		
d. Street Address		
Lowell	MA	01854
e. City/Town	f. State	g. Zip Code
401-524-5108	CNielsen@TRCcompanies.com	
h. Phone Number	i. Fax Number	j. Email address

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

Exempt		
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 Sturbridge Conservation Commission is proposing to treat Quacumquasit Pond with aluminum sulfate (alum) to reduce the availability of free-reactive phosphorus to improve water quality conditions for fish and wildlife and prevent noxious blooms of algae and potentially toxic cyanobacteria.

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

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

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

- 1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)
- 310 CMR 10.53(4)(e)(5) - Other Ecological Restoration Projects: prevention of pollution, protection of fish and wildlife habitat.

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:

Worcester County

a. County

N/A

c. Book

b. Certificate # (if registered land)

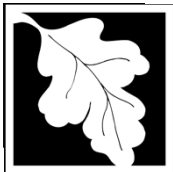
N/A

d. Page Number

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

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

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



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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	30.28 acres 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	

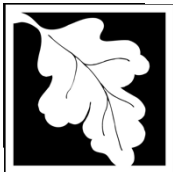
	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	

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

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

5. Project Involves Stream Crossings

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



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Provided by MassDEP:	
MassDEP File Number	_____
Document Transaction Number	_____
Sturbridge	_____
City/Town	_____

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

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

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

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

August 2021
b. Date of map _____

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

c. Submit Supplemental Information for Endangered Species Review*

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

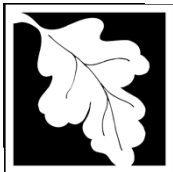
2. Assessor's Map or right-of-way plan of site

- 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. 06-20695 2/17/2023
 a. NHESP Tracking # b. Date submitted to NHESP

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

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

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

South Shore - Cohasset to Rhode Island border, and the Cape & Islands: North Shore - Hull to New Hampshire border:

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

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

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.

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



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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.

Multiple - See Figures

a. Plan Title

M. Billings

N/A - Not Engineered

b. Prepared By

c. Signed and Stamped by

2/23/2023

Various

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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Provided by MassDEP:

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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.

[Handwritten Signature]

1. Signature of Applicant

3-6-23

2. Date

3. Signature of Property Owner (if different)

[Handwritten Signature]

4. Date

3-8-2023

5. Signature of Representative (if any)

6. Date

For Conservation Commission:

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

For MassDEP:

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

Other:

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

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



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

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



A. Applicant Information

1. Location of Project:

<u>Quacumquasit Pond</u>	<u>Sturbridge, Brookfield, East Brookfield</u>
a. Street Address	b. City/Town
<u>Fee exempt</u>	<u>Fee exempt</u>
c. Check number	d. Fee amount

2. Applicant Mailing Address:

<u>Robin</u>	<u>Grimm</u>	
a. First Name	b. Last Name	
<u>Town of Sturbridge</u>		
c. Organization		
<u>301 Main Street</u>		
d. Mailing Address		
<u>Sturbridge</u>	<u>MA</u>	<u>01566</u>
e. City/Town	f. State	g. Zip Code
<u>508-347-2500</u>	<u>rgrimm@sturbridge.gov</u>	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

<u></u>	<u></u>	
a. First Name	b. Last Name	
<u></u>		
c. Organization		
<u></u>		
d. Mailing Address		
<u></u>	<u></u>	<u></u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

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

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

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

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

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

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

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

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



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

B. Fees (continued)

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

Step 5/Total Project Fee: _____

Step 6/Fee Payments:

Total Project Fee:	<u>Fee exempt</u>
	a. Total Fee from Step 5
State share of filing Fee:	<u>Fee exempt</u>
	b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:	<u>Fee exempt</u>
	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, APPENDIX A: ECOLOGICAL RESTORATION LIMITED
PROJECT CHECKLIST**



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

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

Eligibility Checklist

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

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



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

Regulatory Features of All Coastal and Inland Ecological Restoration Limited Projects

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



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Appendix A: Ecological Restoration Limited Project Checklists

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

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sturbridge

City/Town

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

General Eligibility Criteria for All Coastal Ecological Restoration Limited Projects

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

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

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

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

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

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

Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

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

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

Tidal Restoration Projects

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

Shellfish Habitat Restoration Projects

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

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

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



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Appendix A: Ecological Restoration Limited Project Checklists

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

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

Additional Eligibility Criteria for Specific Coastal Ecological Restoration Limited Project Types

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



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Appendix A: Ecological Restoration Limited Project Checklists

Sturbridge

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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): Aquatic habitat restoration



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

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

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sturbridge

City/Town

General Eligibility Criteria for All Inland Ecological Restoration Limited Projects

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



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Appendix A: Ecological Restoration Limited Project Checklists

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

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sturbridge

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Additional Eligibility Criteria for Specific Inland Ecological Restoration Limited Project Types

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

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



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Appendix A: Ecological Restoration Limited Project Checklists

Sturbridge

City/Town

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

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

- Other Ecological Restoration Projects** that meet the criteria set forth in 310 CMR 10.53 (4) (a) through (d).
 - Restoration, enhancement, or management of Rare Species habitat.
 - Restoration of hydrologic and habitat connectivity.
 - Removal of aquatic nuisance vegetation to impede eutrophication.
 - Thinning or planting of vegetation to improve habitat value.
 - Riparian corridor re-naturalization.
 - River floodplain re-connection.
 - In-stream habitat enhancement.
 - Fill removal and re-grading.
 - Flow restoration.
 - Installation of fish passage structures.
 - Invasive species management.
 - Other. Describe: Prevention of pollution and eutrophication
- 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.)

Provided by MassDEP:

MassDEP File Number

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



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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)

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

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

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

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

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

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

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

Supplemental Information for Endangered Species Review has been submitted.

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



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Appendix A: Ecological Restoration Limited Project Checklists

Sturbridge

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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.

06-20695

a. NHESP Tracking #

2/17/2023

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.)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sturbridge

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

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

Division of Marine Fisheries

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



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Appendix A: Ecological Restoration Limited Project Checklists

Sturbridge

City/Town

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

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

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

MassDEP Water Quality Certification

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

MassDEP Wetlands Restriction Order

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

Yes No

Department of Conservation and Recreation

Office of Dam Safety

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



WPA Form 3 – Notice of Intent

Appendix A: Ecological Restoration Limited Project Checklists

Sturbridge

City/Town

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

Areas of Critical Environmental Concern (ACECs)

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

Yes No

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

Name of ACEC

Minimum Required Documents (310 CMR 10.12)

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

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

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

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

Multiple - See Figures

a. Plan Title

M. Billings

b. Prepared by

2/23/2023

d. Final Revision Date

N/A - Not Engineered

c. Signed and Stamped by

Various

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)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sturbridge

City/Town

- 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:

WPA Form 3 – Notice of Intent

MassDEP File Number

Appendix A: Ecological Restoration Limited

Document Transaction Number

Project Checklists

Sturbridge
City/Town

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

Certification that the Ecological Restoration Project Meets the Eligibility Criteria

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

[Handwritten Signature]

Signature of Applicant or Authorized Agent

Robin A Grimm

Printed Name of Applicant or Authorized Agent

3-6-23

Date

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

ATTACHMENT A – Project Narrative

1.0 Introduction

TRC Environmental (TRC) has prepared this Notice of Intent (NOI) application on behalf of the Town of Sturbridge (the Applicant) for the proposed Quacumquasit Pond (also referred to as South Pond, or in this document, “the pond”) Alum Treatment Plan (the project). Quacumquasit Pond is a high-quality water located in Sturbridge, East Brookfield, and Brookfield, MA that is routinely stocked with fish, including rainbow and brown trout, by the Massachusetts Department of Fish and Game (DFG) due to its desirable water quality conditions. Quacumquasit Pond is supported by a very small watershed of 1.8 square miles that is just slightly larger than the pond’s 225-acre size; however, the lake receives significant backflow inputs from Quaboag Pond (with watershed area > 76 square miles) during most large rain events that occur on an annual basis.

As a result of the inputs from Quaboag Pond, Quacumquasit Pond has seen a slow degradation of its superior water quality over the past 30+ years to a level that is now just acceptable for most uses and trending in the wrong direction. Over the past 20 years, many projects have been undertaken by the local communities, the Massachusetts Department of Environmental Protection (MassDEP), and the Quaboag/Quacumquasit Lake Association (QQLA) in both watersheds to address threats to the lake including construction of numerous stormwater best management practices (BMPs), local homeowner education, improvements to the upstream municipal point source (Spencer Waste Water Treatment Facility [WWTF]), and construction of a flow barrier between the two lakes to minimize potential for Quaboag water to enter Quacumquasit during smaller backflows.

Given these prior watershed improvements, the last remaining element needed to protect the lake from additional water quality degradation is the application of aluminum sulfate (commonly referred to as alum) to address the build-up of phosphorus in the sediment of Quacumquasit that has occurred over many years. Alum will bind to the phosphorus in the sediment and significantly reduce internal recycling, which has been shown to be 59 percent of the current annual phosphorus load of the pond based on a study conducted by ESS Group, Inc. in 2019. Removing internal phosphorus loading by implementing this proposed project will enable the lake to achieve its Total Maximum Daily Load (TMDL) goal set by the state of Massachusetts and U.S. Environmental Protection Agency (EPA).

The goal of the proposed alum treatment is to reduce the available phosphorus within the surficial sediments to improve water quality conditions for fish and wildlife, prevent harmful algal blooms and potentially toxic cyanobacteria, improve recreational opportunities in the lake, and ensure adequate water quality for fish and wildlife.

Since the proposed restoration actions will occur within jurisdictional wetland resource areas, this filing is made pursuant to the Massachusetts Wetlands Protection Act (WPA) (Massachusetts General Law [M.G.L.] c. 131 §40) and its implementing regulations (310 Code of Massachusetts Regulations [CMR] 10.00) and the Town of Sturbridge Wetlands Protection Bylaw and Regulations. Wetland resource areas present in and around Quacumquasit Pond include Land under Water (LUW), Inland Bank, Bordering Vegetated Wetlands (BVW), Riverfront Area, and Bordering Land Subject to Flooding (BLSF), as described in Section 3.0 and depicted on Figure 2.

The goal of the proposed project is to improve the natural capacity of the resource areas to protect the interests identified in the WPA, including prevention of pollution, protection of fisheries, and

protection of wildlife habitat. This project is therefore eligible to be reviewed as an Ecological Restoration Limited Project pursuant to 310 CMR 10.53(4)(e)(5).

This project has been designed to be consistent with the Eutrophication and Aquatic Plant Management in Massachusetts: Final Generic Environmental Impact Report (EEA 2004a) and The Practical Guide to Lake Management in Massachusetts (EEA 2004b). The Applicant is seeking an Order of Conditions from the Sturbridge, Brookfield, and East Brookfield Conservation Commissions so that they may proceed with the proposed alum treatment plan for Quacumquasit Pond this spring.

2.0 Project Description

2.1 Treatment Description

The objective of the treatment program is to reduce the availability of free-reactive phosphorus in the system to improve water quality conditions for fish and wildlife and to prevent harmful algal blooms and potentially toxic cyanobacteria. Aluminum sulfate (alum) is a chemical precipitant that is commonly used in water bodies, including drinking water reservoirs, to reduce levels of available phosphorus. Sodium aluminate is typically added as a buffering agent to stabilize water column pH during treatment. These compounds strongly bind with phosphorus once they reach the sediments and prevent its release back into the water column, where it would otherwise fuel the growth of nuisance algae and degrade water quality.

This management technique will help to avoid the need to use copper-based algaecides. Reducing the nutrient imbalance that toxigenic cyanobacteria thrive upon should result in lower overall algal biomass and a more desirable assemblage of non-harmful algae populating the lake. These algal species are more easily integrated into the food web of the lake ecosystem.

2.2 Treatment Methods

The proposed treatment will occur in up to three zones within the pond. The three treatment zones are delineated by bathymetric contour lines and are depicted in Figure 3. The size of each zone and proposed application measurements are depicted in the table below. Within the Town of Sturbridge, there will be approximately 30.3 acres of treatment area across the three zones.

Zone	Bathymetric Contour Range	Size of Zone (acres)	Proposed Treatment (g/m ²)
Zone 1	25 - 45 feet deep	65	56
Zone 2	45 – 57.5 feet deep	33	105
Zone 3	> 57.5 feet	41	227

Application will occur from a boat at the lake surface that will apply alum to the lake along pre-defined track-lines using sub-meter GPS tracking along with an alum distribution system that is programed to apply the correct amount within each zone. The release of alum is corrected automatically based on the speed of the vessel, wind drift, etc. The alum will sink to the pond bottom as it is denser than water and will strip phosphorus out of the lake’s water as it does. The alum dose within each zone was determined through extensive testing performed by TRC on behalf of the town of Sturbridge as part of the current 319 Grant from EPA.

Alum application will be performed by a qualified vendor based on a bidding process by the Town of Sturbridge. The treatment will require over 180,000 gallons of alum to treat all three zones of the lake. Even if a phased approach is required, the effort for zones 1 and 2 will require over 80,000 gallons of alum. As such, the work will require a 50' x 10' temporary staging area to be located at the Brookfield Town beach where two to three tanks will be located to be filled by a delivery tanker truck and then alum will be pumped into the alum applicator vessel as needed. The storage tanks will be approximately 8.5 feet in diameter and will be placed onto a 10' x 50' secondary containment mat to trap any leaks or spills.

TRC will oversee the work and data gathering to facilitate reporting to the various municipalities, conservation commissions, and the MassDEP. TRC will plan and direct QQLA to allow them to assist with pH monitoring during the approximately week-long alum application in order to assess surface water pH fluctuations. This early detection process will ensure that the pH does not get out of balance within the pond during the effort and will therefore minimize any potential for fishery impacts.

2.3 Post-Treatment Monitoring

This is an implementation project and as such there is little to be done following the application of alum to the lake. The most essential aspects will be to continue to monitor water quality within the lake at the surface and bottom during the summer months to evaluate the effects of the treatment and assess its longevity. We anticipate the treatment will benefit the lake for up to 15 years; however, this could be extended considerably as watershed sources of phosphorus will continue to decline due to improved behaviors by local residents and improvements to the Spencer WWTF through its ongoing upgrades to comply with its National Pollutant Discharge Elimination System (NPDES) wastewater permit.

An in-lake and watershed water quality monitoring program (as part of the commitment to Operations and Maintenance) will be developed by TRC under the EPA grant and will be conducted annually thereafter by QQLA volunteers or hired experts to provide annual data and tracking of the water quality improvements and lake condition over time.

3.0 Existing Conditions and Impact Assessment

Quacumquasit Pond is a high-quality water located in Sturbridge, East Brookfield, and Brookfield, MA (Category 4a - impaired with invasive plants and mercury in fish). The pond is over 75 feet deep in some areas. Most of the shoreline of Quacumquasit Pond is developed as residential properties or consists of undeveloped forested area. The pond is primarily used for recreation activities including fishing, boating, and swimming.

3.1 Jurisdictional Wetland Resource Areas

Several wetland resource areas that fall under the jurisdiction of the WPA and the Sturbridge Wetlands Protection Bylaw occur within and adjacent to Quacumquasit Pond. Approximate wetland resource area boundaries were determined based on a review of publicly-available wetlands maps produced by MassDEP and through the use of orthophotograph interpretation. Wetland resource areas present in and around the project area are described in the sections below and depicted on Figure 2. Quacumquasit Pond is not located within an Area of Critical Environmental Concern (ACEC) and is not a designated Outstanding Resource Water (ORW).

The proposed project will result in permanent and temporary impacts to jurisdictional resource areas within the Town of Sturbridge as described in the following table and in the sections below:

RESOURCE AREA	PERMANENT IMPACTS	TEMPORARY IMPACTS	IMPACT DESCRIPTION
Land Under Water Bodies and Waterways (LUW)	30.3 acres	N/A	Permanent impacts resulting from alum treatment applied to LUW within Quacumquasit Pond (application will occur in Zones 1, 2 and 3 shown in Figure 3).

Additional LUW and other resource areas will be impacted in the Towns of Brookfield and East Brookfield. Concurrent review with these Conservation Commissions is ongoing to review this work.

3.1.1 Inland Bank

Per 310 CMR 10.54(2)(a), an Inland Bank is *“the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland.”*

Bank exists around the perimeter of Quacumquasit Pond and is primarily comprised of sandy beach, forested edge, and residential development. Boats used for the proposed alum treatment will access the pond from the existing state boat ramp in Brookfield, and the alum application will occur only within the Land Under Water Bodies and Waterways (LUW) associated with Quacumquasit Pond. There will be no permanent or temporary impacts to Inland Bank within the Town of Sturbridge.

3.1.2 Bordering Vegetated Wetland

Per 310 CMR 10.55(2), BVW are *“freshwater wetlands which border on creeks, rivers, streams, ponds and lakes”* and *“are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants.”* BVW provides habitat for a diverse array of plant and animal species and functions to retain stormwater and attenuate pollutants.

BVW exists in the vicinity of the pond. However, based on MassDEP and National Wetlands Inventory (NWI) mapping, wetland does not exist within or directly surrounding the pond. The proposed alum treatment will occur entirely within the LUW associated with the Quacumquasit Pond; therefore, there will be no permanent or temporary impacts to BVW as a result of the proposed project.

3.1.3 Land Under Water Bodies and Waterways

Per 310 CMR 10.56(2)(a), LUW is *“the land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock.”* LUW is land that occurs below the mean annual low water level of a waterbody which provides substrate for aquatic plant growth and habitat for aquatic animals.

There is approximately 225 acres of LUW associated with Quacumquasit Pond. Quacumquasit Pond is listed on the MassDEP 2018/2020 Integrated List of Waters (305(b)/303(d)) list as Category 4a: “Impaired for one or more designated uses but does not require the development of

a TMDL: TMDL has been completed.” Quaboag Pond, which is a downstream water of Quacumquasit Pond but occasionally contributes flows to Quacumquasit Pond, is on the MassDEP 2018/2020 Integrated List as Category 5: “Impaired for one or more uses and requiring a restorative “action” plan, such as a TMDL or Alternative Restoration Plan (impairment due to pollutant(s) such as nutrients, metals, pesticides, solids, and pathogens).” Both Quacumquasit Pond and Quaboag Pond are impaired by phosphorous loading as established by MassDEP in the TMDL.

The proposed alum treatment will occur within up to 138 of the 225 acres of the LUW in Quacumquasit Pond across the Towns of Sturbridge, Brookfield, and East Brookfield (Figure 3). Within the Town of Sturbridge, there will be 30.3 acres of permanent impact to LUW. The alum added to the pond will settle to the bottom of the pond and bind phosphorus within the sediment. Over time, the alum will become incorporated into the sediments and is expected to continue binding available phosphorus that may be released from deeper sediments.

The proposed alum treatment is expected to improve water quality conditions within Quacumquasit Pond by reducing internal loading of phosphorus from the sediments, which in turn is expected to decrease the likelihood, severity, frequency, and duration of future algae blooms. Permanent impacts to LUW as a result of the project will occur, however they will have a positive impact on water quality within the pond and will improve the resource area’s capacity to provide important fish and wildlife functions.

3.1.4 200-Foot Riverfront Area

Per 310 CMR 10.58(2)(a), Riverfront Area is “*the area of land between a river's mean annual high water line and a parallel line measured horizontally*” located 200 feet away. Riverfront Areas serve to protect surface and groundwater supplies, control flooding, and provide wildlife habitat.

Riverfront Area exists around several perennial streams located in the vicinity of Quacumquasit Pond. Access for the project will occur within existing roadways. The proposed alum treatment will occur only within the LUW associated with Quacumquasit Pond; therefore, there will be no permanent or temporary impacts to Riverfront Area associated with the project.

3.1.5 100-Foot WPA Buffer Zone

Per 310 CMR 10.02, a buffer zone extends 100 feet outward from BVW and Bank and begins at the edge of the resource area boundary. Although not a resource area, work which occurs within the buffer zone is subject to jurisdiction of MassDEP and local conservation commissions.

Buffer zone exists around the entire perimeter of Quacumquasit Pond and around several nearby wetlands. Access for the project will occur within existing roadways. The proposed alum treatment will occur only within LUW associated with Quacumquasit Pond; therefore, there will be no permanent or temporary impacts to the 100-foot buffer zone within the Town of Sturbridge as a result of the proposed project.

3.1.6 Bordering Land Subject to Flooding

Per 310 CMR 10.57, BLSF is defined as an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds, or lakes. BLSF extends from the banks of these waterways and water bodies; where a BVW occurs, it extends from the upper

limit of the BVW. The limit of BLSF is the lateral extent of the 100-year floodplain, which begins up-gradient of the top of the Inland Bank.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the project vicinity was reviewed to determine whether any portions of the site are BLSF. According to the FIRM which covers the project area (Map Number 25027C0762E, Effective Date: 7/4/2011), Quacumquasit Pond, its immediate shoreline, and adjacent low-lying areas within the Town of Sturbridge are located within flood zone AE. Flood zone AE is defined as the area that will be inundated by the flood event having a 1-percent-annual-chance of being equaled or exceeded in any given year (also known as the 100-year flood), where base flood elevations are provided.

Access for the project will occur within existing roadways. The proposed alum treatment will occur only within LUW associated with Quacumquasit Pond; therefore, there will be no permanent or temporary impacts to BLSF within the Town of Sturbridge as a result of the proposed project.

3.1.7 Town of Sturbridge 200-foot Buffer Zone

As defined in the Sturbridge Wetlands Bylaw, the Sturbridge Conservation Commission has jurisdiction over lands within 200 feet of any freshwater wetlands, marshes, wet meadows, bogs, swamps; seasonal wetlands; vernal pools; banks; reservoirs; lakes; ponds of any size; rivers; streams; creeks; land under water bodies; or land subject to flooding or inundation by surface water or groundwater.

These lands exist around Quacumquasit Pond within the boundaries of the Town of Sturbridge. No permanent or temporary impacts will occur within this resource area.

3.1.8 Town of Sturbridge 25-foot No-Disturb Buffer

As stated in the Sturbridge Wetlands Bylaw, *“Disturbance of vegetation or soils within 25 feet of a resource area creates direct observable impacts to the resource area, including but not limited to those stated elsewhere in these regulations. The minimum strip of continuous undisturbed vegetative cover for any and all resource areas is 25 feet from the outermost edge of the resource area in all directions.”*

These lands exist around Quacumquasit Pond within the boundaries of the Town of Sturbridge. No permanent or temporary impacts will occur within this resource area.

3.1.9 Town of Sturbridge 50-foot No-Structure Buffer

As stated in the Sturbridge Wetlands Bylaw, *“any structures less than 50 feet from a resource area can create temporary construction and long-term “normal daily use” impacts within the twenty-five-foot buffer. The minimum distance for a new structure will be 50 feet from any resource Area.”*

These lands exist around Quacumquasit Pond within the boundaries of the Town of Sturbridge. No permanent or temporary impacts will occur within this resource area.

3.2 Massachusetts Natural Heritage and Endangered Species Act Review

Massachusetts Natural Heritage and Endangered Species Program (NHESP) databases from August of 2021 were reviewed to determine whether any portion of the project area is mapped as rare species habitat. Based on a review of this current mapping, the entirety of Quacumquasit Pond is located within Priority Habitat of Rare Species number 996. Priority Habitat is not jurisdictional under the WPA. No portion of the project area is mapped as Estimated Habitat, which is jurisdictional under the WPA. Early consultation with the Massachusetts Division of Fish and Wildlife (MassWildlife) has indicated that the state-listed species present in the project area is dwarf bulrush (*Lipocarpa micrantha*).

Dwarf bulrush tends to inhabit sandy to peaty shores of low-nutrient ponds and lakes. The project is unlikely to impact this state-listed species because alum treatment would not negatively impact an emergent plant species and the alum application will occur well off the shores of the pond. The temporary staging area will be located on an already-disturbed public beach where this plant is unlikely to be found, and TRC will conduct a visual survey of the beach area to look for unvegetated surfaces to place the storage tanks on.

TRC has begun the consultation process with MassWildlife under the Massachusetts Endangered Species Act (MESA) to confirm that the Project will not have impacts on Estimated Habitat. The NHESP tracking number for this project review is 06-20695. Review of this Project may take up to 90 days and TRC will update the Town of Sturbridge on any findings prior to conducting work.

3.3 Impacts and Mitigation

Alum treatment will not affect aquatic vegetation, however, impacts to fish species may occur if the treatment causes fluctuations in pH during application. To avoid impacts to fish and other species during application, the pH will be constantly monitored during treatment by the alum application contractor as well as a team of trained technicians. Application will cease immediately following any indication that the pH balance in the pond is outside of safe limits.

To protect human health, signage will be posted in addition to in-person public outreach prior to the treatment to inform users of the pond that the treatment will be occurring. The pond will be closed to all recreational uses prior to, during, and immediately following the treatment until pH testing has confirmed that the waters remain safe to use. Once the treatment has been conducted, the added alum will bind to phosphorus in the water column and settle to the bottom of the pond. There will be no ongoing threats to human or animal health after the treatment.

4.0 Regulatory Compliance and Performance Standards

4.1 Massachusetts Wetlands Protection Act

The goal of the proposed project is to improve the natural capacity of the resource area to protect the interests identified in the WPA, including prevention of pollution, protection of fisheries, and protection of wildlife habitat. This project is therefore eligible to be reviewed as an Ecological Restoration Limited Project per 310 CMR 10.53(4)(e)(5). Pursuant to 310 CMR 10.11(1), at least two weeks prior to filing an NOI for an Ecological Restoration Limited Project, the Applicant must submit written notification of the proposed filing for publication in the Environmental Monitor. In accordance with this provision, notice was provided to the Massachusetts Environmental Policy Act (MEPA) office on February 16th, 2023 (Attachment D). This project has been designed to be consistent with the *Eutrophication and Aquatic Plant Management in Massachusetts: Final Generic Environmental Impact Report* (EEA 2004a) and *The Practical Guide to Lake*

Management in Massachusetts (EEA 2004b). As discussed in Section 3.1 above, Quacumquasit Pond is not located within an ACEC or ORW.

The project complies with performance standards for resource areas to the maximum extent practicable. The sections below address WPA performance standards for proposed impacts within the Town of Sturbridge.

4.1.1 Land Under Water Bodies and Waterways WPA Performance Standards

The WPA includes performance standards for work on LUW. The text below documents the project's compliance with the WPA performance standards.

Where the presumption set forth in 310 CMR 10.56(3) is not overcome, any proposed work within Land under Water Bodies and Waterways shall not impair the following:

- 1. The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;*
- 2. Ground and surface water quality;*
- 3. The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and*
- 4. The capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.*
- 5. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bank full width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirements of 310 CMR 10.56(4)(a)4., the impact on Land under Water Bodies and Waterways caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures established under 310 CMR 10.60.*

The project is in compliance with these performance standards. The project will not impact the water carrying capacity within Quacumquasit Pond. The project will not impair groundwater quality, and surface water quality will be improved by the project. The project will improve the capacity of the LUW to provide breeding habitat, escape cover and food for fisheries due to the increases in pond health and water quality. Reductions in phosphorus in the water column will prevent harmful algae blooms that would otherwise reduce the ability of LUW to serve as breeding habitat and food for fisheries. The project will improve the capacity of the LUW to provide important wildlife habitat functions by improving the water quality and preventing harmful algae blooms. Impacts will total greater than 5,000 square feet of LUW, however the impacts will have no adverse impact on wildlife habitat. The project does not involve a stream crossing.

Notwithstanding the provisions of 310 CMR 10.56(4)(a), the issuing authority may issue an Order in accordance with M.G.L. c. 131, § 40 to maintain or improve boat channels within Land under Water Bodies and Waterways when said work is designed and carried out using the best practical measures so as to minimize adverse effects such as the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms or the destruction of fisheries habitat or nutrient source areas.

The project is in compliance with this performance standard. The project will not negatively impact boat channels.

Notwithstanding the provisions of 310 CMR 10.56(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.

The project is in compliance with this performance standard. As described in Section 3.2, the project is located within NHESP Estimated Habitat areas but is not located within NHESP Priority Habitat areas. Review and correspondence with the Massachusetts Division of Fisheries and Wildlife (MassWildlife) is ongoing to determine if the project will have an adverse impact on state-listed species. Attachment E contains the initial habitat inquiry sent to MassWildlife and their official response.

Based on their response, further review is required. The MESA Project Review Checklist is currently in preparation and will be submitted to MassWildlife. Their determination and response are forthcoming at the time of the NOI filing. No work will occur until a No Take determination is issued by MassWildlife.

4.2 Sturbridge Wetlands Regulations

4.2.1 General Performance Standards

As stated in § 365-5.0. of the Sturbridge Wetlands Regulations, the following general performance standards shall apply for all resource areas.

GENERAL PERFORMANCE STANDARD STURBRIDGE WETLANDS REGULATIONS	TO ADDRESS PERFORMANCE STANDARD
No project shall lead to a violation of Massachusetts Water Quality Standards, on both numeric and narrative criteria.	The project has been designed and will be carried out in compliance with the Massachusetts Water Quality Standards. It will result in a net increase of water quality in Quacumquasit Pond.
No project may have adverse impacts on habitat for rare or endangered species or on areas of critical environmental concern.	As described in Section 3.2 above and to be confirmed during MESA review, the project will not result in any adverse impacts on habitat for rare or endangered species or on areas of critical environmental concern.
No project will be allowed which will have an adverse impact on the interests noted for each resource area.	The project will improve the water quality of LUW and Quacumquasit Pond. There will be no adverse impacts to resource areas.
Maximum allowable alterations are at the discretion of the Commission.	N/A

GENERAL PERFORMANCE STANDARD STURBRIDGE WETLANDS REGULATIONS	TO ADDRESS PERFORMANCE STANDARD
Values other than those identified in this section may be determined to be significant to a resource area on a case-by-case basis. Should the Commission determine that additional values are significant based on best professional judgment, a written statement with detailed reasons for the determination shall be submitted to the applicant. An applicant has the right to challenge the additional presumed values based on a preponderance of scientific evidence.	N/A
Failure to contain and control sedimentation and erosion on site and out of resource areas and restricted buffers may result in a cease and desist order at the discretion of the Sturbridge Conservation Commission. All work on site will be stopped until erosion control barriers are corrected and sediments are removed from resource areas, restricted buffer areas or impacted off-site areas.	The project will not result in any sediment discharges to waterways. If any sediment discharges are noticed, then work will be stopped immediately and the problem will be rectified.

4.2.2 Land Under Water Bodies and Waterways Sturbridge Performance Standards

LUW PERFORMANCE STANDARD STURBRIDGE WETLANDS REGULATIONS	TO ADDRESS PERFORMANCE STANDARD
Refer to MA Wetlands Protection Act Regulations, 310 CMR 10.56, Land Under Water Bodies and Waterways (Under any Creek, River, Stream, Pond or Lake), Subsection (4), General Performance Standards.	See Section 4.1.1 above.
Any proposed work within land under water and waterways shall not impair the following: (a) The water-carrying capacity within the defined channel, which is provided by said land in conjunction with the banks; (b) Ground- and surface water quality; (c) The capacity of said land to provide breeding habitat, escape cover and food for fisheries; (d) The capacity of said land to provide important wildlife habitat functions.	The project will not change the water-carrying capacity within Quacumquasit Pond. There will be positive impacts to the water quality in the Pond. The project will not impair the capacity of the land to provide breeding habitat, escape cover, or food for fisheries. The project will not impair the capacity of the land to provide wildlife habitat functions.

5.0 Alternatives Analysis

The following alternative layouts were considered for the proposed Project:

- *“No Action” option* – This alternative would result in the applicant not achieving their goal of reducing excess phosphorus to improve the water quality of Quacumquasit Pond. Therefore, this is alternative would not address the project need.
- *Artificial aeration* – This alternative involves aerating the pond to keep the lake’s water chemistry oxidized, even in deep areas. This makes the water less favorable for algae to bloom. This alternative would be difficult to implement due to the large size of Quacumquasit Pond and would be significantly more costly than alum treatment. This

alternative would require a large air-pump system on shore, air lines from it throughout the bottom of the lake, and installation, potentially, of electricity to the pump. This approach would have impacts to bank, buffer zones, and LUW that would be greater than the proposed alternative, therefore, aeration is not preferred.

- *Alum treatment* – This alternative binds the excess phosphorus in the water column and sediments with aluminum where it becomes inert. This treatment will have very little shoreline or buffer impacts and should last for up to 15 years without any yearly maintenance costs. Therefore, alum is the preferred alternative.

6.0 Conclusion

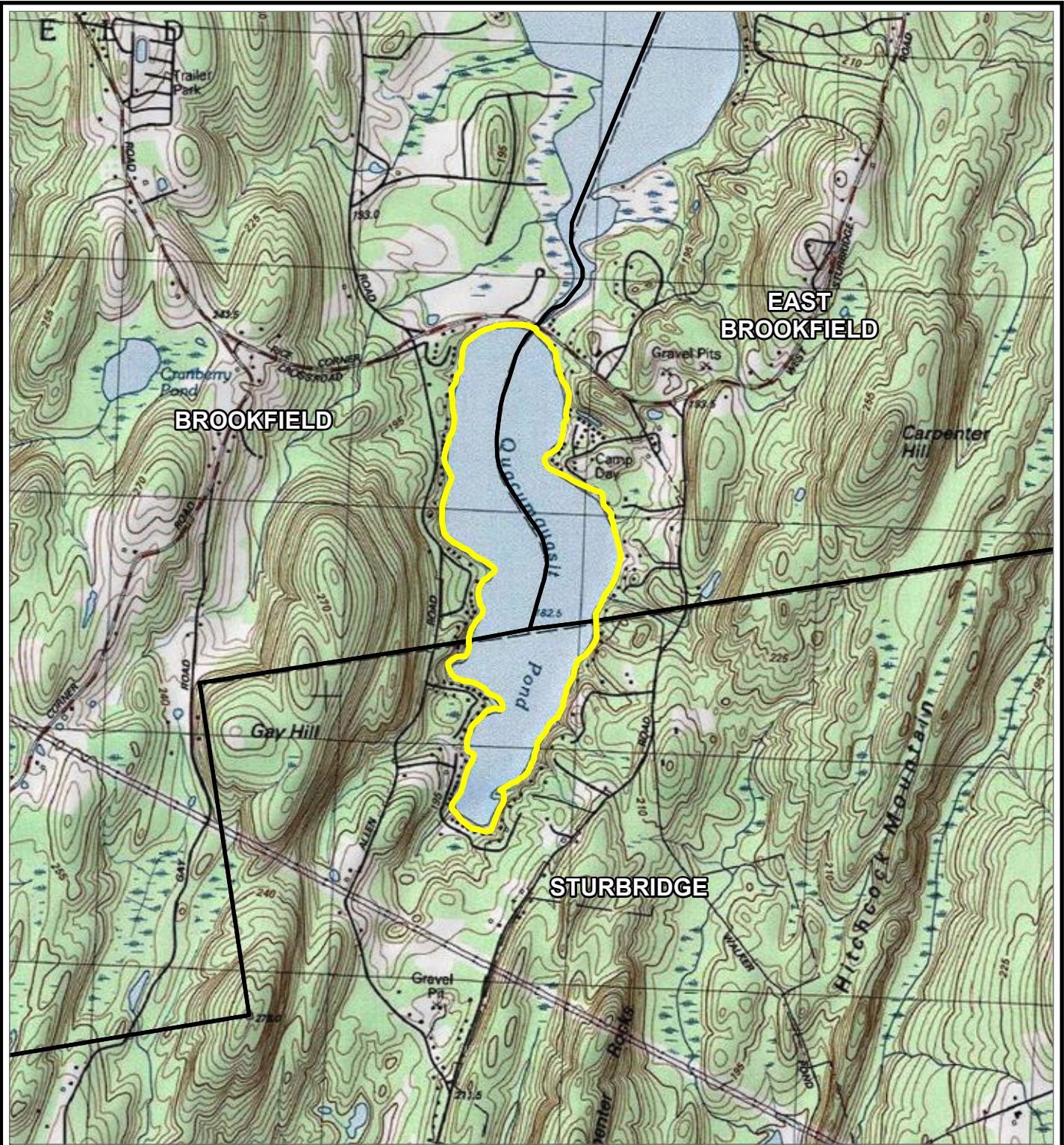
In conclusion, based on the information presented in this NOI application, TRC requests a Restoration Order of Conditions from the Town of Sturbridge Conservation Commission. The proposed treatment plan and methodology has been successfully carried out in many municipalities in Massachusetts and is a cost-effective manner of preserving the water quality in Quacumquasit Pond.



7.0 References

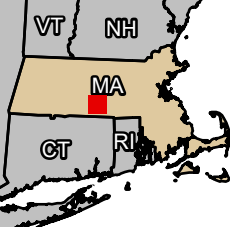
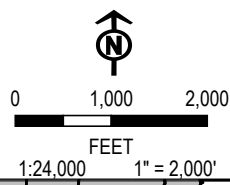
- [EEA 2004a] Massachusetts Executive Office of Environmental Affairs. 2004a. Eutrophication and Aquatic Plant Management in Massachusetts: Final Generic Environmental Impact Report.
- [EEA 2004b] Massachusetts Executive Office of Environmental Affairs. 2004b. The Practical Guide to Lake Management in Massachusetts: A Companion to the Final Generic Environmental Impact Report on Eutrophication and Aquatic Plant Management in Massachusetts.


ATTACHMENT B – Figures

Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet; Map Rotation: 0
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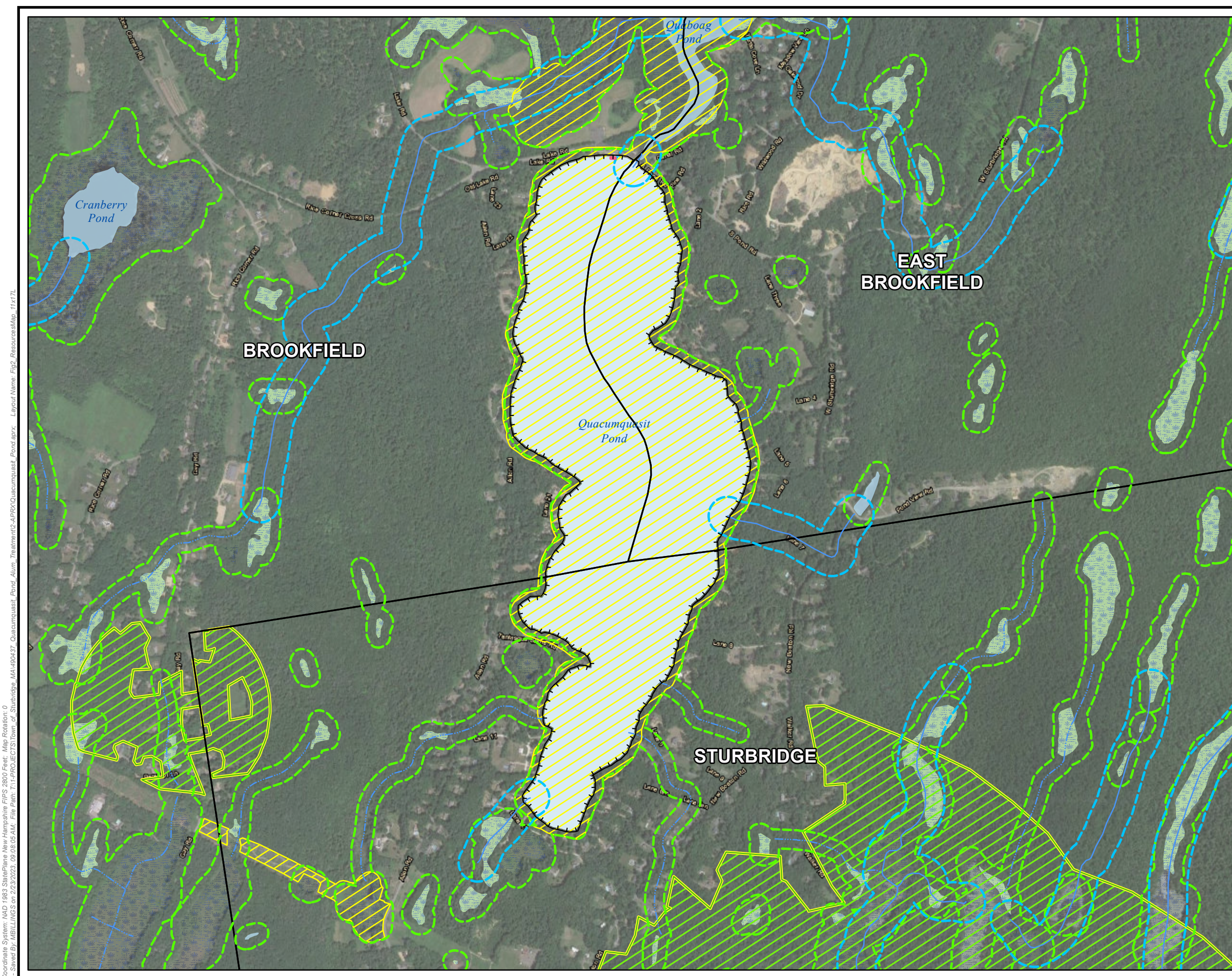


-  QUACUMQUASIT POND
-  TOWN BOUNDARY



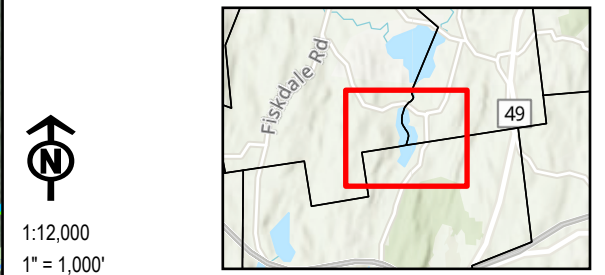
PROJECT: QUACUMQUASIT POND ALUM TREATMENT TOWN OF STURBRIDGE, MA	
TITLE: PROJECT LOCATION MAP	
DRAWN BY: M. BILLINGS	PROJ. NO.: 490437.0000.0000
CHECKED BY: O. SHAW	FIGURE 1
APPROVED BY: C. NIELSEN	
DATE: FEBRUARY 2023	
	
650 Suffolk Street Suite 200 Lowell, MA 01854 Phone: 978.970.5600	
FILE:	Quacumquasit_Pond

BASE MAP: USA TOPOGRAPHIC MAP
 DATA SOURCES: ESRI, MASSGIS, TRC



- INLAND BANK
- TEMPORARY STAGING AREA
- LAND UNDER WATER
- MARSH/BOG
- WOODED MARSH
- OPEN WATER
- 100-FT WETLAND AND INTERMITTENT STREAM BUFFER
- PERENNIAL STREAM
- INTERMITTENT STREAM
- 200-FT RIVERFRONT AREA
- NHESP ESTIMATED HABITATS OF RARE WILDLIFE
- NHESP PRIORITY HABITATS OF RARE SPECIES
- TOWN BOUNDARY

BASE MAP: GOOGLE IMAGERY
 DATA SOURCES: ESRI, MASSGIS, TRC

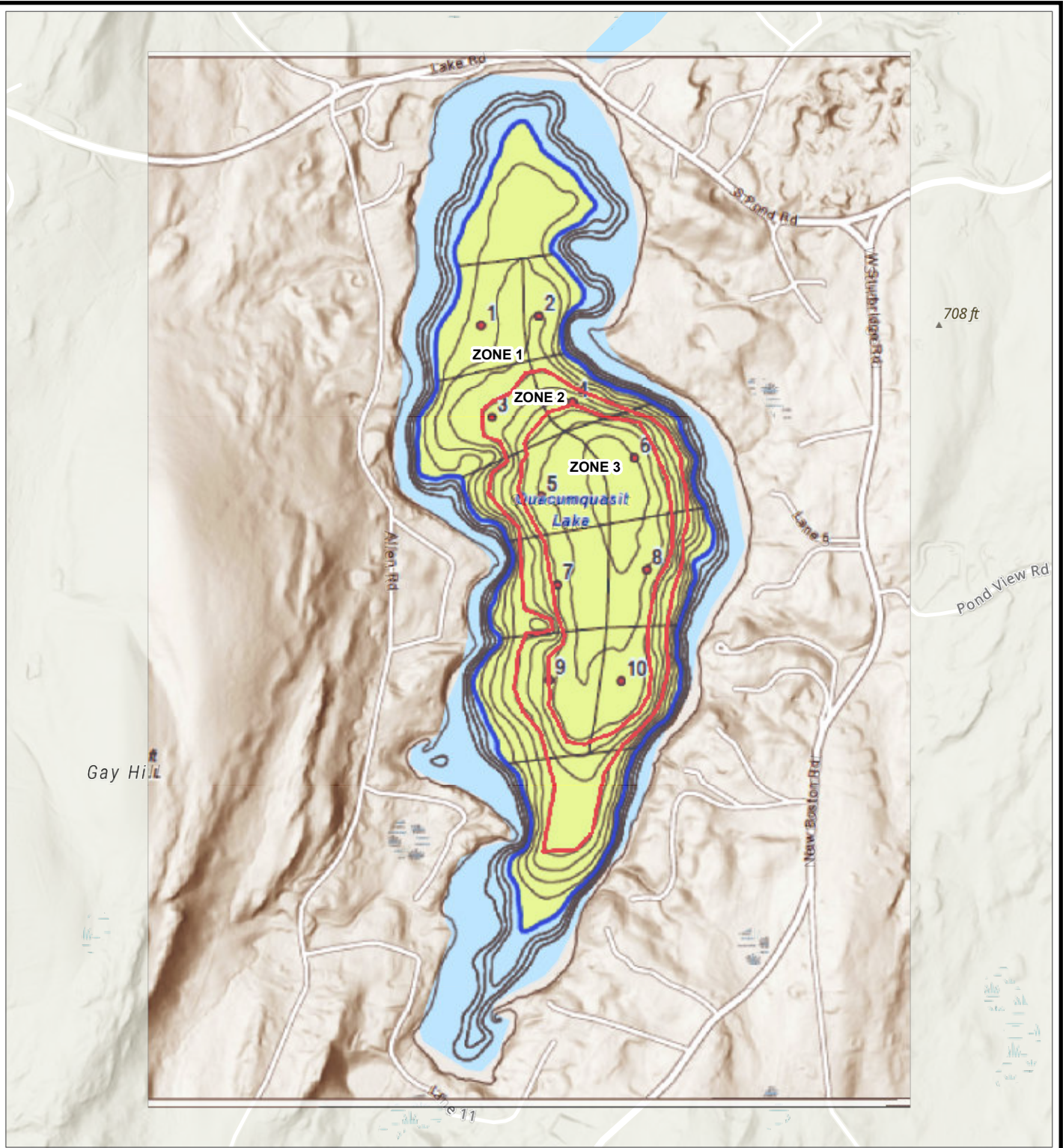


1:12,000
 1" = 1,000'
 0 1,000 2,000 FEET

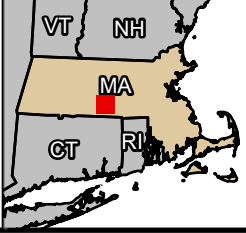
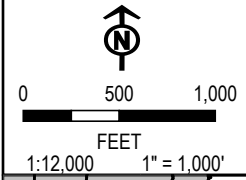
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TITLE: WETLAND DELINEATION MAP	
DRAWN BY: M. BILLINGS	PROJ. NO.: 490437.0000.0000
CHECKED BY: O. SHAW	FIGURE 2
APPROVED BY: C. NIELSEN	
DATE: FEBRUARY 2023	
650 Suffolk Street Suite 200 Lowell, MA 01854 Phone: 978.970.5600	
FILE:	Quacumquasit_Pond

Coordinate System: NAD 1983 StatePlane New Hampshire FIPS 2800 Feet; Map Rotation: 0
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Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001 Feet; Map Rotation: 0
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- Zone Boundary
- Treatment Area
- Non-Treatment Area





PROJECT: QUACUMQUASIT POND ALUM TREATMENT TOWN OF STURBRIDGE, MA	
TITLE: TREATMENT AREA MAP	
DRAWN BY: M. BILLINGS	PROJ. NO.: 490437.0000.0000
CHECKED BY: O. SHAW	FIGURE 3
APPROVED BY: C. NIELSEN	
DATE: FEBRUARY 2023	
650 Suffolk Street Suite 200 Lowell, MA 01854 Phone: 978.970.5600	
FILE: Quacumquasit_Pond	

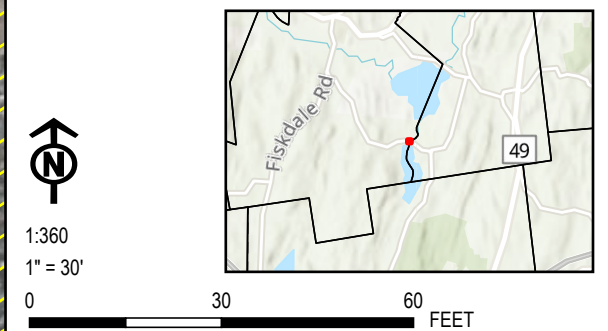
BASE MAP: USA TOPOGRAPHIC MAP
 DATA SOURCES: ESRI, MASSGIS, TRC


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-  STAGING AREA
-  NHESP PRIORITY HABITATS OF RARE SPECIES

BASE MAP: GOOGLE IMAGERY
DATA SOURCES: ESRI, MASSGIS, TRC



PROJECT: QUACUMQUASIT POND ALUM TREATMENT TOWN OF STURBRIDGE, MA	
TITLE: TEMPORARY STAGING AREA	
DRAWN BY: M. BILLINGS	PROJ. NO.: 490437.0000.0000
CHECKED BY: O. SHAW	FIGURE 2
APPROVED BY: C. NIELSEN	
DATE: FEBRUARY 2023	
	
650 Suffolk Street Suite 200 Lowell, MA 01854 Phone: 978.970.5600	
FILE:	Quacumquasit_Pond

ATTACHMENT C – Abutter Information



Town of Sturbridge

Conservation Commission

Notification to Abutters

under the MA Wetlands Protection Act and the Town of Sturbridge Wetland Bylaw Regulations

In accordance with the second paragraph of Massachusetts General Laws, Chapter 131, § 40, as well as the Town of Sturbridge Wetland Bylaw, you are hereby notified of the following permit application for work within a wetland resource area and/or within the 200-foot buffer zone to a resource area:

- A. The name of the applicant is: Robin Grimm, Town of Sturbridge
- B. The address of the lot(s) where the activity is proposed is: Quacumquasit Pond, Sturbridge/Brookfield/East Brookfield
- C. The nature of the activity proposed includes: Pond treatment with aluminum sulfate to reduce free-reactive phosphorus, prevent toxic algal blooms, and improve water quality
- D. The applicant has filed the following in accordance with the Wetlands Protection Act (MGL c. 131, § 40), and/or the Town of Sturbridge Wetland Bylaws.
- Notice of Intent seeking permission to conduct work within a wetland, water body or resource area
 - Request for Determination seeking permission to conduct work within a buffer zone to a wetland, waterbody or resource area
 - Abbreviated Notice of Resource Area Delineation seeking to confirm the wetland resource area boundaries.
 - Request to amend an existing Order of Conditions for DEP File #300-_____

The Public Hearing for this application will be held in person and remotely via GoTo Meeting

at Veteran's Hall, Town Hall, 308 Main Street, 2nd Floor

Date and Time of Hearing: March 30, 2023 7:00 PM

Public Hearing can be accessed remotely:

- **From your computer using: <https://global.gotomeeting.com/join/846062197> or**
- **From your phone: +1 872 240 3212, followed by the access code 846-062-197**

Please note that while an option for remote attendance and/or participation is being provided to the public, the meeting/hearing will not be suspended or terminated if technological problems interrupt the virtual broadcast, unless otherwise required by law. Members of the public with particular interest in any specific item on this agenda should make plans for in-person vs. virtual attendance accordingly. Please note that meetings can also be watched either online via the Town's on demand video broadcast or on cable television on channel 191, however, there is no public participation through these options.

PLEASE NOTE: Copies of the application and related materials including agendas and staff notes can be found here:

- <https://www.sturbridge.gov/conservation-commission/pages/meeting-calendar-and-documents>

You may contact the Sturbridge Conservation Commission Office (508) 347-2506 or the Department of Environmental Protection Central Regional Office at 508-792-7650 with questions in regards to the application process or the Wetlands Protection Act.

Parcel ID	Owner	Owner Address	Owner City	State	Zip	Property Address
110-00145-102	ALBERTSON-SHEA SANDRA	218 SPENCER DRIVE	AMHERST	MA	01002	102 ALLEN ROAD
598-00625-031	ALLARD GARY	31 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	31 SOUTH SHORE DRIVE
598-00625-078	ALLARD GARY	31 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	78 SOUTH SHORE DRIVE
598-00615-019	AVANESIAN RAMILIA	19 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	19 SOUTH SHORE DRIVE
389-00617-132	BERCUME RANDY	132 LANE NINE	STURBRIDGE	MA	01566	132 LANE NINE
633-00145-015	BONIFACE MARK	15 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	15 TANTASQUA SHORE DRIVE
633-00155-034	BROCHU JOCHEBED E	34 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	34 TANTASQUA SHORE DRIVE
598-00626-100	BROCHU MATTHEW	100 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	100 SOUTH SHORE DRIVE
633-00156-032	BROCHU PAUL C	32 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	32 TANTASQUA SHORE DRIVE
633-00145-007	BUTTS ALLEN C	7 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	7 TANTASQUA SHORE DRIVE
387-00147-148	C-DAS LLC	8 PUTNAM AVENUE	CHELMSFORD	MA	01824	148 LANE EIGHT
633-00145-008	CENNERAZO ALBERT J	8 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	8 TANTASQUA SHORE DRIVE
598-00616-110	CURBELO RAUL H	174 CEDAR STREET	STURBRIDGE	MA	01566	110 SOUTH SHORE DRIVE
633-00145-009	CUTLER CYNTHIA A G	9 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	9 TANTASQUA SHORE DRIVE
387-00147-156	DOHERTY CHARLENE L	156 LANE EIGHT	STURBRIDGE	MA	01566	156 LANE EIGHT
633-00145-016	DYLAN HILLSBURG & WILLIAM CORBIN TRS	16 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	16 TANTASQUA SHORE DRIVE
110-00145-096	ELLIOT JOHN	96 ALLEN ROAD	STURBRIDGE	MA	01566	96 ALLEN ROAD
633-00145-002	ELLIOT PATRICK J	93 CENTER DEPOT ROAD	CHARLTON	MA	01507	2 TANTASQUA SHORE DRIVE
633-00145-037	FAUGNO AMI R	37 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	37 TANTASQUA SHORE DRIVE
387-00157-146	FAZEN LOUIS EDWARD III TRUSTEE	PO BOX 1284	STURBRIDGE	MA	01566	146 LANE EIGHT
598-00625-092	GIGUERE THOMAS D	92 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	92 SOUTH SHORE DRIVE
598-00615-080	GIGUERE THOMAS D	92 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	80 SOUTH SHORE DRIVE
598-00615-072	GIUGGIO ANTHONY R	72 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	72 SOUTH SHORE DRIVE
598-00626-096	GLIHA KATHRYN J TRUSTEE	96 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	96 SOUTH SHORE DRIVE
393-00616-126	GOODWIN F PHILIP	126 LANE TEN	STURBRIDGE	MA	01566	126 LANE TEN
455-00241-381	ZUKAS PETER & LYNN	162 LANE EIGHT	STURBRIDGE	MA	01566	381 NEW BOSTON ROAD
391-00138-172	GRABOWSKI GLENN A	40 PEASE AVENUE	WEST SPRINGFIELD	MA	01089	172 LANE SEVEN
598-00615-064	HOULE ANDREW P & MARIEL C	1115 TUCKER ROAD	DARTMOUTH	MA	02747	64 SOUTH SHORE DRIVE
391-00138-170	HOVAN EDWARD J TR	61 BOLTON CENTER RD	MANCHESTER	CT	06040	170 LANE SEVEN
393-00616-118	ILCHUK GRACE C	264 EAST BROADWAY	NEW YORK	NY	10002	118 LANE TEN
598-00626-102	JENNETTE DENNIS	102 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	102 SOUTH SHORE DRIVE
633-00146-018	JETTE MATTHEW	18 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	18 TANTASQUA SHORE DRIVE
598-00615-023	KROCHMALNYCKY ROMAN	23 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	23 SOUTH SHORE DRIVE
633-00155-042	ZINGER SERGEY & JULIE	12 KING PHILIP ROAD	SUDBURY	MA	01776	42 TANTASQUA SHORE DRIVE
633-00155-040	LAPIERRE JOHN A & HELEN P	31 WIGWAM ROAD	W BROOKFIELD	MA	01585	40 TANTASQUA SHORE DRIVE
598-00155-048	LEMIEUX MAUREEN E TR	141 GEORGE HILL ROAD	GRAFTON	MA	01519	48 SOUTH SHORE DRIVE
389-00617-134	LEMKE BILL B	P O BOX 599	STURBRIDGE	MA	01566	134 LANE NINE

598-00615-068	MARKETT WALTER F JR	11 RUTH DRIVE	WILBRAHAM	MA	01095	68 SOUTH SHORE DRIVE
598-00155-046	MASCARO ALAN P	240 MOUNTAIN ROAD	WILBRAHAM	MA	01095	46 SOUTH SHORE DRIVE
110-00145-100	MAZEIKA CHRISTOPHER P	100 ALLEN ROAD	STURBRIDGE	MA	01566	100 ALLEN ROAD
598-00626-098	MCCLEARY BRIAN	98 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	98 SOUTH SHORE DRIVE
598-00615-076	MIMEAULT PETER J	76 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	76 SOUTH SHORE DRIVE
633-00145-006	MONTRUSS CONSTANCE M	6 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	6 TANTASQUA SHORE DRIVE
633-00146-020	NEILL THOMAS	20 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	20 TANTASQUA SHORE DRIVE
387-00147-158	NIELSEN CARL F JR	158 LANE EIGHT	STURBRIDGE	MA	01566	158 LANE EIGHT
633-00156-026	NOYES MARGARET M TRUSTEE	26 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	26 TANTASQUA SHORE DRIVE
598-00615-017	OSTROWSKI CYNTHIA M TRUSTEE	58 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	17 SOUTH SHORE DRIVE
598-00615-058	OSTROWSKI CYNTHIA M TRUSTEE	58 SOUTH SHORE DRIVE	STURBRIDGE	MA	01056	58 SOUTH SHORE DRIVE
633-00145-014	PALUMBO MICHAEL	14 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	14 TANTASQUA SHORE DRIVE
598-00615-060	PECK THOMAS R	60 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	60 SOUTH SHORE DRIVE
393-00617-128	PELISSIER DANIEL	128 LANE TEN	STURBRIDGE	MA	01566	128 LANE TEN
455-00617-351	PELISSIER DANIEL TRUSTEE	128 LANE TEN	STURBRIDGE	MA	01566	351 NEW BOSTON ROAD
110-00145-104	POST ROBERT C	170 MILLBURY STREET	AUBURN	MA	01501	104 ALLEN ROAD
391-00148-168	QUINK STEPHEN M	37 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	168 LANE SEVEN
598-00625-037	QUINK STEPHEN M	37 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	37 SOUTH SHORE DRIVE
598-00625-090	RANDALL SUZANNE F	90 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	90 SOUTH SHORE DRIVE
633-00155-036	RATHBONE BRYAN L & KRISTIN B	75 BUCKLAND STREET	PALMER	MA	01069	36 TANTASQUA SHORE DRIVE
633-00155-038	RATHBONE BRYAN L & KRISTIN B	75 BUCKLAND STREET	PALMER	MA	01069	38 TANTASQUA SHORE DRIVE
598-00625-088	REED STEPHEN B	84 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	88 SOUTH SHORE DRIVE
598-00625-084	REED STEPHEN B	84 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	84 SOUTH SHORE DRIVE
387-00157-140	REIDY ROBERT	4 RUTHEN CIRCLE	SHREWSBURY	MA	01545	140 LANE EIGHT
598-00626-106	RUDE JAMES R	25 HIGHRIDGE ROAD	CROMWELL	CT	06416	106 SOUTH SHORE DRIVE
633-00145-005	RUSSELL TODD H	5 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	5 TANTASQUA SHORE DRIVE
633-00145-012	SANTANGELO STEPHEN A	12 TANTASQUA SHORE DRIVE	STURBRIDGE	MA	01566	12 TANTASQUA SHORE DRIVE
598-00615-052	SCHMIDT ALWIN E	52 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	52 SOUTH SHORE DRIVE
598-00615-054	SCHMIDT ALWIN P	52 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	54 SOUTH SHORE DRIVE
598-00625-035	SEGUN JOHN J JR	35 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	35 SOUTH SHORE DRIVE
598-00626-108	SER HOWARD L	108 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	108 SOUTH SHORE DRIVE
598-00155-016	SHAUGHNESSY JOHN J	16 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	16 SOUTH SHORE DRIVE
598-00615-082	SMITH JAMES M	82 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	82 SOUTH SHORE DRIVE
387-00157-144	STANNARD JEREMY E	144 LANE EIGHT	STURBRIDGE	MA	01566	144 LANE EIGHT
389-00617-130	TASSE JEFF M & MCGUIRE MARY K TRS	130 LANE NINE	STURBRIDGE	MA	01566	130 LANE NINE
598-00616-112	TASSE MARITA	PO BOX 747	STURBRIDGE	MA	01566	112 SOUTH SHORE DRIVE
598-00625-094	TETREAULT WILLIAM R	PO BOX 1509	GUILDERLAND	NY	12084	94 SOUTH SHORE DRIVE
633-00156-030	TRUAX NICHOLAS C & REMIJAN DAWN A	PO BOX 746	FISKDALE	MA	01518	30 TANTASQUA SHORE DRIVE
598-00615-070	VACON JOHN P	7 PHEASANT DRIVE	HOLYOKE	MA	01040	70 SOUTH SHORE DRIVE

598-00626-104	VERSCHURE ROBERT & CAROL TR	104 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	104 SOUTH SHORE DRIVE
393-00616-124	VIZARD DOUGLAS	PO BOX 441	STURBRIDGE	MA	01566	124 LANE TEN
393-00616-120	VIZARD DOUGLAS L TRUSTEE OF THE	PO BOX 441	STURBRIDGE	MA	01566	120 LANE TEN
598-00615-050	WATSON TAMARA J TRUSTEE	50 SOUTH SHORE DRIVE	STURBRIDGE	MA	01566	50 SOUTH SHORE DRIVE
393-00616-114	ZUIDEMA WAYNE	P.O. BOX 1016	STURBRIDGE	MA	01566	114 LANE TEN
387-00148-162	ZUKAS PETER W & LYNN A TRUSTEES	162 LANE EIGHT	STURBRIDGE	MA	01566	162 LANE EIGHT
	BOARD OF ASSESSORS					
Above persons listed are record owners as they appear on the most recent applicable tax list.						
Assessors are not responsible for errors or omissions. RE: M.G.L. - Chapter 40A, Section 11						
Abutters List - Conservation Commission - 200'						
RE: SOUTH POND						
Certified Copy						
Assessor: <i>John P. Murphy</i>						
Date: <i>2-8-2023</i>						

ATTACHMENT D – Environmental Monitor Publication

The Town of Sturbridge Conservation Commission will file a Notice of Intent (NOI) with the Sturbridge, Brookfield, and East Brookfield Conservation Commissions for the Quacumquasit Pond Alum Treatment Plan located at Quacumquasit Pond on or about May 2023. The purpose of the proposed project is to improve water quality and manage algae blooms and plant growth in Quacumquasit Pond through alum treatments. The project will improve aquatic habitats that support fish and wildlife species and will restore the natural capacity of the resource area to protect the interests identified in the Wetlands Protection Act (M.G.L. c. 131 §40). The anticipated submittal date of this NOI is March 14th, 2023. To obtain additional information regarding the date, time, and location of the public hearings, contact the Sturbridge Conservation Commission at 301 Main Street, Sturbridge, MA or 508-347-2506, the Brookfield Conservation Commission at 6 Central Street, Brookfield, MA or 508-867-2930, and the East Brookfield Conservation Commission at 122 Connie Mack Drive, East Brookfield MA or 508-867-6769. To obtain more information regarding this application or to obtain an electronic copy of the application, contact Carl Nielsen at TRC Companies, Inc. at CNielsen@TRCcompanies.com or 401-524-5108.

**ATTACHMENT E – MESA Correspondence (Determination
Forthcoming)**



MASSWILDLIFE

MASSACHUSETTS REQUEST FOR STATE-LISTED SPECIES INFORMATION

Please complete this form to request state-listed species information from the Natural Heritage & Endangered Species Program for a particular location (please submit only one project per form).

Fee: \$50.00, Payable to Comm. of MA – NHESP (as required in 321 CMR 10.17(3)). Please **mail** this completed form, a map with location clearly marked, and fee to: *NHESP Regulatory Review, MassWildlife Field Headquarters, 1 Rabbit Hill Road, Westborough, MA 01581.*

No fee required if request is for conservation purposes or habitat management and you are a non-profit conservation group, government agency or are working with a government agency. The completed form and map with location clearly marked can be mailed to the address above or *emailed* to: natural.heritage@mass.gov.

Project Details

* **Project or Site Name:** Quacumquasit Pond Phosphorus Inactivation Project

* **Street Address/Location:** Quacumquasit Pond (i.e. South Pond)

* **Town(s):** Sturbridge, East Brookfield, Brookfield

* **Total Site Acreage:** 225 **Acreage of Disturbance (if proposed)¹:** 138

Description current site conditions and proposed project (if necessary, attach additional sheet): Alum treatment below the 25-foot depth contour of Quacumquasit Pond (an area of approximately 98 acres) for the control of excess soluble phosphorus in the water column that contributes to poor water quality. We will not be working near the banks of and do not anticipate impacts to this species.

Do you have a previous NHESP Tracking number? (Yes / No) If yes, please provide: No

Map

* **Required:** Enclose a map with the site location clearly marked and centered on the page.

Landowner Info

* **Are you the Record Owner²: of the property? (Yes / No)** * **If No, are you a representative of the Record Owner or do you have permission from the Record Owner to submit this request or filing? (Yes / No)**

* **Landowner Name:** Rebecca Gendreau, Town of Sturbridge

* **Address:** 301 Main Street

* **City:** Sturbridge * **State:** MA * **Zip Code:** 01566

Email (if available): rgendreau@sturbridge.gov **Telephone:** (508) 347-2506

Comments/Purpose of request³: The Quacumquasit Pond is mapped as habitat for rare, threatened, and/or endangered species. We understand this to be the result of the dwarf bullrush (Lipocarpa micrantha) which is a small wiry plant that grows near the shores of lakes or in very shallow waters. In the past, the way to avoid impacts to these species has been to restrict treatments of the lake to periods when water elevations are at or below normal pool elevations.

¹ If a project is being proposed, please provide the potential acreage of disturbance and/or site clearing.
² Record Owner means any person or entity holding a legal or equitable interest, right or title to real property, as reflected in a written instrument or recorded deed, or any person authorized in writing by such person.
³ Please describe the purpose of your request for rare species information and the authorization you have to submit this request.

Applicant Info

Applicant Name (if different from Landowner): Isabel Mohammadi-Hall, TRC Companies, Inc _____

Address: 650 Suffolk Street _____

City: Lowell _____ **State:** MA _____ **Zip Code:** 01854 _____

Email (if available): imohammadi-hall@trccompanies.com _____ **Telephone:** (201) 306-2297 _____

***For No-Fee Request Only**

*** Are you a non-profit conservation group, government agency or working with a government agency? (Yes / No)**

*** If yes, provide the name of the non-profit group or government agency:** US Environmental Protection Agency _____

*** Is your request for conservation purposes or habitat management? (Yes / No)**

Comments: Lake and pond treatments do not qualify for the fee exemption. _____

I hereby certify under the pains and penalties of perjury that the information contained is true and complete to the best of my knowledge.

***Applicant Signature:** Isabel Mohammadi-Hall ***Date:** 2/14/2023

A written response will be returned within 30 days of receipt of all information required.



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DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

March 11, 2023

Isabel Mohammadi-Hall
TRC Companies, Inc.
650 Suffolk Street
Lowell, MA 01854

RE: Project Location: Quamcumquasit Pond
Town: BROOKFIELD, EAST BROOKFIELD, STURBRIDGE
NHESP Tracking No.: 06-20695

To Whom It May Concern:

Thank you for contacting the Natural Heritage and Endangered Species Program of the MA Division of Fisheries & Wildlife (the "Division") for information regarding state-listed rare species in the vicinity of the above referenced site. Based on the information provided, this project site, or a portion thereof, is located **within** *Priority Habitat 996* (PH 996) as indicated in the *Massachusetts Natural Heritage Atlas* (15th Edition) for the following state-listed rare species:

<u>Scientific name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>
<i>Lipocarpha micrantha</i>	Dwarf Bulrush	Plant	Threatened

The species listed above is protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed rare species can be found on our website (www.mass.gov/nhesp).

Please note that projects and activities located within Priority and/or Estimated Habitat must be reviewed by the Division for compliance with the state-listed rare species protection provisions of MESA (321 CMR 10.00) and/or the WPA (310 CMR 10.00).

Wetlands Protection Act (WPA)

If the project site is within Estimated Habitat and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the Division so that it is received at the same time as the local conservation commission. If the Division determines that the proposed project will adversely affect the actual Resource Area habitat of state-protected wildlife, then the proposed project may not be permitted (310 CMR 10.37, 10.58(4)(b) & 10.59). In such a case, the project proponent may request a consultation with the Division to discuss potential project design modifications that would avoid adverse effects to rare wildlife habitat.

A streamlined joint MESA/WPA review process is now available. When filing a Notice of Intent (NOI), the applicant may now file concurrently under the MESA on the same NOI form and qualify for a 30-day

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streamlined joint review. For a copy of the revised NOI form, please visit the MA Department of Environmental Protection's website:
<http://www.mass.gov/eea/agencies/massdep/service/approvals/wpa-form-3.html>.

MA Endangered Species Act (MESA)

If the proposed project is located within Priority Habitat and is not exempt from review (see 321 CMR 10.14), then project plans, a fee, and other required materials must be sent to Natural Heritage Regulatory Review to determine whether a probable Take under the MA Endangered Species Act would occur (321 CMR 10.18). Please note that all proposed and anticipated development must be disclosed, as MESA does not allow project segmentation (321 CMR 10.16). For a MESA filing checklist and additional information please see our website: www.mass.gov/regulatory-review.

We recommend that rare species habitat concerns be addressed during the project design phase prior to submission of a formal MESA filing, as avoidance and minimization of impacts to rare species and their habitats is likely to expedite endangered species regulatory review.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. If the purpose of your inquiry is to generate a species list to fulfill the federal Endangered Species Act (16 U.S.C. 1531 et seq.) information requirements for a permit, proposal, or authorization of any kind from a federal agency, we recommend that you contact the National Marine Fisheries Service at (978)281-9328 and use the U.S. Fish and Wildlife Service's Information for Planning and Conservation website (<https://ecos.fws.gov/ipac>). If you have any questions regarding this letter please contact Emily Holt, Endangered Species Review Assistant, at (508) 389-6385.

Sincerely,



Everose Schlüter, Ph.D.
Assistant Director