

Stamski and McNary, Inc.

Engineering - Planning - Surveying

1000 Main Street Acton, MA 01720 (978) 263-8585

www.StamskiandMcNary.com

Notice of Intent

Under the Massachusetts Wetland Protection Act,
M.G.L. c. 131, s. 40 and the Town of Stow Wetlands
Protection General Bylaws Article 9

For

**Randall Road
Map R11, Parcels 25B-3
Stow, MA 01775**

Applicant/Owner

Mark O'Hagan
MCO & Associates
P.O. Box 372,
Harvard, MA 01451

Date:

December 20, 2022

SM-6781

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Certified Abutters List / Affidavit / Notice to Abutters

Attachments:

A. U.S.G.S. Map

B. Massachusetts Natural Heritage Atlas 13th edition, Effective: August 1, 2021

C. FEMA Flood Insurance Rate Map

D. ORAD #299-707, Issued: 1/25/22

E. Well Drilling / Earthwork Process Description

F. Pump Test Proposal Report

G. Wetland Permitting Plan by Stamski and McNary, Inc.

Project Narrative

Project Narrative

Existing Conditions

The project is located on an existing golf course containing gravel and paved cart paths, lawn area, and wooded area. A Bordering Vegetated Wetland (BVW) is located to the north of the proposed project.

Project Description

The proposed project is the construction of three public water supply wells within a 100' Buffer Zone of a Bordering Vegetated Wetlands to serve a multiple dwelling, the closest well being 46'± from the BVW. Access to the proposed well site will be from the existing gravel and paved cart paths. Drill pits are proposed to contain slurry and settle out drilling. A well drilling zone is provided to allow for multiple locations to be used in the case of one location producing insufficient flow. Wells will not be closer than 50' apart and siltation barriers will be installed in similar manner on plan. All work will be outside the 35' Buffer Zone. Any modifications to locations will be addressed as "field changes." Minor grading may be needed for the approach to the wells. Any disturbed surfaces will be loamed and seeded once construction is completed.

Resource Area Descriptions

The resource area is a Bordering Vegetated Wetland to the west of the proposed project. The BVW was delineated by B&C Associates and confirmed by ORAD #299-707 issued on 1/25/22.

Massachusetts Endangered Species Act Review:

The project is not located in an area subject to MESA review.

Compliance with Town of Stow Wetlands Bylaw:

The only work proposed within 35' is the siltation barrier and a singular containment pit. This area is provided within the limit of work to allow the construction runoff to be completely contained. Work from this project is temporary and all disturbed areas will be restored with loam and seeded upon completion.

Compliance with General Performance Standards for BVW 310 CMR 10.55:

The general performance standards for a Bordering Vegetated Wetland have been met since the proposed activity does not involve removing, filling, dredging, or altering a BVW. The proposed siltation controls will prevent indirect alteration of wetlands during construction.

Summary:

The project has been designed to meet the performance standards of the Wetland Protection Act. The project has also been designed to meet the Town of Stow's Wetlands Regulations. Erosion controls have been proposed to protect wetland resource areas during construction.

Notice of Intent - WPA Form 3



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

Stow

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):

<u>Randall Road</u>	<u>Stow</u>	<u>01775</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>42°24'57.6" N</u>	<u>71°31' 41.15" W</u>	
d. Latitude	e. Longitude	
<u>R11</u>	<u>25B-3</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Mark</u>	<u>O'Hagan</u>	
a. First Name	b. Last Name	
<u>MCO & Associates</u>		
c. Organization		
<u>PO Box 372</u>		
d. Street Address		
<u>Harvard</u>	<u>MA</u>	<u>01451</u>
e. City/Town	f. State	g. Zip Code
<u>508-395-1211</u>	<u>markohagan@mcoassociates.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

<u>Stow Holdings, LLC</u>		
c. Organization		
<u>258 Andover Street</u>		
d. Street Address		
<u>Georgetown</u>	<u>MA</u>	<u>01833</u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Aidan</u>	<u>Schlotman</u>	
a. First Name	b. Last Name	
<u>Stamski and McNary, Inc.</u>		
c. Company		
<u>1000 Main Street</u>		
d. Street Address		
<u>Acton</u>	<u>MA</u>	<u>01720</u>
e. City/Town	f. State	g. Zip Code
<u>978.263.8585 x218</u>	<u>978.263.9883</u>	<u>abs@stamskiandmcnary.com</u>
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$500.00</u>	<u>\$237.50</u>	<u>\$262.50</u>
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:

Proposed project is for construction of three wells within the buffer zone of a BVW

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

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

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

1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

Middlesex South

a. County

67309

c. Book

b. Certificate # (if registered land)

266

d. Page Number

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

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

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



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

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

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

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

2. Width of Riverfront Area (check one):

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

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

4. Proposed alteration of the Riverfront Area:

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

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

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

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



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

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

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

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

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

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

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



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C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

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

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

August 1, 2021
b. Date of map

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

c. Submit Supplemental Information for Endangered Species Review*

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

Division of Marine Fisheries -
 Southeast Marine Fisheries Station
 Attn: Environmental Reviewer
 1213 Purchase Street – 3rd Floor
 New Bedford, MA 02740-6694
 Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

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

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



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

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

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

D. Additional Information

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

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

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

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



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D. Additional Information (cont'd)

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

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

Wetland Permitting Plan

a. Plan Title

Stamski and McNary Inc.

George Dimakarakos, P.E.

b. Prepared By

c. Signed and Stamped by

12/20/22

1"=40

d. Final Revision Date

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:

5302	12/20/22
2. Municipal Check Number	3. Check date
5301	12/20/22
4. State Check Number	5. Check date
MCO & Associates, INC	
6. Payor name on check: First Name	7. Payor name on check: Last Name



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F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant

3. Signature of Property Owner (if different)

5. Signature of Representative (if any)

2. Date

4. Date

6. Date

12/15/22

12/15/2022

For Conservation Commission:

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

For MassDEP:

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

Other:

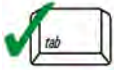
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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>Randall Road</u>	<u>Stow</u>
a. Street Address	b. City/Town
<u>5301</u>	<u>\$237.50</u>
c. Check number	d. Fee amount

2. Applicant Mailing Address:

<u>Mark</u>	<u>O'Hagan</u>	
a. First Name	b. Last Name	
<u>MCO & Associates, INC</u>		
c. Organization		
<u>PO Box 372</u>		
d. Mailing Address		
<u>Harvard</u>	<u>MA</u>	<u>01451</u>
e. City/Town	f. State	g. Zip Code
<u>508-395-1211</u>	<u>markohagan@mcoassociates.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

<u>Stow Holdings, LLC</u>	<u></u>
a. First Name	b. Last Name
c. Organization	
<u>258 Andover Street</u>	
d. Mailing Address	
<u>Georgetown</u>	<u>MA</u>
e. City/Town	f. State
<u></u>	<u>01833</u>
h. Phone Number	g. Zip Code
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
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 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
Water Supply Exploration	1	\$500.00	\$500.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			\$500.00
Step 6/Fee Payments:			
Total Project Fee:			\$500.00
			a. Total Fee from Step 5
State share of filing Fee:			\$237.50
			b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:			\$262.50
			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.)

Certified Abutters List / Affidavit / Notice to Abutters



Town of Stow BOARD OF ASSESSORS

380 Great Road
Stow, Massachusetts 01775-1122
(978) 897-4597
Email: Assessors2@Stow-MA.gov

REQUEST FOR CERTIFIED ABUTTERS' LIST

Date of Request: December 12, 2022
Property Owner: Stow Acres LLC
Property Location: Stow Acres Golf Course / North Course Randall Road
Parcel ID: (Map & Lot): R-11 25B.3
Requesting Board: Conservation Commission

Requestor Information:

Name: MCO ASSOCIATES, INC. - MARK O'HAGAN
Mailing Address: P.O. Box 372, Harvard, MA 01451
Email address: markohagan@mcoassociates.com
Phone Number: 508.395.1211

FEE: \$20.00 for first 20 abutters or less:
PLUS: \$1.00 per abutter above 20 entries and \$2.00 per sheet of labels.

31 names, 3 sheets
20
11
31 r
6.00[#] = 37

Assessors' Office Use Only:

Deposit: \$ 20.00 Cash Check (check # _____)
Add'l Fee: \$ 17.00 Cash Check (check # 5303) pt.

PAID DEC 20 2022

The Board of Assessors has 10 business days to provide all Certified Lists of Abutters.
The list is valid for 90 days from the date of Certification.
Applications submitted without all necessary information may be returned for completion.

ABUTTERS LIST
0 Randall Rd
MAP R-11 PARCEL 25B-3

MAP/PARCEL	PROPERTY LOCATION	OWNER NAME 1	OWNER NAME 2	MAILING ADDRESS	CITY	STATE	ZIP CODE	DEED BOOK	DEED PAGE
00R-10 000050	0 HUDSON RD	OWNER UNKNOWN		ADDRESS UNKNOWN					
00R-10 00049B	22 ELIZABETH DR	KENNEDY, BRENDON C.	KENNEDY, ANDREA N.	22 ELIZABETH DR	STOW	MA	01775	77189	416
00R-10 00049C	21 ELIZABETH DR	PEABODY MICHAEL E	SUSAN M PEABODY	21 ELIZABETH DRIVE	STOW	MA	01775	24458	190
00R-10 0053-1	112 HUDSON RD	SARKISIAN DAVID J	SARKISIAN JENNIFER M	112 HUDSON RD	STOW	MA	01775	64120	103
00R-10 025B-1	0 GATES LN	STOW WOODLANDS LLC		PO BOX 620-636	NEWTON	MA	02462	17734	443
00R-10 025B-2	0 ELIZABETH DR	STOW WOODLANDS LLC		PO BOX 620-636	NEWTON	MA	02462	17734	443
00R-10 053-1A	110 HUDSON RD	KLOCHKOV ARTYOM		110 HUDSON ROAD	STOW	MA	01775	71488	487
00R-11 000023	80 EDSON ST	THOMAS BRUCE A		80 EDSON ST	STOW	MA	01775	22623	610
00R-11 000026	21 CROSS ST	HAM RONALD J TR	HAM HELEN ROLFE TR; CROSS ST	21 CROSS ST	STOW	MA	01775	37128	285
00R-11 000027	5 CROSS ST	GOLDSTEIN AARON	GOLDSTEIN HEATHER	5 CROSS STREET	STOW	MA	01775	68183	266
00R-11 000028	295 GLEASONDALE RD	SIROIS PAUL E	JULIE A SIROIS	295 GLEASONDALE ROAD	STOW	MA	01775	25771	400
00R-11 00005A	285 GLEASONDALE RD	JACKSON, CHRISTIAN M.	JACKSON, KATHLEEN BRADY	285 GLEASONDALE RD	STOW	MA	01775	76032	445
00R-11 00006A	279 GLEASONDALE RD	SMITS JOHN A	SMITS CATHERINE A	279 GLEASONDALE ROAD	STOW	MA	01775	49398	589
00R-11 00007A	265 GLEASONDALE RD	BRADWAY ROBERT		265 GLEASONDALE RD	STOW	MA	01775	50930	244
00R-11 00011A	0 HUDSON RD	STOW HOLDINGS LLC		258 ANDOVER STREET	GEORGETT	MA	01833	67309	266
00R-11 00011B	0 EDSON ST	TOWN OF STOW		380 GREAT ROAD	STOW	MA	01775	61033	573
00R-11 00037A	58 RANDALL RD	STOW HOLDINGS LLC		258 ANDOVER STREET	GEORGETT	MA	01733	67309	266
00R-11 0025-4	64 EDSON ST	COBB JENNIFER S	COBB JASON R	64 EDSON ST	STOW	MA	01775	61961	393
00R-11 0033-2	147 BOON RD	PETERS FAMILY TRUST	CLAUDIA G PETERS TRUSTEE	147 BOON RD	STOW	MA	01775	72991	531
00R-11 0033-4	30 CROSS ST	DOUCETTE THOMAS	DOUCETTE ALISON M	30 CROSS ST	STOW	MA	01775	22961	254
00R-11 0033-5	22 CROSS ST	WENDLER JOHN P	ROBIN K WENDLER	22 CROSS STREET	STOW	MA	01775	24257	514
00R-11 0054-2	137 RANDALL RD	ZINKE ALEXANDER W	ZINKE AMANDA KATHLEEN	137 RANDALL ROAD	STOW	MA	01775	68456	565
00R-11 025-11	0 FAIRWAY DR	SARTORI LOUIS R		2203 ATLANTIC ST APT 721	MELBOUR FL	FL	32951	46140	406
00R-11 025-12	11 FAIRWAY DR	SARTORI LOUIS R		2203 ATLANTIC ST APT 721	MELBOUR FL	FL	32951	46140	404
00R-11 025-13	7 FAIRWAY DR	GEREMIAS RONALDO		7 FAIRWAY DR	STOW	MA	01775	66971	149
00R-11 025-5A	70 EDSON ST	BOUDO WILLIAM M	BOUDO ASHLEY E	70 EDSON STREET	STOW	MA	01775	67531	449
00R-11 025-6A	76 EDSON ST	SEIGAL STEPHEN	MAGDALENE TEIGEN STORY	76 EDSON ST	STOW	MA	01775	70653	388
00R-11 025-9A	32 FAIRWAY DR	L'HOMMEDIEU CHRISTOPHER G	L'HOMMEDIEU MEREDITH M	32 FAIRWAY DRIVE	STOW	MA	01775	61723	532
00R-11 025A-1	148 HUDSON RD	FANNING MATTHEW J	FANNING NICOLE D	148 HUDSON ROAD	STOW	MA	01775	66947	284
00R-11 025B-3	0 RANDALL RD	STOW HOLDINGS LLC		258 ANDOVER STREET	GEORGETT	MA	01833	67309	266
00R-11 025B-4	0 HUDSON RD	STOW WOODLANDS LLC		PO BOX 620-636	NEWTON	MA	02462	17734	443

Handwritten signature

DEC 18 2022

Date Certified or Re-Certified:

Certified by the Stow Board of Assessors:

**ABUTTERS LIST
0 Randall Rd
MAP R-11 PARCEL 25B-3**

00R-11 025B-8	0 CROSS ST	VIRNELLI TANVA		59 GLEASONDALE RD	STOW	MA	01775	71019	388
00R-11 025B-9	111 RANDALL RD	KANE JOHN L	HOUBA KANE KATHY L	111 RANDALL RD	STOW	MA	01775	54227	469
00R-11 25-10A	36 FAIRWAY DR	ROY JONATHAN T	ROY JESSICA M	36 FAIRWAY DRIVE	STOW	MA	01775	72751	41
00R-11 25B-10	121 RANDALL RD	ALEXANDER BRIAN	ALEXANDER MICHELLE	121 RANDALL RD	STOW	MA	01775	53905	348
00R-14 0001-4	8 DEACON BENHAM DR	KERRIGAN, JR., EDWARD J.		8 DEACON BENHAM DR	STOW	MA	01775	1562	186
00R-15 000065	264 GLEASONDALE RD	GONET REESA T		264 GLEASONDALE ROAD	STOW	MA	01775	32022	514
00R-15 000066	0 WHEELER RD	PAGE FAMILY LIMITED PARTNERSHIP		115 WHEELER ROAD	STOW	MA	01775	26923	577

Handwritten signature

OWNER UNKNOWN

ADDRESS UNKNOWN

,

SARKISIAN DAVID J
SARKISIAN JENNIFER M
112 HUDSON RD
STOW, MA 01775

KLOCHKOV ARTYOM
KLOCHKOVA OLGA
110 HUDSON ROAD
STOW, MA 01775

GOLDSTEIN AARON
GOLDSTEIN HEATHER
5 CROSS STREET
STOW, MA 01775

SMITS JOHN A
SMITS CATHERINE A
279 GLEASONDALE ROAD
STOW, MA 01775

TOWN OF STOW
380 GREAT ROAD
STOW, MA 01775

PETERS FAMILY TRUST
CLAUDIA G PETERS TRUSTEE
147 BOON RD
STOW, MA 01775

ZINKE ALEXANDER W
ZINKE AMANDA KATHLEEN
137 RANDALL ROAD
STOW, MA 01775

GEREMIAS RONALDO
7 FAIRWAY DR
STOW, MA 01775

L'HOMMEDIU CHRISTOPHER G
L'HOMMEDIU MEREDITH M
32 FAIRWAY DRIVE
STOW, MA 01775

KENNEDY, BRENDON C.
KENNEDY, ANDREA N.
22 ELIZABETH DR
STOW, MA 01775

STOW WOODLANDS LLC
PO BOX 620-636
NEWTON LOWER FALLS, MA 02462

THOMAS BRUCE A
GAIL D THOMAS
80 EDSON ST
STOW, MA 01775

SIROIS PAUL E
JULIE A SIROIS
295 GLEASONDALE ROAD
STOW, MA 01775

BRADWAY ROBERT
265 GLEASONDALE RD
STOW, MA 01775

STOW HOLDINGS LLC
258 ANDOVER STREET
GEORGETOWN, MA 01733

DOUCETTE THOMAS
DOUCETTE ALISON M
30 CROSS ST
STOW, MA 01775

SARTORI LOUIS R
2203 ATLANTIC ST APT 721
MELBOURNE BEACH, FL 32951

BOUDO WILLIAM M
BOUDO ASHLEY E
70 EDSON STREET
STOW, MA 01775

FANNING MATTHEW J
FANNING NICOLE D
148 HUDSON ROAD
STOW, MA 01775

PEABODY MICHAEL E
SUSAN M PEABODY
21 ELIZABETH DRIVE
STOW, MA 01775

STOW WOODLANDS LLC
PO BOX 620-636
NEWTON LOWER FALLS, MA 02462

HAM RONALD J TR
HAM HELEN ROLFE TR; CROSS STREET REALTY
TRUST
21 CROSS ST
STOW, MA 01775

JACKSON, CHRISTIAN M.
JACKSON, KATHLEEN BRADY
285 GLEASONDALE RD
STOW, MA 01775

STOW HOLDINGS LLC
258 ANDOVER STREET
GEORGETOWN, MA 01833

COBB JENNIFER S
COBB JASON R
64 EDSON ST
STOW, MA 01775

WENDLER JOHN P
ROBIN K WENDLER
22 CROSS STREET
STOW, MA 01775

SARTORI LOUIS R
2203 ATLANTIC ST APT 721
MELBOURNE BEACH, FL 32951

SEIGAL STEPHEN
MAGDALENE TEIGEN STORY
76 EDSON ST
STOW, MA 01775

STOW HOLDINGS LLC
258 ANDOVER STREET
GEORGETOWN, MA 01833

OWNER UNKNOWN

ADDRESS UNKNOWN

KENNEDY, BRENDON C.
KENNEDY, ANDREA N.
22 ELIZABETH DR
STOW, MA 01775

PEABODY MICHAEL E
SUSAN M PEABODY
21 ELIZABETH DRIVE
STOW, MA 01775

SARKISIAN DAVID J
SARKISIAN JENNIFER M
112 HUDSON RD
STOW, MA 01775

STOW WOODLANDS LLC
PO BOX 620-636
NEWTON LOWER FALLS, MA 02462

STOW WOODLANDS LLC
PO BOX 620-636
NEWTON LOWER FALLS, MA 02462

KLOCHKOV ARTYOM
KLOCHKOVA OLGA
110 HUDSON ROAD
STOW, MA 01775

THOMAS BRUCE A
GAIL D THOMAS
80 EDSON ST
STOW, MA 01775

HAM RONALD J TR
HAM HELEN ROLFE TR; CROSS STREET REALTY
TRUST
21 CROSS ST
STOW, MA 01775

GOLDSTEIN AARON
GOLDSTEIN HEATHER
5 CROSS STREET
STOW, MA 01775

SIROIS PAUL E
JULIE A SIROIS
295 GLEASONDALE ROAD
STOW, MA 01775

JACKSON, CHRISTIAN M.
JACKSON, KATHLEEN BRADY
285 GLEASONDALE RD
STOW, MA 01775

SMITS JOHN A
SMITS CATHERINE A
279 GLEASONDALE ROAD
STOW, MA 01775

BRADWAY ROBERT
265 GLEASONDALE RD
STOW, MA 01775

STOW HOLDINGS LLC
258 ANDOVER STREET
GEORGETOWN, MA 01833

TOWN OF STOW
380 GREAT ROAD
STOW, MA 01775

STOW HOLDINGS LLC
258 ANDOVER STREET
GEORGETOWN, MA 01733

COBB JENNIFER S
COBB JASON R
64 EDSON ST
STOW, MA 01775

PETERS FAMILY TRUST
CLAUDIA G PETERS TRUSTEE
147 BOON RD
STOW, MA 01775

DOUCETTE THOMAS
DOUCETTE ALISON M
30 CROSS ST
STOW, MA 01775

WENDLER JOHN P
ROBIN K WENDLER
22 CROSS STREET
STOW, MA 01775

ZINKE ALEXANDER W
ZINKE AMANDA KATHLEEN
137 RANDALL ROAD
STOW, MA 01775

SARTORI LOUIS R
2203 ATLANTIC ST APT 721
MELBOURNE BEACH, FL 32951

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GEREMIAS RONALDO
7 FAIRWAY DR
STOW, MA 01775

BOUDO WILLIAM M
BOUDO ASHLEY E
70 EDSON STREET
STOW, MA 01775

SEIGAL STEPHEN
MAGDALENE TEIGEN STORY
76 EDSON ST
STOW, MA 01775

L'HOMMEDIEU CHRISTOPHER G
L'HOMMEDIEU MEREDITH M
32 FAIRWAY DRIVE
STOW, MA 01775

FANNING MATTHEW J
FANNING NICOLE D
148 HUDSON ROAD
STOW, MA 01775

STOW HOLDINGS LLC
258 ANDOVER STREET
GEORGETOWN, MA 01833

STOW WOODLANDS LLC
PO BOX 620-636
NEWTON LOWER FALLS, MA 02462

VIRNELLI TANYA
59 GLEASONDALE RD
STOW, MA 01775

KANE JOHN L
HOUBA KANE KATHY L
111 RANDALL RD
STOW, MA 01775

ROY JONATHAN T
ROY JESSICA M
36 FAIRWAY DRIVE
STOW, MA 01775

ALEXANDER BRIAN
ALEXANDER MICHELLE
121 RANDALL RD
STOW, MA 01775

KERRIGAN, JR., EDWARD J.
8 DEACON BENHAM DR
STOW, MA 01775

GONET REESA T
264 GLEASONDALE ROAD
STOW, MA 01775

PAGE FAMILY LIMITED PARTNERSHP
115 WHEELER ROAD
STOW, MA 01775

STOW WOODLANDS LLC
PO BOX 620-636
NEWTON LOWER FALLS, MA 02462
KANE JOHN L
HOUBA KANE KATHY L
111 RANDALL RD
STOW, MA 01775
KERRIGAN, JR., EDWARD J.
8 DEACON BENHAM DR
STOW, MA 01775
ROY JONATHAN T
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115 WHEELER ROAD
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ALEXANDER BRIAN
ALEXANDER MICHELLE
121 RANDALL RD
STOW, MA 01775
VIRNELLI TANYA
59 GLEASONDALE RD
STOW, MA 01775

NOTIFICATION TO ABUTTERS
UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT
AND THE TOWN OF STOW WETLANDS
PROTECTION BYLAW

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the Town of Stow Bylaws, you are hereby notified of the following:

The Applicant: MCO & Associates

Address: P.O. Box 372, Harvard, MA 01451 Phone: 508-395-1211

has filed a Notice of Intent with the Stow Conservation Commission.

Applicant's Representative: Stamski and McNary, Inc.

Address: 1000 Main Street; Acton, MA 01720 Phone: (978)263-8585

The address of the property where the activity is proposed: Athens Street Assessor's Map R11, Parcel 25B-3

Project Description: Construction of three public water supply wells within a Buffer Zone of a Bordering Vegetative Wetlands

Copies of the Abbreviated Notice of Intent may be examined at the Conservation Office, Stow Town Hall, 380 Great Road, Stow, between the hours of 9:00 A.M. and 5:00 P.M. Monday through Friday. For more information please call the Conservation Office at (978)897-8615.

A Public Hearing regarding this Notice of Intent will be held. Information regarding the time and place of the public meeting may be obtained from the applicant or the Stow Conservation Commission.

The notice of the public hearing will be published at least five (5) days in advance in the Stow Independent.

NOTE: You may also contact your local conservation commission or the nearest Department of Environmental Protection Regional Office for the information about this application or, the Wetlands Protection Act. Stow is in the Central Region. To contact DEP, call:
*Central Region: (508)792-7650 Northeast Region: (978)661-7600
Southeast Region: (508)946-2800 Western Region: (413)784-1100



**Town of Stow
Conservation Commission**

**380 Great Road
Stow, Massachusetts 01775**
(978) 897-8615
FAX (978) 897-4534
conservation@stow-ma.gov

**Affidavit of Service Under the Massachusetts Wetlands Protection Act
and the Town of Stow Wetlands Bylaw**

(to be submitted to Stow Conservation Commission and MA Department of Environmental Protection when filing a Notice of Intent or Request for Determination)

I, _____(name), hereby certify under the pains and penalties of perjury that on 12/20/22 (date of mailing), I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and/or the Stow Wetlands Bylaw, in connection with the following matter:

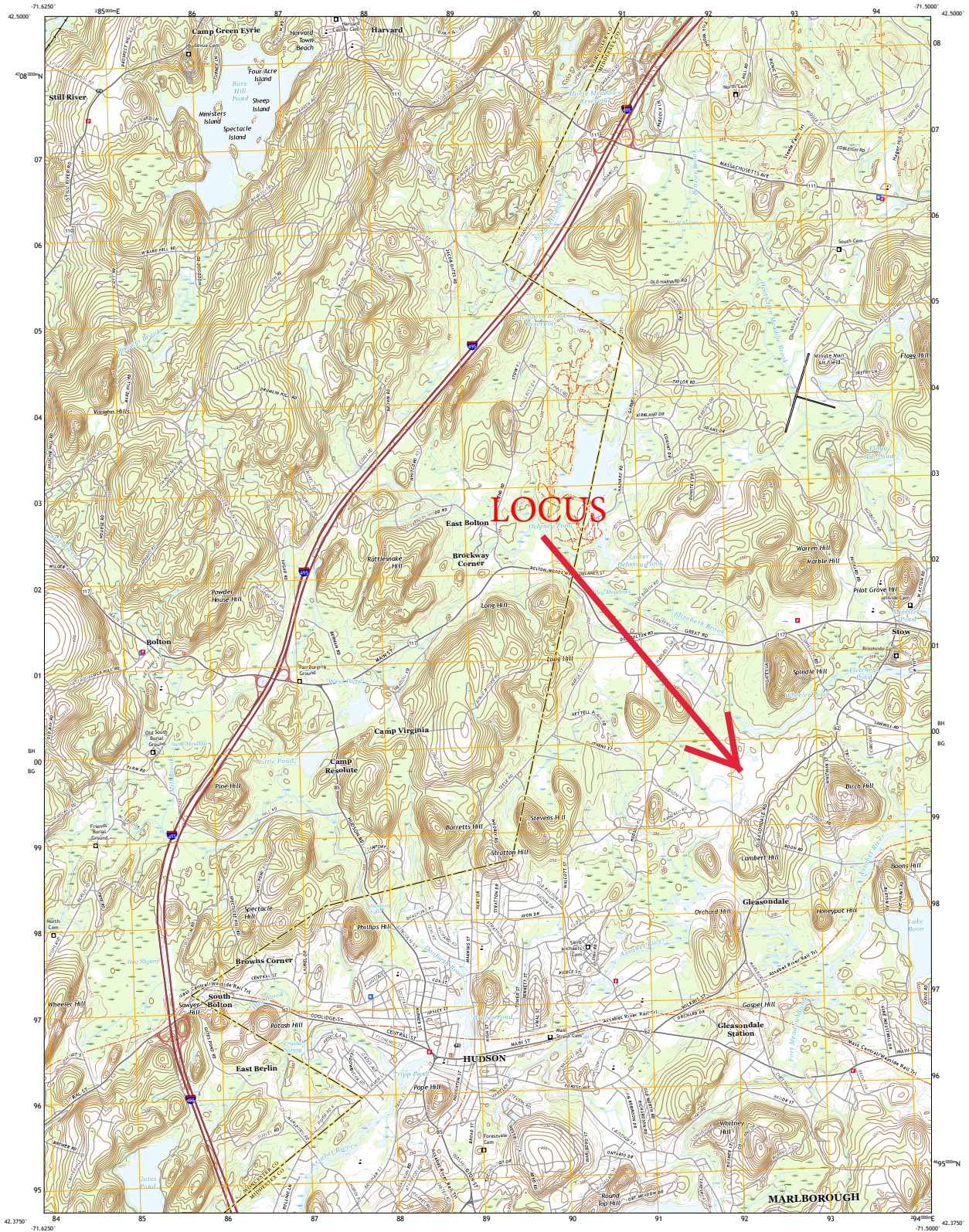
- Request for Determination (via regular mail)
- Abbreviated Notice of Resource Area Delineation (via certified mail or certificate of mailing)
- Notice of Intent (via certified mail or certificate of mailing)

For property located at: Randall Road

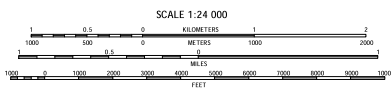
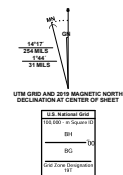
Signature

Date

U.S.G.S. Map



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
Work Coordinate System of 1983 (PROJ83) Projection and
1 000-meter grid Universal Transverse Mercator, Zone 19T
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.



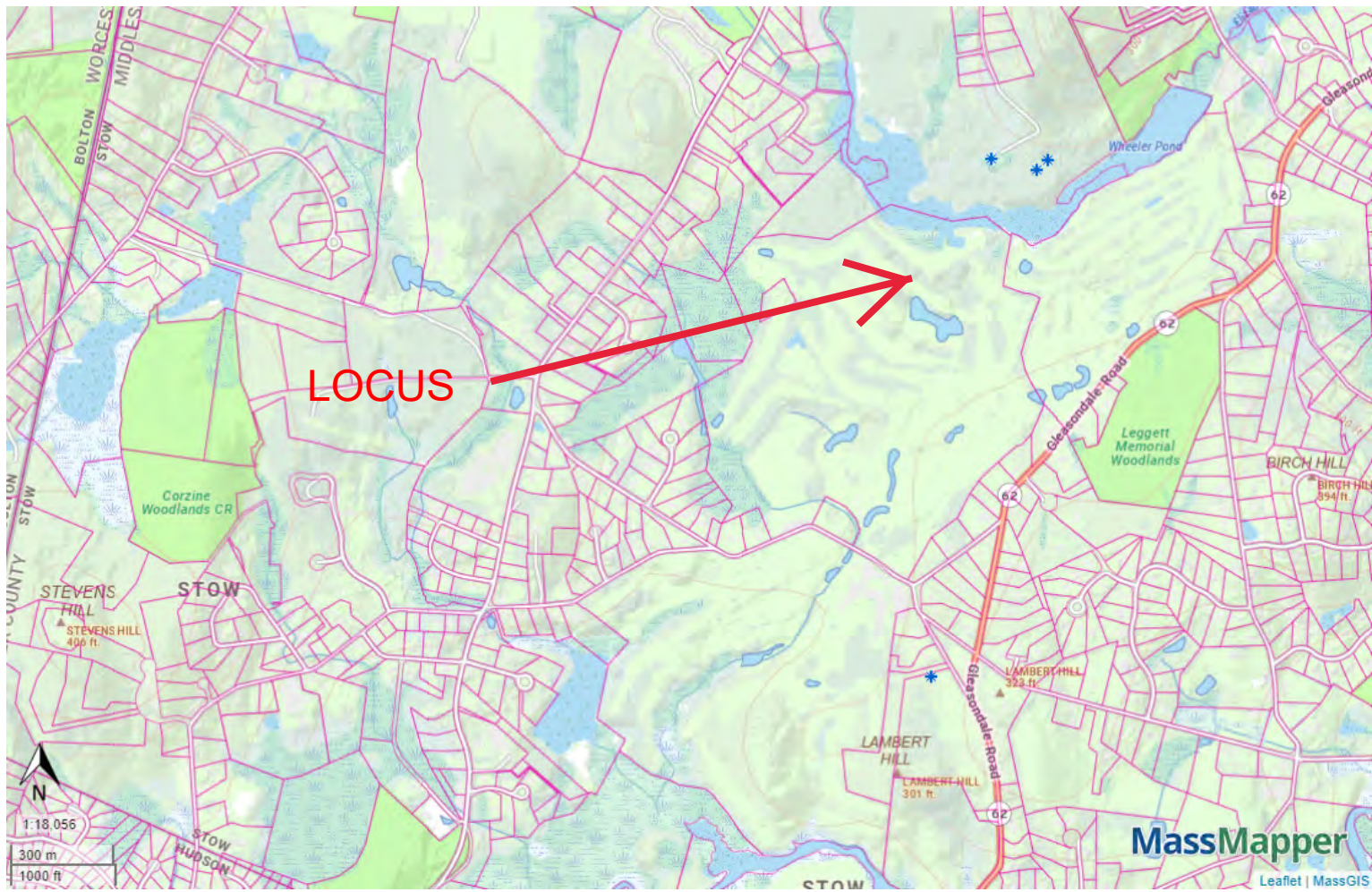
ALTERNATE COORDINATES

1	2	3
4	5	6
7	8	9

HUDSON, MA
2021



Massachusetts Natural Heritage Atlas 13th Edition



NHESP Priority Habitats of Rare Species



NHESP Estimated Habitats of Rare Wildlife



NHESP Certified Vernal Pools



Property Tax Parcels

FEMA Flood Insurance Rate Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updates or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Subleak Elevations being contained within the Flood Insurance Study (FIS) Report that accompanies this FIRIM. Users should be aware that BFEs shown on the FIRIM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRIM for purposes of construction and/or floodplain management.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic computations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for the jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.1 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Massachusetts State Plane, Mainland Zone (FIS zone 2001). The horizontal datum was NAD 83. GRS 1980 adjusted. Differences in datum selection, projection or UTM zones used in the production of FIRIMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRIM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NCG Information Services
NCGI, N100512
National Geodetic Survey
SSM-C-3, #0022
3335 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation description and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRIM was derived from orthoregistry provided by MassGIS at a scale of 1:500 from photoregistry dated 2002.

The profile bases used on this map represent the hydraulic modeling baseline that matches the base profiles in the FIS report. As a result of improved topographic data, the profile baselines, in some cases, may deviate significantly from the original composite or sparse outside the SFHA.

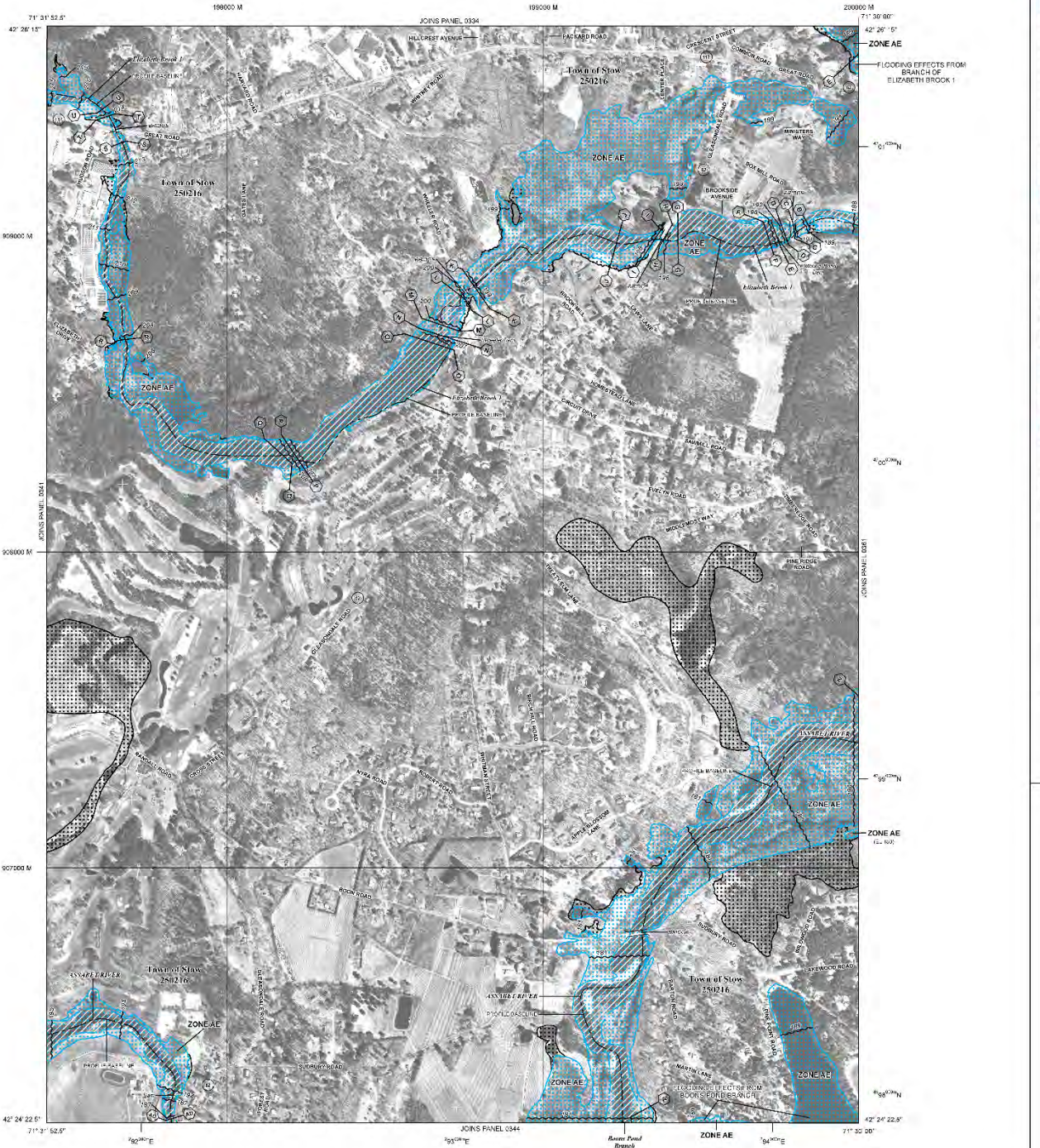
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRIM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRIM may have been adjusted to conform to these new stream channel configurations. As a result of the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contain authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels, community map repository addresses, and a listing of Communities at Risk containing National Flood Insurance Program data for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRIM visit the Map Service Center (MSC) website at <http://msc.fema.gov>. Available products may include previously issued letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have questions about this map, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information Exchange (MIEX) at 1-877-FEMA-MAAP (1-877-336-3671) or visit the MIEX website at <http://www.fema.gov/business/miex>.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% Annual Chance Flood (1% ACF) is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area of land that is expected to be inundated by the 1% ACF. The base flood elevation is the water surface elevation of the 1% ACF at a given location.

ZONE A
Includes flood elevations determined based on flood hydrology (determined).

ZONE AE
Flood depths of 1 to 3 feet (usually from flow on steeply sloping terrain, average depths determined) or areas of shallow flooding, water less than 6 feet deep.

ZONE AD
Special Flood Hazard areas where flood depths are 1 to 3 feet, water of excessive velocity is likely to cause damage to structures, and where flood depths are 1 to 3 feet.

ZONE AV
Areas of moderate flood depths (1 to 3 feet) with high velocity water, which may cause damage to structures and property.

ZONE VE
Coastal flood areas with velocity based wave action; Special Flood Elevation (SFE) is 3 feet.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of stream plus an elevated floodplain area that must be kept free of obstructions to the 1% Annual Chance Flood. It is defined as the area in which the 1% ACF is maintained.

OTHER FLOOD AREAS

ZONE X
Areas of 1% Annual Chance Flood, areas of the 1% Annual Chance Flood with average depths of 1 to 3 feet or less than average depths of 1 to 3 feet.

OTHER AREAS

ZONE D
Areas where there is to be no or the smallest degree of protection. Areas in which flood hinders an activity, but does not prevent it.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

OPAs are areas that are normally exempt from or adjacent to Special Flood Hazard Areas. They include:

- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Class or Class Boundary
- Dike or Dike Boundary
- Dike or Dike Boundary
- Dike or Dike Boundary
- Dike or Dike Boundary
- Dike or Dike Boundary
- Dike or Dike Boundary
- Dike or Dike Boundary

Map Scale: 1" = 660'

MAP SCALE: 1" = 660'

0 100 200 300 FEET

0 100 200 300 METERS

PANEL 0342F

FIRM

**FLOOD INSURANCE RATE MAP
MIDDLESEX COUNTY,
MASSACHUSETTS
(ALL JURISDICTIONS)**

PANEL 342 OF 656
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

DATE: 07/07/2014
FIRM: 15017C0342F
DATE: 07/07/2014

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER
25017C0342F
MAP REVISED
JULY 7, 2014**

Federal Emergency Management Agency

Attachment D:
ORAD #299-707
Issued: 1/25/22

For Registry of Deeds Use Only



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

**WPA Form 4B – Order of Resource Area
Delineation**

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

Provided by MassDEP:

299-707

MassDEP File Number

eDEP Transaction Number

Stow

City/Town

A. General Information

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.

From: Stow
1. Conservation Commission

2. This Issuance is for (check one):

a. Order of Resource Area Delineation

b. Amended Order of Resource Area Delineation

3. Applicant:

Mark O'Hagan
a. First Name b. Last Name

MCO & Associates, Inc.
c. Organization

P.O. Box 372
d. Mailing Address

Harvard MA 01451
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):

Stow Holdings, LLC Stow
a. First Name b. Last Name

258 Andover Street
c. Organization

Georgetown MA 01833
d. Mailing Address e. City/Town f. State g. Zip Code

5. Project Location:

58 Randall Road Stow 01775
a. Street Address b. City/Town c. Zip Code

R11 25B-3
d. Assessors Map/Plat Number e. Parcel/Lot Number

Latitude and Longitude (in degrees, minutes, seconds): 1 18 2022 1 25 2022
f. Latitude g. Longitude

6. Dates: 12/15/2021 1/18/2022 1/25/2022
a. Date ANRAD filed b. Date Public Hearing Closed c. Date of Issuance



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**WPA Form 4B – Order of Resource Area
Delineation**

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

Provided by MassDEP:

299-707

MassDEP File Number

eDEP Transaction Number

Stow

City/Town

A. General Information (cont.)

7. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

Resource Area Delineation Plan in Stow Massachusetts for MCO Associates, prepared by Stamski and McNary, Inc. Sheets 1-4 and to be further revised per ORAD	12/14/2021 revised 1/14/2022
c. Title	d. Date

B. Order of Delineation

1. The Conservation Commission has determined the following (check whichever is applicable):

- a. **Accurate:** The boundaries described on the referenced plan(s) above and in the Abbreviated Notice of Resource Area Delineation are accurately drawn for the following resource area(s):

1. Bordering Vegetated Wetlands
2. Other resource area(s), specifically:

a. See ORAD Appendix

- b. **Modified:** The boundaries described on the plan(s) referenced above, as modified by the Conservation Commission from the plans contained in the Abbreviated Notice of Resource Area Delineation, are accurately drawn from the following resource area(s):

1. Bordering Vegetated Wetlands
2. Other resource area(s), specifically:

a. See ORAD Appendix

- c. **Inaccurate:** The boundaries described on the referenced plan(s) and in the Abbreviated Notice of Resource Area Delineation were found to be inaccurate and cannot be confirmed for the following resource area(s):

1. Bordering Vegetated Wetlands
2. Other resource area(s), specifically:

See ORAD Appendix



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

299-707

MassDEP File Number

WPA Form 4B – Order of Resource Area Delineation

eDEP Transaction Number

Stow

City/Town

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

B. Order of Delineation (cont.)

- 3. The boundaries were determined to be inaccurate because:

C. Findings

This Order of Resource Area Delineation determines that the boundaries of those resource areas noted above, have been delineated and approved by the Commission and are binding as to all decisions rendered pursuant to the Massachusetts Wetlands Protection Act (M.G.L. c.131, § 40) and its regulations (310 CMR 10.00). This Order does not, however, determine the boundaries of any resource area or Buffer Zone to any resource area not specifically noted above, regardless of whether such boundaries are contained on the plans attached to this Order or to the Abbreviated Notice of Resource Area Delineation.

This Order must be signed by a majority of the Conservation Commission. The Order must be sent by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate DEP Regional Office (see <https://www.mass.gov/service-details/massdep-regional-offices-by-community>).

D. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate DEP Regional Office to issue a Superseding Order of Resource Area Delineation. When requested to issue a Superseding Order of Resource Area Delineation, the Department’s review is limited to the objections to the resource area delineation(s) stated in the appeal request. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department’s Superseding Order of Resource Area Delineation will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order or Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act, (M.G.L. c. 131, § 40) and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal bylaw or ordinance, and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.

APPENDIX 1

Location: Off Randall Road

Owner: Stow Holdings LLC

Applicant: Mark O'Hagan, MCO & Associates

Order of Resource Area Delineation

Massachusetts Wetlands Protection Act File #299-707

Map R11, Lot 25B-3

Issued January 18, 2022

The Stow Conservation Commission has reviewed and confirmed the accuracy of the resource areas shown on the “**Resource Area Delineation Plan in Stow Massachusetts for MCO and Associates,**” prepared by Stamski and McNary, Inc., Sheets 1-4 dated December 14, 2021 with a latest revision date of January 14, 2022, except as noted and described below. Wetland resource area boundaries were originally flagged by B&C Associates in November 2021 and revised as a result of site visits by the Stow Conservation Commission. A series of small wetlands, streams, and ponds are present at the front of the site, with bordering vegetated wetland, riverfront area, and bordering land subject to flooding associated with Elizabeth Brook, a perennial stream, at the rear of the site. The Commission makes the following findings as part of this Order of Resource Area Delineation:

- 1) **The Commission has verified the wetland delineation on only those portions of the parcels shown on the above-referenced plans and with the following limitations:**
 - a) **Bordering Vegetated Wetland (BVW)** (state and local) – All flags were confirmed, as adjusted in the field and shown on the above-referenced plan.
 - b) The 51-67 Series drains via a culvert to the 1-4 Series, as shown on the plans.
 - c) The 200 Wetland Series drains via a channel toward a culvert at WF 201 to the 300 Wetland Series, as shown on the plans. The channel is not flagged, therefore the location of Bank cannot be addressed in the ORAD.
 - d) Riverfront Area to Unnamed South Flowing Stream East of Parcel (state and local) – The RF -1 through RF-6 Series identifies the top of bank along the unnamed stream and the plans show the extent of Riverfront Area associated with this water body.
 - e) **Buffer Area** (local only resource area): The plan depicts the 100' buffer to wetlands and other resources. These areas are protected by the Stow Wetlands Protection Bylaw and Regulations.

- 2) **The following Resource areas were not confirmed:**
 - a) **Banks or Land Under Water to Streams and Ponds:** There are streams or channels within the A-series BVW, the 200-series, and the 400-series wetland which were not delineated in the field. No information was submitted to determine they are intermittent or perennial streams and no Bank or Riverfront Area determination has been made.
 - b) **Riverfront Area and Bank to Elizabeth Brook** (state and local) – All 300-series BVW flags were confirmed as shown on the above-referenced plan. There are no Bank flags and the Riverfront Area to Elizabeth Brook is not shown on the plans. Elizabeth Brook is located immediately north of the subject site.

- c) **Vernal Pools** – There is a potential vernal pool near wetland flags 220 to 227, in an area with a great deal of woody debris. This area shall be investigated during vernal pool season and a report provided to the Commission prior to the submittal of a Notice of Intent for the development of the property. If the area is determined to be a vernal pool, appropriate documentation for certification should be submitted to the Massachusetts Natural Heritage and Endangered Species Program.
- d) **Bordering Land Subject to Flooding** (state and local) – BLSF was not delineated on the plans but rather scaled from other plans and is present on the subject site. The Commission makes no findings with regard to the boundaries/elevations of BLSF on the subject site, or the 100' buffer zone to this area under the Bylaw.
- e) **Culverts** – The Commission noted other culverts and pipes that may function as flooding or water diversion, field drainage or irrigation. It was not clear how these drainage features function to support the wetland resource areas or contribute to the interests of the Act or Bylaw. As part of design and preparation of the Notice of Intent, watershed and subwatershed plans should be prepared and stormwater management addressed to ensure that wetland hydroperiods are not significantly altered.

3) The following REVISIONS need to be made to the final plans and submitted to the Commission for approval:

- a) The B Series has a culvert that flows out of it between Flags B-2 and B-3, to the 1 – 4 Series. A “hole” in the ground was observed in the lawn area off of Flag A-1 where flow could be observed.
- b) Evidence observed in the field indicates that the A-series channel likely drains into a culvert (Item #1 above) that is assumed to flow from Flag A-27 toward the 1 – 4 Series.
- c) At the field visit, it was agreed that Flag A-18 should be connected to Flag A-21, and flags A19 and A20 should be deleted from the plan.
- d) The 400-series wetland is shown as local bylaw only. This area should be shown as Bordering Vegetated Wetland.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:
299-707

MassDEP File Number

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eDEP Transaction Number

Stow

City/Town

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

E. Signatures

1/25/2022

Date of Issuance

4

1. Number of Signers

Please indicate the number of members who will sign this form.

Signatures

Elizabeth Mattison
Signature of Conservation Commission Member

Elizabeth Mattison

Printed Name

Holly A. Clack
Signature of Conservation Commission Member

Holly A. Clack

Printed Name

Jeff Saunders
Signature of Conservation Commission Member

Jeff Saunders

Printed Name

Matthew Stuckfowder
Signature of Conservation Commission Member

MATTHEW STUCKFOWDER

Printed Name

Signature of Conservation Commission Member

Printed Name

Signature of Conservation Commission Member

Printed Name

Signature of Conservation Commission Member

Printed Name

Signature of Conservation Commission Member

Printed Name

This Order is valid for three years from the date of issuance.

If this Order constitutes an Amended Order of Resource Area Delineation, this Order does not extend the issuance date of the original Final Order, which expires on 1/25/2025 unless extended in writing by the issuing authority.

This Order is issued to the applicant and the property owner (if different) as follows:

2. By hand delivery on

3. By certified mail, return receipt requested on

a. Date 1/25/22

a. Date

[Handwritten signature]



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee
Transmittal Form

DEP File Number:

299-707

Provided by DEP

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

A. Request Information

1. Location of Project

a. Street Address	b. City/Town, Zip
c. Check number	d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town	State	Zip Code
Phone Number	Fax Number (if applicable)	

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

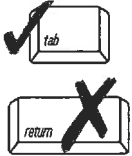
Name

Mailing Address

City/Town	State	Zip Code
Phone Number	Fax Number (if applicable)	

4. DEP File Number:

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



B. Instructions

1. When the Departmental action request is for (check one):

- Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- Superseding Determination of Applicability – Fee: \$120
- Superseding Order of Resource Area Delineation – Fee: \$120

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
 Box 4062
 Boston, MA 02211



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
**Request for Departmental Action Fee
Transmittal Form**

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

DEP File Number:

299-707

Provided by DEP

B. Instructions (cont.)

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <https://www.mass.gov/service-details/massdep-regional-offices-by-community>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**WPA Form 4B – Order of Resource Area
Delineation**

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

Provided by MassDEP:

299-707

MassDEP File Number

eDEP Transaction Number

Stow

City/Town

Recording Information

Prior to commencement of work, this Order of Resource Area Delineation must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Resource Area Delineation. The recording information on this page shall be submitted to the Conservation Commission listed below.

Stow

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Stow

Conservation Commission

Please be advised that the Order of Resource Area Delineation for the Project at:

58 Randall Road

Project Location

299-707

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

For:

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Resource Area Delineation issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

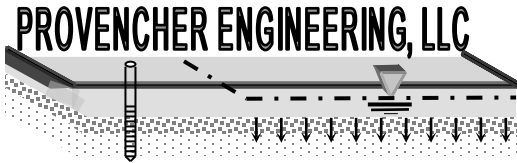
If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Attachment E:
Well Drilling /
Earthwork
Process
Description

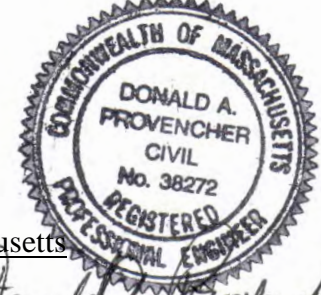
MEMORANDUM



Donald A. Provencher, PE
6 Wasserman Heights
Merrimack, NH 03054

Phone / fax: (603) 883-4444
E-mail: Don@Provencher.com

TO: Town of Stow Conservation Commission
FROM: Donald A. Provencher, P.E.
DATE: December 20, 2022
REFERENCE: Well Drilling / Earthwork Process Description
Stow Acres Residential Development – Stow, Massachusetts
Project No. PE372.01



The purpose of this memo is to describe the well drilling process and earthwork requirements in support of a Notice of Intent Application for approval to drill three bedrock wells.

Existing golf cart paths and fairways will be used to allow the drill rig and support vehicles to traverse the site up to the proposed well locations. Prior to drilling the three bedrock wells, earthwork will be required to provide adequate access to each well for the drill rig and drilling support vehicle. At the proposed well sites, clearing, grubbing, and earthwork will be necessary so that adequately leveled drilling pads can be constructed for the drill rig and support vehicles.

First, erosion control barriers will be installed as indicated on the plans, followed by tree clearing, where required, within the limit of work. Then, excavation of two temporary slurry pits and settling pits, each approximately 8 feet long x 2.5 feet wide x 2.5 feet deep, will be provided adjacent to each well as depicted on the plans. The proposed temporary slurry and settling pit dimensions are the preference of the well driller.

The proposed drilling pads will require an area large enough to support not only a drilling rig but also a support truck, both of which are essentially the size of a fire engine. Like a fire engine, these vehicles have a limit on the amount of turning radius, as well as longitudinal and transverse slope which they can accommodate. If the longitudinal slope is too steep, the drill tower may not achieve the required angle to allow for a straight plumb vertical well bore hole. If this slope is too severe, excessive shoring and blocking becomes necessary to level the drill rig, thereby making the drill rig less stable and resulting in an unsafe condition. If the transverse slope is too severe, the drill rig may tend to lean excessively to one side, also resulting in an unsafe condition or an out-of-plumb well bore hole. Once on the prepared drilling pad, the drill rig is backed onto the well site. Once the drill rig is leveled, set, and begins drilling, it does not move until the well is complete because of the level of effort required to achieve this initial proper set up.

The drill rig includes a drill tower and revolving drive mechanism which advances the drill bit down into the ground. The well depth is advanced by adding successive drilling rods, which are each approximately 21 feet long. These drilling rods are stored on a drilling support vehicle. Due to reach limitations, the support vehicle is preferred be located on the driver side of the drill rig, so that the lift mechanism on the drill rig can reach the drilling rods carried on the support

vehicle. Alternatively, the support vehicle can also be located back to back with the drill rig. The proposed design will allow flexibility for the preference of the selected well driller.

The first step in drilling a bedrock well after the rig is set up is to install the well casing. This is accomplished by advancing a larger diameter overburden hole through the unconsolidated earth down to and 20 feet into competent bedrock. However, during this overburden drilling, if the soil begins to cave in, making the drilling process much more cumbersome, to keep the borehole open and reduce the potential for cave in, the driller mixes a bentonite clay slurry inside the slurry pit, and pumps the slurry down into the overburden borehole. The slurry pit is simply a narrow shallow test pit sized hole dug near the well into which the slurry is held, mixed, and pumped into the bore hole as the overburden drilling progresses. The slurry is heavier than the earth, and therefore, keeps the soil borehole from caving in. Upon achieving a sufficient 20-foot depth into competent bedrock, a steel well casing pipe with a drive shoe is installed into the borehole, and a concrete grout is mixed and pumped into the casing and borehole annulus by a process known as a tremmie grout method. This displaces the bentonite slurry back up to the ground surface, where it is again collected inside the slurry pit. The concrete grout then advances to just below the ground surface within the annular space between the outer casing pipe and the bore hole. Then, the grout is left to cure in place, becoming the permanent well seal.

Once the grout is cured, a drilling bit is advanced inside the casing down through the bedrock creating an open bedrock borehole, which is advanced until the desired depth or amount of groundwater yield is achieved. During this process, compressed air is blown down through the drilling rods, and the drilled bedrock fragments and any groundwater encountered are blown out within the annulus between the drill rods and the borehole / casing, up to the top of the well to the ground surface. A deflector shroud located on the drill rig deflects the water and rock fragments (drilling cuttings) coming out of the well onto the ground surface and into the settling pit, to settle out the rock fragments. The deeper the well advances, the more the settling pit becomes filled with cuttings. The settling pit is lined with erosion controls to promote the settling and filtering of the displaced groundwater.

The well yield is measured by timing the filling of a bucket of known volume until the desired yield is achieved. Once the desired yield is achieved, drilling advancement stops, and the compressed air is continuously blown down through the drilling rods into the well to clean out the remaining rock fragments and to continue to collect yield readings until a steady flow rate is confirmed. This is called an air-yield test. When the air-yield test indicates a steady rate and the deflected water is adequately clarified of rock fragments, the well drilling is complete, and the drill rods are removed, one at a time, and reloaded onto the support truck. Once all of the drilling rods are removed, the drill rig and support truck move onto the next well, repeating the process, until the final well is drilled. The temporary slurry and settling pits are then backfilled, regraded, and stabilized to support growth of vegetation.

Attachment F:
Pump Test
Proposal
Report

PUMP TEST PROPOSAL REPORT

NEW SOURCE APPROVAL – SITE SOURCE / CONDITIONAL PUMPING TEST UNDER 70 GPM (BRP WS 13) (DEP TRANSMITTAL # X289065)

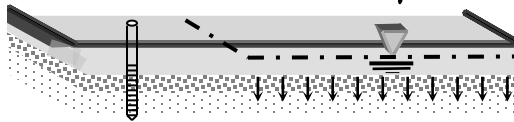
at
STOW ACRES RESIDENTIAL COMMUNITY
RANDALL ROAD
STOW, MASSACHUSETTS

Prepared for:

MCO & Associates, Inc.
206 Ayer Road, Suite 5
Harvard, MA 01451

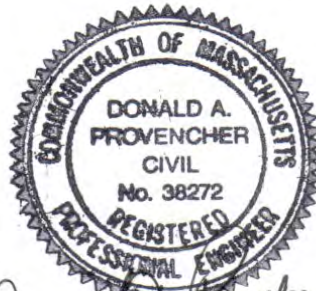
Prepared by:

PROVENCHER ENGINEERING, LLC



6 Wasserman Heights
Merrimack, NH 03054

(603) 883-4444
Don@Provencher.com
ProvencherEngineering.com



Donald A. Provencher, P.E.
Civil Engineer

Project No. PE372.01
May 26, 2022

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7.0 PROPOSED WATER QUALITY SAMPLING 8

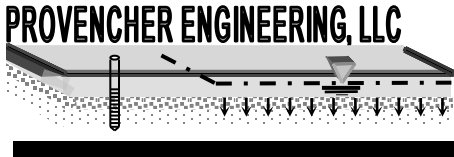
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APPENDIX

- **FIGURE-1: USGS Locus Map**
- **FIGURE-2: Half-Mile Radius Map**
- **FIGURE-3: MA DEP – Bureau of Waste Site Cleanup – Site Scoring Map**
- **FIGURE-4: Waste Site & Reportable Releases Results**

PLAN POCKET

- **Pump Test Exhibit Plan**



PUMP TEST PROPOSAL REPORT

Stow Acres Residential Community
Randall Road
Stow, Massachusetts

May 26, 2022

1.0 EXECUTIVE SUMMARY

On behalf of the applicant, MCO & Associates, Inc., of Harvard, Massachusetts, we submit this Pump Test Proposal Report to the Department of Environmental Protection (DEP) for approval to drill and pump test three proposed bedrock community public water supply wells in support of a 60,000 gallons per day (GPD) proposed, privately owned Community Public Water Supply (PWS). The new water supply is planned to support a proposed 189-unit, single and multi-bedroom, residential community housing development, named Stow Acres, located off Randall Road in Stow, Massachusetts.

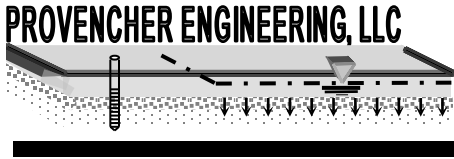
This application is submitted for approval of a “Site Source / Conditional Pumping Test Less Than 70 GPM.” DEP permit application BRPWS13, DEP Transmittal form (X289065), and check for \$1,380 application fee has been submitted in conjunction with this report. We respectfully request that the DEP review and accept this submission on behalf of the applicant, schedule and attend a Site Exam site visit at your convenience, and approve the site for bedrock well drilling and pump testing as presented herein.

2.0 PROJECT DESCRIPTION

Stow Acres consists of a 70.6±-acre parcel located in the southwest portion of the Town of Stow. Please refer to the USGS Locust Map (Figure-1), and to the Half-Mile Radius Map (Figure-2) in the appendix. The site is abutted to the north, west, south, and northeast by undeveloped land; and to the southwest by single-family residential dwellings. The undeveloped land to the west and south is the Stow Acres Country Club, and the undeveloped land to the northeast is the Butternut Country Club. The site includes frontage along Randall Road, which is proposed to provide access to the site. The site is currently comprised by the Stow Acres Golf Course, and is undeveloped, partially wooded, and vacant.

Stow Acres is a proposed residential project including 189 residential dwelling units. A proposed access roadway will be constructed off of Randall Road, and will provide access to the various lots and buildings in the proposed development. The development will include a wastewater treatment plant (WWTP) and treated effluent soil absorption system (SAS), both of which are proposed to be permitted with the Department of Environmental Protection’s (DEP’s) Groundwater Discharge Permit program. The SAS is proposed to be located in an open green space area outside of the wells’ Interim Wellhead Protection Area (IWPA). Please refer to the “Pump Test Exhibit Plan” in the pocket at the back of this report. A stormwater collection, treatment, and detention / infiltration system will also be proposed to address the site’s proposed stormwater runoff.

The three proposed PWS wells and their Zone 1s are each proposed to be fully located within Stow Acres land. Each well is proposed to provide up to 20,000 GPD, for a total design flow of 60,000 GPD. Each well is proposed to include a 295-foot Zone 1 radius and an 844-foot IWPA radius. Because the Zones 1’s will be entirely contained within the subject property, no



PUMP TEST PROPOSAL REPORT

Stow Acres Residential Community
Randall Road
Stow, Massachusetts

May 26, 2022

Zone 1 easements or Conservation Restrictions will be required. Land use within the Zone 1s includes uses related only to the water system. No pavement, buildings, stormwater detention or infiltration systems, sewers or septic systems are proposed within the Zone 1s.

A proposed above-ground pump station and at least 120,000 gallons of atmospheric storage (two days capacity) will also be designed to accommodate any water treatment and storage needed. The finished water will be re-pumped through a proposed 4 or 6-inch PVC looped distribution system to be located within the site to provide water service to each of the units. No clubhouse facilities are proposed.

The 60,000 GPD design flow is calculated as follows:

124 three bedroom units x 330 GPD/bedroom =	40,920 GPD
40 three-bedroom cottage rentals x 330 GPD/bedroom =	13,200 GPD
25 age-restricted single bedroom units x 110 GPD/bedroom =	2,750 GPD
Common Area (function hall), with 20 outsiders x 15 GPD/person =	300 GPD
Club House (function hall), 20 outsiders x 15 GPD/person =	300 GPD
Total Design Flow =	57,470 GPD

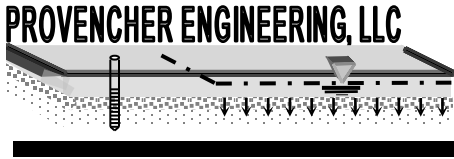
“Outsiders” referred to above represent guests who will not reside at Stow Acres. Residents of Stow Acres who visit the club house and common area do not need to be double-counted in the club house and common area design flow calculations because they are already counted in the bedroom count design flows.

To provide conservatism, we are proposing a total 60,000 GPD design flow, which may be reduced after the proposed 5-day pumping test and final design are completed. The wells’ 295-foot Zone 1s and 844-foot IWPA are based on a proposed withdrawal of 20,000 GPD for each well. Those dimensions may also be refined in the final site design.

The 20,000 GPD individual well design flow is equivalent to an average 13.9 gallons per minute (GPM) flow over a 24-hour period. Using the DEP’s 33% safety factor, we propose to conduct a simultaneous 5-day pumping test on all three wells at minimum 18.5 GPM individual pumping rate, or a minimum 55.5 GPM between all three wells combined.

We propose to drill three wells until an individual rate of 50 - 60 GPM is achieved at each well, to account for hydraulic interference between the wells. We propose to conduct individual step tests at 9, 18, 27, and 36 GPM, essentially at 50%, 100%, 150%, and 200% of the 18.5 GPM minimum individual 5-day pump test pumping rate.

The proposed PWS wells are anticipated to be bedrock wells completed with a pitless adapter. An underground HDPE water supply line from each individual well will enter directly into a proposed pump station building. Once inside the pump station, it is anticipated that the raw water from each individual well will pass through a raw water sample tap, a totalizing flow



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meter, and other miscellaneous valves and fittings, before being combined into a common well supply manifold, followed by sediment filtration, water treatment, and disinfection if necessary.

Atmospheric storage with booster pumps will be designed to draw stored water from the storage tank and pressurize a distribution system to the residences. Activation of the wells will be controlled by the water level in the storage tank. No direct fire protection or irrigation is anticipated to be provided by the public water supply wells or distribution system.

If applicable, backwash from any water treatment systems will be discharged into a proposed on-site underground leaching pit. The leaching pit design will be based on a test pit conducted in the disposal location. The water treatment system backwash will not be disposed of in the site's sewage disposal system. An Underground Injection Control (UIC) permit registration application will be filed with the DEP, if water treatment backwash water disposal is needed.

3.0 ZONING AND CURRENT LAND USES

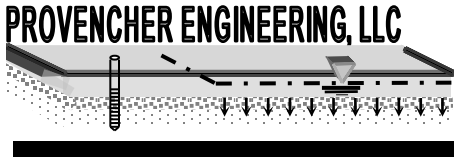
Based on the Town of Stow on-line GIS, "residential" zoning exists at, and in the vicinity of the site within one-half mile of the subject wells, with a "recreation-conservation" zoning district encompassing the subject wells and bordering Elizabeth Brook to the north of the subject wells. No other zoning districts are present within the one-half mile radius of the subject wells.

4.0 EXISTING AND POTENTIAL SOURCES OF CONTAMINATION

We conducted research of various sources and databases, including review of Mass DEP – Bureau of Waste Site Cleanup (BWSC) Site Scoring Map; review of DEP's Release Tracking Number (RTN) database provided by the Executive Office of Energy & Environmental Affairs (EEA) on-line data portal; and review of existing and proposed conditions site plan information provided by the site civil engineer / land surveyor, Stamski & McNary, Inc. These sources were reviewed to identify and evaluate the potential for contamination to the proposed subject wells. The following is a summary of all informational sources reviewed, potential contamination sources identified, and the potential for impact to the subject well.

4.1 Bureau of Waste Site Cleanup (BWSC) Site Scoring Map

Review of the BWSC Map (Figure-3) in the appendix indicates that there are no dams, shore lands, high-yield aquifers, EPA sole-source aquifers, reservoirs, Areas of Critical Environmental Concern (ACEC), Estimated Rare Wildlife Habitats, landfills, solid waste facilities, or road salt storage facilities within one-half mile of the subject wells.



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The BWSC map indicates three certified vernal pools approximately 850 – 1,230 feet northeast of the subject wells, across Elizabeth Brook; and flood plain and fresh water wetlands associated with Elizabeth Brook at the immediate north of the subject wells. Elizabeth Brook flows in an easterly direction to the immediate north of the subject wells. Protected open space is found almost a half-mile to the southeast of the subject wells across Gleasondale Road. The BWSC map indicates a narrow medium-yield aquifer that terminates approximately 1,000 feet south of the subject wells.

The BWSC map indicates three public water supply wells just beyond one-half mile of the subject wells. Arbor Glen (PWS ID# 2286026-02G) is community PWS located to the northwest; Butternut Golf Club (PWS ID# 2286021-01G) is a non-community PWS located to the northeast; and Stow Acres Country Club is a non-community PWS located to the south across Randall Road from the proposed subject wells. No Zone IIs are indicated within one-half mile of the proposed subject wells.

4.2 Title 5 Septic Systems

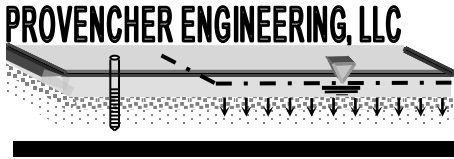
Single family homes with private septic systems are generally not high-risk sources of contamination provided that their net effluent loading rate does not exceed 440 GPD/acre. Larger commercial or community septic systems could be higher risk systems because of their larger wastewater discharge volumes.

In Stow, municipal water and sewer is not available within one half-mile of the subject wells, therefore, it is assumed that all developed properties in Stow include private septic systems. We estimated approximately 44 private septic systems in Stow located within one-half mile of the subject well. Please refer to the Half-Mile Radius Map (Figure-2) in the appendix.

The regional groundwater flow in the vicinity of the subject wells is anticipated to be generally in a north-northeasterly direction toward Elizabeth Brook. The site topography in the vicinity of the subject wells slopes moderately downward to the north to Elizabeth Brook. Off-site properties to the west would be considered cross-gradient with groundwater anticipated to flow to the northeast to Elizabeth Brook. Land to the southwest would be considered upgradient, and land to the east would be considered downgradient. Land to the north of the subject wells is across Elizabeth Brook, which is considered a groundwater hydraulic boundary. We note that the upgradient land to the southwest is currently comprised of undeveloped golf course, and therefore, wastewater impacts from those upgradient properties should not be a concern. Under proposed conditions, all wastewater from the proposed development will be treated at the WWTP, and the treated effluent recharge SAS is outside of the subject wells' IWPA's, and therefore should not be a concern.

4.3 DEP Reportable Release Look-Up Database

Research of Hazardous Waste Sites was conducted by reviewing the Mass DEP –Waste Site / Reportable Release File Viewer, provided by the Executive Office of Energy & Environmental Affairs (EEA) on-line data portal. Two locations (RTN 2-0015897 & 2-



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0013979) were identified on at Stow Acres Country Club on Randall Road in Stow, however, research of both sites indicates the spill locations are beyond one-half mile of the subject wells, and are therefore not anticipated to impact the proposed subject wells water quality. Please refer to the Waste Site & Reportable Releases Results (Figure-4) in the appendix.

5.0 ENVIRONMENTALLY SENSITIVE AREAS

We conducted research from various sources and documents, including review of Mass DEP Bureau of Waste Site Cleanup (BWSC) Site Scoring Map in the appendix; review of municipal records and maps from the Town of Stow On-Line GIS; and review of existing conditions site plans. These sources were reviewed to identify sensitive areas which could be impacted by drawdown from pumping of the subject wells. The following is a summary of information sources reviewed, the potentially sensitive areas identified, and the potential for impact to those sensitive areas due to pumping of the subject wells.

5.1 Potential Impacts to On-Site Streams and Wetlands

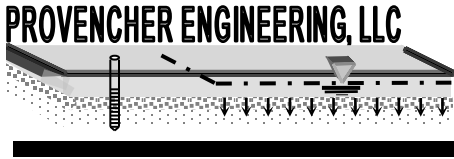
The Massachusetts DEP – Bureau of Waste Site Cleanup (BWSC) Site Scoring Map, included in the appendix, indicates fresh water wetlands and a 100-year flood plain associated with Elizabeth Brook. Given the proposed pumping from deep bedrock wells cased through the upper sand and gravel aquifer, as opposed to pumping directly from sand & gravel surficial aquifer wells, we do not expect any measurable draw down impacts to wetland areas or Elizabeth Brook. Consequently, we do not propose to monitor any draw down at any wetlands during the proposed pumping test on the proposed subject wells.

5.2 Potential Impacts to Private Wells & Regional Water Supplies

A review of the Massachusetts DEP–BWSC Site Scoring Map, included in the appendix, identified no DEP-approved Zone II boundaries, nor any IWPA's within one-half mile of the proposed wells. Since the subject wells are located over one-half mile from these IWPA's, no drawdown impacts are anticipated to any public water supply wells from the subject wells.

Since Stow has no municipal water service, it can be assumed that all developed properties within one-half mile of the subject wells have a private water supply well. Research was conducted from the Stow on-line GIS website, and by review of Google Earth aerial photos to determine which properties are developed, and what types of development exist within one-half mile of the proposed subject wells.

We have estimated approximately 44 properties with existing or the potential for private single-family residential wells within one-half mile of the subject wells. Please refer to the Half-Mile Radius Map (Figure-2) in the appendix. The distance to the closest potential abutter's well from the proposed subject wells is approximately 900 feet to the west of the



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subject wells. Given the distance to the subject wells, we do not expect any drawdown effects from pumping the subject wells on any abutters' wells, and therefore, are not proposing to monitor any abutters' wells during any on-site pumping tests on the proposed subject wells.

6.0 PROPOSED WELL DRILLING & PUMPING TESTS

We propose to install the three subject wells by drilling, placing and grouting 6-inch diameter steel casings within a drilled 12-inch diameter minimum overburden hole. Well casing material used will be steel meeting the requirements of the American Water Works Association (AWWA) standards (19-LB steel), and will be sealed with grout from a depth of not less than 6 feet below the ground surface to the bottom of the casing, which is proposed to be installed at least 20 feet into competent bedrock.

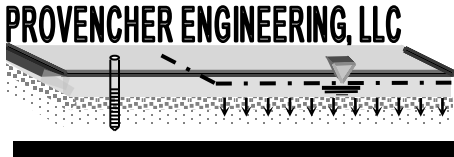
The grout shall be either neat cement or concrete with type II cement conforming to the requirements of ASTM standard C150, with not more than 6 gallons of water per 94 lbs. Grouting will be applied by pressure or tremie pipe from the bottom of the casing in an upward direction, and will be completed in one continuous motion. The grouted casing will be allowed to sufficiently cure before drilling of the bedrock well shaft commences. The top of well casing will be finished approximately 3-4 feet above the ground surface with a locking cap to prevent tampering or entrance of foreign materials into the well.

Drilling will continue until a target well yield of at least 50-60 GPM is achieved at each well. Drilling will stop once the target yield is achieved, provided a minimum well depth of 300 feet is achieved, unless this 300-foot depth is unachievable due to excessive water. A maximum well depth of 1,200 feet will be required if the target yield is not first achieved.

The wells have been spaced at least 252 feet apart from each other. Therefore, if the target well yields within the three wells are not achieved during well drilling, we would have the flexibility to add additional wells between the three wells, and maintain the minimum 50-foot spacing between wells.

An air-lift test will be conducted at each well at the end of drilling for a period of 1/2 hour by damming an area around the well and measuring the flow through a pipe through the dam with a 5 gallon bucket and stop watch with accuracy to 1/10th of a second. The estimated well yield shall be computed in gallons per minute for successive measurements made over the 1/2-hour minimum period until a steady flow rate is achieved.

The 20,000 GPD individual well design flow is equivalent to an average 13.9 gallons per minute (GPM) flow over a 24-hour period. Using the DEP's 33% safety factor, we propose to conduct a simultaneous 5-day pumping test on all three wells at minimum 18.5 GPM individual pumping rate, or a minimum 55.5 GPM between all three wells combined. We



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propose to conduct individual step tests at 9, 18, 27, and 36 GPM, essentially at 50%, 100%, 150%, and 200% of the 18.5 GPM minimum individual 5-day pump test pumping rate.

Submersible well pumps will be installed on threaded PVC or HDPE pipe. No glue will be used. A 1" HDPE or threaded PVC stilling tube will also be installed in order to facilitate water level readings with a water level indicator and / or pressure transducer.

The 5-Day pumping test water levels will be collected as follows:

- Every minute for the first ten minutes
- Every five minutes for the first two hours of the test
- Once per hour thereafter until shut down

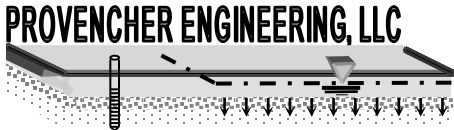
Recovery readings will be recorded as follows:

- Every five minutes for the first two hours after pumping
- Every ten minutes for the next 100 minutes
- Twice per day for at least two days or until 95% recovery is achieved, whichever occurs first.

We propose approximately between 50 – 100 feet of discharge line from each individual well to be directed to the north into the ponded water of Elizabeth Brook, which is a substantial constant head hydraulic boundary. The pumped water will flow away from the wells along with flows in Elizabeth Brook. The pump test discharge water volume is negligible compared to the flows in Elizabeth Brook. This configuration will render negligible any possible impact from recirculation of the pumped water. A 4'x4' plywood splash board will be placed on the ground at the edge of the brook at the outfall of each discharge line to dissipate the flow energy to prevent erosion.

During the 5-day pump test, the draw down data for all three wells will be plotted on semi-log graph paper. The data will be extrapolated out to 180 days, and the 10% initial water column draw down value will be compared. If during the test it appears that the 180-day stabilization criteria may not be achieved, the pumping rate will be reduced until extrapolation of the data indicates an achievable 180-day drawdown. We will contact the DEP prior to commencement. Upon 5-days of pumping, and once stabilization is achieved, we will terminate the pump test and record recovery water levels.

We are not proposing any field monitoring of any private wells, or piezometers or monitoring wells in any wetlands, streams, or proposed leaching areas. We intend to install a transducer in each of the subject wells to collect 10 days of pre-pumping baseline water levels, and to collect all pumping and recovery water levels. We will measure on-site barometric pressure with another pressure transducer.



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Following the pump tests, we will complete a Source Final Report summarizing the pump test results. We will prepare design plans and specifications of the wellhead construction and water treatment, storage, and pumping facilities as needed. On a site plan we will show the proposed power and water supply conduits, any required storage tanks, treatment and distribution systems to the buildings. We will provide construction details and specifications as necessary and submit the Source Final Report with the plans and specifications along with Application BRP WS 15, Permit Application to Construct a Water Supply Less Than 70 GPM.

7.0 PROPOSED WATER QUALITY SAMPLING

We are planning to conduct a full round of water quality sampling at each well in accordance with the Guidelines. Field and laboratory samples will be collected in accordance with the Guidelines as follows:

Within 1 hour from start of test:

- Field: pH, odor, specific conductance, temperature, carbon dioxide
- Lab: secondary contaminants

At 2.5 days (test midpoint):

- Field: pH, odor, specific conductance, temperature, carbon dioxide
- Lab: secondary contaminants

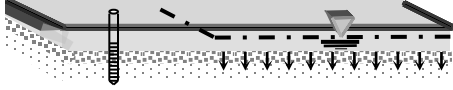
Just Prior to Shut Down (5-Days):

- Field: pH, odor, specific conductance, temperature, carbon dioxide
- Lab: total coliform, inorganics, volatile organic compounds, synthetic organic compounds, radionuclides (including gross alpha, radium 226 & 228, radon, uranium), secondary contaminants, perchlorate, PFAS6 (EPA Isotope Dilution method 537 modified), and micro-particulate analysis (MPA).

Samples will be collected from a sampling tap located at each well head and will be delivered to Nashoba Analytical Lab of Littleton, Massachusetts. The sample taps will be sterilized prior to sampling to prevent contamination from human or other contact with the sampling tap. Based on water quality results, we will include appropriate treatment design as necessary.

8.0 CONCLUSIONS

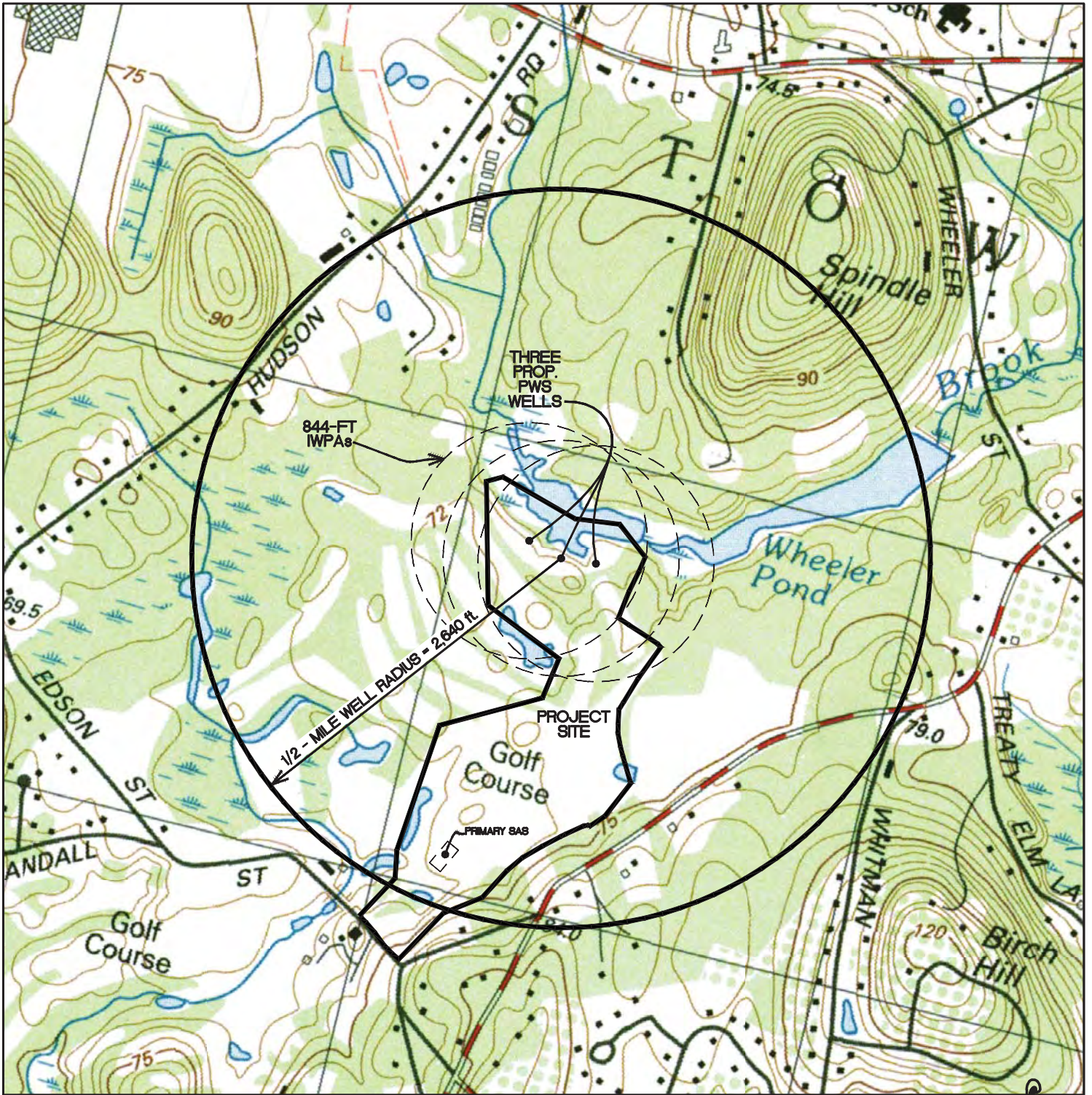
Based on the research conducted and information provided, we believe that the proposed wells are acceptable from environmental, geological, and Zone 1 site accommodation perspectives. Environmentally, there are no abutting properties or land uses in the vicinity of the site, with known contamination or significant potential for degradation of water quality.



May 26, 2022

On site, the stormwater recharge systems will be located outside of Zone 1s, sufficiently distant from the subject wells. Adequate treatment of the stormwater is proposed, and the site's wastewater will be collected, treated at an on-site WWTP, and recharged in a SAS located outside of the proposed subject wells' IWPA radii. Adequate Zone 1 protection and land uses have been proposed, and there are no non-conforming uses proposed within the Zone 1s.

We are proposing a simultaneous 5-Day pump test on the subject wells, and water quality sampling in accordance with current DEP Guidelines and Policies for Public Water Systems. We request that the DEP review this application, and approve the site for well drilling, conduct of step and/or a 5-Day pumping test, and water quality sampling. Please call with any questions, comments, or to schedule a site exam at your convenience.



PREPARED BY:

PROVENCHER ENGINEERING, LLC



6 Wasserman Heights
Merrimack, NH 03054
Phone/Fax: (603) 883-4444
e-mail: Don@Povencher.com
ProvencherEngineering.com

CLIENT:

**MCO &
ASSOCIATES, INC.**

**C/O: MARK O'HAGAN
206 AYER ROAD,
SUITE 5
HARVARD, MA 01451**

TITLE:

**USGS SITE LOCUS MAP
PROPOSED COMMUNITY WATER SUPPLY
STOW ACRES RESIDENTIAL COMMUNITY
RANDALL ROAD, STOW, MASSACHUSETTS**

APPLICANT:

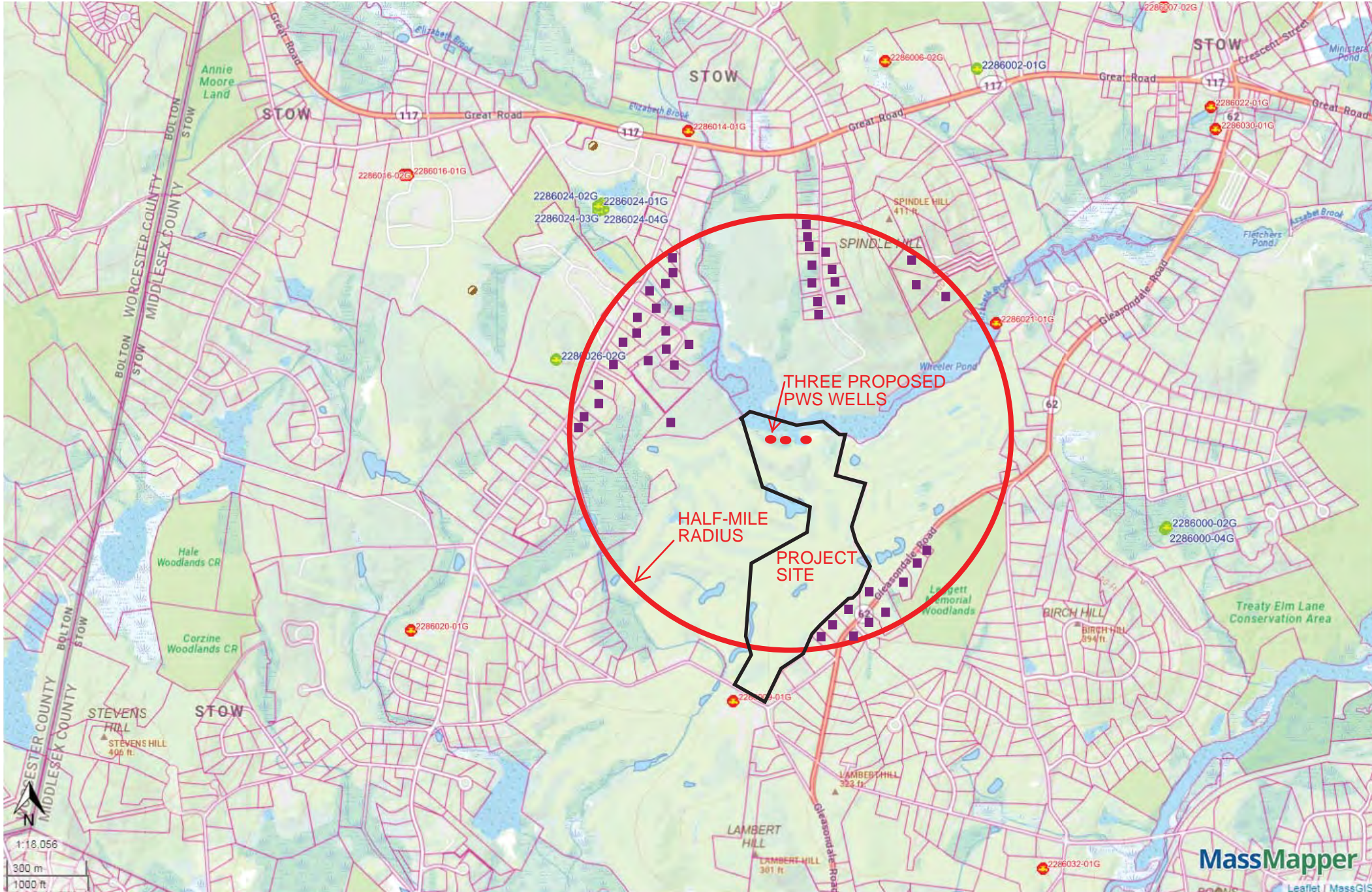
**MCO & ASSOCIATES, INC.
206 AYER ROAD, SUITE 5
HARVARD, MA 01451**

DATE: 5/26/2022
JOB NO.: PE372.01
SCALE: 1" = 1,000'
DWG NO.: PE372001

FILE NO.: PE372002.DWG
ISSUE for:
PUMP TEST PROPOSAL
REPORT (BRPWS13)

FIGURE 1

Stow Acres



Ground Water Discharges

- CAR WASH
- LAUNDROMAT
- OTHER
- SANITARY DISCHARGE

Zone IIs

-

Public Water Supplies

- Community Groundwater Well
- Non-Community Groundwater Well
- Surface Water Intake
- Emergency Surface Water Intake
- Community Labels
- Non-Community Labels

Areas of Critical Environmental Concern ACECs

-

Property Tax Parcels

- Assumed Private Well & Title 5 Septic System

FIGURE-2

HALF-MILE RADIUS MAP

STOW ACRES RESIDENTIAL COMMUNITY

PROVENCHER ENGINEERING
6 WASSERMAN HEIGHTS
MERRIMACK, NH 03054
(603) 883-4444

MAY 26, 2022 1" = 1,515 FEET

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
STOW ACRES
STOW, MA

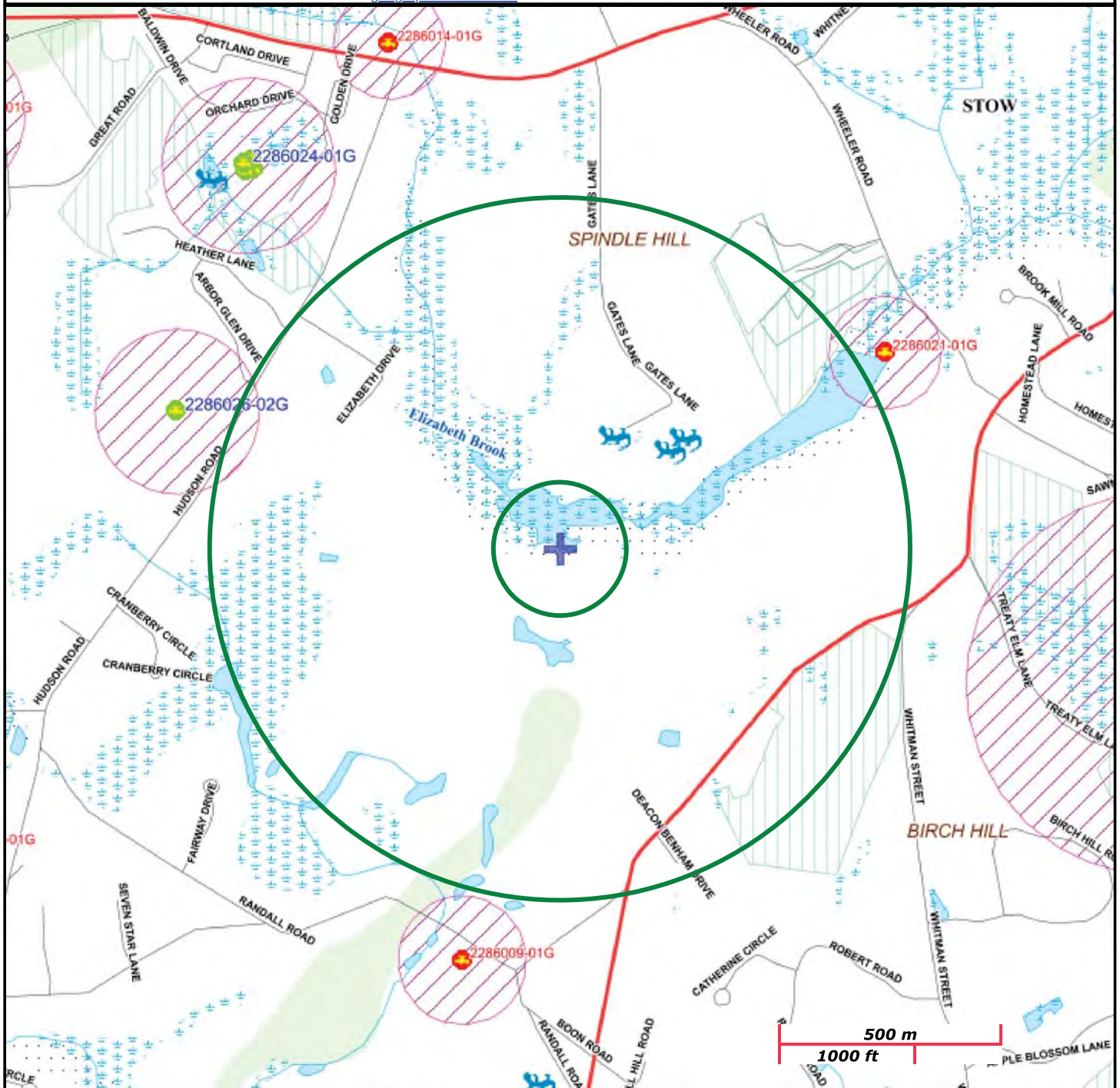
NAD83 UTM Meters:
4700011mN , 292292mE (Zone: 19)
May 24, 2022

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<https://www.mass.gov/orgs/massgis-bureau-of-geographic-information>.



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



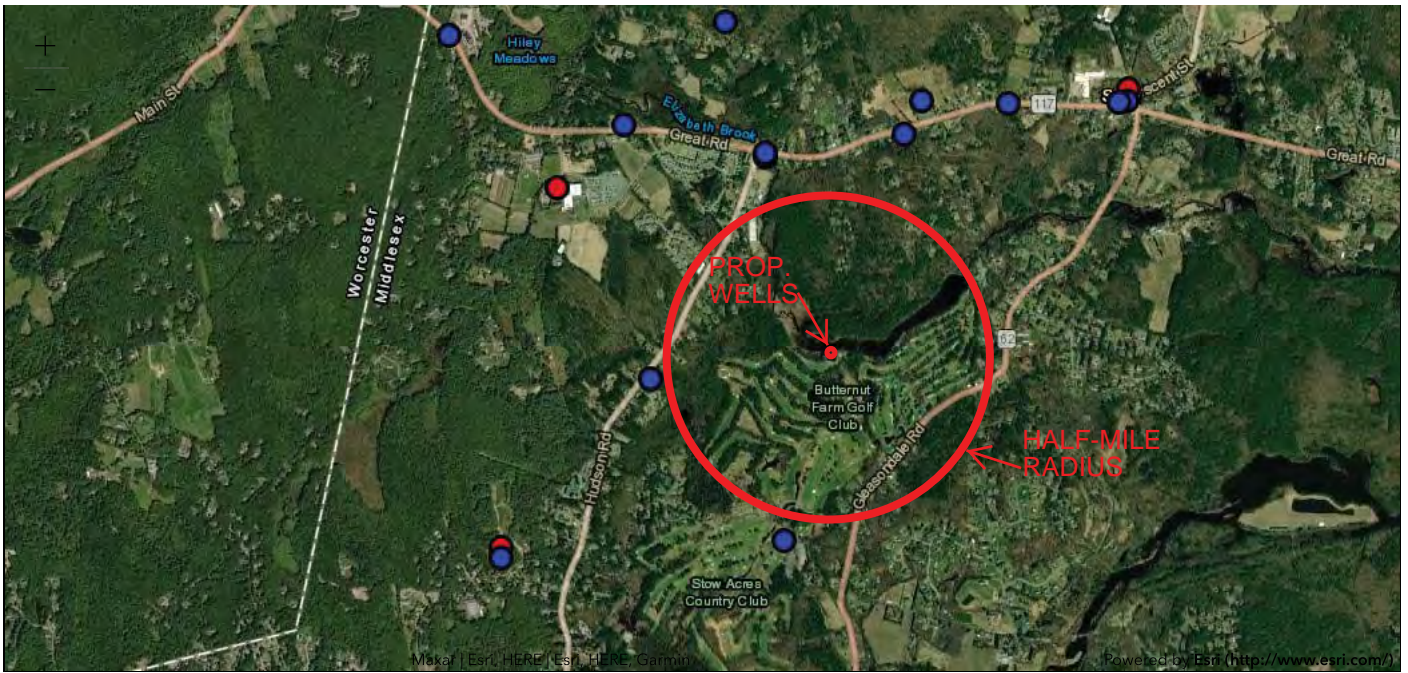
Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, IWPA, Zone A
Boundaries: Town, County, DEP Region; Train, Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC
Non Potential Drinking Water Source Area: Medium, High (Yield)	NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential
	Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.

FIGURE-3

Waste Site & Reportable Releases Results

HIDE MAP

Locations



● Open Sites ● Closed Sites ● Closed Sites with Use Limitation

Search Criteria City/Town: STOW

1/1
200 1 - 50 of 50 items

SELECT	RTN	CITY/TOWN	RELEASE ADDRES...	SITE NAME LOCATION AID	REPORTING CATEGO...	NOTIFICATION DAT...	COMPLIANCE
<input type="checkbox"/>	2-0019201	STOW	45 WALCOTT ST	BENTLEY BUILDING CORP...	72 HR	05/09/2014	REMOPS
<input type="checkbox"/>	2-0018877	STOW	FRONT OF 17 WED...	ROADWAY RELEASE	TWO HR	04/25/2013	RAO
<input type="checkbox"/>	2-0018667	STOW	723 GREAT ROAD	VANDALIZED RESIDENCE	TWO HR	08/16/2012	RAO
<input type="checkbox"/>	2-0017327	STOW	1 SADBURY RD	MASSACHUSETTS FIREFIG...	120 DY	11/21/2008	RAO
<input type="checkbox"/>	2-0016680	STOW	124 GREAT RD	MOBIL STATION	72 HR	05/07/2007	RTN CLOSED
<input type="checkbox"/>	2-0016026	STOW	124 GREAT RD	MOBIL STATION	72 HR	12/08/2005	RTN CLOSED
<input type="checkbox"/>	2-0015897	STOW	RANDAL RD-POLE ...	STOW ACRES COUNTRY C...	TWO HR	09/18/2005	RAO
<input type="checkbox"/>	2-0015629	STOW	45 WHITE POND RD	HUDSON LIGHT & POWER ...	TWO HR	03/08/2005	RAO
<input type="checkbox"/>	2-0015271	STOW	45 WHITE POND RD	ASTRO CRANE SERVICES, I...	72 HR	05/19/2004	RTN CLOSED
<input type="checkbox"/>	2-0014741	STOW	45 WHITE POND RD	ASTRO CRANE SERVICES I...	72 HR	04/23/2003	RTN CLOSED
<input type="checkbox"/>	2-0014665	STOW	26 HERITAGE LN	WASTE MGT INC ROADWA...	TWO HR	02/10/2003	RAO

1/1
200 1 - 50 of 50 items

FIGURE-4

N74°47'06" S87°13'17" E
24.79' 25.49'

PARCEL G
7,713,112 S.F.±
177.0687 AC.±

PROPOSED RESERVE
TREATED EFFLUENT
SAS

STORMWATER
MANAGEMENT
AREA

PROPOSED PRIMARY
TREATED EFFLUENT
SAS

PROPOSED PUMP TEST
DISCHARGE LINES.
EXTEND OUT TO EDGE
OF SURFACE WATER IF
POSSIBLE / ACCESSIBLE
PLACE SPLASH BOARD
AT OUTLET TO
DISSIPATE FLOW.

PROGRESS PRINT
7 APRIL 2022

PUMP TEST EXHIBIT PLAN
(REVISED 7/20/2022)
CONCEPT PLAN

IN
STOW, MASSACHUSETTS
(MIDDLESEX COUNTY)

FOR: MCO AND ASSOCIATES
SCALE: 1"=120' APRIL 7, 2022

STAMSKI AND McNARY, INC.
1000 MAIN STREET ACTON, MASSACHUSETTS
ENGINEERING - PLANNING - SURVEYING

0 60 120 240 360 480 FT

(6781.CONC.B.dwg) Randall Road SM-6781

NOTES:
1. PRIOR TO SELLING, MARKETING OR PURCHASING THE PROPERTY BASED ON THIS CONCEPT,
ALL PERMITS SHOULD BE OBTAINED.



**Attachment G:
Wetland Permitting Plan
By
Stamski and McNary, Inc.**