

Commonwealth of Massachusetts
City/Town of
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

DEP has provided this form for use by on-site professionals and local Boards of Health. Other forms may be used, but the information must be substantially the same as provided here. Before using this form, check with your local Board of Health to determine the form they use.

A. Facility Information

1. Facility Information

Owner Name Robert Tucker
Street Address 1416 BRAODWAY Map/Lot 441-12A
City/Town HAVERHILL State MA Zip Code 01830

B. Site Information

1. (Check one) New Construction ☐ Upgrade ☒ Repair ☐
2. Published Soil Survey available? Yes ☐ No ☒ If yes:

Year Published _____ Publication Scale _____ Soil Map Unit _____

Soil Name _____

Soil limitations _____

3. Surficial Geological Report available? Yes ☐ No ☒ If yes:

Year Published _____ Publication Scale _____ Map Unit _____

Geologic Material _____

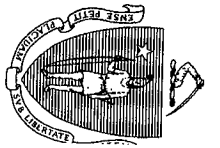
Landform _____

4. Flood Rate Insurance Map:

Above the 500 year flood boundary? Yes ☒ No ☐ Within the 100 year flood boundary? Yes ☐ No ☒
Within the 500 year flood boundary? Yes ☐ No ☒ Within a Velocity Zone? Yes ☐ No ☒

5. Wetland Area: National Wetland Inventory Map

Wetlands Conservancy Program Map
Map Unit _____ Name _____
Map Unit _____ Name _____



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6. Current Water Resource Conditions (USGS) _____ Range: Above Normal ☐ Normal ☐ Below Normal ☐
Month/Year _____

7. Other references reviewed: _____

C. On-Site Review (minimum of two holes required at every proposed disposal area)

Deep Observation Hole Number: 1

1. Location _____ Date 7/28/26 Time 9am Weather sunny 70

Ground Elevation at Surface of Hole 94.25

Location (Identify on Plan) TP-1

2. Land Use: lawn area _____ Surface Stones _____ Slope (%) _____
(e.g. woodland, agricultural field, vacant lot, etc.)

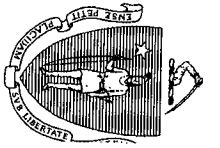
Vegetation mowed grass _____ Landform outwash plain _____ Position on landscape (attach sheet) middle

3. Distances from: Open Water Body >100 feet _____ Drainage Way >20 feet _____ Possible Wet Area >20 feet _____
Property Line >20 feet _____ Drinking Water Well >100 feet _____ Other _____

4. Parent Material: Loamy Sand _____ Unsuitable Materials Present: Yes ☒ No ☐

If Yes: Disturbed Soil ☐ Fill Material ☒ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock ☐

5. Groundwater Observed: Yes ☒ No ☐
If Yes: Depth Weeping from Pit 72 inches _____ Depth Standing Water in Hole 60 inches _____
Estimated Depth to High Groundwater: _____ elevation 89.25'

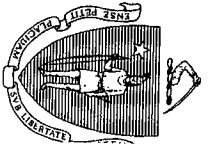


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Deep Observation Hole Number: _____ TP-1 _____

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-36	FILL										
36-60	App	10YR2/1				FSL			massive	friable	
60-120	C	2.5Y6/4	60	7.5YR5/8 5Y7/1		LS			Massive	Friable	

Additional Notes _____



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C. On-Site Review (Cont.)

Deep Observation Hole Number: 2

Date 7/28/25

Time 9am

Weather sunny 70

1. Location

Ground Elevation at Surface of Hole 94.55

Location (Identify on Plan) TP-2

2. Land Use:

lawn area
(e.g. woodland, agricultural field, vacant lot, etc.)

Surface Stones

Slope (%)

mowed grass
Vegetation

outwash plain
Landform

middle
Position on landscape (attach sheet)

3. Distances from: Open Water Body >100

feet

Drainage Way >20

feet

Possible Wet Area >20

feet

Property Line >20

feet

Drinking Water Well >100

feet

Other

4. Parent Material:

Loamy Sand

Unsuitable Materials Present: Yes ☒ No ☐

If Yes:

Disturbed Soil ☐

Fill Material ☒

Impervious Layer(s) ☐

Weathered/Fractured Rock ☐

Bedrock ☐

5. Groundwater Observed: Yes ☒ No ☐

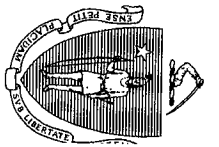
If Yes: Depth Weeping from Pit 60

Depth Standing Water in Hole 48"

Estimated Depth to High Groundwater:

48
inches

90.55
elevation

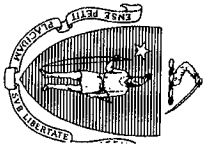


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Deep Observation Hole Number: _____ TP-2 _____

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-60	FILL										
60-72	Apb	10YR2/1				FSL			massive	friable	
72-120	C	2.5Y6/4	48	7.5YR5/8 5Y7/1		LS			Massive	Friable	

Additional Notes _____



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6. Current Water Resource Conditions (USGS) _____ Range: Above Normal ☐ Normal ☐ Below Normal ☐
Month/Year _____

7. Other references reviewed: _____

C. On-Site Review (minimum of two holes required at every proposed disposal area)

Deep Observation Hole Number: 3 7/28/26 9am sunny 70
Date Time Weather

1. Location _____

Ground Elevation at Surface of Hole 93.35

Location (Identify on Plan) TP-3

2. Land Use: lawn area _____ Surface Stones _____ Slope (%) _____
(e.g. woodland, agricultural field, vacant lot, etc.)

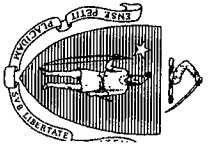
mowed grass _____ Landform _____ outwash plain _____ Position on landscape (attach sheet)
Vegetation _____

3. Distances from: Open Water Body >100 feet _____ Drainage Way >20 feet _____ Possible Wet Area >20 feet _____
Property Line >20 feet _____ Drinking Water Well >100 feet _____ Other _____

4. Parent Material: Loamy Sand _____ Unsuitable Materials Present: Yes ☒ No ☐

If Yes: Disturbed Soil ☐ Fill Material ☒ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock ☐

5. Groundwater Observed: Yes ☒ No ☐
If Yes: Depth Weeping from Pit 100 _____ Depth Standing Water in Hole 48 _____
Estimated Depth to High Groundwater: 48 inches _____ 89.35' elevation _____

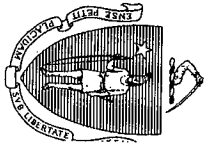


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Deep Observation Hole Number: _____ TP-3 _____

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-48	FILL										
48-60	Apb	10YR2/1				FSL			massive	friable	
60-110	C	2.5Y6/4	48	7.5YR5/8 5Y7/1		LS			Massive	Friable	

Additional Notes _____



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D. Determination of High Groundwater Elevation

1. Method used: ☐ Depth observed standing water in observation hole A. _____ inches B. _____ inches
☐ Depth weeping from side of observation hole A. _____ inches B. _____ inches
☒ Depth to soil redoximorphic features (mottles) A. 60 inches B. 48 inches
☐ Groundwater adjustment (USGS methodology) A. _____ inches B. _____ inches
2. Index Well Number _____ Reading Date _____ Index Well Level _____
Adjustment Factor _____ Adjusted Groundwater Level _____

E. Depth of Pervious Material

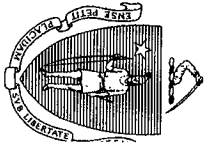
1. Depth of Naturally Occurring Pervious Material
- a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? Yes ☒ No ☐
- b. If yes, at what depth was it observed? Upper boundary: 72" inches Lower boundary: 120" inches

F. Certification

I certify that I have passed the soil evaluator examination* approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

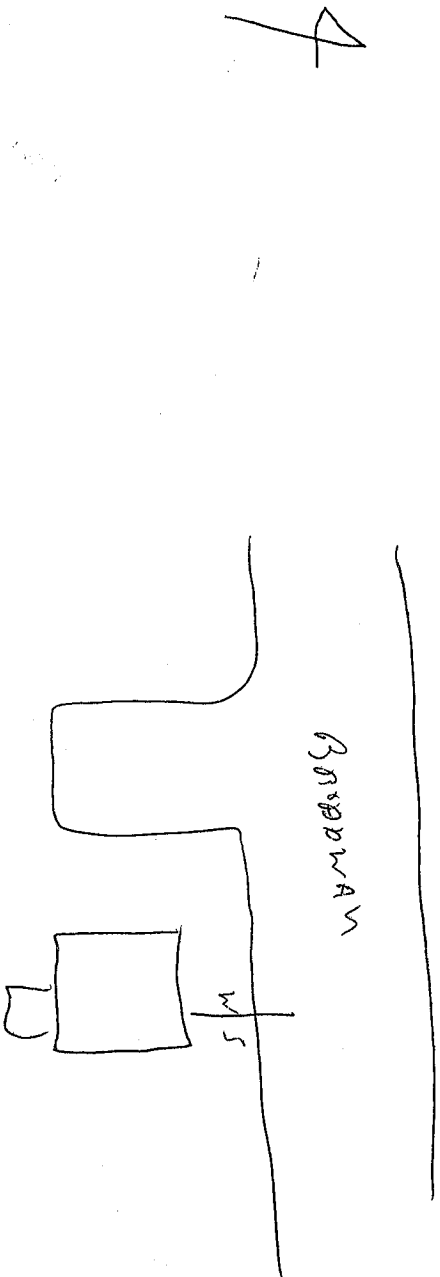
Signature of Soil Evaluator [Signature] Date 7/26/95
Typed or Printed Name of Soil Evaluator James Kavanaugh *Date of Soil Evaluator Exam 7/26/95
Name of Board of Health Witness MARK TOLMAN Lynfield Board of Health

Note: This form must be submitted to the approving authority with Percolation Test Form 12



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Use this sheet for field diagrams:



UMassAmherst

Extension Soil & Plant Nutrient Testing Laboratory

Particle Size Analysis - Basic

Prepared For:

James Kavanaugh
14 Shady Hill Dr
N Reading, MA 01864

kavanaughj@msn.com
978-375-9781

Soil and Plant Nutrient Testing Laboratory

203 Paige Laboratory
161 Holdsworth Way
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Sample Information:

Sample ID: 1416Broad

Order Number: 88856

Lab Number: X260730-205

Received: 8/4/2026

Reported: 8/13/2026

USDA Size Fraction			
Main Fractions	Size (mm)	Percent	
Sand	0.05-2.0	85.7	
Silt	0.002-0.05	12.2	
Clay	<0.002	2.1	

USDA Textural Class: loamy sand

MA Title V Textural Class I