



Commonwealth of Massachusetts
City/Town of Bolton

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

James Morin

Owner Name

Mallard Lane

Street Address

Bolton

City

MA

State

2c/15.1

Map/Lot #

01740

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade

2. Soil Survey Web Soil Survey Pits, Gravel Worcester County Northeastern Part
Source Soil Map Unit Soil Series
Base Slope None
Landform Soil Limitations

Loose Sandy and Gravelly Glaciofluvial Deposits

Soil Parent material

3. Surficial Geological Report Version 16, Sept 3, 2021 600
Year Published/Source Map Unit

4. Pits, Gravel

Description of Geologic Map Unit:

5. Flood Rate Insurance Map Within a regulatory floodway? ☐ Yes ☒ No

6. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No

If yes, MassGIS Wetland Data Layer:

7. Current Water Resource Conditions (USGS): 4/8/2022 Range: ☐ Above Normal ☒ Normal ☐ Below Normal
Month/Day/ Year

Wetland Type

8. Other references reviewed: USGS maps
(Zone II, IWPA, Zone A, EEA Data Portal, etc.)



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

Deep Observation Hole Number: TH-5 4/8/2022 10:00 A.M. SUNNY 60 F 42 24' 24" 71 36' 78"
Hole # Date Time Weather Latitude Longitude

1. Land Use Vacant Lot grass None 3%
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: Open Meadow Lot#0 South Bolton Road

2. Soil Parent Material: Sand Back slope BS
Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body >100 feet Drainage Way >100 feet Wetlands >100 feet
Property Line >10 feet Drinking Water Well >100 feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil/Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth to Weeping in Hole _____ Depth to Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-6"	A	SL	10YR2/2		Cnc : Dpl:						
6-24"	B	SL	7.5 YR5/6		Cnc : Dpl:						
24-156"	C	SAND	7.5 YR5/4		Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						

Additional Notes:



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

Deep Observation Hole Number: TH-6 34/8/2022 10:00 A.M. Sunny 60F 42 24'24" 71 36' 78"
Hole # Date Time Weather Latitude Longitude

1. Land Use: Vacant Lot g r a s s None
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) 3%
Slope (%)

Description of Location: Open Meadow Lot #0 South Bolton Road

2. Soil Parent Material: Sand Back Slope BS
Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body >100 feet Drainage Way >100' feet Wetlands >100' feet
Property Line >10 feet Drinking Water Well >100 feet Other feet

4. Unsuitable Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil/Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: Depth to Weeping in Hole Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-9"	A	SL	10 YR2/2		Cnc : Dpl:						
9-24"	B	SL	7.5YR5/4		Cnc : Dpl:						
18-156"	C	SAND	7.5YR5/4		Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						

Additional Notes:



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Deep Observation Hole Number: TH-7 4/8/2022 10:00 A.M. SUNNY 60 F 42 24' 24" 71 36' 78"
Hole # Date Time Weather Latitude Longitude

1. Land Use Vacant Lot mixed hard wood None 3%
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: Open Meadow Lot#0 South Bolton Road

2. Soil Parent Material: Sand Back slope BS
Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body >100 feet Drainage Way >100 feet Wetlands >100 feet
Property Line >10 feet Drinking Water Well >50 feet Other feet

4. Unsuitable Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil/Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: Depth to Weeping in Hole Depth to Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-6"	A	SL	10YR2/2		Cnc : Dpl:						
6-24"	B	SL	7.5 YR5/6		Cnc : Dpl:						
24-180"	C	SAND	7.5 YR5/4		Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						

Additional Notes:



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

Deep Observation Hole Number: TH-8 4/8/2022 10:00 A.M. Sunny 60F 42 24'24" 71 36' 78"
Hole # Date Time Weather Latitude Longitude

1. Land Use: Vacant Lot grass None 3%
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: Open area in prpposed culdesac Lot #0 South Bolton Road

2. Soil Parent Material: Sand Back Slope BS
Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body >100 feet Drainage Way >100' feet Wetlands >100' feet
Property Line >10 feet Drinking Water Well >100 feet Other feet

4. Unsuitable Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil/Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: Depth to Weeping in Hole Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-156"	C	SAND	10 YR5/4		Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						

Additional Notes:

Area was graveled out in the past



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D. Determination of High Groundwater Elevation

1. Method Used (Choose one):

☒ Depth to soil redoximorphic features

Obs. Hole # TH-5

144 inches

Obs. Hole # _____

_____ inches

☒ Depth to observed standing water in observation hole

144 inches

_____ inches

☐ Depth to adjusted seasonal high groundwater (S_h)
(USGS methodology)

_____ inches

_____ inches

Index Well Number _____

Reading Date _____

$$S_h = S_c - [S_r \times (OW_c - OW_{max}) / OW_r]$$

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____

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 (exclude O, A, and E Horizons)?

Upper boundary: 18"
inches

Lower boundary: 144"
inches

c. If no, at what depth was impervious material observed?

Upper boundary: _____
inches

Lower boundary: _____
inches



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F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

James Morin

#12907

Typed or Printed Name of Soil Evaluator / License #

4/15/2022

Date

6/30/2024

Expiration Date of License

Name of Approving Authority Witness

Approving Authority

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with [Percolation Test Form 12](#).

Field Diagrams: Use this area for field diagrams:

