



Commonwealth of Massachusetts

City/Town of Sudbury

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

A. Facility Information

Town of Sudbury

Owner Name

Ti-Sales Field Hudson Road

Street Address

Sudbury

City

MA

State

G09 -200

Map/Lot #

01776

Zip Code

B. Site Information

1. (Check one) [X] New Construction [] Upgrade [] Repair

2. Soil Survey Available? [] Yes [] No

If yes: Sudbury GIS Source

256 A Soil Map Unit

Deerfield Loamy Sand

Soil Name

Glacial Outwash

Geologic/Parent Material

Soil Limitations

Outwash Plain

Landform

3. Surficial Geological Report Available? [] Yes [X] No

If yes:

Year Published/Source

Publication Scale

Map Unit

4. Flood Rate Insurance Map

Above the 500-year flood boundary? [X] Yes [] No
If Yes, continue to #5.

Within the 100-year flood boundary? [] Yes [] No

5. Within a velocity zone? [] Yes [X] No

6. Within a Mapped Wetland Area? [] Yes [X] No

MassGIS Wetland Data Layer:

Wetland Type

7. Current Water Resource Conditions (USGS): July 2016
Month/Year

Range: [] Above Normal [] Normal [X] Below Normal

8. Other references reviewed: USGS Groundwater Information



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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: DTHA-1 Date: 7/13/16 Time: 8 AM Weather: Sunny

1. Location

Ground Elevation at Surface of Hole: N/A feet Latitude/Longitude: /

Description of Location: Open Field behind Ti-Sales

2. Land Use

Athletic Recreational Field (e.g., woodland, agricultural field, vacant lot, etc.) None Surface Stones (e.g., cobbles, stones, boulders, etc.) <1 Slope (%) Grass Vegetation Outwash Plain Landform Open Space Position on Landscape (SU, SH, BS, FS, TS)

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

4. Parent Material: Glacial Outwash Unsuitable Materials Present: [] Yes [] No

If Yes: [] Disturbed Soil [x] Fill Material [] Impervious Layer(s) [] Weathered/Fractured Rock [] Bedrock

5. Groundwater Observed: [x] Yes [] No If yes: 105" Depth Weeping from Pit 108" Depth Standing Water in Hole

Estimated Depth to High Groundwater: 78" inches elevation



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C. On-Site Review (continued)

Deep Observation Hole Number: DTH A-1

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12	1C1	-				Fill/Loam					
12-24	1C2	-				Fill/Med.Sand					
24-38	A	2.5 Y 3/2				L.Sand	2	<1	Massive	Moist	
38-48	B	2.5 Y 6/8				L.Sand	2	<1	Loose	Moist	
48-120	C	2.5 Y 6/6	78"	10YR5/8	>10	Sand Medium	5	<1	Loose	Dry	Weep H2O 105"
											Standing H2O 108"

Additional Notes:



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C. On-Site Review (continued)

Deep Observation Hole Number: _____

Date _____

Time _____

Weather _____

1. Location

Ground Elevation at Surface of Hole: _____

feet

Latitude/Longitude: _____ / _____

2. Land Use

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

Surface Stones (e.g., cobbles, stones, boulders, etc.) _____

Slope (%) _____

3. Distances from:

Vegetation _____

Landform _____

Position on Landscape (SU, SH, BS, FS, Wetlands) _____

Open Water Body _____

Drainage Way _____

Wetlands _____

feet

feet

feet

Property Line _____

Drinking Water Well _____

Other _____

feet

feet

feet

4. Parent Material: _____

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 _____

Depth Standing Water in Hole _____

Estimated Depth to High Groundwater: _____

inches

elevation



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C. On-Site Review (continued)

Deep Observation Hole Number: _____

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			

Additional Notes:



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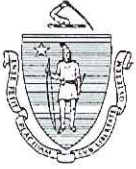
D. Determination of High Groundwater Elevation

1. Method Used:
- | | | |
|--|-------------------|-------------------|
| <input type="checkbox"/> Depth observed standing water in observation hole | Obs. Hole # _____ | Obs. Hole # _____ |
| | inches | inches |
| <input type="checkbox"/> Depth weeping from side of observation hole | inches | inches |
| <input checked="" type="checkbox"/> Depth to soil redoximorphic features (mottles) | 78" | inches |
| <input type="checkbox"/> 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 # _____	S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____
Obs. Hole # _____	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?
- | | | | |
|-----------------|--------------|-----------------|---------------|
| Upper boundary: | 38
inches | Lower boundary: | 120
inches |
|-----------------|--------------|-----------------|---------------|
- c. If no, at what depth was impervious material observed?
- | | | | |
|-----------------|--------|-----------------|--------|
| Upper boundary: | inches | Lower boundary: | inches |
|-----------------|--------|-----------------|--------|



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F. Board of Health Witness

 Name of Board of Health Witness

 Board of Health

G. Soil Evaluator 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

7/13/16

 Date

William Murphy SE 1718

6/30/19

 Typed or Printed Name of Soil Evaluator / License #

 Expiration Date of License

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 sheet for field diagrams:

