

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

A. Facility Information

Jeffrey J. Smith and Micheal S. McLaughlin

Owner Name

55 Pearson Drive

Street Address

Byfield

City

MA

State

R20/75

Map/Lot #

01922

Zip Code

20-01-20-02

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes:

Web Soil Survey 422D
Source Soil Map Unit

Canton Fine Sandy Loam

Soil Name

none

Soil Limitations

Ablation Till

Soil Parent material

Moraine

Landform

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

Year Published/Source Map Unit

Description of Geologic Map Unit:

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

5. Within a velocity zone? ☐ Yes ☒ No

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

7. Current Water Resource Conditions (USGS):

05/2020
Month/Day/ Year

If yes, MassGIS Wetland Data Layer:

Range: ☐ Above Normal

Wetland Type
☐ Normal

☒ Below Normal

8. Other references reviewed:

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

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

Deep Observation Hole Number: TP 20-01 06/09/2020 8:00 sunny/warm Latitude Longitude:
 Hole # wooded wooded few Surface Stones (e.g., cobbles, stones, boulders, etc.) 15%
 Date wooded few Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

- Soil Parent Material: ablation till moraine BS
 Landform Position on Landscape (SU, SH, BS, FS, TS)
- Distances from: Open Water Body >100 feet Drainage Way 40' feet Wetlands 20' feet
Property Line 15' feet Drinking Water Well >100 feet Other _____ feet
- Unsuitable Materials Present: ☐ Yes ☒ No ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock
- Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
68"	C	SiL	2.5Y 4/4	16"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes: _____

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

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

Deep Observation Hole Number: TP 20- 02 Date: 6/9/2020 Time: 8:00 Weather: sunny/warm Latitude: _____ Longitude: 20%
 1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation: woods Surface Stones (e.g., cobbles, stones, boulders, etc.): few boulders Slope (%): _____

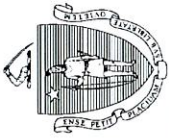
Description of Location:

2. Soil Parent Material: Ablation Till Moraine Landform MS Position on Landscape (SU, SH, BS, FS, TS) _____
 3. Distances from: Open Water Body >100 feet Drainage Way >70 feet Wetlands 50 feet
 Property Line 50 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
24"	B	SL	10YR 4/6						M	F	
80	C	SIL	2.5Y4/4	24"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:



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

D. Determination of High Groundwater Elevation

1. Method Used:

- ☐ Depth observed standing water in observation hole
- ☐ Depth weeping from side of observation hole
- ☒ Depth to soil redoximorphic features (mottles)
- ☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)

Obs. Hole # TP20-01 Obs. Hole # TP20-02

_____ inches _____ inches

_____ inches _____ inches

16 inches 24 inches

_____ 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 _____

2. Estimated Depth to High Groundwater: _____ inches

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 system? absorption

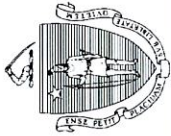
☒ Yes ☐ No

b. If yes, at what depth was it observed (exclude A and O Horizons)?

Upper boundary: 6 inches Lower boundary: 80 inches

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

Upper boundary: _____ inches Lower boundary: _____ inches



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

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

benjamin c osgood jr

Typed or Printed Name of Soil Evaluator / License #

N/A



Date

06/2021

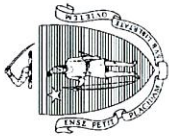
Expiration Date of License

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:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

A. Facility Information

Owner Name Jeffrey J. Smith and Micheal S. McLaughlin

Street Address 55 Pearson Drive

Byfield MA 01922

City State Zip Code

R20/75

Map/Lot #

01922

Zip Code

20-03? 20-04

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes:

Web Soil Survey Source 422D Soil Map Unit

Canton Fine Sandy Loam

Soil Name Soil Limitations none

Ablation Till

Soil Parent material Moraine Landform

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

Year Published/Source Map Unit

Description of Geologic Map Unit:

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

5. Within a velocity zone? ☐ Yes ☒ No

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

7. Current Water Resource Conditions (USGS): 05/2020 Month/Day/ Year

If yes, MassGIS Wetland Data Layer:

Range: ☐ Above Normal ☐ Normal ☒ Below Normal

Wetland Type

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP 20-03
Hole #

06/09/2020
Date

8:00
Time

sunny/warm
Weather

Latitude

Longitude:
5%
Slope (%)

1. Land Use woodland

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

wooded
Vegetation

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

Description of Location:

2. Soil Parent Material: ablation till

moraine
Landform

BS
Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from:

Open Water Body >100 feet

Drainage Way 35' feet

Wetlands 20 feet

Property Line 60 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
80"	C	SiL	2.5Y 4/4	16"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:
No Refusal



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP20-04 Hole # 6/9/2020 Date 8:00 Time sunny/warm Weather Latitude Longitude: 20%
Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) woods Vegetation few boulders Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

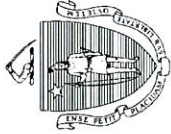
Description of Location: _____

2. Soil Parent Material: Ablation Till Moraine MS Position on Landscape (SU, SH, BS, FS, TS)
Landform _____
3. Distances from: Open Water Body >100 feet Drainage Way >25 feet Wetlands 20 feet
Property Line 50 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
80	C	SiL	2.5Y4/4	24"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes: _____



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D. Determination of High Groundwater Elevation

1. Method Used:

- ☐ Depth observed standing water in observation hole
- ☐ Depth weeping from side of observation hole
- ☒ Depth to soil redoximorphic features (mottles)
- ☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)

Obs. Hole # TP20-03

_____ inches

_____ inches

16 inches

_____ inches

Obs. Hole # TP20-04

_____ inches

_____ inches

16 inches

_____ inches

Index Well Number _____

Reading Date _____

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

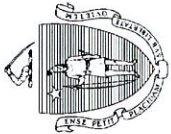
Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____

2. Estimated Depth to High Groundwater: _____ inches

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 system? ☒ Yes ☐ No absorption
- b. If yes, at what depth was it observed (exclude A and O Horizons)? 80 inches
- c. If no, at what depth was impervious material observed? 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.

benjamin c osgood jr

Signature of Soil Evaluator

benjamin c osgood jr

Typed or Printed Name of Soil Evaluator / License #

N/A

Name of Approving Authority Witness

7/30/20

Date

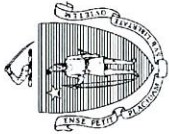
06/2021

Expiration Date of License

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:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

A. Facility Information

Owner Name Jeffrey J. Smith and Micheal S. McLaughlin

Street Address 55 Pearson Drive

Byfield MA

City State

Zip Code 01922

Map/Lot # R20/75

20-058, 20-060

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes:

Web Soil Survey Source 422D Soil Map Unit

Canton Fine Sandy Loam

Soil Name

none

Soil Limitations

Ablation Till

Moraine

Soil Parent material

Landform

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

Year Published/Source Map Unit

Description of Geologic Map Unit:

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

5. 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):

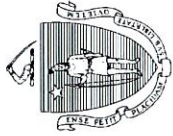
05/2020 Month/Day/ Year

Range: ☐ Above Normal ☐ Normal ☒ Below Normal

Wetland Type

☐ Normal ☒ Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP 20-05

Hole #

Date

Time

Weather

Longitude:
5°

Slope (%)

1. Land Use

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

wooded
Vegetation

few

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

Description of Location:

2. Soil Parent Material: ablation till

moraine

Landform

BS

Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from:

Open Water Body >100 feet

Drainage Way >100 feet

Wetlands >100 feet

Property Line 60 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
72"	C	L	2.5Y 4/4	16"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP20-06 Hole # 6/9/2020 Date 9:00 Time sunny/warm Weather Latitude Longitude: 20%
Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) woods Vegetation few boulders Surface Stones (e.g., cobbles, stones, boulders, etc.) 20% Slope (%)

Description of Location:

2. Soil Parent Material: Ablation Till Moraine MS Position on Landscape (SU, SH, BS, FS, TS)
3. Distances from: Open Water Body >100 feet Drainage Way >100 feet Wetlands >100 feet
Property Line 75 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
80	C	SiL	2.5Y4/4	24"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:



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

D. Determination of High Groundwater Elevation

1. Method Used:

☐ Depth observed standing water in observation hole

Obs. Hole # IP20-05 Obs. Hole # IP20-06
_____ inches _____ inches

☐ Depth weeping from side of observation hole

_____ inches _____ inches

☒ Depth to soil redoximorphic features (mottles)

16 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 _____

2. Estimated Depth to High Groundwater: _____ inches

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 A and O
Horizons)?

Upper boundary: 6 inches Lower boundary: 80 inches

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

Upper boundary: _____ inches Lower boundary: _____ inches



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B. C. Osgood Jr.

Signature of Soil Evaluator

benjamin c osgood jr

Typed or Printed Name of Soil Evaluator / License #

N/A

Name of Approving Authority Witness

7/30/20

Date

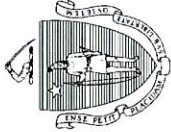
06/2021

Expiration Date of License

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.

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Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

A. Facility Information

Owner Name
Jeffrey J. Smith and Micheal S. McLaughlin

Street Address
55 Pearson Drive

Byfield
City

MA
State

01922
Zip Code

R20/75
Map/Lot #

01922
Zip Code

20-07 1 20-08

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes:

Web Soil Survey Source 422D
Soil Map Unit

Canton Fine Sandy Loam
Soil Name

none
Soil Limitations

Ablation Till
Landform

Moraine
Landform

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

Year Published/Source Map Unit

Description of Geologic Map Unit:

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

5. Within a velocity zone? ☐ Yes ☒ No

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

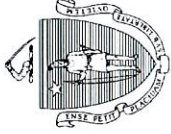
If yes, MassGIS Wetland Data Layer:

7. Current Water Resource Conditions (USGS): 05/2020
Month/Day/ Year

Range: ☐ Above Normal ☐ Normal ☒ Below Normal

Wetland Type

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP 20-07

Hole #

Date

wooded
Vegetation

Time

10:00
Weather

few

Latitude

Longitude:
2%

Slope (%)

1. Land Use

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

Description of Location:

2. Soil Parent Material: ablation till

moraine

Landform

BS

Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from:

Open Water Body >100 feet

Drainage Way >100 feet

Wetlands >100 feet

Property Line 85 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:

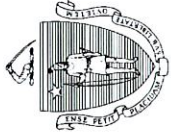
Depth Weeping from Pit

_____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
70"	C	L	2.5Y 4/4	16"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:
No Refusal



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP20-08 Hole # 6/9/2020 Date 10:00 Time sunny/warm Weather Latitude Longitude: 5°
1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) woods Vegetation few boulders Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: Ablation Till Moraine Landform MS Position on Landscape (SU, SH, BS, FS, TS)
3. Distances from: Open Water Body >100 feet Drainage Way >100 feet Wetlands >25 feet
Property Line 25 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
72"	C	SiL	2.5Y4/4	24"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:
large boulders at bottom



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

D. Determination of High Groundwater Elevation

1. Method Used:

☐ Depth observed standing water in observation hole

Obs. Hole # TP20-07
_____ inches

Obs. Hole # TP20-08
_____ inches

☐ Depth weeping from side of observation hole

_____ inches

_____ inches

☒ Depth to soil redoximorphic features (mottles)

16 inches

16 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 _____

2. Estimated Depth to High Groundwater: _____ inches

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 system? absorption

☒ Yes ☐ No

b. If yes, at what depth was it observed (exclude A and O Horizons)?

Upper boundary: _____

6 inches

Lower boundary: _____

72 inches

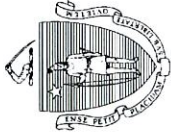
c. If no, at what depth was impervious material observed?

Upper boundary: _____

_____ inches

Lower boundary: _____

_____ inches



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

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.

Benjamin C. Osgood Jr.

Signature of Soil Evaluator

benjamin c osgood jr

Typed or Printed Name of Soil Evaluator / License #

N/A

Name of Approving Authority Witness

7/30/20

Date

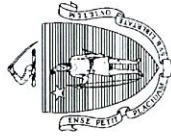
06/2021

Expiration Date of License

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:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

A. Facility Information

Owner Name Jeffrey J. Smith and Micheal S. McLaughlin

Street Address

Byfield

City

State

Zip Code

R20/75

Map/Lot #

01922

MA

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes:

Web Soil Survey Source 422D

Soil Map Unit

Canton Fine Sandy Loam

Soil Name

none

Soil Limitations

Ablation Till

Soil Parent material

Moraine

Landform

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

Year Published/Source

Map Unit

Description of Geologic Map Unit:

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

5. Within a velocity zone? ☐ Yes ☒ No

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

7. Current Water Resource Conditions (USGS):

05/2020
Month/Day/ Year

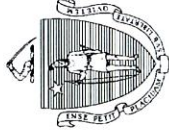
If yes, MassGIS Wetland Data Layer:

Range: ☐ Above Normal

Wetland Type
☐ Normal

☒ Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP 20-09

Date 06/09/2020

Time 11:00

Weather sunny/warm

Latitude

Longitude: 20%

Hole #

wooded

few

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

Slope (%)

1. Land Use

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

wooded

few

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

Slope (%)

Description of Location:

2. Soil Parent Material: ablation till

moraine

Landform

BS

Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from:

Open Water Body >100 feet

Drainage Way >100 feet

Wetlands >25 feet

Property Line 70 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
16"	B	SL	10YR 4/6						M	F	
96"	C	L	2.5Y 4/4	16"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:
NO REFUSAL



Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

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

Deep Observation Hole Number: TP20-10 Hole # 6/9/2020 Date 11:00 Time sunny/warm Weather Latitude Longitude: 5°
1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) woods Vegetation few boulders Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: Ablation Till MS Moraine Landform MS Position on Landscape (SU, SH, BS, FS, TS)
3. Distances from: Open Water Body >100 feet Drainage Way >100 feet Wetlands 35 feet
Property Line 110 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 Weeping from Pit _____ 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			
6"	A	SL	10YR 3/2								
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60"	C	SiL	2.5Y4/4	24"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:
large boulders at bottom



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

D. Determination of High Groundwater Elevation

1. Method Used:

☐ Depth observed standing water in observation hole

Obs. Hole # IP20-09
_____ inches

Obs. Hole # IP20-10
_____ inches

☐ Depth weeping from side of observation hole

_____ inches

_____ inches

☒ Depth to soil redoximorphic features (mottles)

22 inches

24 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 _____

2. Estimated Depth to High Groundwater: _____ inches

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 system? ☒ Yes ☐ No absorption

b. If yes, at what depth was it observed (exclude A and O Horizons)?

Upper boundary: _____

6 inches

Lower boundary: _____

96 inches

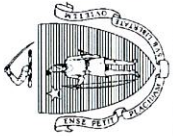
c. If no, at what depth was impervious material observed?

Upper boundary: _____

_____ inches

Lower boundary: _____

_____ inches



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

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
Benjamin C Osgood Jr

Typed or Printed Name of Soil Evaluator / License #

N/A

Name of Approving Authority Witness

7/30/20

Date

06/2021

Expiration Date of License

Approving Authority

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