TP 1 & 2

Commonwealth of Massachusetts
City/Town of BYFIELD

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

A. Facility Information

SMITH JEFFRY J , MCLAUGHLIN MICHEAL S
Owner Name

55 PEARSON DR.
Street Address

R-20/75
Map/Lot #

BYFIELD
City

MA
State

01922
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: NRCS (Source) 422D (Soil Map Unit)

   CANTON FINE SANDY LOAM (Soil Name) NONE (Soil Limitations)

   GLACIAL TILL (Geologic/Parent Material) MORAIN (Landform)

3. Surficial Geological Report Available? ☐ Yes ☒ No If yes: (Year Published/Source) (Publication Scale) (Map Unit)

4. Flood Rate Insurance Map

   Above the 500-year flood boundary? ☒ Yes ☐ No Within the 100-year flood boundary? ☐ Yes ☒ No
   If Yes, continue to #5.

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No MassGIS Wetland Data Layer: (Wetland Type)

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

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of 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: TP1 | 11/02/2015 (Date) | 10:30 AM (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 71 feet Latitude/Longitude: /

   Description of Location: TOP OF HILL

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) | SOME STONES, BOULDERS (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 20 (Slope (%))

   WOODED (Vegetation) | MORAIN (Landform) | SEE PLAN (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from:

Open Water Body	>400 feet	Drainage Way	>100 feet	Wetlands	140 feet
Property Line	35 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL 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: N/A (Depth Weeping from Pit) | N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 48 inches | 67 elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP1

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			
-2-0	Oi										
0-6	A	10yr 3/2				SL					
6-26	Bw	10yr 4/6				SL					
26-110	C	5yr 5/4	48	10 YR 5/8	>15	LS					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP2 | 11/02/2015 (Date) | 10:30 (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 72.5 feet Latitude/Longitude: /

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) | SOME STONES (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 20% (Slope (%))

   Vegetation | Landform | SEE PLAN (Position on Landscape (SU, SH, BS, FS,

3. Distances from:

Open Water Body	>400 feet	Drainage Way	130 feet	Wetlands	130 feet
Property Line	35 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL 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: N/A (Depth Weeping from Pit) | N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 48 inches | 68.5' elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP2

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			
2-0	Oi										
0-6	A	10yr 3/2				SL					
6-26	Bw	10yr 4/6				SL					
26-110	C	2.5y 5/4	48	10 YR 5/8	>15	LS					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole #TP1	Obs. Hole #TP2
☐ Depth observed standing water in observation hole	inches	inches
☐ Depth weeping from side of observation hole	inches	inches
☒ Depth to soil redoximorphic features (mottles)	48 inches	48 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 # _____ 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: 6 inches Lower boundary: 110 inches

   c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

Commonwealth of Massachusetts
City/Town of BYFIELD

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

F. Board of Health Witness

DEBORAH ROGERS
Name of Board of Health Witness

NEWBURY
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

11/02/2017
Date

BENJAMIN C. OSGOOD, JR. #1818
Typed or Printed Name of Soil Evaluator / License #

6/30/2018
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.

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

Field Diagrams

Use this sheet for field diagrams:

TP 3 & 4

Commonwealth of Massachusetts
City/Town of BYFIELD

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

A. Facility Information

SMITH JEFFRY J , MCLAUGHLIN MICHEAL S
Owner Name

55 PEARSON DR.
Street Address

R-20/75
Map/Lot #

BYFIELD
City

MA
State

01922
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: NRCS (Source) 422D (Soil Map Unit)

   CANTON FINE SANDY LOAM
   Soil Name

   NONE
   Soil Limitations

   GLACIAL TILL
   Geologic/Parent Material

   MORAIN
   Landform

3. Surficial Geological Report Available? ☐ Yes ☒ No If yes: _____ (Year Published/Source) _____ (Publication Scale) _____ (Map Unit)

4. Flood Rate Insurance Map

   Above the 500-year flood boundary? ☒ Yes ☐ No Within the 100-year flood boundary? ☐ Yes ☒ No
   If Yes, continue to #5.

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No MassGIS Wetland Data Layer: _____ (Wetland Type)

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

8. Other references reviewed: _____

Commonwealth of Massachusetts
City/Town of 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: TP3 | 11/02/2015 (Date) | 11:00 AM (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 72 feet Latitude/Longitude: /

   Description of Location: TOP OF HILL

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) | SOME STONES (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 20 (Slope (%))

   WOODED (Vegetation) | MORAIN (Landform) | SEE PLAN (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from:

Open Water Body	>400 feet	Drainage Way	>120 feet	Wetlands	120 feet
Property Line	75 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL 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: N/A (Depth Weeping from Pit) | N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 48 inches 68 elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP3

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			
2-0	Oi										
0-6	A	10yr 3/2				SL					
6-28	Bw	10yr 4/6				SL					
28-76	C	2.5yr 5/4	48	10YR 5/8	> 15	LS					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP4 | 11/02/2015 (Date) | 11:00 (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 71.5 feet | Latitude/Longitude: /

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) | SOME STONES (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | Slope (%)

   WOODED (Vegetation) | MORAIN (Landform) | SEE PLAN (Position on Landscape (SU, SH, BS, FS,

3. Distances from:

Open Water Body	>400 feet	Drainage Way	>140 feet	Wetlands	140 feet
Property Line	70 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL | 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: N/A (Depth Weeping from Pit) | N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 48 inches | 67.5' elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP4

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			
3-0	Oi										
0-7	A	10yr 3/2				SL					
7-27	Bw	10yr 4/6				SL					
27-106	C	2.5y 5/4	48	10YR 5/8	>15	LS					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole #TP3	Obs. Hole #TP4
☐ Depth observed standing water in observation hole	inches	inches
☐ Depth weeping from side of observation hole	inches	inches
☒ Depth to soil redoximorphic features (mottles)	48 inches	48 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 # _____ 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: 6 inches Lower boundary: 76 inches

   c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

Commonwealth of Massachusetts
City/Town of BYFIELD

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

F. Board of Health Witness

DEBORAH ROGERS
Name of Board of Health Witness

NEWBURY
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

11/02/2017
Date

BENJAMIN C. OSGOOD, JR. #1818
Typed or Printed Name of Soil Evaluator / License #

6/30/2018
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.

Commonwealth of Massachusetts
City/Town of BYFIELD

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

Field Diagrams

Use this sheet for field diagrams:

TP5 & 6

Commonwealth of Massachusetts
City/Town of BYFIELD

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

A. Facility Information

SMITH JEFFRY J , MCLAUGHLIN MICHEAL S
Owner Name

55 PEARSON DR.
Street Address

R-20/75
Map/Lot #

BYFIELD
City

MA
State

01922
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: NRCS (Source) 422D (Soil Map Unit)

   CANTON FINE SANDY LOAM
   Soil Name

   NONE
   Soil Limitations

   GLACIAL TILL
   Geologic/Parent Material

   MORAIN
   Landform

3. Surficial Geological Report Available? ☐ Yes ☒ No If yes: Year Published/Source ____ Publication Scale ____ Map Unit ____

4. Flood Rate Insurance Map

   Above the 500-year flood boundary? ☒ Yes ☐ No Within the 100-year flood boundary? ☐ Yes ☒ No
   If Yes, continue to #5.

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No MassGIS Wetland Data Layer: ____ Wetland Type

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

8. Other references reviewed: ____

Commonwealth of Massachusetts
City/Town of 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: TP5 | 11/02/2015 (Date) | 11:10 AM (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 67 feet Latitude/Longitude: /

   Description of Location: SIDEOF HILL

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) | SOME STONES (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 17 (Slope (%))

   WOODED (Vegetation) | MORAIN (Landform) | SEE PLAN (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from:

Open Water Body	>400 feet	Drainage Way	>70 feet	Wetlands	70 feet
Property Line	80 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL 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: N/A (Depth Weeping from Pit) | N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 48 inches | 63 elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP5

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			
3-0	Oi										
0-6	A	10yr 3/2				SL					
6-26	Bw	10yr 4/6				SL					
26-56	C1	2.5yr 5/4	48	10YR 5/8	>15	LS					
56-72	C2	5y 4/3				L					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP6 | 11/02/2015 (Date) | 11:30 (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 58 feet | Latitude/Longitude: /

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) | SOME BOULDERS (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 4 (Slope (%))

   WOODED (Vegetation) | MORAIN (Landform) | SEE PLAN (Position on Landscape (SU, SH, BS, FS,

3. Distances from:

Open Water Body	>400 feet	Drainage Way	100 feet	Wetlands	80 feet
Property Line	135 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL | 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: N/A (Depth Weeping from Pit) | N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 20 inches | 56.33' elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP6

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			
1-0	Oi										
0-6	A	10yr 2/2				SL					
6-20	Bw	10yr 4/4				SL					
20-110	C	5y 4/4	20	10YR 5/8	> 15	L					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole #TP5	Obs. Hole #TP6
☐ Depth observed standing water in observation hole	inches	inches
☐ Depth weeping from side of observation hole	inches	inches
☒ Depth to soil redoximorphic features (mottles)	48 inches	20 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 # _____ 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: 7 inches Lower boundary: 106 inches

   c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

Commonwealth of Massachusetts
City/Town of BYFIELD

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

F. Board of Health Witness

DEBORAH ROGERS
Name of Board of Health Witness

NEWBURY
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

11/02/2017
Date

BENJAMIN C. OSGOOD, JR. #1818
Typed or Printed Name of Soil Evaluator / License #

6/30/2018
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.

Commonwealth of Massachusetts
City/Town of BYFIELD

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

Field Diagrams

Use this sheet for field diagrams:

TP 7 & 8

Commonwealth of Massachusetts
City/Town of BYFIELD

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

A. Facility Information

SMITH JEFFRY J , MCLAUGHLIN MICHEAL S
Owner Name

55 PEARSON DR.
Street Address

R-20/75
Map/Lot #

BYFIELD
City

MA
State

01922
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: NRCS (Source) 422D (Soil Map Unit)

CANTON FINE SANDY LOAM
Soil Name

NONE
Soil Limitations

GLACIAL TILL
Geologic/Parent Material

MORAIN
Landform

3. Surficial Geological Report Available? ☐ Yes ☒ No If yes: ____ (Year Published/Source) ____ (Publication Scale) ____ (Map Unit)

4. Flood Rate Insurance Map

Above the 500-year flood boundary? ☒ Yes ☐ No Within the 100-year flood boundary? ☐ Yes ☒ No
If Yes, continue to #5.

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No MassGIS Wetland Data Layer: ____ (Wetland Type)

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

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of 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: TP7 | 11/02/2015 (Date) | 11:40 AM (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 60.5 feet Latitude/Longitude: /

   Description of Location: FLATLAND

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) SOME BOULDERS (Surface Stones (e.g., cobbles, stones, boulders, etc.)) 1 (Slope (%))

   WOODS (Vegetation) MORAIN (Landform) SEE PLAN (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from:

Open Water Body	>400 feet	Drainage Way	120 feet	Wetlands	90 feet
Property Line	120 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL 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: N/A (Depth Weeping from Pit) N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 36 inches 57.5 elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP7

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			
1-0	Oi										
0-6	A	10yr 2/2				SL					
6-36	Bw	10yr 4/4				SL					
36-84	C1	2.5y 4/4	36	10YR 5/8	> 15	S					
84-110	C2	5y 4/4				L					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP8 | 11/02/2015 (Date) | 11:45 (Time) | SUNNY/ 70 (Weather)

1. Location

   Ground Elevation at Surface of Hole: 61 feet | Latitude/Longitude: /

2. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) | SOME BOULDERS (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 4 (Slope (%))

   WOODED (Vegetation) | MORAIN (Landform) | SEE PLAN (Position on Landscape (SU, SH, BS, FS,

3. Distances from:

Open Water Body	>400 feet	Drainage Way	130 feet	Wetlands	125 feet
Property Line	160 feet	Drinking Water Well	>100 feet	Other	feet

4. Parent Material: GLACIAL TILL | 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: N/A (Depth Weeping from Pit) | N/A (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: 36 inches | 58' elevation

Commonwealth of Massachusetts
City/Town of BYFIELD

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

C. On-Site Review (continued)

Deep Observation Hole Number: TP8

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			
1-0	Oi										
0-6	A	10yr 2/2				SL					
6-30	Bw	10yr 4/4				SL					
30-90	C	5y 4/4	36	10YR 5/8	> 15	L					

Additional Notes:

Commonwealth of Massachusetts
City/Town of BYFIELD

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # TP7	Obs. Hole # TP8
☐ Depth observed standing water in observation hole	inches	inches
☐ Depth weeping from side of observation hole	inches	inches
☒ Depth to soil redoximorphic features (mottles)	36 inches	36 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 # _____ 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: 6 inches Lower boundary: 110 inches

   c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

Commonwealth of Massachusetts
City/Town of BYFIELD

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

F. Board of Health Witness

DEBORAH ROGERS
Name of Board of Health Witness

NEWBURY
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

11/02/2017
Date

BENJAMIN C. OSGOOD, JR #1818
Typed or Printed Name of Soil Evaluator / License #

6/30/2018
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.

Commonwealth of Massachusetts
City/Town of BYFIELD

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

Field Diagrams

Use this sheet for field diagrams:

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

A. Facility Information

Jeffry J. Smith and Micheal S. McLaughlin — 20-01 & 20-02
Owner Name

55 Pearson Drive — R20/75
Street Address — Map/Lot #

Byfield — MA — 01922
City — State — 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 If yes, MassGIS Wetland Data Layer: (Wetland Type)

7. Current Water Resource Conditions (USGS): 05/2020 (Month/Day/ Year) Range: ☐ Above Normal ☐ 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 20-01 (Hole #) | 06/09/2020 (Date) | 8:00 (Time) | sunny/warm (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) | wooded (Vegetation) | few (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 15% (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 40' feet | Wetlands 20' feet | Property Line 15' 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	
68"	C	SiL	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: TP 20-02 | 6/9/2020 (Date) | 8:00 (Time) | sunny/warm (Weather) | _____ (Latitude) | _____ (Longitude:)

1. 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 (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: _____

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # TP20-01	Obs. Hole # TP20-02
☐ Depth observed standing water in observation hole	_____ inches	_____ inches
☐ Depth weeping from side of observation hole	_____ inches	_____ inches
☒ Depth to soil redoximorphic features (mottles)	16 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 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

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

7/30/20
Date

benjamin c osgood jr
Typed or Printed Name of Soil Evaluator / License #

06/2021
Expiration Date of License

N/A
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

Jeffry J. Smith and Micheal S. McLaughlin — 20-03, 20-04
Owner Name

55 Pearson Drive
Street Address

R20/75
Map/Lot #

Byfield
City

MA
State

01922
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 If yes, MassGIS Wetland Data Layer: _____ (Wetland Type)

7. Current Water Resource Conditions (USGS): 05/2020 (Month/Day/ Year) Range: ☐ Above Normal ☐ 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 20-03 (Hole #) | 06/09/2020 (Date) | 8:00 (Time) | sunny/warm (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) | wooded (Vegetation) | few (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5% (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 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:)

1. 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 (Landform) | MS (Position on Landscape (SU, SH, BS, FS, TS))

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: _____

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

D. Determination of High Groundwater Elevation

1. Method Used:	Obs. Hole # TP20-03	Obs. Hole # TP20-04
☐ Depth observed standing water in observation hole	_____ inches	_____ 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 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

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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	Date 7/30/20
benjamin c osgood jr Typed or Printed Name of Soil Evaluator / License #	06/2021 Expiration Date of License
N/A 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

Jeffry J. Smith and Micheal S. McLaughlin 20-05 & 20-06
Owner Name

55 Pearson Drive
Street Address

R20/75
Map/Lot #

Byfield
City

MA
State

01922
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 If yes, MassGIS Wetland Data Layer: _____ (Wetland Type)

7. Current Water Resource Conditions (USGS): 05/2020 (Month/Day/ Year) Range: ☐ Above Normal ☐ 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 #) | 06/09/2020 (Date) | 9:00 (Time) | sunny/warm (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) | wooded (Vegetation) | few (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5% (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 >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:

1. 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 (Landform) | 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: _____

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

D. Determination of High Groundwater Elevation

1. Method Used:	Obs. Hole # TP20-05	Obs. Hole # TP20-06
☐ Depth observed standing water in observation hole	_____ inches	_____ 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 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

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

7/30/20
Date

benjamin c osgood jr
Typed or Printed Name of Soil Evaluator / License #

06/2021
Expiration Date of License

N/A
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

Jeffry J. Smith and Micheal S. McLaughlin 20-07 & 20-08
Owner Name

55 Pearson Drive
Street Address

R20/75
Map/Lot #

Byfield
City

MA
State

01922
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 If yes, MassGIS Wetland Data Layer: _____ (Wetland Type)

7. Current Water Resource Conditions (USGS): 05/2020 (Month/Day/ Year) Range: ☐ Above Normal ☐ 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 20-07 (Hole #) | 06/09/2020 (Date) | 10:00 (Time) | sunny/warm (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) | wooded (Vegetation) | few (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 2% (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 >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:

1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) | woods (Vegetation) | few boulders (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5% (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

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # TP20-07	Obs. Hole # TP20-08
☐ Depth observed standing water in observation hole	_____ inches	_____ 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 absorption system?

☒ 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

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

7/30/20
Date

benjamin c osgood jr
Typed or Printed Name of Soil Evaluator / License #

06/2021
Expiration Date of License

N/A
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

Jeffry J. Smith and Micheal S. McLaughlin — 20-09 & 20-10
Owner Name

55 Pearson Drive
Street Address

R20/75
Map/Lot #

Byfield
City

MA
State

01922
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 If yes, MassGIS Wetland Data Layer: _____ (Wetland Type)

7. Current Water Resource Conditions (USGS): 05/2020 (Month/Day/ Year) Range: ☐ Above Normal ☐ 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 (Hole #) | 06/09/2020 (Date) | 11:00 (Time) | sunny/warm (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) | wooded (Vegetation) | few (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 20% (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:)

1. Land Use: woodland (e.g., woodland, agricultural field, vacant lot, etc.) | woods (Vegetation) | few boulders (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5% (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 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								
16"	B	SL	10YR 4/6						M	F	
60"	C	SiL	2.5Y4/4	24"	10YR 5/8	>15%			M	F	
					5Y 5/2						

Additional Notes:
large boulders at bottom

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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

D. Determination of High Groundwater Elevation

1. Method Used:	Obs. Hole #TP20-09	Obs. Hole #TP20-10
☐ Depth observed standing water in observation hole	_____ inches	_____ 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 absorption system?

☒ Yes ☐ No

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

Commonwealth of Massachusetts
City/Town of Newbury- Byfield

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	Date 7/30/20
Benjamin C Osgood Jr	06/2021
Typed or Printed Name of Soil Evaluator / License #	Expiration Date of License
N/A	
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: