Commonwealth of Massachusetts
City/Town of GROTON

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

A. Facility Information

GROTON AFFORDABLE HOUSING TRUST
Owner Name

COW POND BROOK RD. & HOYTS WARF RD. | 249/57, 249/51
Street Address | Map/Lot #

GROTON | MA | 01450
City | State | Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: USDA (Source) 653 (Soil Map Unit)
   UDORTHENTS, SANDY (Soil Name) WATER TABLE (Soil Limitations)

3. Surficial Geological Report Available? ☐ Yes ☒ No If yes: (Year Published/Source) (Publication Scale) (Map Unit)
   LOAMY ALLUVIUM AND/OR SANDY GLACIOFLUVIAL DEPOSITES
   KAME TERRACE (Landform)

4. Flood Rate Insurance Map

   Above the 500-year flood boundary? ☐ Yes ☒ No Within the 100-year flood boundary? ☐ Yes ☒ No

   Within the 500-year flood boundary? ☒ Yes ☐ No Within a velocity zone? ☐ Yes ☒ No

5. Wetland Area: Wetlands Conservancy Program Map (Map Unit) (Name)

6. Current Water Resource Conditions (USGS): 2/22 (Month/Year) Range: ☐ Above Normal ☒ Normal ☐ Below Normal

7. Other references reviewed:

Commonwealth of Massachusetts
City/Town of GROTON

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

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

Deep Observation Hole Number: _____ 3/22/22 (Date) 9:00 AM (Time) SUNNY-60's (Weather)

1. Location

   Ground Elevation at Surface of Hole: _____ Location (identify on plan): _____

2. Land Use: WOODS, FORMER GRAVEL PIT (e.g., woodland, agricultural field, vacant lot, etc.); NONE (Surface Stones); 3-8%+/- (Slope (%))
   PINE AND OAK TREES (Vegetation); KAME TERRACE (Landform); SIDESLOPE (Position on Landscape (attach sheet))

3. Distances from:
   Open Water Body 100'+ feet; Drainage Way 100'+ feet; Possible Wet Area VARIES feet
   Property Line 50'+ feet; Drinking Water Well 100'+ feet; Other _____ feet

4. Parent Material: PROGLACIAL OUTWASH 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: SEE LOGS (Depth Weeping from Pit) SEE LOGS (Depth Standing Water in Hole)

   Estimated Depth to High Groundwater: SEE LOGS (inches) SEE LOGS (elevation)

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-1

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
15	A	10YR 3/3				S.L.			CRUMB	FRIABLE	
24	B	10YR 5/6				L.S..			S.A.B.	FRIABLE	
84	C	2.5Y 5/4	36"	7.5YR6/8		C.S.+G			MASSIVE	FRIABLE	
				7.5YR6/1							

Additional Notes: NO REFUSAL
GWO@44"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-2

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
8	A	10YR 3/2				S.L.			CRUMB	FRIABLE	
16	B	10YR 5/6				L.F.S.			S.A.B.	FRIABLE	
84	C	2.5Y 5/4	48"	7.5YR6/8		M.C. SAND			MASSIVE	FRIABLE	
				7.5YR6/1							

Additional Notes: NO REFUSAL
GWO@60"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-3

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
8	A	10YR 3/3				S.L.			CRUMB	FRIABLE	
16	B	10YR 5/4				S.L..			S.A.B.	FRIABLE	
52	C	10YR 5/3	48"	7.5YR6/8		S.L.			MASSIVE	FRIABLE	
				7.5YR6/1							

Additional Notes: BOULDERS @ 52"
NGWO

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-4

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
10	A	10YR 3/2				S.L.			CRUMB	FRIABLE	
16	B	10YR 5/6				S.L.			S.A.B.	FRIABLE	
52	C1	2.5Y 5/4	52"	7.5YR6/8		F.S.			MASSIVE	FRIABLE	
80	C2	10YR 5/4		7.5YR6/1		L.C.S+G			MASSIVE	FRIABLE	

Additional Notes: NO REFUSAL
GWO@60"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-5

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
10	A	10YR 3/3				S.L.			CRUMB	FRIABLE	
12	B	10YR 5/4				S.L.			S.A.B.	FRIABLE	
42	C1	2.5Y 5/3	42"	7.5YR6/8		F.S.			MASSIVE	FRIABLE	
84	C2	10YR 5/4		7.5YR6/1		L.F.S.			MASSIVE	FRIABLE	

Additional Notes: NO REFUSAL
GWO@60"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-6

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
12	A	10YR 5/3				S.L.			CRUMB	FRIABLE	
18	B	10YR 5/4				L.S.			S.A.B.	FRIABLE	
90	C	10YR 5/3	84"	7.5YR6/8		F.M.S.			MASSIVE	FRIABLE	
				7.5YR6/1							

Additional Notes: NO REFUSAL
GWO@86"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-7

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
10	A	10YR 3/3				S.L.			CRUMB	FRIABLE	
64	C1	2.5Y 5/3				M-C.S.			S.A.B.	FRIABLE	
86	C2	10YR 5/4	64"	7.5YR6/8		L.F.S.			MASSIVE	FRIABLE	
				7.5YR6/1							

Additional Notes: NO REFUSAL
GWO@86"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-8

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
10	A	10YR 3/3				S.L.			CRUMB	FRIABLE	
24	B	10YR 5/4				L.S.			S.A.B.	FRIABLE	
80	C	2.5Y 5/3	46"	7.5YR6/8		C.S.			MASSIVE	FRIABLE	
				7.5YR6/1							

Additional Notes: NO REFUSAL
GWO@60"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-9

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
9	A	10YR 3/3				S.L.			CRUMB	FRIABLE	
36	B	2.5Y 5/3				F.M.S.			S.A.B.	FRIABLE	
72	C	10YR 3/3	24"	7.5YR6/8		C.S.			MASSIVE	FRIABLE	
				7.5YR6/1							

Additional Notes: NO REFUSAL
GWO@36"

Commonwealth of Massachusetts
City/Town of GROTON

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

C. On-Site Review (continued)

Deep Observation Hole Number: P-10

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
24	A	10YR 3/3				S.L.			CRUMB	FRIABLE	
72	C	2.5Y 5/4				F.S.			S.A.B.	FRIABLE	
			36"	7.5YR6/8							
				7.5YR6/1							

Additional Notes: NO REFUSAL
GWO@48"

Commonwealth of Massachusetts
City/Town of GROTON

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	A. SEE LOGS inches	B. SEE LOGS inches
☒ Depth weeping from side of observation hole	A. SEE LOGS inches	B. SEE LOGS inches
☒ Depth to soil redoximorphic features (mottles)	A. SEE LOGS inches	B. SEE LOGS inches
☐ Groundwater adjustment (USGS methodology)	A. inches	B. inches

2. _____ Index Well Number _____ Reading Date _____ Index Well Level

_____ Adjustment Factor _____ Adjusted Groundwater Level

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

   a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

   ☒ Yes ☐ No

   b. If yes, at what depth was it observed? Upper boundary: SEE LOGS inches Lower boundary: SEE LOGS inches

Commonwealth of Massachusetts
City/Town of GROTON
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.

Jack Maloney

Signature of Soil Evaluator	4/14/2022 Date
WILLIAM J. "JACK" MALONEY, JR. Typed or Printed Name of Soil Evaluator / License #	7/13 Date of Soil Evaluator Exam
N/A Name of Board of Health Witness	NONE Board of Health

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.