



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

A. Facility Information

Long Point Trust, Stephen & Marybeth Bisson, TRS

Owner Name

176 Scraggy Neck Road

Street Address

Bourne

City

MA

State

Map 51 / Parcel 1-0

Map/Lot #

02556

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade

2. Soil Survey

Source

Outwash Plain

Landform

252C

Soil Map Unit

None

Soil Limitations

Carver Coarse Sand

Soil Series

Sandy Glaciofluvial deposits

Soil Parent material

3. Surficial Geological Report

2018 / Surficial Materials Map-Onset Quadrangle / Stone, Cohen

Year Published/Source

Coarse Deposits

Map Unit

Sand Deposits composed of v. coarse - v. fine sand, commonly in well sorted layers. Coarser layers may contain up to 25% gravel. Fine layers may contain some very fine sand, silt, & clay.

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

5. Within a velocity zone? Yes No **Site partially falls within a VE (EI. 17) & an AE (EI 15) flood zones (Test pits located outside of VE zone)

6. Within a Mapped Wetland Area? Yes No

If yes, MassGIS Wetland Data Layer:

Wetland Type

7. Current Water Resource Conditions (USGS):

09/21/2021

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:

(Zone II, IWPA, Zone A, EEA Data Portal, etc.)

MassMapper – Site does NOT fall within a Zone II, IWPA, mapped area of NHESP



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

Deep Observation Hole Number: 1 09/21/2021 9:30a 75° Sunny 41°40'11.76"N 70°37'29.71W
Hole # Date Time Weather Latitude Longitude

1. Land Use Residential Dwelling Mixed species forest/grass None 3-5%
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: Test pit located adjacent to gravel driveway, on edge of grass and forest. Parcel located adjacent to Red Brook Harbor

2. Soil Parent Material: Sandy Glaciofluvial Deposits Outwash Plain Plain
Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body 196+/- feet Drainage Way N/A feet Wetlands 82+/- feet
(Mean high water) (Coastal Bank)
Property Line 30+/- feet Drinking Water Well N/A feet Other N/A feet

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

5. Groundwater Observed: Yes No If yes: 128" Depth to Weeping in Hole N/A Depth to Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-12	A/O	Loamy Sand	10YR 4/1	Cnc :		-	-	-	Granular	Friable	-
				Dpl:							
12-36	Bw	Loamy Sand	10YR 5/4	Cnc :		-	-	-	Massive	Friable	-
				Dpl:							
36-80	C1	Med. Sand	2.5Y 5/6	Cnc :		-	10%	5% Stone 2% Cobble	Single Grain	Loose	-
				Dpl:							
80-100	C2	Med. Sand w/ pockets Sandy Loam	2.5Y 5/6	Cnc :		-	-	-	Massive	Friable	-
				Dpl:							
100-140	C3	Med. Sand	2.5Y 6/4	Cnc :		-	-	-	Single Grain	Loose	-
				Dpl:							
				Dpl:							

Additional Notes:

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

Deep Observation Hole Number: 2 09/21/2021 9:30a 75° Sunny 41°40'11.76"N 70°37'29.71W
 Hole # Date Time Weather Latitude Longitude

1. Land Use Residential Dwelling Mixed species forest/grass None 3-5%
 (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: Test pit located adjacent to gravel driveway, on edge of grass and forest. Parcel located adjacent to Red Brook Harbor

2. Soil Parent Material: Sandy Glaciofluvial Outwash Outwash Plain Plain
 Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body 148+/- feet Drainage Way N/A feet Wetlands 45 +/- feet
 (Mean High Water) (Coastal Bank)
 Property Line 75+/- feet Drinking Water Well N/A feet Other N/A feet

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

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

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-28	Fill	-	-		Cnc : Dpl:	-	-	-	-	-	-
28-40	ApB	Loamy Sand	10YR 3/2		Cnc : Dpl:	-	-	-	Massive	Friable	-
40-60	Bw	Loamy Sand	10YR 5/4		Cnc : Dpl:	-	-	-	Massive	Friable	-
60-128	C	Med. Sand	2.5Y 5/6		Cnc : Dpl:	-	10%	5% Stone 2% Cobble	Single Grain	Loose	-
					Cnc : Dpl:						
					Cnc : Dpl:						

Additional Notes:
 Perc in TP#2 – See Form 12

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

Deep Observation Hole Number: 3 09/21/2021 9:30a 75° Sunny 41°40'11.76"N 70°37'29.71W
 Hole # Date Time Weather Latitude Longitude

1. Land Use: Residential Dwelling Mixed species forest/grass None 3-5%
 (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: Test pit located adjacent to gravel driveway, on edge of grass and forest. Parcel located adjacent to Red Brook Harbor

2. Soil Parent Material: Sandy Glaciofluvial Outwash Outwash Plain Plain
 Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body 132+/- feet Drainage Way N/A feet Wetlands 36+/- feet
 (Mean High Water) (Coastal Bank)
 Property Line 90+/- feet Drinking Water Well N/A feet Other N/A feet

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

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

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-16	A/O	Loamy Sand	10YR 4/1	Cnc : _____ Dpl: _____	-	-	-	-	Granular	Friable	-
16-30	Bw	Loamy Sand	10YR 5/4	Cnc : _____ Dpl: _____	-	-	-	-	Massive	Friable	-
36-128	C	Med. Sand	2.5Y 5/6	Cnc : _____ Dpl: _____	-	10%	5% Stone 2% Cobble	-	Single Grain	Loose	-
				Cnc : _____ Dpl: _____							
				Cnc : _____ Dpl: _____							
				Cnc : _____ Dpl: _____							

Additional Notes: _____

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

Deep Observation Hole Number: 4 09/21/2021 9:30a 75° Sunny 41°40'11.76"N 70°37'29.71W
 Hole # Date Time Weather Latitude Longitude

1. Land Use: Residential Dwelling Mixed species forest/grass None 3-5%
 (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: Test pit located adjacent to gravel driveway, on edge of grass and forest. Parcel located adjacent to Red Brook Harbor

2. Soil Parent Material: Sandy Glaciofluvial Outwash Outwash Plain Plain
 Landform Position on Landscape (SU, SH, BS, FS, TS, Plain)

3. Distances from: Open Water Body 131+/- feet Drainage Way N/A feet Wetlands 28+/- feet
 (Mean High Water) (Coastal Bank)
 Property Line 92+/- feet Drinking Water Well N/A feet Other N/A feet

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

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

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-16	A/O	Loamy Sand	10YR 4/1		Cnc : Dpl:	-	-	-	Granular	Friable	-
16-30	Bw	Loamy Sand	10YR 5/4		Cnc : Dpl:	-	-	-	Massive	Friable	-
36-128	C	Med. Sand	2.5Y 5/6		Cnc : Dpl:	-	10%	5% Stone 2% Cobble	Single Grain	Loose	-
					Cnc : Dpl:						
					Cnc : Dpl:						
					Cnc : Dpl:						

Additional Notes: _____

D. Determination of High Groundwater Elevation

1. Method Used (Choose one):
- | | | | |
|--|------------------------------|------------------------------|---------------------------------|
| <input type="checkbox"/> Depth to soil redoximorphic features | Obs. Hole #1
_____ inches | Obs. Hole #2
_____ inches | Obs. Hole # 3/4
_____ inches |
| <input type="checkbox"/> Depth to observed standing water in observation hole | _____ inches | _____ inches | _____ inches |
| <input type="checkbox"/> Depth to adjusted seasonal high groundwater (S_h)
(USGS methodology) | _____ 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 _____

*** Tidally influenced Groundwater Elevation determined by Monitoring Well in TP #1. Peak G.W. depth recorded at 124"

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

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

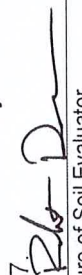
Yes No

- b. If yes, at what depth was it observed (exclude O, A, and E Horizons)?
- | | | | |
|-----------------------|---------------------|-----------------|----------------------|
| TP 1: Upper boundary: | <u>36</u>
inches | Lower boundary: | <u>140</u>
inches |
| TP 2: Upper Boundary: | <u>60</u>
Inches | Lower Boundary: | <u>128</u>
inches |
| TP 3: Upper Boundary: | <u>36</u>
Inches | Lower Boundary: | <u>128</u>
inches |
| TP 4: Upper Boundary: | <u>36</u>
inches | Lower Boundary: | <u>128</u>
Inches |

- c. If no, at what depth was impervious material observed?
- | | | | |
|-----------------------|--------------|-----------------|--------------|
| TP 2: Upper boundary: | _____ inches | Lower boundary: | _____ inches |
|-----------------------|--------------|-----------------|--------------|

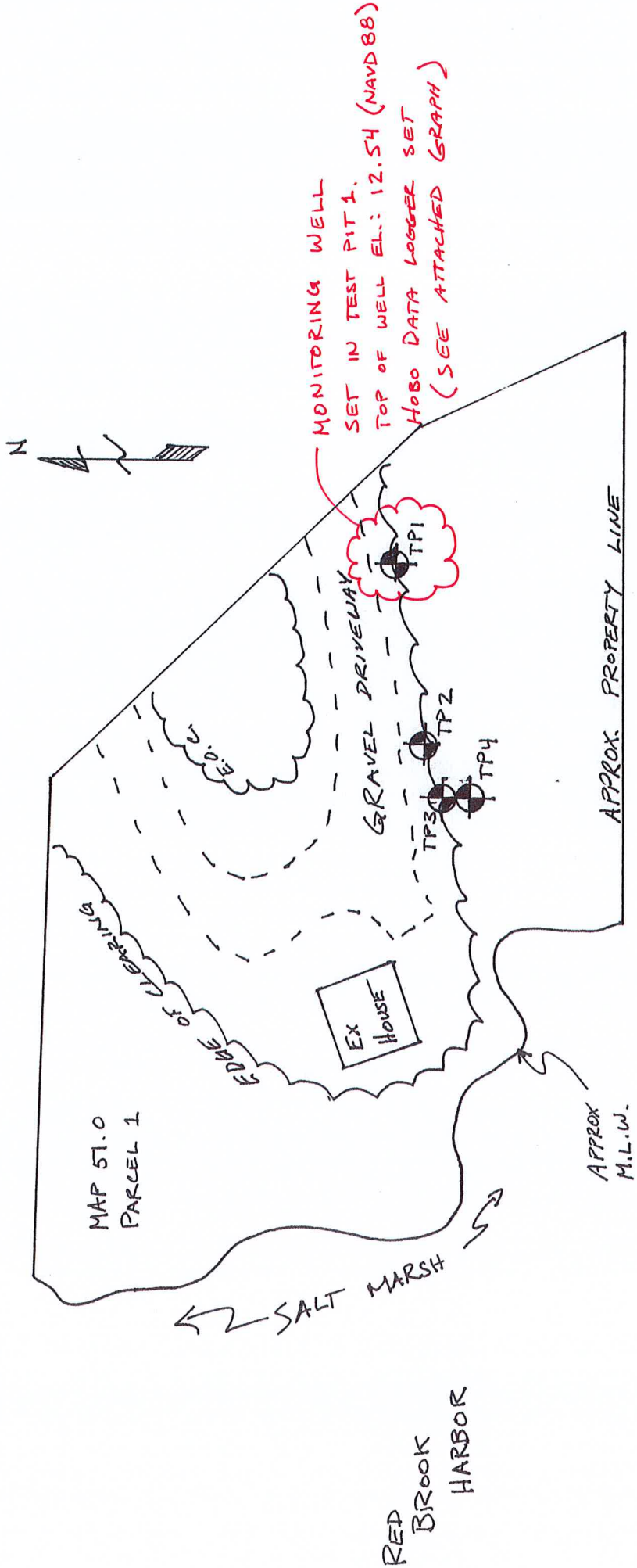
F. Certification

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
ROBERT DEWAR EIT - SE #14230
 Typed or Printed Name of Soil Evaluator / License #
JERRI GIMARINO R.S. C.H.D.
 Name of Approving Authority / Witness
11/19/2021 REV. 8/22/2022 RE.D.
 Date
6/30/2024
 Expiration Date of License
BOURNE HEALTH DEPARTMENT / BOARD OF HEALTH
 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:

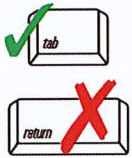




Commonwealth of Massachusetts
 City/Town of BOURNE
Percolation Test
Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with the local Board of Health to determine the form they use.

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Site Information

Long Point Trust, Stephen & Marybeth Bisson, TRS
 Owner Name
 176 Scraggy Neck Road
 Street Address or Lot #
 Bourne MA 02556
 City/Town State Zip Code
 Bracken Engineering, Inc. (Agent) 508-833-0070
 Contact Person (if different from Owner) Telephone Number

B. Test Results

	09/21/2021	9:30a		
	Date	Time	Date	Time
Observation Hole #	#2			
Depth of Perc	60"			
Start Pre-Soak				
End Pre-Soak				
Time at 12"				
Time at 9"				
Time at 6"				
Time (9"-6")	Could Not Presoak			
Rate (Min./Inch)	< 2 MPI			
	Test Passed: <input checked="" type="checkbox"/>	Test Passed: <input type="checkbox"/>	Test Failed: <input type="checkbox"/>	Test Failed: <input type="checkbox"/>

Robert E. Dewar, EIT, SE14230 of Bracken Engineering, Inc.
 Test Performed By:
 Terri Guarino - Town of Bourne Health Agent
 Board of Health Witness

Comments:

Expand All Collapse All

- Details
- Series: Abs Pres, psi (psi)
 - Series: Temp, °F (F)
 - Series: Abs Pres Barom., psi (psi)
 - Series: Water Level, feet
 - Event Type: Coupler Detached
 - Event Type: Coupler Attached
 - Event Type: Host Connected
 - Event Type: Stopped
 - Event Type: End Of File

Expand All Collapse All

- Subset Statistics
- Axis: Time
 - Series: Abs Pres, psi (psi)
 - Series: Temp, °F (F)
 - Series: Abs Pres Barom., psi (psi)
 - Series: Water Level, feet
 - Samples: 10,149
 - Max: 1.940
 - Min: 0.594
 - Avg: 1.392
 - Std Dev (σ): 0.237

