

Peter Crane - Soil Consulting

Site Evaluation/Septic System Design - Soil Mapping - Wetland Delineation

April 30, 2007

Tom Lange
236 Knox Road
Bar Harbor, ME 04609

Re: Preliminary Septic Disposal Suitability test of 2-acre lot on Knox Road, Bar Harbor.

Dear Mr. Lange,

On April 26, 2007 I reviewed a 2-acre parcel on the Knox Road and found a large area of soil that meets the requirements of the Maine Subsurface Waste Water Disposal Rules and allows a septic disposal system. I have located an area and recorded a soil test boring #1 on the enclosed site map, but in fact a large portion of this lot is suitable for septic disposal.

The soils in the area of soil boring #1 are a gravelly sandy loam glacial till soil that allow a medium to medium large size rated disposal system. As an example, a three-bedroom home would require a 15'x 45' or 20'x 45' disposal bed, depending on presence of an impervious layer above or below the 40-inch depth. Testing at the time of the design will determine specific size. In addition to a stone bed, all other proprietary disposal systems allowed by the Rules could be utilized on this lot.

If you have further questions or wish to have a system designed, please contact me.

Sincerely,



Certified Soil Scientist #11 - Licensed Site Evaluator #33

162 Maddocks Ave., Ellsworth, ME 04605 (207) 667-5007 Toll Free: 866-222-0037

TABLE 600.1			DESIGN CLASS								Disposal Area Sizing Multiply the hydraulic loading rate (square feet per gallon per day) times the design flow (gallons per day). This gives the minimum square feet of bottom and side wall area below the invert needed for a standard stone filled disposal field. Proprietary devices may be used in lieu of stone filled fields. See Appendix B.
SOIL PROFILE SOIL CONDITION DESIGN CLASS			Must be used with Table 600.2, 600.3, & 600.4 "Minimum Permitting Conditions and Design Requirements"								
SOIL CONDITION			Bedrock Class			Soil drainage class					
Parent Material	Soil Profile	Textural Classification and description	Inches from the mineral soil surface to bedrock			Inches from the surface of the mineral soil to seasonal high ground water table. Also, for design purposes, hydraulically restrictive horizon when mottling is not present.					
			AJ	AIJ	AIH	B	C	D	E		
			0-12	12-15	15-48	>48	48-15	<15-7	<7-0		
Basal Glacial Till	1	Silt loam textured soils throughout the entire profile. The lower horizons usually have prismatic or platy structures. This profile tends to become firm dense and impervious with depth thus this profile may have a hydraulically restrictive horizon. Angular rock fragments are usually present. Occasionally cobbles and stones may be present.	5	4	1	1	1	3	5	4.10 ft ² /gpd Large	
Ablation Till	2	Loam to sandy loam textured soils throughout the entire profile. This profile does not have a hydraulically restrictive horizon. Angular rock fragments are present. Occasionally cobbles and stones may be present.	5	4	1	1	1	3	5	3.30 ft ² /gpd Medium Large	
Basal Glacial Till	3	Loam to loamy sand textured soils throughout the entire profile. The lower soil horizons usually have well defined prismatic or platy structures that are very compact and are difficult to excavate. These lower horizons are considered hydraulically restrictive. Angular rock fragments are present. Occasionally cobbles and stones are present.	5	4	1	1	1	3	5	3.30 ft ² /gpd Medium Large	
Ablation Till	4	Sandy loam to loamy sand textured upper horizon(s) overlying loamy sand textured lower horizon. This profile tends to be loose and easy to excavate. Lower horizons tend not to be firm and are not considered hydraulically restrictive. Angular rock fragments are present along with partially water-worn cobbles and stones.	5	4	1	1	1	3	5	2.60 ft ² /gpd Medium	
Stratified Glacial Drift	5	Loam to loamy sand textured upper horizons overlying fine and medium sand parent materials. Stratified horizons of water-sorted materials may be present. Lower horizons tend to be granular or massive. Entire profile tends to be loose except that saturated horizons may be cemented and therefore firm and are considered hydraulically restrictive. Horizons with rounded rock fragments are common.	5	4	2	2	2	3	5	2.60 ft ² /gpd Medium	
Stratified Glacial Drift	6	Loamy sand to sand textured upper horizons overlying stratified coarse sands or gravel parent materials. Stratified horizons of water-sorted materials may be present. Entire profile tends to be loose except that saturated horizons may be cemented and therefore firm and are considered hydraulically restrictive. Horizons with rounded rock fragments are common.	5	4	2	2	2	3	5	2.00 ft ² /gpd Small	
Mixed geological origins	7	Fifteen (15) or more inches of sandy loam to loamy sand glacial till or loamy sand to sand stratified drift parent material overlying marine or lacustrine deposited silt to silty clay or fifteen (15) or more inches of loamy sand to sand stratified drift parent material overlying firm basal till. The upper horizons tend to be granular in structure. The lower horizons tend to be firm and massive in structure and are considered to be hydraulically restrictive. Rock fragments may be present in upper horizons but are usually absent in lower horizons, except for basal till.	5	4	1	1	1	3	5	3.30 ft ² /gpd Medium Large	
Lacustrine deposits	8	Loam to fine sandy loam upper horizon(s) overlying firm silt loam to silt textured lower horizons. The upper horizons tend to be granular in structure. The lower horizons tend to be firm and massive in structure and are considered to be hydraulically restrictive. Stratified lenses of fine sand and sandy loam may be present in the lower horizons. Coarse rocks are usually absent throughout entire profile.	5	4	1	1	1	3	5	4.10 ft ² /gpd Large	
Marine deposits	9	Silt loam textured upper horizons overlying firm silt loam to silty clay textured lower horizons. The lower horizons tend to be very firm and are considered to be hydraulically restrictive. Coarse rock are usually absent throughout entire profile. Thin lenses of very fine sand to silt may be present in the lower horizons.	5	4	1	1	1	3	5	5.00 ft ² /gpd Extra Large	
Organic deposits	10	Partially decomposed organic material at least 16" in thickness.	5								
Alluvial dune beach deposits	11	These soils have no typical profile. Variable in texture and exhibit very little weathering. They are deposited in flood plains sand dunes or beach environments.	Use the Soil Profile Bedrock Class Soil Drainage Class and minimum hydraulic loading rate that best describes the observed profile.								
Filled Site	12	These soils have no typical profile. Variable in texture. May contain man-made materials.	Use the Soil Profile Bedrock Class Soil Drainage Class and minimum hydraulic loading rate that best describes the observed profile. For first time and non-exempt expansion systems see Section 405.0.								

6/1/97

6/1/97

PRELIMINARY SEPTIC SEWAGE DISPOSAL SUITABILITY TEST

Owner's Name

TOM LANGE

Scale 1" = _____ ft.

Rt-3



SEE ATTACHED
PRELIM. SEPTIC SUITABILITY MAP
ON DELORME TOPO 5.0
BY PETER CRANE

Observation Hole 1 ☐ Test Pit ☒ Boring
4 " Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (Inches)

0 10 20 30 40 50

GRAVELLY SANDY LOAM DK. BROWN

GRAVELLY LOAMY SAND FRIABLE YELLOWISH BROWN NONE

SAND

FIRMER ZONE (MAYBE IMPERVIOUS LAYER) BORING DEATH

Soil Classification <u>4 B/C</u>	Slope <u>5</u> %	Limiting Factor <u>34</u>	☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☒ Fit Depth
Profile Condition			

Observation Hole ☒ Test Pit ☐ Boring
" Depth of Organic Horizon Above Mineral Soil

0
10
20
30
40
50

DEPTH BELOW MINERAL SOIL SURFACE (INCHES)

FIRMER ZONE AT 34"
OR GREATER MAY
REQUIRE A MEDIUM
LARGE SYSTEM SIZE
RATING - BUT BASED
ON 4 BORC SOIL
SYSTEM SIZE RATING
IS THOUGHT TO BE
MEDIUM

Soil Classification		Slope	Limiting Factor	☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth
Profile	Condition	%	"	

Peter Liang

LSE #33

4/27/07

Site Evaluator Signature _____

SF #

Date _____

DELOME LANE, BART HARBOR, MAINE

ROAD INCORRECTLY LOCATED BY DELOME

IRON PIPE

OLD FENCE LINE

CULVERT

2 +/- AC.

5% SLOPE

UTILITY POLE # 32 1/2

SOIL TEST BORING #1

KNOX ROAD

PROPOSED LINE (200 FT. FRONTAGE)

NOTES: DATA OBTAINED BY HANDHELD GPS W/ +/- 3 METER ACCURACY

SOIL TEST AREA IS FLAGGED W/PINK FLAGGING

SEE PRELIMINARY SEPTIC SUITABILITY REPORT BY: PETER CRANE, LSE #33

DATE OF FIELD DATA COLLECTION: 4/26/2007

KNOX R

FIRE RD 560

FIRE RD 560