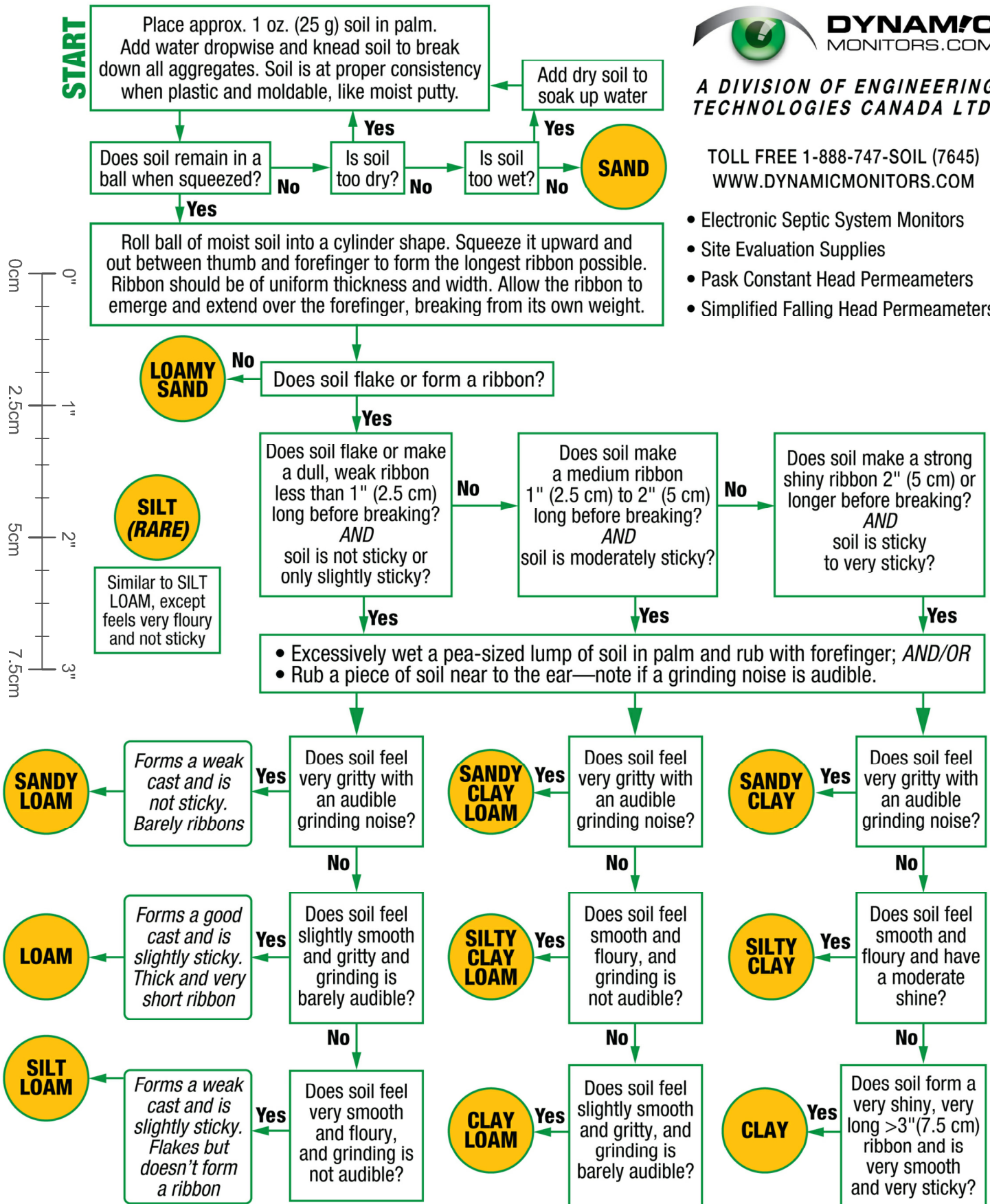
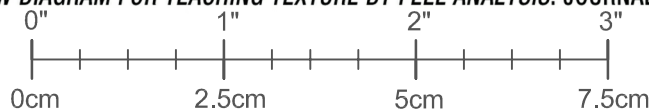


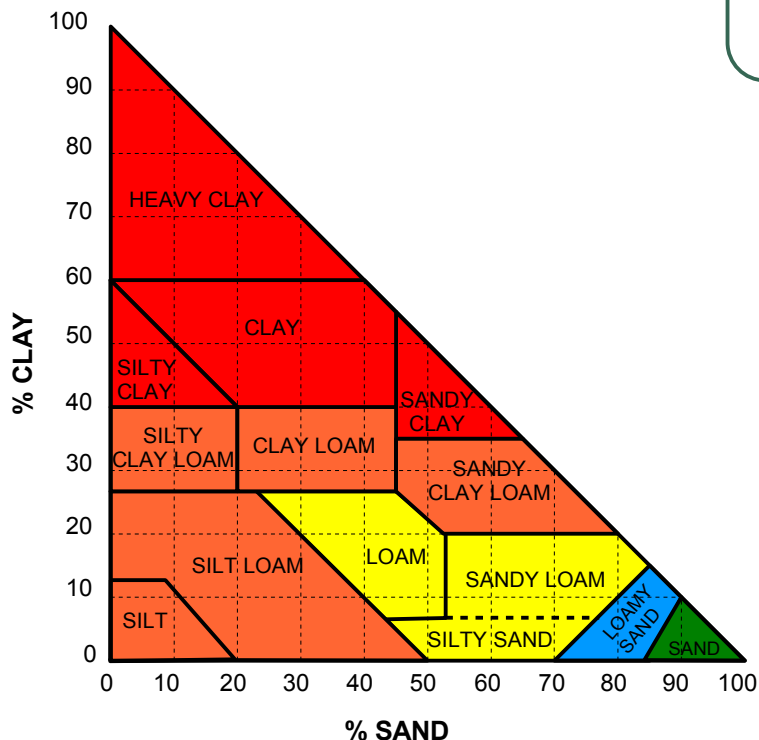
- Electronic Septic System Monitors
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ADAPTED FROM S.J. THIEN. 1979. A FLOW DIAGRAM FOR TEACHING TEXTURE BY FEEL ANALYSIS. JOURNAL OF AGRONOMIC EDUCATION. 8:54-55.



Texture Triangle



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Non-permeable.



Usually **non-permeable** unless soil has any moderate to strongly developed structure besides Platy or Massive.



Usually **permeable** unless soil has moderate to strongly developed Platy or Massive structure, or texture is Very Fine or Fine Sandy Loam.



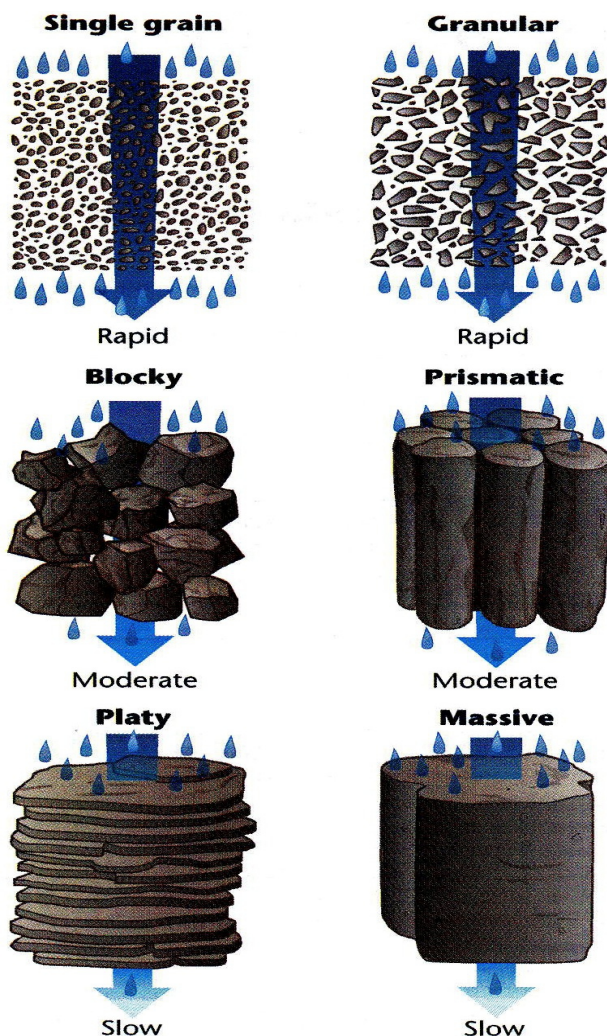
Permeable.



Very permeable.

Soil texture, structure and permeability are three of several factors which should be considered in an on-site sewage disposal evaluation.

STRUCTURE TYPE



STRUCTURE GRADE

Weak

Weakly formed peds that are barely observable in place.

Moderate

Moderately well formed peds that are moderately evident in place. Soil material of this grade, when disturbed, breaks down into a mixture of many distinct entire peds, some broken peds, and little disaggregated material.

Strong

The peds are clearly evident in place. They adhere only weakly to one another, and the peds separate from each other and remain largely intact when the soil material is disturbed. When displaced, soil material of this grade consists very largely of entire peds and includes few broken peds and little disaggregated material.

Structure Type (Shape)

Type (shape)	Typical Permeability	Description	Comments
Structureless - Single grain	Rapid	No observable aggregation or joining of individual soil particles	Loose, incoherent mass of individual particles as in clean sands.
Granular	Rapid	Particles are joined into relatively small spherical units.	Peds look like “cookie crumbs”. Common in topsoil and uppermost soil layers.
Blocky	Moderate	Soils joined together to form larger units bounded by flat or rounded surfaces.	Observable sharp or rounded surfaces on peds.
Prismatic / Columnar	Moderate	Structure is arranged in a vertical plane. Peds have relatively flat vertical surfaces.	Peds formed in a vertical arrangement. Not common in the Maritimes.
Platy	Slow	Peds are arranged in layers on a horizontal plane.	Horizontal layering appearing as plates. Often associated with soils high in clay content.
Structureless - Massive	Slow	Solid structure. No evidence of any distinct arrangement of soil particles.	Appears as a solid mass.

Soil Density Classification

Code / Density Classification	Typical Penetration Depth of Probe (cm)
1 - Very Loose	> 10 Probe penetrates very easily
2 - Loose	5 – 10 Probe penetrates easily, Easily excavated with shovel
3 - Compact	2.5 – 5 Two-handed effort required to push probe into soil, Can excavate with effort
4 - Dense	1 - 2.5 Difficult to push probe into soil, Difficult to excavate with shovel
5 - Very Dense	< 1 Very difficult to push probe into soil, Very difficult to excavate with shovel

Soil Consistence

Consistence Classification	Description
Loose	Non-coherent
Friable	Soil material crushes easily under gently to moderate pressure between thumb and forefinger, and coheres when pressed together
Firm	Soil material crushes under moderate pressure but resistance is distinctly noticeable
Hard	Moderately resistant to pressure, can be broken in the hands without difficulty but rarely breakable between thumb and forefinger
Compact	Term denotes a combination of firm resistance and a close packing or arrangement of particles
Plastic	Wire formable by rolling the soil between the thumb and forefinger and moderate pressure required for deformation of the soil mass
Sticky	Soil adheres to both the thumb and the forefinger and tends to stretch somewhat and pulls apart rather than pulling free from either digit

Moisture Content

Dry	Soil feels dry to the touch. There is no evidence of free moisture in the pit face. Soil may have very low water holding capacity (eg. Sand).
Moist	Excess water has drained away from the horizon while retaining enough moisture to feel slightly moist to the touch. No water escapes when squeezed.
Wet	Water is released from a grab sample when squeezed



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ETC SUMMARY OF THE <i>PEI PLANNING ACT</i> LOT CATEGORIES AND APPENDIX G FROM <i>CONSTRUCTION STANDARDS HANDBOOK FOR ON-SITE SEWAGE DISPOSAL SYSTEMS IN PEI</i>					
Planning Act Lot Category	Thickness of Permeable Natural Soil**	Depth to Water Table†	Depth to Bedrock†	Minimum Lot Area and Circle Diameter††	Septic System Design by: (as per Appendix G)
Category I	61 cm (2 ft) or greater	122 cm (4 ft) or greater	122 cm (4 ft) or greater	2,322 m ² (25,000 ft ²) 45.7m (150 ft) circle	Contractor
Category II	30 cm (1 ft) or greater but less than 61 cm (2 ft)	122 cm (4 ft) or greater	122 cm (4 ft) or greater	3,251 m ² (35,000 ft ²) 53.3m (175 ft) circle	Contractor
Category III	30 cm (1 ft) or greater	Depth to water table and/or bedrock is 61 cm (2 ft) or greater but less than 122 cm (4 ft)		4,738 m ² (51,000 ft ²) 68.6m (225 ft) circle	
<i>Category III a*</i>	30 cm (1 ft) or greater	122 cm (4ft) or greater	61 cm (2 ft) or greater but less than 122 cm (4 ft)		Contractor
<i>Category III b*</i>	30 cm (1 ft) or greater	61 cm (2 ft) or greater but less than 122 (4 ft) cm	61 cm (2 ft) or greater		Professional Engineer
Category IV	Less than 30 cm (1 ft) (no min requirement)	61 cm (2 ft) or greater	30 cm (1 ft) or greater	6,975 m ² (75,000 ft ²) 91.4m (300 ft) circle	
<i>Category IV a*</i>	Less than 30 cm (1 ft) (no min requirement)	122 cm (4 ft) or greater	30 cm (1 ft) or greater		Contractor
<i>Category IV b*</i>	Less than 30 cm (1 ft) (no min requirement)	61 cm (2 ft) or greater and less than 122 cm (4 ft)	30 cm (1 ft) or greater		Professional Engineer
Category V	Not applicable	Depth to water table is less than 61 (2 ft) cm. and/or Depth to bedrock is less than 30 cm (1 ft)		New subdivisions will not normally be approved	Professional Engineer

*Names in *italics* are ETC sub-categories and relate to the different subsurface conditions described in Appendix G of the *PEI Construction Standards*, and also who may select or design the septic system.

**For the purpose of measuring permeable soil thickness, according to the *PEI Construction Standards*, measurements begin at the first mineral soil horizon (underside of root mat).

† For the purpose of measuring depth to groundwater and bedrock, measurements are with respect to the ground surface.

†† For lots which will be serviced with individual wells and septic systems.

May 2025

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