Soil Sampling Protocol for Onsite Wastewater Management Systems

Soil types can vary from region to region within the province and from one sampling point to another within a few metres of one another. **Never assume soil is uniform**.

Soil properties can change dramatically over a very short distance. There may be clay at one point and sandy soil just a few metres away. Soil properties change dramatically with depth as well; surface soil is usually very different than the material present a metre below the surface.

Step 1. Site Assessment and Suitability

► Assess the property for a suitable septic field location.

- Septic fields should be located on high ground in a well drained area.
- Do not locate the septic field near trees as tree roots may eventually penetrate and damage the field.
- Locate the field in an area that will allow adequate space for future repairs or expansion.

Step 2. Obtaining the Soil Sample

► Dig or augur a hole to a depth of one metre (3.25 ft.) near the centre of the proposed septic field area.
- A 2-inch hand auger is beneficial in helping to locate an appropriate test area.

► Record the soil colour and texture, noting the different layers.
- Watch for evidence of saturation or standing water. These are signs that the water table is too near the surface.
- In some instances it may be necessary to obtain more than one soil sample to determine the soil type in the area.
- The Environment Officer or Onsite Wastewater Inspector may request that an additional test hole be dug using a backhoe to determine depth to high groundwater level.

Step 3. Collecting the Soil Sample

► Collect approximately 1 pound of soil from the base of the hole at the one metre (3.25 ft.) depth. Place the soil in a plastic zip lock bag or in a bag that has been supplied by the laboratory.

- Some laboratories may require more than one sample. Check with the laboratory that you are using.

Step 4. Laboratory Analysis

► Have the laboratory conduct a particle size analysis. ASTM Standard Test Method for Particle-Size Analysis of Soils D422-63 (2002).

Notes

Soil samples are required for treatment mounds, modified aboveground systems and subsurface systems.

The holes you make during an investigation should not interfere with the operation of the system when it is installed. They should be strategically placed and not located where the trenches for the system will be dug. Alternatively, they may be filled with bentonite to ensure they do not become conduits for effluent flow.