



QUICK SOIL TEXTURE ANALYSIS

A quick manual soil texture test can determine to what degree any existing topsoil will need to be amended in order to be re-used for the rain garden backfill.

To determine soil texture: Using a simple manual soil texture test, determine whether you have predominantly sandy or clayey soils. Sandy loam soils will be suitable to use for rain garden fill soil. Clayey soils will need to be removed and replaced with sandier soil. Some of the clay can be used for constructing the berm.

Use soil core sampler (or shovel) to see how deep the topsoil is. Typically you'll find a darker topsoil from 2 to 8" deep, then a more red-colored, heavier clay, below the topsoil layer.

Typically, (in Chattanooga,) both our topsoil and underlying soils are both clay-based soils.

However, the darker topsoil may be good to use for backfill, while the lower redder, heavier clay is not – but, it *IS* suitable to build a berm.

You may wish to take photos of the soil, or soil samples, and submit to the RainSmart Representative, to get feedback on soil type ahead of time.

Many times, a large amount of clay is left over from the excavation, and will need to be disposed of after the project is completed. Plans for soil disposal should be addressed with the homeowner ahead of time.

	Top of Soil Horizon	Bottom of Soil Horizon	Soil Texture	Comments
Depth to A Horizon	0" to	[X"]	<i>[clay loam, sandy loam, loam, etc.]</i>	<i>[High/low organic matter? Construction debris?]</i>
Depth to B horizon	<i>[X" to]</i>	<i>[Y"]</i>		
Depth to C horizon				

Has soil texture been verified by RainSmart Representative? Y / N *(Optional)*

Photos Attached? Y / N *(Optional)*

Plan to dispose of excess soil/clay? Has this been discussed with homeowner?



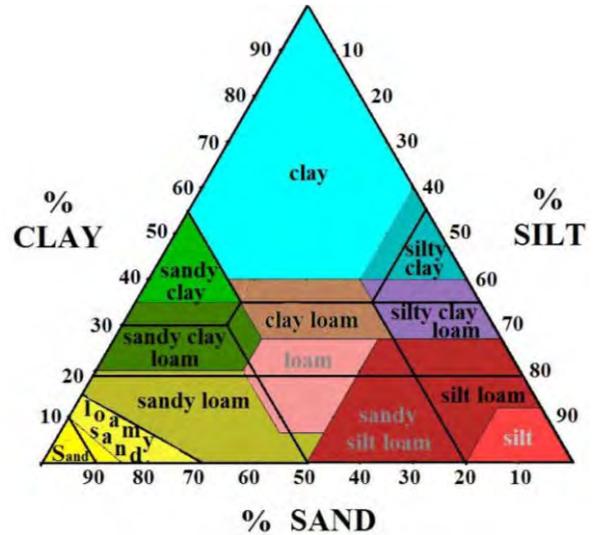
QUICK SOIL TEXTURE ANALYSIS, CONTINUED

What is Soil Texture?

Soil Texture Analysis is to determine the ratio of clay, silt, and sand (three particle sizes) in soil. This is important to determine for rain garden sites because soil texture impacts percolation. Clay soils do not percolate well, while sandy or silty soils percolate better. Rain gardens must be back-filled with predominantly sandy soils in order to maintain quick percolation. “Loam” is a term for a mixture of all three particles. Rain gardens need some of the smaller particles to provide surfaces for adhesion. Thus, a “sandy loam” is the desired texture for rain garden backfill.

To procure soil for a soil texture test, you can dig a hole, use a soil probe, or use soil from the percolation test pit described above.

A “Ribbon Test” is done by gathering a handful of soil, wetting the soil a little bit, then rolling it into a ball in your fist. If it will not roll into a ball, but instead keeps falling apart, the soil is sandy (see photo below). If it rolls into a ball, squeeze the ball between your thumb and inside of your index finger, attempting to make a “ribbon.” The length of the ribbon you can make indicates the predominant soil type.



SANDIER

