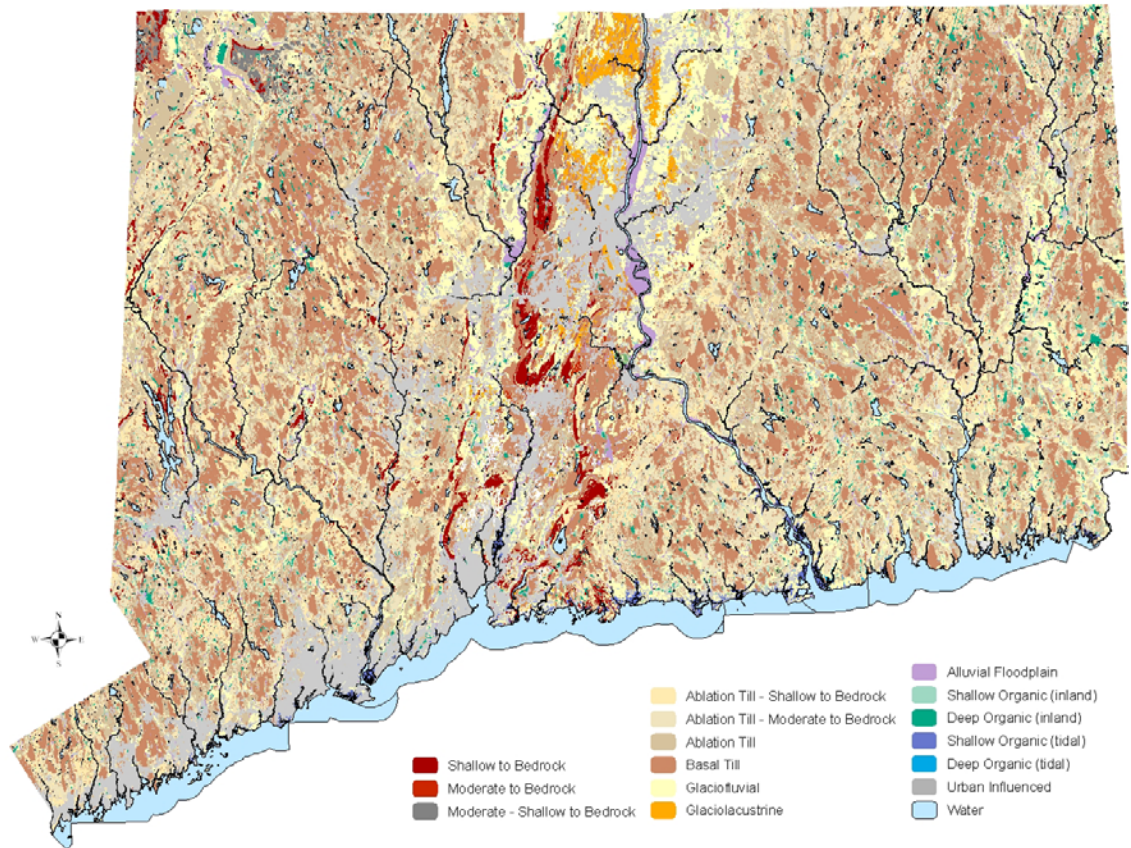


## Soil Parent Material

Geologic processes have brought to Connecticut's surface numerous parent materials in which soils have formed. Parent material is considered to be rock weathering in situ and unconsolidated sediment transported from its origin by various processes and deposited at a different locality.

Weathering processes over an extended period of time result in soil that varies from the original rock or sediment in its physical and chemical properties. In addition, organic matter from decaying vegetation and microorganisms is added to the soil and pronounced vertical arrangement of layers develops in the soil, known as a soil profile. This profile extends from the surface downward to the unweathered soil parent material.



**Glacial till** is material that has been transported and deposited directly by ice. Till typically has unsorted sediments varying in texture, mineralogy, and degree of consolidation. Material carried in different parts of the glacier produces till with different characteristics. Materials deposited directly beneath the glacier under enormous pressure are referred to as **basal or lodgement till**. Basal or lodgement till is compact and contains a greater amount of fine-grained sediment. The compact or dense layer reduces the flow of air and water movement, producing a slowly permeable zone which supports perched water tables. Material deposited as the ice beneath slowly melts away is referred to as **ablation or meltout till**, which is less consolidated and friable.

**Glaciofluvial** is material that has been transported by moving water from melting ice. The material is usually rounded, well sorted sands and gravels. It has very high air and water movement throughout, but very low available water making it very droughty. These materials are important for ground water and aquifer recharge.

## Soil Parent Material *(continued)*

---

**Glaciolacustrine** is material deposited during placid waters in large lake systems, such as Glacial Lake Hitchcock which formed in the Connecticut River Valley. These materials are layer upon layer of well sorted very fine sands, fine silts, and clays, collectively called varves. These varves reduce the flow of air and water movement, limiting groundwater recharge.

**Alluvial or floodplain** deposits are transported by streams overflowing their banks. These water transported materials are generally very rich in nutrients and stone free, but may require protection from future flooding. Soils formed in these deposits are Connecticut wetlands.

**Organics** are materials deposited from decaying vegetation and microorganisms. These materials have a very high water holding capacity and buffering capability. Organic materials found along coastal and tidal areas are often saline and support distinctively separate habitats from the non-saline organic materials commonly found inland. Soils formed in these deposits are Connecticut wetlands.

**Shallow to bedrock** indicates soils less than 20 inches to bedrock and **moderate to bedrock** indicates moderately deep soils 20 to 40 inches to bedrock.

**Urban influenced** refers to materials that show extreme variability from one location to another.

*Information obtained from the Soil Catenas of Connecticut. To view the Catenas, visit us on the web at [ftp://ftp-fc.sc.egov.usda.gov/CT/soils/soil\\_catenas\\_9-17-03.pdf](ftp://ftp-fc.sc.egov.usda.gov/CT/soils/soil_catenas_9-17-03.pdf) (Adobe Acrobat Reader required).*