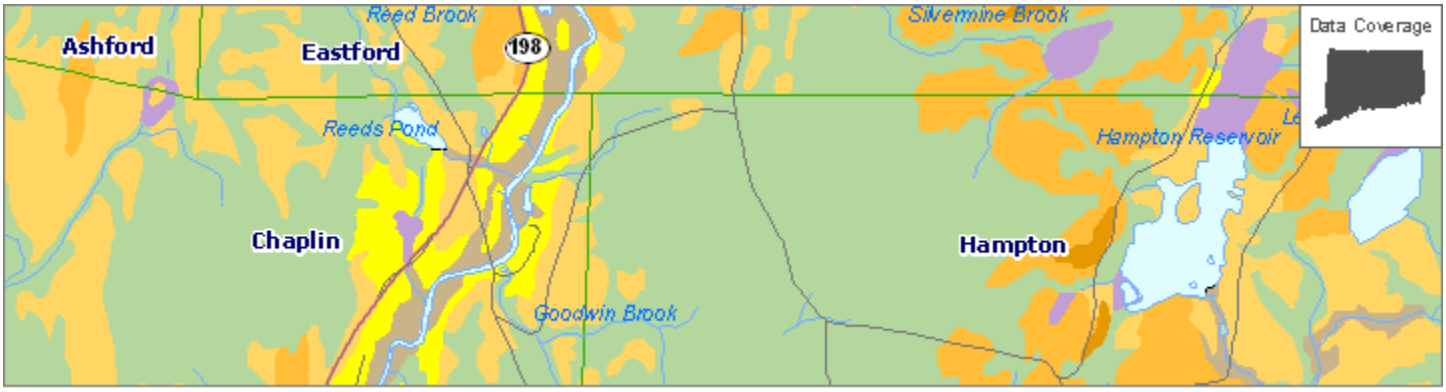
Soil Parent Material



Description

Parent material name is a term for the general physical, chemical, and mineralogical composition of the unconsolidated material, mineral or organic, in which the soil forms. Mode of deposition and/or weathering may be implied by the name.

Purpose

The soil surveyor uses parent material to develop a model used for soil mapping. Soil scientists and specialists in other disciplines use parent material to help interpret soil boundaries and project performance of the material below the soil. Many soil properties relate to parent material. Among these properties are proportions of sand, silt, and clay; chemical content; bulk density; structure; and the kinds and amounts of rock fragments. These properties affect interpretations and may be criteria used to separate soil series. Soil properties and landscape information may imply the kind of parent material.

Legend Description

The legend describes sixteen types of Soil Parent Materials.

Moderate to Bedrock

The soil depth to bedrock ranges from 20 to 40 inches.

Moderate – Shallow to Bedrock

The soil depth to bedrock ranges from 0 to 40 inches.

Shallow to Bedrock

The soil depth to bedrock is less than 20 inches.

Glaciofluvial – Shallow to Bedrock

Glaciofluvial material 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. The soil depth is less than 20 inches.

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Melt-out Till

Melt-out till is material deposited, as the ice beneath the glacier slowly melts away. It is less consolidated and friable than lodgement till.

Melt-out Till – Moderate to Bedrock

Melt-out till is material deposited as the ice beneath the glacier slowly melts away. It is less consolidated and friable than lodgement till. The soil depth to bedrock ranges from 20 to 40 inches.

Melt-out Till – Shallow to Bedrock

Melt-out till is material deposited, as the ice beneath the glacier slowly melts away. It is less consolidated and friable than lodgement till. The soil depth to bedrock is less than 20 inches.

Deep Organic – Inland

Organics are materials deposited from decaying vegetation and microorganisms. These materials have a very high water holding capacity and buffering capability. The depth of the organic materials is greater than 51 inches.

Shallow Organic – Inland

Organics are materials deposited from decaying vegetation and microorganisms. These materials have a very high water holding capacity and buffering capability. The depth of the organic materials is 16 to 51 inches.

Deep Organic – Tidal

Organics are materials deposited from decaying vegetation and microorganisms.. 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. The depth of the organic materials greater than 51 inches.

Shallow Organic – Tidal

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commonly found inland. The depth of the organic materials is 16 to 51 inches.

Alluvial/Floodplain

Alluvial or floodplain deposits are transported by streams overflowing their banks.

Glaciolacustrine

Glaciolacustrine material is deposited during placid waters in large lake systems, such as Glacial Lake Hitchcock which formed in the Connecticut River Valley. These materials have layer upon layer of well sorted very fine sands, fine silts, and clays, collectively called varves.

Lodgement Till

Lodgement Till is material deposited directly beneath the glacier under enormous pressure. It 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.

Urban Influenced

Urban Influenced refers to materials that show extreme variability from one location to another due to disturbance.

Use Limitations

This data set is not designed for use as a primary regulatory tool in permitting or siting decisions, but may be used as a reference source. This is public information and may be interpreted by organizations, agencies, units of government, or others based on needs; however, they are responsible for the appropriate application. Federal, State, or local regulatory bodies are not to reassign to the Natural Resources Conservation Service any authority for the decisions that they make. The Natural Resources Conservation Service will not perform any evaluations of these maps for purposes related solely to State or local regulatory programs.

Related Information

Soil survey interpretations are predictions of soil characteristics for specified land management practices. Below are descriptions of soil survey interpretations available through CT ECO.

Farmland Soils - CT ECO Complete Resource Guide
Hydric Soils - CT ECO Complete Resource Guide
Inland Wetland Soils - CT ECO Complete Resource Guide
Soil Drainage Class - CT ECO Complete Resource Guide
Soil Flooding Class - CT ECO Complete Resource Guide
Soil Potential Ratings for Subsurface Sewage Disposal Systems - CT ECO Complete Resource Guide

Data Collection Date

The original data was collected from published surveys from 1962 to 1981, field mapping from 1985 through 2001 and additional attribute documentation to 3/23/2007.

Status

This information is updated as needed. The previously published county soil surveys (published between 1962 and 1981) are superseded by this official soil information. County soil surveys are for historical use only.

Map Scale

The source map scale is 1:12,000 (1 inch = 1,000 feet). This information is designed to be viewed and analyzed at this map scale. The minimum size delineation is 3 acres.

Contact

State Soil Scientist, USDA, Natural Resources Conservation Service, 334 Merrow Rd., Suite A, Tolland, CT 08084. Phone: 860-871-4011 or visit the Connecticut NRCS office website.

Additional Documentation

Soil Parent Materials – CT ECO Basic Data Guide

Soils – CT ECO Complete Resource Guide

Soil map unit GIS Metadata – Contains technical documentation describing the Soil map units data and the data sources, process steps, and standards used to collect, digitize, and store this information in a geographic information system (GIS).

Soil interpretation GIS Metadata – Contains technical documentation describing the data table that defines soil interpretation such as Hydric Soils, Inland Wetland Soils, and Potential for Subsurface Disposal Systems. This lookup table is related to the soil map unit data and used to create the various soil interpretations included in CT ECO.

Soil Catenas of Connecticut describes the relationship between soils, landscapes, geology, and parent material.

Originators

USDA, Natural Resources Conservation Service (NRCS)

GIS Data Download

Soils data downloadable from DEEP GIS Data originated from the Soils Data Mart (SDM) where additional soils data is available.

Connect GIS and AutoCAD software to this information online using the Soils CT ECO Map Service.