Soils of Long Island

Definition

- **SOIL**: The top layer of the earth composed of organic and inorganic material created over time in reaction to temperature and moisture working on parent material.

Soils are created and influenced locally by:
- **Parent material** (bedrock and surface material)
- **Climate** (temperature and moisture)
- **Topography** (slope, drainage, sun-facing)
- **Biological factors** (plants, animals, insects, micro-organisms, plant roots)
- **Time** (develop very slowly and change over time)

Factors in Soil Analysis

- **Texture** – grain size of soil (sand-silt-clay ratio)
- **Structure** – the way soil particles hold together
- **Drainage** – the way water is retained
- **pH** – soil acidity and the ability of roots to absorb nutrients
- **Soil profile** – the layers (horizons) of a soil

Soil Texture

Soil Profile
**Soil Profile: Plymouth Loamy Sand**

- Dark-colored layer is the top soil about 2 ft thick.
- Light-colored layer is the upper part of the substratum consisting of coarse sand and pebbles.

**Soil Pattern of Long Island**

- Young soils (post-glacial period).
- Formed from transported soil, glacial till and scoured bedrock. (The only bedrock near the surface is in Queens.)
- Soils vary with slope and sun orientation.
- North Shore soils are rocky; South Shore soils are sandy. Where there are higher concentrations of clay, water is retained.

**County Soil Surveys**

- Soil surveys provide a detailed analysis and mapping of local soils.
- They are important for programs in agriculture, road and building construction, flood control, land preservation (esp. wetlands), and soil conservation.


**Surface Soil Survey Map**