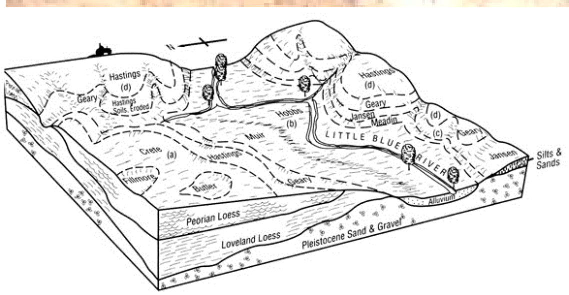
What is Soil?

Soil is a mixture of minerals, organic matter, air and water that was formed by the physical and chemical breakdown of rock. The properties of soil are dependent on the mineral composition of bedrock from which it is derived (parent material) interacting with climate, topography, and biological factors over time.

History of Soil in Maine

Maine soils reflect soil forming processes that were active while the last glacier was situated over Maine and since the glacier melted about 12,500 years ago. The heavy, mile thick glacier advanced southeasterly across the state and in the process it scraped bedrock and soil from some areas and deposited rock fragments and soil material as ice contact till or water-sorted sediments in other areas. This created a variety of soil types including well known stony, dense glacial till, sandy and gravelly eskers and deltas, and marine sediments consisting of silt and clay. These materials, along with organic deposits and bedrock form the soils of Maine.



Landscapes of Associations of Soil Series (Soil Survey Thayer Co., Nebraska).

How do I find out What Type of Soil I Have?

For hundreds of years people have studied soil to better understand its properties. To make sure there is a standardized method for soil evaluation the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) is the federal department that oversees the classification and mapping of soil. They perform soil mapping on a large scale that is suitable for planning but not for site specific work or projects. In Maine the State certifies "Soil Scientists" (CSS). If you would like to get site specific soils information for your property, you should contact a Maine Certified Soil Scientist who will prepare a detailed soil map for you, tailored to meet your needs.

Soil maps are created because they give information needed to aid in land use planning. They are based on differences in soil physical and chemical properties, in conjunction with ranges in slope gradient. Land uses addressed are:

- Agriculture
- Building Site Development
- Building Roads & Bridges
- Forestry
- Recreation
- Sites for Septic Systems
- Water Management/Conservation
- Wetlands
- Wildlife Habitat

Maine Association of Professional Soil Scientists

The Maine Association of Professional Soil Scientists (MAPSS)

MAPSS was formed in 1978 with a mission to promote the profession of soil science by:

- maintaining high professional standards and code of practice
- assisting with the continuing education and training necessary for professional development of soil scientists
- providing a forum for the exchange of ideas among members, and
- promoting a feeling of friendly and cooperative relations among members and other related professional organizations.

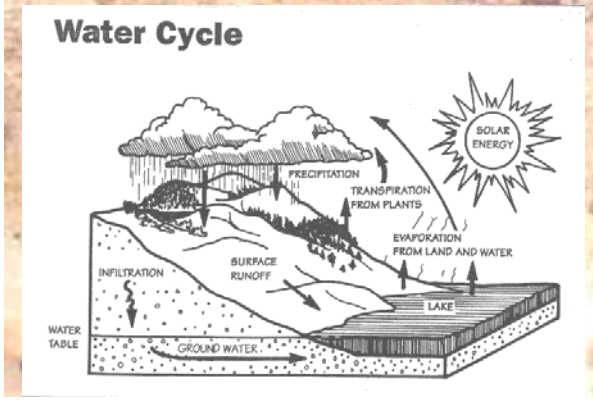
Members include certified soil scientists, state and federal soil scientists, wetland scientists, environmental consultants, site evaluators, educators, students, and regulators. For more information about MAPSS, its on-going outreach opportunities and its members please visit: www.mapss.org.

Maine Certified Soil Scientists Provide A Wide Variety of Services Including:

- Soil Mapping & Classification
- Evaluation of Soil Capabilities & Limitations
- Hydric Soil Mapping, Wetland Delineation, & Permitting
- Assessing Septic System potential
- Assessment & Planning for Erosion & Sedimentation Control
- Water Quality Protection
- Nutrient Management
- Promotion of Land & Water Stewardship

Soil Erosion & Sedimentation:

When soil is eroded it carries away nutrients and destroys soil structure, both of which took thousands of years to develop and are essential for plant growth. When eroded soil enters a water body it changes the water chemistry which can lead to decreased water quality and land value on the water body. It can also irreversibly impact fish and shellfish habitat. This can result in a serious environmental problem.



Typical Land Uses in Maine Dependent on Soil

Maine is the most forested state in the country. Land uses important to the "Maine way of life" that are directly dependent on soil quality are industrial forestry, blueberry production, potato farming and other types of agriculture.

SOILS OF MAINE

Learn more with the Maine Association of Professional Soil Scientists

From planting a small vegetable garden to construction of roads and buildings, an understanding of soil is important. Why is an understanding of soil important for everyone?

Soil is The Media for Plant Growth:

Plants are our food and create diverse habitats for wildlife. Plants get energy from the sun, but they get water and nutrients from the soil. Soil provides nutrients for our farms, allowing us to grow fruits and vegetables for consumption and feed for livestock. Soil also provides nutrients to our forests, creating diverse wildlife habitats and the food web.

Soil is an Integral Part of all Natural Cycles; Including Water and Carbon:

Soil provides filtration and cleaning of water, which keeps our lakes, rivers and streams clean, and keeps groundwater clean for drinking water. Soil can hold excess stormwater, helping reduce flood damage from storms. Soil traps and stores excess carbon that is in our atmosphere.

Background Photo Shows A Somewhat Poorly Drained Madawaska Sandy Loam with an 8-12" Layer Of Old Fill Material. This series t originated from post-glacial water-sorted (alluvial) material.