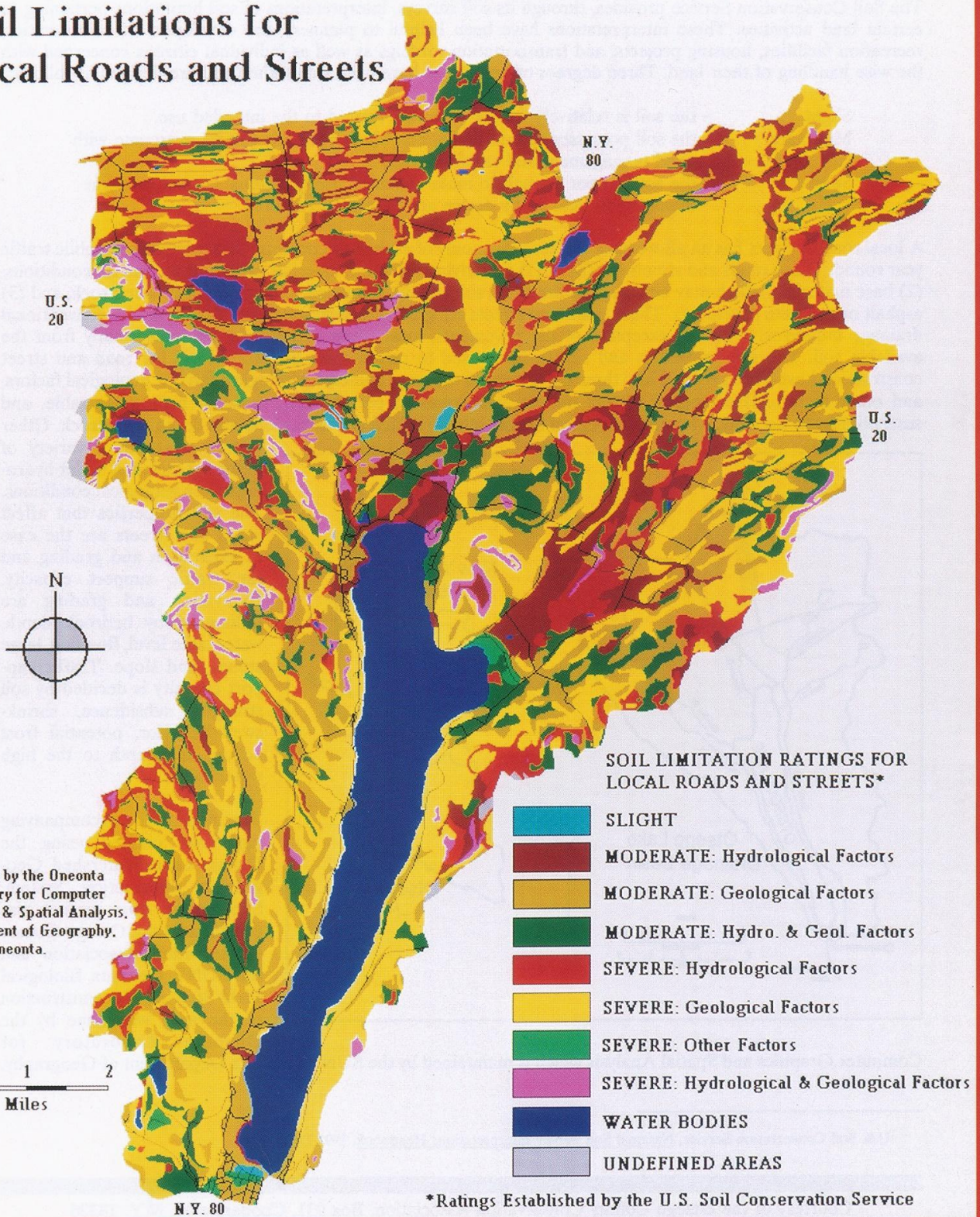


# OTSEGO LAKE WATERSHED

## Soil Limitations for Local Roads and Streets



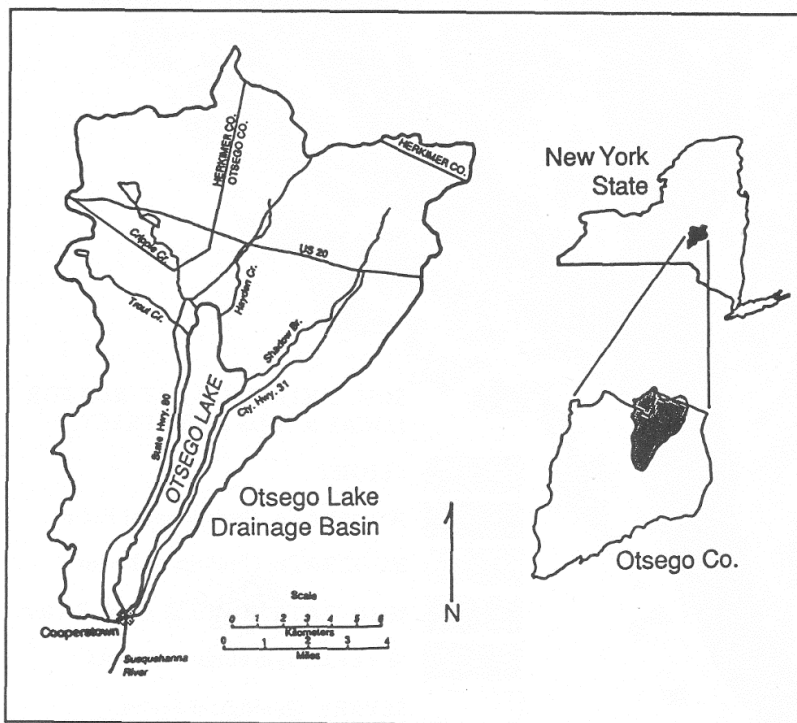


## Local Roads and Streets

The Soil Conservation Service provides, through its soil surveys, interpretations of soil limitations pertaining to certain land activities. These interpretations have been helpful to planners and developers of communities, recreation facilities, housing projects, and transportation routings as well as individual citizens concerned with the wise handling of their land. Three degrees of limitations have been established and are defined as follows:

- |          |  |
|----------|--|
| Slight   | - the soil is relatively free of problems related to the intended use.   |
| Moderate | - the soil possesses certain limitations which generally can be overcome with good management and careful design.              |
| Severe   | - the soil is poor enough to make intended use questionable, and extreme management and costly design are frequently required. |

A local road or street has an all-weather surface, commonly of asphalt or concrete, that carries automobile traffic year round. These roads and streets consist of (1) underlying local soil materials including cut and fill conditions, (2) base materials, which may be lime-stabilized soil, soil-cement stabilized soil, gravel, or crushed rock, and (3) asphalt or concrete pavements. These roads and streets are graded to shed water and designed with conventional drainage measures. With the exception of the pavements, local roads and streets are built mainly from the available soil. The soil properties and site features used to rate a soil's limitation level for road and street construction have been grouped into three categories on the map, namely hydrological factors, geological factors, and other factors. Hydrological factors include such items as permeability, seasonal high water table, and susceptibility to flooding; whereas, geological factors involve such features as slope and depth to bedrock. Other



factors relate to a variety of items not included under hydrological or geological conditions. The soil properties that affect roads and streets are the ease of excavation and grading and the traffic support capacity. Excavation and grading are influenced by bedrock depth, water table level, flooding, large stones, and slope. Traffic support capacity is decided by soil strength, subsidence, shrink-swell behavior, potential frost action, and depth to the high water table.<sup>1</sup>

The map on the accompanying page was created using the Otsego Lake Watershed Geographic Information System. Support for this project was provided by the Otsego County Conservation Association and the SUNY Oneonta Biological Field Station. The construction of the map was done by the Oneonta Laboratory for

Computer Graphics and Spatial Analysis which is maintained by the SUNY Oneonta Department of Geography.

<sup>1</sup>U.S. Soil Conservation Service, *National Soil Survey Interpretations Handbook*, 1992 Draft, p. 21.