

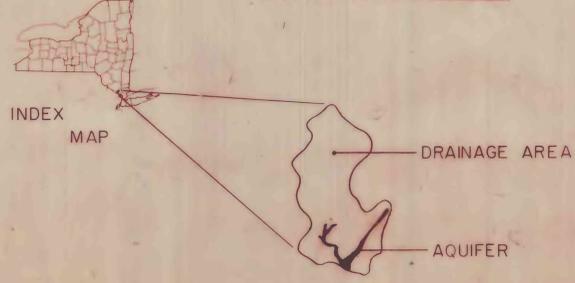
# WATER-INFILTRATION POTENTIAL OF SOIL

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EXPLANATION	
WATER-INFILTRATION POTENTIAL OF SOIL ZONE	
Map Units	Classification
1	VERY LOW TO LOW—soils having very low to low infiltration rates when thoroughly wetted; include mainly clayey and silty soils, soils with a high water table, and soils that are shallow over nearly impervious material.
2	MODERATE—Soils having moderate infiltration rates when thoroughly wetted; includes mainly deep soils with silty and sandy textures.
3	HIGH—Soils having high infiltration rates when thoroughly wetted; includes mainly deep sandy and gravelly soils.
4	Too variable to estimate.

- TILL/BEDROCK HILL—surrounded by highly permeable material
- BOUNDARY OF UNITS OF WATER-INFILTRATION POTENTIAL—approximately located
- AQUIFER BOUNDARY—dashed where full extent of aquifer is not shown
- BOUNDARY OF HIGH PERMEABILITY MATERIAL ADJACENT TO THE AQUIFER—aquifer may partially extend into these areas
- 01330000 COMMUNITY WATER SYSTEM WELL OR WELL FIELD—numbered by New York State Department of Health (number may be same for widely scattered sites in same system)



**NOTE**

Classifications for water-infiltration potential are given for those soils which overlie and directly recharge the aquifer. Soils with high infiltration potential provide greater recharge to the aquifer than soils with low potential. Hillsides adjacent to the aquifer are typically underlain by till and bedrock (see Surficial Geology, sheet 1) and have a predominantly low or very low infiltration potential. Exceptions where the hillsides are underlain by high permeability material, are identified on map. This means that adjacent hills underlain by till and bedrock have a high potential for runoff, hence overland flow occurs and reaches the area overlying the aquifer where infiltration and recharge to the aquifer may occur. Areas underlain by high permeability material typically have a soil zone with a moderate or high infiltration rate and indirectly provide significant recharge to the aquifer.

Rates of infiltration depend upon such factors as soil moisture and temperature, density of vegetation, slope, soil porosity, grain-size distribution and cohesion, depth to seasonal high-water table, presence or absence of a water-impeding layer, the intensity and duration of rainfall and other meteorological factors. Classification for water-infiltration potential are based on estimates by the Soil Conservation Service (1970). Their estimates are based on the above factors (excluding density of vegetation) and on soil-percolation tests.

The boundaries of the units of water-infiltration potential do not necessarily coincide with the geologic units (sheet 1). For example, very permeable sand and gravel may have a thin cover of windblown silt or pond deposit (not shown on sheet 1) which creates a soil with low-infiltration potential overlying a very permeable geologic unit. Also, a permeable sand and gravel unit may have a high water table and thus a low-infiltration potential. In areas where a high water table is the major criterion for classifying a soil, lowering of the water table by well-pumpage will result in a greater infiltration potential and thus areas previously of a low or very low potential may develop a high infiltration potential.

**REFERENCES CITED**

Goodman, S. D., 1970, Interim soils report, Rockland County, New York: Rockland County Soil and Water Conservation District, 66 p.

U.S. Soil Conservation Service, unpublished field maps.