



# SURFICIAL GEOLOGY

By  
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## INTRODUCTION

The mapping was undertaken to compile available information on the limits and characteristics of principal aquifers in upstate New York. The glacial outwash and ice-contact stratified drift aquifers in the Baldwinsville area underlie a 55 square mile area. It is a primary source of water for rural residents, industry, and community water systems in northwestern Onondaga County.

Findings relating to the aquifer are presented in this series of maps to provide water managers with current knowledge to aid in protecting and managing this prolific aquifer. The hydrologic data used in preparing these maps are available in the cited references and in the New York Subdistrict Office of the U.S. Geological Survey in Ithaca, New York.

The mapping is a continuation of a series begun in 1980 by the U.S. Geological Survey in cooperation with the New York State Dept. of Health. The style and format have been freely adapted from Miller and others (1982).

## EXPLANATION

GEOLOGIC CONTACT—approximately located  
AQUIFER BOUNDARY—dashed where full extent of aquifer is not shown. The aquifer is interpreted to extend outward to where the saturated thickness is less than 15 feet.  
LINE OF SECTION—see sheet 2, "Geologic Sections"  
310-624-2  
Well on which geologic sections, sheet 2, are based; numbers are based upon latitude and longitude, after Kantrowitz (1970)

w

Open-water areas

af

Artificial Fill

ml

Made Land:

consists mainly of bed areas of chemical waste material

ul

Urban Land:

areas altered or obscured by urban works

als

Alluvial silt and sand;

floodplain deposits of postglacial to recent age;

low permeability

alg

Alluvial sand and gravel;

alluvial fan and stream deposits of postglacial to recent age;

high permeability

pm

Peat, marl, muck, and clay;

bog and swamp deposits of postglacial to recent age;

low to moderate permeability

lsc

Lake silt and/or clay;

thin bedded to massive offshore deposits

in proglacial and postglacial lakes;

low permeability

dsg

Delta sand and gravel;

mostly fine to coarse sand;

deposited when streams entered proglacial or postglacial lakes;

high permeability

bsg

Beach sand and gravel;

moderately to well sorted;

predominantly coarse textured;

postglacial or proglacial lake beach deposits;

high permeability

osg

Outwash sand and gravel;

stratified and well sorted glacial meltwater deposits;

some secondary calcite cementation;

high permeability

ic

Ice contact sand and gravel;

kames, kame terraces, and kame moraines;

poorly to moderately well sorted and stratified;

some secondary calcite cementation;

high permeability

th/r

Thick till over bedrock (undifferentiated);

unsorted glacial deposit of silt, sand, clay, cobbles,

gravel, and boulders; generally averages about 30 feet thick

but may be up to 200 feet thick in some places;

drumlinoid topography; low to moderate permeability

tn/r

Thin till over bedrock (undifferentiated);

unsorted glacial deposit of silt, sand, clay, cobbles,

gravel, and boulders; generally less than 5 feet thick;

low permeability

## REFERENCES

Hutton, F.Z., Jr., and Rice, C.E., 1977, Soil Survey of Onondaga County, New York, U.S. Dept. of Agriculture, 235 p.

Kantrowitz, I.H., 1970, Ground-water resources of the eastern Onondaga River basin, New York, New York State Water Resources Commission Basin Planning Report ORB-2, 129 p.

Muller, E.H., 1983, Unpublished field mapping