

GROUND-WATER AVAILABILITY IN THE EASTERN PART
OF THE LAKE ONTARIO BASIN, NEW YORK

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EXPLANATION

GEOLOGIC UNITS

- w OPEN-WATER AREAS
- a ALLUVIAL SILT, SAND, AND GRAVEL. Stream deposits of postglacial time; unconsolidated and generally permeable.
- pm PEAT, MARL, MUCK, AND CLAY. Wetland deposits of postglacial to recent time; low permeability.
- es EOLIAN SAND. Wind-deposited sand that formed ridges or mounds; fine to medium sand; oxidized and moderately permeable.
- lsc LAKE SILT AND CLAY. Offshore deposits in proglacial or postglacial lakes; thin bedded to massive; low permeability.
- lss LAKE SILT AND FINE SAND. Offshore deposits in proglacial or postglacial lakes; thin bedded to massive; low to medium permeability.
- bsg BEACH SAND AND GRAVEL. Coarse sand and gravel deposited near shore or at shore of proglacial or postglacial lakes; well sorted, unconsolidated, highly permeable.
- dsg DELTA SAND AND GRAVEL. Pebble and cobble gravel with sand; deposited at the mouths of streams flowing into a lake; well sorted; highly permeable.
- dss DELTA SAND: Sand deposited at mouth of streams flowing into a lake; well sorted; fine to medium sand; moderately permeable.
- ksg KAME AND KAME TERRACE SAND AND GRAVEL. Sand to cobble gravel distributed on a glacier and later deposited on ground as ice melted; some sorting; unconsolidated except for some secondary calcite cementation, highly permeable.
- osg OUTWASH SAND AND GRAVEL. Sand to cobble gravel deposited by streams flowing from former ice sheets; stratified; well sorted; highly permeable.
- at ABLATION TILL. Mixture of clay, silt, sand, and boulders deposited from drift laid down after ice melted beneath it; unconsolidated; noncompact and generally slightly coarser than lodgment till; permeability variable but generally low.
- lt LODGMET TILL. Mixture of clay, silt, sand, and boulders deposited at base of glacier; poorly sorted; compact; low permeability.
- r BEDROCK. Sedimentary rocks of low to medium permeability.
- CONTACT
- BOUNDARY of the eastern part of the Lake Ontario drainage basin.

LAKE ONTARIO



INTRODUCTION

In the late 1960's, the U.S. Geological Survey began a ground-water study of the eastern part of Lake Ontario basin in cooperation with the New York State Department of Environmental Conservation. Although the study was curtailed, a significant amount of field data was collected and stored in U.S. Geological Survey files. In 1985, in response to New York State's growing need for information on aquifers, the 1960's data were recompiled along with more recent information on 1:125,000-scale maps of the basin to depict surficial geology, well locations, and potential yield from wells that tap unconsolidated aquifers. These maps can aid State and local officials in planning and management of ground-water resources.

SURFICIAL GEOLOGY

This map was recompiled from information obtained during three mapping studies—Stewart (1958), O'Brien and Gere Consulting Engineers (1968), and Miller (1981).

REFERENCES CITED

Miller, T. S., 1981, Geology and ground-water resources of Oswego County, New York: U.S. Geological Survey, Water-Resources Investigations 81-60, 37 p.

O'Brien and Gere Consulting Engineers, 1968, Jefferson County comprehensive study: Syracuse, N.Y., O'Brien and Gere Consulting Engineers, Public Water-Supply Study CPWS-38, 210 p.

Stewart, D. P., 1958, The Pleistocene geology of the Watertown and Sackets Harbor quadrangles, New York: New York State Museum and Science Service, Bulletin 369, 79 p.

