

SURFICIAL GEOLOGY

By

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INTRODUCTION

The mapping was undertaken to compile available information on the limits and characteristics of one of the principal aquifers in upstate New York. This aquifer, the principal aquifer in the Fulton area, underlies a 50-square mile area in north-central New York extending from Fulton south and bisected by the Oswego River. It is a primary source of water for rural residents, light industry, and community water systems in southwestern Oswego County.

Findings relating to this highly used aquifer are presented in this series of maps to provide water managers with current knowledge to aid in protecting and managing the 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.

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EXPLANATION

- | | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| af | Artificial fill |
| w | Open-water area |
| a | Alluvial silt, sand, and gravel, postglacial stream deposits; unconsolidated; high permeability |
| pm | Peat, muck, and clay; postglacial bog deposits |
| lsc | Lake silt and clay; offshore deposits in proglacial or post-glacial 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 moderate permeability |
| wsg | Wave delta, sand and gravel stratified sand to cobble gravel deposited on lee side of drumlins by breaking waves; moderate to good sorting; high permeability |
| bsg | Beach sand and gravel; well-sorted coarse sand and gravel deposited on shore of glacial and postglacial lakes; high permeability |
| ksg | Kame sand and gravel; a hill of stratified coarse sand to cobble gravel deposited by debouching streams of glacial meltwater; high permeability |
| at | Ablation till; mixture of clay, silt, sand, and boulders deposited from a superglacial position after ice melted beneath it; noncompact; variable permeability |
| lt | Lodgement till; nonsorted, compact mixture of clay, silt, sand, and boulders deposited at base of glacier; low permeability |
| r | Bedrock; sandstone and shale; locally low permeability in fractures or joints |

REFERENCES CITED

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- Muller, E. H., and Miller, T. S., 1980, Surficial geology of part of Lysander Quadrangle, Oswego County, New York: U.S. Geological Survey Water-Resources Investigations Open-File Report 80-1117, 1 sheet, scale 1:24,000.

- — — — — GEOLOGIC CONTACT—dashed where approximately located
- A—A' LINE OF SECTION—see sheet 2, "Geologic Sections"
- — — — — AQUIFER BOUNDARY—delineates aquifer material in study area; dashed where approximately located
- — — — — DRAINAGE DIVIDE—approximates the ground-water divide
- 27-13 WELL—on which geologic sections are based, the seconds of latitude and longitude from well numbered by U.S. Geological Survey

