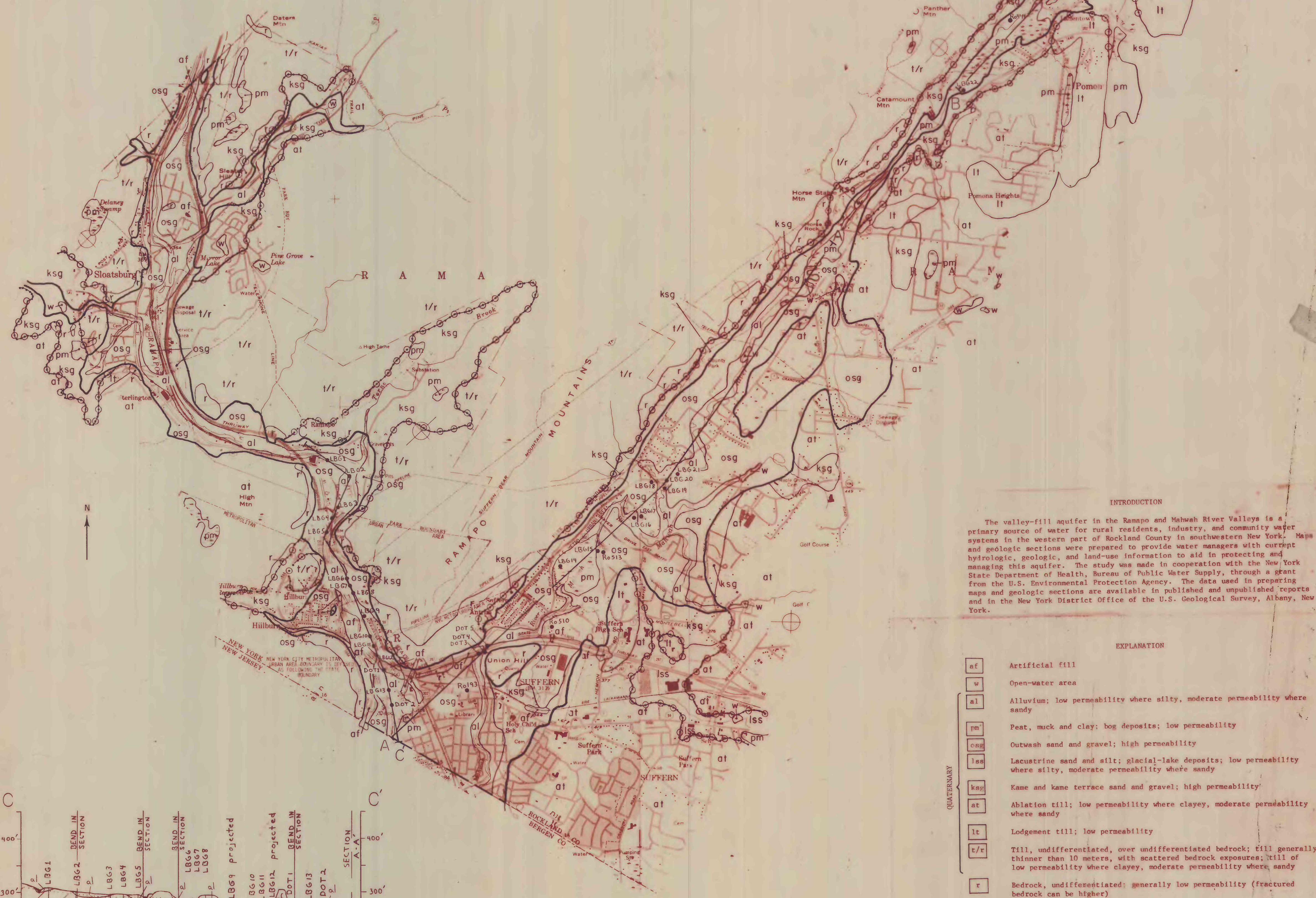


SURFICIAL GEOLOGY AND GEOLOGIC SECTIONS

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INTRODUCTION

The valley-fill aquifer in the Ramapo and Mahwah River Valleys is a primary source of water for rural residents, industry, and community water systems in the western part of Rockland County in southwestern New York. Maps and geologic sections were prepared to provide water managers with current hydrologic, geologic, and land-use information to aid in protecting and managing this aquifer. The study was made in cooperation with the New York State Department of Health, Bureau of Public Water Supply, through a grant from the U.S. Environmental Protection Agency. The data used in preparing maps and geologic sections are available in published and unpublished reports and in the New York District Office of the U.S. Geological Survey, Albany, New York.

EXPLANATION

- | | |
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| af | Artificial fill |
| w | Open-water area |
| al | Alluvium; low permeability where silty, moderate permeability where sandy |
| pm | Peat, muck and clay; bog deposits; low permeability |
| osg | Outwash sand and gravel; high permeability |
| lss | Lacustrine sand and silt; glacial-lake deposits; low permeability where silty, moderate permeability where sandy |
| ksg | Kame and kame terrace sand and gravel; high permeability |
| at | Ablation till; low permeability where clayey, moderate permeability where sandy |
| lt | Lodgement till; low permeability |
| t/r | Till, undifferentiated, over undifferentiated bedrock; till generally thinner than 10 meters, with scattered bedrock exposures; till of low permeability where clayey, moderate permeability where sandy |
| r | Bedrock, undifferentiated; generally low permeability (fractured bedrock can be higher) |

- GEOLOGIC CONTACT—approximately located
- LINE OF SECTION
- AQUIFER BOUNDARY—dashed where full extent of aquifer is not shown
- DRAINAGE DIVIDE (surface-water and ground-water)
- BOUNDARY OF HIGH PERMEABILITY MATERIAL ADJACENT TO THE AQUIFER—aquifer may partly extend into these areas

ADDITIONAL EXPLANATION FOR GEOLOGIC SECTIONS

- t Till, undifferentiated; low permeability where clayey, moderate permeability where sandy
- PRINCIPAL AQUIFER
- WATER TABLE—under nonstressed conditions
- WELL OR TEST HOLE—number from Perlmutter (1959)
- WELL OR TEST HOLE—numbered by Leggett, Brashears, and Graham Inc.
- WELL OR TEST HOLE—number by New York State Department of Transportation

REFERENCES CITED

- Leggett, Brashears, and Graham Inc., unpublished well and test hole data.
- New York State Department of Transportation, unpublished test hole data.
- Perlmutter, N. M., 1959, Geology and ground-water resources of Rockland County, New York, with special emphasis on the Newark group (Triassic): New York State Water Power and Control Commission Bulletin GW-42, 133 p.

