POTENTIOMETRIC SURFACE OF THE LLOYD AQUIFER, LONG ISLAND, NEW YORK, IN JANUARY 1979

by

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Preliminary data on the Lloyd aquifer (Reverent Lloyd Bed: Member of the Maritime Formation) is presented continuously by the U.S. Geological Survey, particularly to Nassau and Suffolk Counties, because this aquifer is a major source of water for public-supply and industrial use. The January 1979 water-level measurements from 41 wells in Nassau County, Nassau County, and western Suffolk County were used to prepare this map.

General trends of the potentiometric surface are similar to those of the upper glacial and magmatic aquifers (Bronfman and Konaklis, 1982a, 1982b), with a depression in the eastern part of the island gradually filling in as the aquifer was used. In the central part of the island, the potentiometric surface is lower than the depression in central Nassau County. The potentiometric surface altitude is from 3 feet above National Geodetic Vertical Datum of 1929 (NGVD) in central Suffolk County to 27 feet below NGVD in central Queens County.

The potentiometric surface of the Lloyd aquifer has changed very little since 1973 (Bronfman, Primavera, and Spinnellia, 1975) except for a 2-foot rise in the north and in the central part of the island and a 6-foot decline in the depression in central Queens County.

In eastern Suffolk County, the Lloyd aquifer contains saline water.

This study was done in cooperation with the Nassau County Department of Public Works, Suffolk County Department of Health Services, Suffolk County Water Authority, New York State Department of Environmental Conservation, and many of the water companies on Long Island.

REFERENCES


ATLANTIC OCEAN

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EXPLANATION

1. Observation well and number. Probes Q, N, and W for Queens, Nassau, and Suffolk Counties, respectively are not shown. Lower number in altitude of potentiometric surface, in feet above or below NGVD of 1929.

2. Refracted waves in vector format. Solid line approximately drawn in actual wave movement. Contours are drawn in 3 feet. Dashes indicate depressions. 3000 ft of 1979.

3. Estimated limit of the Lloyd aquifer.