DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
NEW YORK STATE DEPARTMENT OF HEALTH

OPEN-FILE REPORT 81-1022
(SHEET 4 OF 7)

AQUIFER THICKNESS

By

Todd S. Miller and Thomas D. Brooks

ADJOINS Y-Y

ADJOINS X-X

H O M E R

T L A N D

C O R T L A N D V I L L E

P R E B L E

T U L L Y L A K E

N

SCALE 1:24000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

EXPLANATION

1120 — LINE OF EQUAL SATURATED THICKNESS OF AQUIFER — dashed where approximately located. Contour interval 20 feet, except 40 feet in one area

AREA LACKING SUBSURFACE DATA

AQUIFER BOUNDARY — dashed where full extent of aquifer is not shown

TILL/BEDROCK HILL — surrounded by aquifer

DRAINAGE DIVIDE

BOUNDARY OF MODERATELY PERMEABLE MATERIAL ADJACENT TO AQUIFER — material in these areas may contribute seasonal recharge to the aquifer

A ——— A' LINE OF SECTION — see sheet 2, "Geologic Sections"

WELL SYMBOLS

00316000 — COMMUNITY WATER SYSTEM WELL OR WELL FIELD — number assigned by New York State Department of Health

X — WELL OR TEST HOLE — used for control

CT 11 — Well used to draw "Geologic Sections," sheet 2; with identifier used by Cosner and Harsh (1978) and Buller (1978)

54-49b — Well used to draw "Geologic Sections," sheet 2; with seconds of latitude-longitude from well number assigned by U.S. Geological Survey; b represents borehole log

NOTE

Aquifer thickness represents the estimated saturated thickness of permeable sediments from the water table to the top of the first continuous unit of relatively low permeability. The sediments range from very fine sand to coarse gravel. Generally, from the west and north edge of the city of Cortland, extending east and southeast toward Polkville and northeast of Loring Crossing, a silt-clay layer divides the aquifer into upper and lower units. The altitude of the top of the clay layer is about 1,055 ft. The layer ranges in thickness from 5 ft in the western Cortland area to greater than 50 ft in the eastern Cortland area. All hydrologic information shown pertains to the upper aquifer unit because little information is available for the lower unit. See also sheet 2, "Geologic Sections."

REFERENCE

Cosner, O. J., and Harsh, J. F., 1978, Digital-model simuation of the glacial outwash aquifer, Otter Creek-Dry Creek basin, Cortland County, New York: U.S. Geological Survey Water-Resources Investigations Open-File Report 78-71, 34 p.

LOCATION

Aquifer

Drainage Area

INDEX MAP

BASE FROM NEW YORK STATE DEPARTMENT OF TRANSPORTATION CORTLAND, N.Y., 1974; HOMER, N.Y., 1974; MCGRAW, N.Y., 1974; OTISCO VALLEY, N.Y., 1978; TRUXTON, N.Y., 1974; TULLY, N.Y., 1978. 1:24,000

HYDROLOGY FROM O.J. COSNER AND J.F. HARSH, IN PART(1978); MODIFIED BY T.S. MILLER AND TOM BROOKS(1981)

GEOHYDROLOGY OF THE VALLEY-FILL AQUIFER IN THE CORTLAND-HOMER-PREBLE AREA, CORTLAND AND ONONDAGA COUNTIES, NEW YORK

1981