



DISCUSSION

This map shows the saturated thickness of the water-table aquifer. This aquifer consists of the deposits of the Columbia Formation and those portions of the Magalloway and Eggleston Mt. Laurel formations, and Rancocas Group that are hydraulically connected with the Columbia deposits (see Groot, Demico, and Cherry, 1983). For example, large, saturated thicknesses in the zone trending northeast-southwest near Townsend reflect the addition of the sands of the Rancocas Group to the total thickness of the sands of the overlying Columbia Formation.

Saturated thickness is the thickness of the aquifer throughout which pores are water-filled. The thickness of the aquifer itself depends on the configuration of the land surface and the basal contact of the sand. The upper surface of the saturated zone is the "water table." Large values of saturated thickness indicate greater available drawdown for shallow wells.

The saturated thickness was determined through interpretation of data in publications and files of the Delaware Geological Survey, United States Geological Survey, and the Water Resources Center of the University of Delaware. The thicknesses shown on the map represent the best judgment of the authors based on available data. Detailed investigations of specific sites will require additional data.

REFERENCES

Groot, J. J., Demico, P. M., and Cherry, P. J., 1983, Ground-water availability in southern New Castle County, Delaware: Delaware Geol. Survey Open File Report No. 23, 20 p.

Johnston, R. H., 1973, Hydrology of the Columbia (Platocene) deposits of Delaware: an appraisal of a regional water-table aquifer, Delaware Geol. Survey Bull. 14, 78 p.

Pickett, T. E., 1970, Geology of the Chesapeake and Delaware Canal area, Delaware: Delaware Geol. Survey Geologic Map Series No. 1.

Pickett, T. E. and Spolaric, N., 1971, Geology of the Middletown-Odessa area, Delaware: Delaware Geol. Survey Geologic Map Series No. 2.

Pickett, T. E. and Benson, R. N., 1977, Geology of the Smyrna-Clayton area, Delaware: Delaware Geol. Survey Geologic Map Series No. 3.

Rima, D. R., Cookery, O. J., and Anderson, P. W., 1964, Ground-water resources of southern New Castle County, Delaware: Delaware Geol. Survey Bull. No. 11, 54 p.

Sundstrom, R. W. and Pickett, T. E., 1971, The availability of ground water in New Castle County, Delaware: University of Delaware Water Resources Center, Newark, Delaware, 156 p.

**SATURATED THICKNESS OF THE WATER-TABLE AQUIFER
IN SOUTHERN NEW CASTLE COUNTY, DELAWARE**
by
Johan J. Groot, Peter M. Demico, Philip J. Cherry
1983

Base maps : USGS Topographic Division Elkton (Md.), St. Georges, Delaware City, Cecil (Md.), Middletown, Taylors Bridge, Millington (Md.), Clayton, and Smyrna Quadrangles.

This map is derived from a project funded by the Water Resources Agency for New Castle County.