

GEOLOGICAL SURVEY, WATER RESOURCES DIVISION

WRSIC Abstract

TITLE: POTENTIOMETRIC SURFACE OF THE AQUIA AQUIFER IN SOUTHERN MARYLAND SEPTEMBER 1998

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ABSTRACT:

This report presents a map showing the potentiometric surface of the Aquia aquifer in the Aquia Formation of Paleocene age in Southern Maryland during September 1998. The map was prepared from water-level measurements in 88 wells. The potentiometric surface was above sea level near the northern boundary and outcrop area of the aquifer in a topographically high area of Anne Arundel County, and was below sea level in the remainder of the study area. The hydraulic gradient was directed southeastward toward an extensive cone of depression around well fields at Lexington Park and Solomons Island. Ground-water levels were more than 80 feet below sea level in a 100-square-mile area surrounding the deepest part of the cone of depression. A cone of depression has formed in northern Calvert County due to pumpage at Chesapeake Beach and North Beach. The water level has declined to 44 feet below sea level in this area. The lowest measurement was 159 feet below sea level in one well near the center of the cone of depression at Lexington Park.

