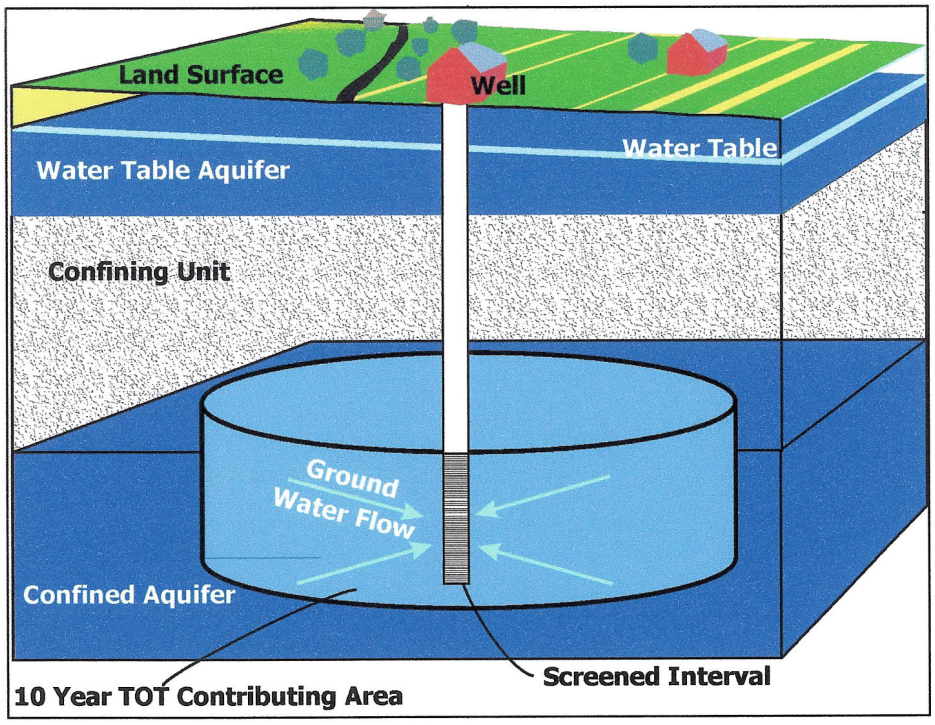
SOURCE WATER ASSESSMENT

FOR THE PINE HILLS SUBDIVISION

CECIL COUNTY, MD



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Water Management Administration
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MDE

SUSCEPTIBILITY SUMMARY

In 1998, Cecil County was awarded a Wellhead Protection (WHP) grant by the Maryland Department of the Environment (MDE) to establish a WHP plan for eight community water systems. The studies were completed in August 2000 by Advanced Land and Water, Inc (ALWI). The 1996 amendments to the Safe Drinking Water Act require the State to conduct source water assessments for all of its public drinking water systems.

The Maryland Department of the Environment Water Supply Program (WSP) has conducted a source water assessment for the Pine Hills ground water supply based on the completed WHP Plan. The required components as described in Maryland's Source Water Assessment Plan (SWAP) are: (1) delineation of an area that contributes water to the source, (2) identification of potential sources of contamination, and (3) determination of the susceptibility of the water supply to contamination. The first two steps have been addressed in the Pine Hills WHP Plan as well as recommendations for protecting the drinking water supply (ALWI, 2000). The WSP is responsible for completing the susceptibility determinations for this system.

The source for the Pine Hills ground water supply is a confined aquifer in the Coastal Plain known as the Patapsco Formation. The system has two wells to obtain their drinking water. The wellhead protection area (WHPA) for the Pine Hills wells was delineated for the Cecil County Office of Planning and Zoning by ALWI using U.S. EPA approved methods specifically designed for each source (ALWI, 2000). For ground water systems, a WHPA is considered to be the source water assessment area.

The delineated WHPA is shown on Figure 1. No potential sources of contamination were reported in the WHP Plan (ALWI, 2000). Well information and water quality data were also reviewed. No detects close to 50% of the maximum contaminant levels (MCLs) have been reported from available sampling data since 1994 for each of the Pine Hills wells. An aerial photograph of the well locations is shown on Figure 2.

The susceptibility analysis of the Pine Hills water supply was based on the review of the water quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that the Pine Hills water supply is not susceptible to inorganic compounds, volatile organic compounds, synthetic organic compounds, radionuclides, or microbiological contaminants.

REFERENCES

Advanced Land and Water, Inc., 2000, Wellhead Protection Plan for the Pine Hills Groundwater Supply System Cecil County, Maryland, 13 p.

Maryland Department of the Environment Water Supply Program, 1999, Maryland's Source Water Assessment Plan, 36 p.

OTHER SOURCES OF DATA

Water Appropriation and Use Permit No. CE1961G002
Water Treatment Plant Inspection Reports
MDE Water Supply Program Oracle Database
Department of Natural Resources 1995 Digital Orthophoto Quarter Quadrangles for North East NE & North East SE
USGS 7.5 Minute Series Topographic Maps, North East & Elkton Quadrangles
Maryland Office of Planning 1997 Cecil County Land Use Map
Maryland Office of Planning 1995 Cecil County Sewerage Coverage Map