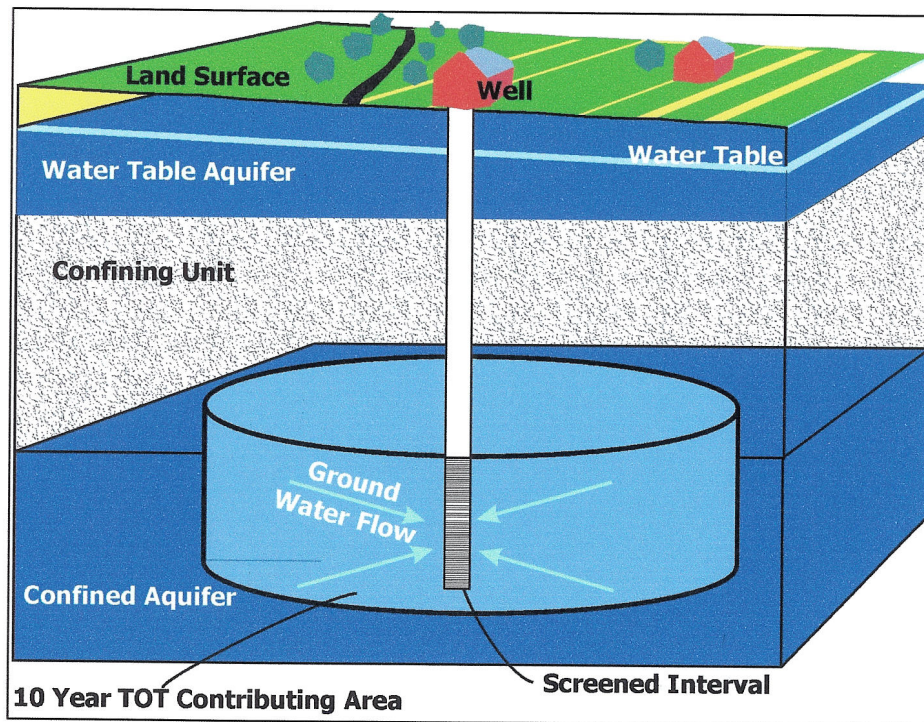


SOURCE WATER ASSESSMENT
FOR THE TOWN OF CECILTON
CECIL COUNTY, MD



Prepared By
Maryland Department of the Environment
Water Management Administration
Water Supply Program
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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 Town of Cecilton's 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 Town of Cecilton's 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 Cecilton ground water supply is a confined aquifer in the Coastal Plain known as the Magothy Formation. The system has two wells to obtain their drinking water. Currently, the water is supplied by Well 2 only. Well 1 is shut down pending rehabilitation or replacement (Figure 1). The wellhead protection area (WHPA) for the Cecilton 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 with potential sources of contamination are shown on Figure 1. The only potential contamination hazard shown within the WHPA is the Maryland State Highway Administration Maintenance Yard located to the south of Well 2 (Figure 1). 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 Cecilton wells. Iron levels above secondary standards are present in the untreated water. Iron is removed at the treatment plant prior to distribution. An aerial photograph of the well locations is shown on Figure 2.

The susceptibility analysis of Cecilton's 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 Cecilton's 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 Cecilton Groundwater Supply System Cecil County, Maryland, 14 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. CE1972G004

Water Treatment Plant Inspection Reports

MDE Water Supply Program Oracle Database

Department of Natural Resources 1995 Digital Orthophoto Quarter Quadrangles for Earleville SE & Cecilton SW

USGS 7.5 Minute Series Topographic Maps, Earleville & Cecilton Quadrangles

Maryland Office of Planning 1997 Cecil County Land Use Map

Maryland Office of Planning 1995 Cecil County Sewerage Coverage Map