The Potomac aquifer is the deepest aquifer in the area and directly overlies the bedrock. Historically, this aquifer was divided into three separate aquifers, termed the Lower, Middle, and Upper Potomac aquifers (Meng and Harsh, 1988). However, recent studies have concluded that the confining units described in previous studies are probably not present, and for purposes of this study, the Potomac aquifer is defined as a single aquifer as described by MacFarland and Bruce (2006).

The top of the Potomac aquifer is encountered at a depth of approximately 1,065 feet below ground surface (bgs), and extends to depths in excess of 3,000 feet. Because of its large lateral extent and coarse grained sediments, this aquifer is one of the predominantly used aquifers in the Virginia Coastal Plain. Capable of providing large quantities of groundwater, its depth and the brackish nature of its water quality in the eastern portion of