

System Name: Pottawatomi Village Drinking Water System
Municipality: Township of Georgian Bluffs
Drinking Water System Category: Large Municipal Residential

The Township of Georgian Bluffs borders the City of Owen Sound to the south, west and north. The Township is located in the northwest part of the County of Grey, entirely in the Grey Sauble Source Protection Area. The Georgian Bay shoreline surrounds the Township to the east and north. The Township has a mix of urban, rural and agricultural land including commercial/industrial development and several defined settlement areas, as well as many recreation areas. In 2011, the population was 10,404, a decrease of 1.0% from 2006. The main towns are Shallow Lake (population 447) and Kilsyth (population 100). Smaller settlement areas include Keady, Rockford, Springmount, Jackson, Balmy Beach, and Clavering.

The Township of Georgian Bluffs is currently operating a total of three separate municipal water supply systems, of which two are groundwater-based and one is surface water-based. The current groundwater-based systems include the Pottawatomi Village Drinking Water System and the Shallow Lake Drinking Water System, both of which are designated as GUDI*. The surface water based system is the East Linton system. No new drinking water systems are planned. A fourth surface water system, Presqu'ile has recently been decommissioned but is included in this report because it appears in the approved Terms of Reference document.

The Pottawatomi Village Drinking Water System is located west of the City of Owen Sound in the Township of Georgian Bluffs. It is comprised of two bedrock wells that were both constructed in 1987: Well No. 1, a capped standby well, and Well No. 2, the current operating well. Well No. 2 is 54.8 metres (m) deep and is cased to a depth of 29.5m. This well is located in a subdivision on the west side of Owen Sound, 600 meters north of Highway 21.

The geology of the Pottawatomi Well No. 2, as derived from well records, indicates a thin 1.8m overburden of permeable sand, underlain by 27.5m of soft clay and rock. Beneath this, the well is drilled into a series of bedrock formations. Presumably, between 29.3 to 38.4m of the limestone Manitoulin formation exists, which is labelled as Blue rock shale in the well log. From 38.4 to 54.8m, the well encounters the blue and red series of the Queenston shale formations. Both of these formations contribute water to the well (Henderson and Paddon, 1987).

A GUDI assessment has not been completed; therefore, this well was given GUDI status. In this well, turbidity levels tend to rise following precipitation events, suggesting pronounced surface water influence (MOE Inspection Report 2005). Also, the distance of the well to the Pottawatomi River is below the GUDI criteria. However, an earlier engineer's report for the Pottawatomi Village Drinking Water System (Gamsby and Mannerow 2001) indicated that there is no significant potential for microbiological contamination.

*GUDI - Well water or groundwater under the direct influence of surface water (GUDI) refers to groundwater supply sources that are hydraulically connected to nearby surface waters, and are thus vulnerable to contamination by pathogens.



Pumphouse



Well