

Town of Oakbank Well Water Quality

September 16, 2010

Aquifer Conditions at Oakbank

Private well owners draw their water from the carbonate rock aquifer which is located about 30 meters (100 feet) below ground surface. The carbonate aquifer is naturally well protected because it is overlain by a thick layer of clay and till soils. These soils act as a barrier for the downward movement of potential sources of contamination that may occur at or near ground surface. Subsequently, under natural conditions the carbonate aquifer would not contain contamination because the thickness of clay and till soils prevents the downward migration of contamination into the aquifer.

Summary of 2010 Bacterial Contamination

On July 9, 2010, the RM of Springfield issued a Well Water Safety Public Notice and again on September 2, 2010, along with The Office of Drinking Water issued an updated notice to the Town of Oakbank due to its concern of the detection and persistence of bacterial contamination in a number of private water wells within the community. Bacterial contamination has been identified in approximately 30% of private well samples collected over the summer period. Significant contamination of well water samples has been identified within areas of Main Street, Balsam Crescent and Cypress Avenue.

The bacterial contamination observed within Oakbank is not natural but is due to contaminated water entering the aquifer that supplies water to private wells. Manitoba Water Stewardship has undertaken a review of the well water sampling results and inspected a number of wells to help identify the source of the bacterial contamination and the pathway for the contamination to enter the aquifer. The primary source and pathway has been identified as the drainage and/or seepage of surface water into wells completed in well pits. Under these conditions there is potential not only to contaminate the well contained within the well pit itself but also neighboring wells. Some well water samples that had tested positive for bacterial contamination are also believed to have been the result of improper sample collection.

More recent sampling results indicate that the well water quality is improving. This can be attributed to the disinfection of wells, proper sampling of wells which had previously been improperly sampled and recent repairs or upgrades to problem wells.

Currently efforts are underway to communicate information to private well owners on identifying well problems that may contribute to the local bacterial contamination, proper well construction and maintenance of wells and proper methods for well water testing.