

PROTECTING GROUNDWATER QUALITY IN THE SWAN LAKE WATERSHED



To address land and water concerns, the Swan Lake Watershed Conservation District completed the Swan Lake Integrated Watershed Management Plan (IWMP). Protection of groundwater quality is one of the three key priorities in this plan.

Why is groundwater important?

Groundwater is a vital resource to all stakeholders in the Swan Lake Watershed and is the primary source of rural, urban, municipal and industrial water supply in the area. Located below the surface, groundwater is found in permeable rock, known as aquifers.

Three aquifers stretch across the Swan Lake Watershed:

The Swan River Sandstone Aquifer

- underlies most of the agricultural portion of the watershed and is the most widely used aquifer for water supply.

The Carbonate Aquifer

- mostly underlies Swan Lake and surrounding area and generally has poor water availability and quality.

Sand and gravel aquifers

- are widely distributed throughout the watershed where supply and quality varies.

What affects groundwater quality?

Groundwater quality is measured in terms of suitability for drinking water, irrigation and domestic purposes. Certain parameters, including elevated total dissolved solids, sodium, sulphate and chloride can exceed maximum acceptable concentrations in the watershed for aesthetic and drinking water purposes. Regular well-water testing will help to identify any drinking water constraints present.

Protecting your well

Well maintenance is a key factor in protecting your groundwater supply. Poorly maintained, shallow, or abandoned wells may be more susceptible to contamination and can also provide a direct conduit for groundwater contamination. Sealing abandoned wells helps in reducing potential contamination to the aquifer.

Properly constructed and maintained wells can provide safe drinking water for several years.

The Swan Lake Watershed Conservation District assists well owners in proper well maintenance, private well water testing and assessments.

Groundwater programming offered by Swan Lake Watershed Conservation District to residents:

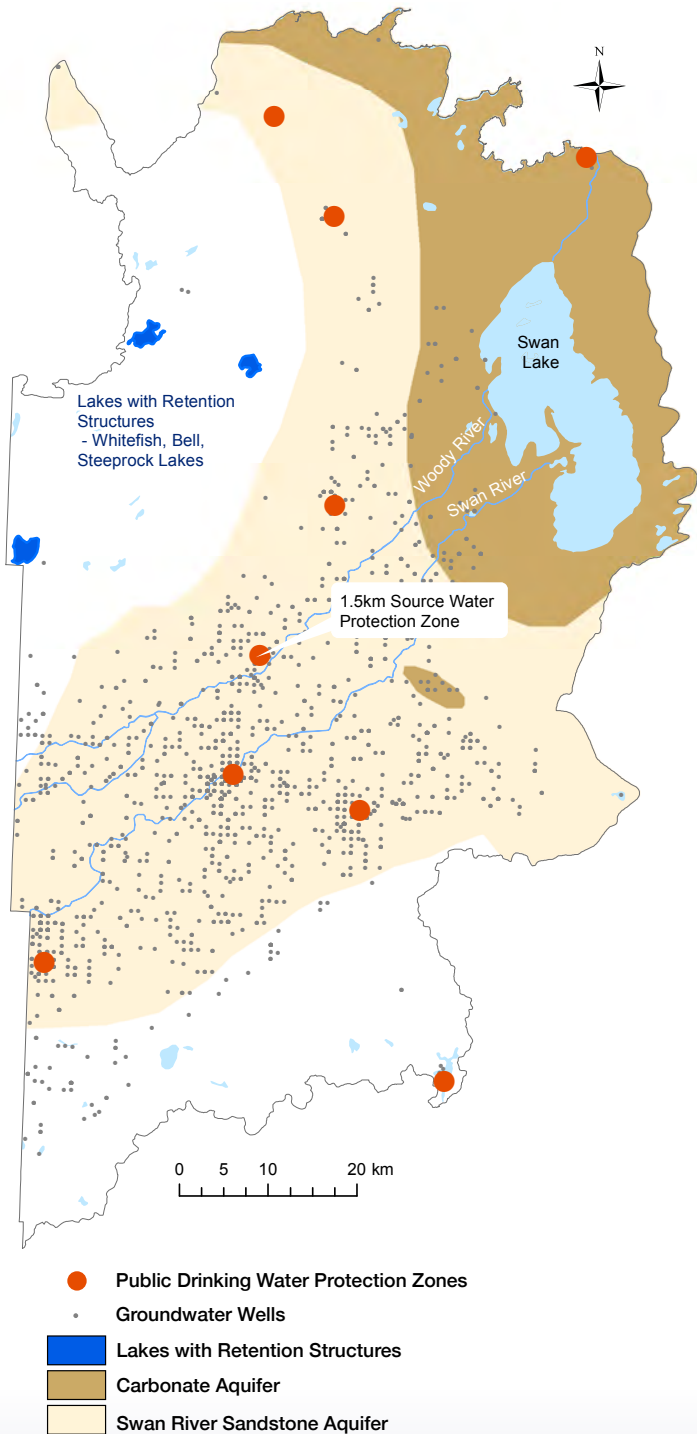
Abandoned well sealing
Private well testing
Private well assessments
Well shock chlorination

Groundwater is the main source of drinking water in the watershed. The Swan Lake Watershed Conservation District promotes activities and programming to protect essential groundwater sources.



GOAL

PROTECT GROUNDWATER QUALITY AND QUANTITY



What are the key groundwater protection actions for the watershed?

- Ensure existing surface water retention structures are stable and maintained for adequate aquifer recharge, flood protection and recreation needs
- Develop an abandoned well inventory
- Seal all known abandoned wells
- Identify and protect natural spring water for a drinking water source at Wuskwi Sipiik First Nation
- Provide financial assistance for groundwater quality testing, well head assessments and private well sealing
- Implement all actions of the Source Water Protection Plan

Source Water Protection

As part of the planning process, a source water protection assessment was conducted for six public drinking water sources in the watershed. Recommendations were developed for each of the six sites to address threats to public drinking water sources.

A full listing of all groundwater actions and site-specific recommendations of the Source Water Assessment are located in the Swan Lake Integrated Watershed Management Plan.



For more information on groundwater quality programming, or for a copy of the complete Swan Lake Integrated Watershed Management Plan, please contact the Swan Lake Watershed Conservation District:

Swan Lake Watershed Conservation District

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