

Working Today For a Healthy Tomorrow

Groundwater, or water that flows underground in the spaces between rocks, soil or in crevices and cracks in rock, is the primary source of water supplies in the Interlake region of Manitoba. Groundwater is integral to the hydrologic system, and plays a vital role in the functioning of ecosystems and biological habitat. Maintaining groundwater quality is directly linked to the health and prosperity of our communities. Risks to groundwater quality in the Interlake region of Manitoba include leaks and spills from industry, agriculture and lagoons, seepage from septic systems in sensitive groundwater recharge areas and bacterial contamination from improperly constructed wells or unsealed abandoned wells.



An old-fashioned hand-pump and well located south of Fraserwood, prior to sealing by the EICD.

The East Interlake Conservation District (EICD) formed as a partnership between 15 member municipalities, communities and the Province of Manitoba. It is committed to developing relevant programs for residents of the Interlake. Two programs developed as part of our groundwater protection program include: abandoned well sealing (applications available at our Gimli office or www.eicd.ca), and a well inventory, described below.

The EICD is collecting information about the location and condition of wells to better understand risks to the source of our drinking water. EICD representatives will be knocking on doors and asking watershed residents to volunteer information about the status of their wells currently in use. EICD representatives will record information about the age, use and condition of the well, as well as collect a water sample which will be analyzed for water quality parameters such as conductivity, turbidity and bacteria. The EICD will cover all testing costs. This program provides an opportunity for watershed residents to learn about the condition of their existing well, as well as help the EICD to create programs that meet the needs of watershed residents and develop a 'source water protection plan,' or a plan which outlines steps to ensure the source of our drinking water is safe for years to come.

Groundwater is integral to the health and vitality of our Interlake communities. We appreciate your help in protecting this valuable resource. Please contact the EICD office at 642-7578 with any questions or feel free to visit us at our office in Gimli, located at the corner of Highway 9 and Colville Rd.

What happens to your samples?

- Samples will be sent to ALS laboratories in Winnipeg, MB
- They will then be tested for nitrate and 2 types of bacteria (total Coliform and *E. coli*)
- Results will be sent to you, Manitoba Water Stewardship and the EICD
- As per the Drinking Water Safety Act, ALS Laboratories will contact you if the results are deemed 'high'

What do your results mean?

- Nitrates: Nitrate (NO₃) is a compound of nitrogen and oxygen found in many food items in your everyday diet.
 - Although low levels of nitrates may occur naturally in water, sometimes higher levels can be found and are potentially dangerous to infants. High nitrate levels in drinking water pose a risk to infants because they may cause methemoglobinemia, a condition known as "blue baby."
 - Elevated nitrate levels are often associated with poorly constructed or improperly located wells.
- Coliform bacteria: are the commonly-used bacterial indicator of sanitary quality of foods and water. Coliforms are abundant in the feces of warm-blooded animals, but can also be found in the aquatic environment, in soil and on vegetation. In most instances, coliforms themselves are not the cause of sickness, but they are easy to culture and their presence is used to indicate that other pathogenic organisms of fecal origin may be present.
 - If only total coliform bacteria are detected in drinking water, the source is probably environmental. Fecal contamination is not likely. However, if environmental contamination can enter the system, there may also be a way for pathogens to enter the system. Therefore, it is important to find the source and resolve the problem.
 - *E. coli* is a sub-group of the fecal coliform group. Most *E. coli* bacteria are harmless and are found in great quantities in the intestines of people and warm-blooded animals. Some strains, however, can cause illness. The presence of *E. coli* in a drinking water sample almost always indicates recent fecal contamination – meaning there is a greater risk that pathogens are present.

Test Parameters	Manitoba drinking water quality standards
Total coliform	<1 per 100ml
<i>Escherichia. coli</i>	<1 per 100ml
Nitrate+Nitrite N	10 mg/L