

## Well Water Related Information

The fact sheets and guidelines referenced in this document are available as follows:

- Manitoba's Office of Drinking Water by calling 204-945-5762
- Springfield Public Works office at 27 055 Oakwood Road.
- Manitoba Water Stewardship web site at [http://www.gov.mb.ca/waterstewardship/odw/public-info/fact\\_sheets/index.html](http://www.gov.mb.ca/waterstewardship/odw/public-info/fact_sheets/index.html)

### Responsibility of the Well Owner

As a private well owner, you are responsible for ensuring your well and water distribution system are properly constructed and maintained and that your well provides water that is safe for domestic purposes. In many cases, contamination is a direct result of improper construction, maintenance or protection of the well itself. Wells and water distribution systems also deteriorate over time and at some point will need repair or replacement.

As a well owner, there are a number of actions you can take to help prevent contamination of your well water. In cases where professional assistance is needed to determine the condition of a well or to complete any water well related work, hire only qualified and experienced personnel. Professional water well services are available from licensed water well contractors in Manitoba. Names and locations are listed in the yellow pages under Water Well Drilling & Service.

Everyone requires safe drinking water, and everyone has a responsibility to ensure the water within the community of Oakbank remains safe for present and future use. Residents are encouraged to report improperly constructed or maintained wells and abandoned wells by contacting Groundwater Management at 945-7425 in Winnipeg or the Rural Municipality of Springfield Public Works Department at 444-2241.

## How to Prevent Contamination of Your Well Water

To help ensure your well condition is not contributing to unsafe water, the well should be inspected on a regular basis to help identify any problems. The following checklist can be used to help identify and prevent contamination of your well water.

- ❑ Know where your well is located. Common sense tells us that the closer a well is to a source of contamination, the greater the risk of contaminating the well's water supply.
- ❑ Know the details of your well construction – check the Well Driller's Report.
  - If you are the original well owner, you should have been provided with a Well Driller's Report when the well was drilled. The report provides useful information on the soil conditions and construction details of the well. If you did not receive a report or are not the original well owner, this information may be available by contacting Groundwater Management at 945-7425 in Winnipeg.
- ❑ Identify and keep all sources of contamination away from your well and the area surrounding your well. The most immediate threats to the safety of your well water are usually nearby – in your own yard. Consider the following:
  - Prevent surface water or other run-off from draining into or ponding in the area of your well.
  - Ensure water from eave trough drain pipes are directed away from the area of your well.
  - Follow label instructions and use chemicals such as fertilizers and pesticides at a safe distance from your well. Waste and chemical products should be stored in a secure location away from the area of the well. Disposal of any products should be done in an environmentally friendly manner. Water wells should not act as a means for disposal.
  - Ensure pets do not have access to your well or the area surrounding it. Pet waste can be a source of E. coli contamination.
- ❑ Extend the well casing above grade, if it is buried or located within a well pit. For best protection, it is recommended the well casing extends 0.30 to 0.45 meters (12 to 18 inches) above grade and a proper pitless adapter is used to provide a sanitary hook-up of water lines. Consider the following:
  - Prior to about the mid-1980's, well pits were commonly used to protect water line connections from freezing. However, the practice of constructing well pits is no longer considered safe because they often fill with surface water and debris, leading to well water contamination.
  - Pitless adapters are commercially manufactured underground assemblies which provide a frost-free connection and water tight seal where the water line passes through the wall of the well casing. It provides a sanitary connection by preventing the entrance of contaminants from surface sources and permits access to the equipment within the well without excavation or disruption of the earth.

- For information on upgrading of wells completed in well pits, extension of well casings, drainage problems around wells and well lids or caps, refer to the 'Guidelines for Upgrading Water Wells'.
- Inspect your well at least once a year. Early spring, just after the snow has melted is a good time. If removing the well cap, be aware of electrical wires that may extend from the top of the casing down to a submersible pump. Consider the following items during inspection – repair or replace any parts or equipment as needed.
  - Check the well cap or well seal for signs of cracking or damage. The cap or seal should be watertight, vermin resistant and sized properly to prevent contaminants or foreign materials from entering the well. Replace a damaged or poor fitting cap or seal.
  - Look for any external signs of damage, cracking or dislocation of your well casing. Look for signs of surface water or run-off seeping or running freely into the well including seepage through cracks or stains on the inside of the casing.
  - If a submersible pump is being used, ensure that the electrical conduit is securely attached to the well cap to prevent foreign materials from entering the well.
  - Look for problems with the sealant (grout) used to fill the space between the drilled hole and the well casing. A depression in the ground around the edge of the casing can indicate that the sealant has shrunk, collapsed, or cracked. Cracking and gaps may allow surface water or run-off to move down the outside of the well casing and contaminate your well water. If cracks or gaps have developed, fill with clean earth, preferably clay,
  - Watch for settling of ground around the outside of the well casing and above any underground piping. The earth in these areas often settles after the installation and hook-up of the well. If settlement has occurred, mound up the ground with clean earth, preferably clay, to promote drainage of surface water away from the well. If possible, a permanent grassed buffer should also be maintained around the well.
- Disinfect your well after any repairs to the well or if the pump has been removed and re-installed in the well.
  - For step by step instructions on disinfecting your water well, refer to the fact sheet 'How Do I Disinfect My Well?'
- When a well is no longer in use, seal it properly. Do not keep an old well 'just in case it's needed' as it can become a source of contamination for your own water supply as well as neighbouring wells.
  - Information on sealing abandoned wells is provided in the 'Guide for Sealing Abandoned Water Wells in Manitoba'.
  - The Cooks Creek Conservation District currently has a program for properly sealing abandoned wells. The cost to the private property owner is currently \$105.00.

## Well Water Testing

It is the well owner's responsibility for the collection and testing of well water samples. To help ensure your well water is safe for consumption, it is recommended you:

- Test it regularly for bacteria – at least once a year, and more often if problems are suspected. Well water should also be tested: after well servicing; whenever a change in taste, odour or colour is noticed; whenever you suspect illness may be caused by the water; whenever the risk of contamination increases due to environmental conditions such as heavy rains and run-off or flooding. **If you are unsure your water is safe, it is recommended as a precautionary measure to boil your water.**

Consider the following:

- The Province of Manitoba subsidizes the analysis costs associated with one bacteriological sample per year. The current cost to homeowners for the testing is \$8.03. In the event that the analysis indicates that the water sample is contaminated, the province covers 100% of the analytical cost for an additional sample (re-sample) to confirm the initial sample results. Homeowners are responsible for any costs associated with transporting the samples to the lab.
- The Province of Manitoba has contracted with Maxxam Analytics for its Bacteriological Subsidy Program.

Maxxam Analytics  
Unit D, 675 Berry Street  
Winnipeg MB  
Canada R3H 1A7  
Phone: +1 (204) 772 7276  
Toll Free: +1 (866) 800 6208  
Fax: +1 (204) 772 2386

- Other accredited laboratories can also be used for bacterial testing, however well owners are responsible for payment of the full cost of analysis. Other nearby laboratories include:

ALS Laboratory Group  
1329 Niakwa Road East, unit 12.  
255-9720

Current cost to homeowners for the testing is approximately \$25.00.

- Contact the testing laboratory directly for sample containers, instructions for collecting samples, and the form that must accompany the sample.
- Bottles and paper work for bacterial testing can also be picked up from Springfield Public Works office during regular business hours (closed noon to 12:30).
- For step by step instructions on sampling your well for bacterial contamination, refer to the fact sheet 'How Do I Test My Well for Bacterial Contamination?'

- The Rural Municipality of Springfield does not receive the results of private well water testing, as it is private information. Therefore, any questions related to the laboratory results need to be directed to the laboratory that conducted the testing.
- Test for nitrate-nitrogen if someone using the well water is under one year of age, is a nursing mother, is pregnant, or is planning a pregnancy. For more information on nitrates in water:
  - Refer to the fact sheet ‘Nitrate in Manitoba Well Water’.
- If you have any questions regarding well water testing, please contact your local Drinking Water Officer, the Manitoba Office of Drinking Water at 204-945-5762, or Health Links-Info Santé at 204-788-8200 or toll free at 1-888-315-9257.

### **Considerations for a Positive Bacterial Test**

If your well water tests positive for bacterial contamination, consider the following:

- Is your well constructed or maintained such that a source of contaminated water and a pathway for the contamination to enter the well exists?
  - Under these conditions, the well problem must be determined and fixed in order to eliminate the source and pathway of contamination into your well. Following any repair of the well it should be disinfected. The well water should be tested for bacteriological contamination no sooner than one week after the disinfection procedure.
- Was the well water sample collected according to prescribed well sampling guidelines?
  - If not, you may have a false positive for bacterial contamination. In this case, it is recommended a proper well water sample be collected and tested to determine if bacterial contamination is present.
- If it appears that there is no identifiable well construction or maintenance issue with your well, and that you have collected a well water sample according to the well sampling guidelines, then well disinfection is recommended.
  - Refer to the fact sheet ‘How Do I Disinfect My Well?’ The well water should be tested for bacteriological contamination no sooner than one week after the disinfection procedure.