

Flooded Wells

After flooding, well owners should take actions to:

- make their water supplies safe for consumption; and
- protect the groundwater resource used as a source of drinking water.

When a water supply well has been affected by flood waters, the water within a well may be contaminated with waterborne pathogens (germs) that can cause serious illness in humans and pets. The water in the well can also be contaminated by debris, fuel oil or other chemical products released during the flood.

During flooding, the ground around the well may also erode, possibly creating unsafe conditions or a pathway for surface water and contaminants to enter the well. In other cases, the electrical wires attached to the pump in a well may be damaged risking electrocution. Therefore, well owners should exercise extreme caution approaching their wells, especially older, large diameter dug wells after a flood.

If a well owner believes that the well has been contaminated by flood water, the well owner should discontinue using the water in the well for drinking and cooking purposes and use potable water from another source.

Under the Wells Regulation [R.R.O. 1990, Regulation 903 (Wells) as amended made under the Ontario Water Resources Act, R.S.O. 1990, c. O. 40]:

- the well owner must maintain the well to prevent the entry of surface water and other foreign materials.
- if laboratory analysis of water samples from the well show the well is producing water that is not potable, then the well owner must contact the local Medical Officer of Health (MOH) and follow his or her advice or immediately abandon the well. As an alternative to contacting the MOH, the well owner could contact the Director appointed under the Wells Regulation at 1-888-396-9355 (WELL) for written consent not to abandon the well.

To bring a well back into service safely, a well owner should consider contacting:

- a qualified registered professional (e.g. professional engineer or professional geoscientist) or a licensed well driller to evaluate and service a drilled well;
- a qualified registered professional or a licensed well digger to evaluate and service a dug well;
- a licensed pump installer and, if necessary a certified electrician, to evaluate and service the well pump.

Note - *A residential private well owner can work on and disinfect his or her own well. However, there are some safety considerations when working on a well and many technical steps needed to properly clean and disinfect a well. Therefore, the well owner should consider retaining the services of a qualified professional or qualified technician as noted above.*

If the well structure, pump and surrounding ground surface have been repaired or are deemed sound, the water in the well should be pumped and disinfected by a licensed well technician as outlined in Chapter 8: *Well Disinfection of the Water Supply Wells – Requirements and Best Management Practices* manual published by the Ministry of the Environment and Climate Change, revised 2015.

The Well Disinfection chapter of the manual provides the following steps to properly disinfect a well:

- Initial steps which include:
 - following sanitary practices
 - removing any debris from a well
- Thorough flushing of the well
- Treatment with a properly prepared chlorine solution, i.e. “shock” chlorination
- Discharge of heavily chlorinated water from the well and the plumbing
- Collection and analysis of water samples for indicator bacterial parameters

The Well Disinfection chapter of the manual is available at the following website:

<https://dr6j45jk9xcmk.cloudfront.net/documents/4965/h-wwbmp-chapter-8-well-disinfection-april-2015.pdf>.

A synopsis of the Well Disinfection chapter for interested well owners is provided in the Wells Regulation – Well Disinfection 2011 technical bulletin and is available at the following website: <https://www.ontario.ca/page/technical-bulletin-wells-disinfection>.

Information on proper well maintenance, and other well related topics, is available on the Ontario.ca website at: <https://www.ontario.ca/page/wells-your-property>.