

Flooding

Floods occur in Canada each year. Although flash floods do occur, usually weather forecasts can predict rain or quick thaw events and there is usually an opportunity to take action to protect yourself and your property. When floods do occur, there are many hazards and challenges that accompany them. Flood water can impact the quality and safety of our water and food supply, and expose our families to hazards we may not be aware of.

Water Quality Issues:

Flood water is normally contaminated with high levels of bacteria, including pathogenic bacteria from septic tanks and farm fields. When flood water enters your well it contaminates your well water supply. Therefore your water may not be safe and should not be used for drinking, preparing food (including making ice and juice or drinks from frozen concentrate), brushing of teeth, and washing dishes. In some cases, heavily contaminated water may not be suitable for bathing infants and small children.

Flood water may also contain various pesticides and chemicals found in garages, households and businesses. If containers holding these items leak or spill during the flood, they may create hazardous conditions not only in your drinking water, but also in the environment around you. If your water supply comes from a well and the power is off, you will not have access to water, and any equipment treating your water will not work, so the water may not be safe for use. Insufficient quantities of safe water may create challenges for every day needs including food preparation, hand washing, personal hygiene, diapering small children and caring for pets. Challenges in performing these day to day activities can increase the chances of your family becoming ill.

- Keep an alternate supply of safe water on hand. Consider what you use water for and the number of people and pets in your family. Be sure to rotate the supply to keep it fresh.
- Boiling your water at a rolling boil for one minute will destroy bacteria in the water; however if pesticides and chemicals have contaminated the flood water that contaminated your well, boiling may concentrate these harmful contaminants, so a safe alternate source should be used.
- After the flood, wells need to be disinfected by shocking them with chlorine. Your health unit can provide disinfection instructions. **The well water must be tested before use.** Ensure you collect and submit at least three samples taken a week apart to ensure your water supply is stable and bacteriologically safe. A sample for chemical parameters may need to be taken in addition to the bacteriological sample.

Food Safety Issues:

Floods often result in power outages. When refrigerators and freezers do not work, food temperatures may rise to levels that support the growth of bacteria. Prolonged power outages may result in your food becoming unsafe to eat.

- Discard foods that have been soaked with flood water (even slight contamination should be a concern).
- Discard foods that have not been stored at proper temperatures i.e. perishable foods need to be stored at 4°C or lower.
- Canned foods can be salvaged if they have not been damaged. Remove labels and disinfect cans that have come into contact with flood water in a mild bleach and water solution. Only use cans that are water tight (re-label after cleaning).
- Have foods on hand that do not require special storage or preparation and are ready to eat.

Safety Issues:

Flood water can conceal many hazardous situations. Many submerged items with sharp edges may not be seen and can cause injury. Fast moving flood waters pose a drowning risk, even for skilled swimmers due to the unexpected currents and submerged hazards. When the power goes out, other safety hazards may arise. Smoke and carbon monoxide detectors that run on electricity may not function properly. Fall and trip hazards increase when stairwells are not adequately lit. If you use candles for back up light, these need to be handled with care so as not to increase the risk of fire.

- Keep your family safe by keeping them out of the flood water.
 - If you use propane or gas powered generators or heaters during the power outage ensure these are vented to the outside to ensure your family is not overcome by carbon monoxide fumes.
 - Flood water entering homes and basements may come into contact with electrical outlets, panel boxes, and various appliances that may have an electrical component to them. Water conducts electricity so do not enter areas where electrical systems have been affected as you may be electrocuted. Always wait for clearance from the electrical authority before entering these areas.
 - Building materials, clothing, furniture etc. that have been exposed to flood waters are likely contaminated and can support the growth of mold. While some items can be salvaged, cleaned and disinfected, others may need to be discarded. Where possible seek professional advice during clean up. If you attempt to salvage and clean on your own, make sure you wear protective clothing, a mask and gloves.
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Before the Flood:

- Monitor weather and take warnings seriously.
- Have an emergency kit stocked and ready to go. Be sure to include important documents, cash and medications.
- Move items likely to be impacted by a flood to higher areas where possible.
- Ensure chemicals, cleaners, gas cans etc are stored in such a manner as not to contaminate flood water.
- Have extra supplies of water and food available that you can prepare without electricity.
- Maintain your home to keep flood water out.
- Ensure drainage ditches etc. around your home are clear and can function during periods of heavy rain.
- Label the shut off valves and the direction to turn off the gas, water, power etc. If you must leave your home due to rising flood waters, turn off the power, gas etc.
- Have your vehicle filled up and ready to go.
- Ensure you have a supply of fuel for generators and pumps. Store fuel in a manner so as not to contaminate flood water.