



Using Well Water after a Flood

YOUR SAFETY COMES FIRST

Do not go into any area that was flooded until local authorities say it is safe.

For more safety information, visit:
<https://emergencyinfo.novascotia.ca/floods>

You will find resources such as:

- *After a Flood: Sewage*
- *Safety Tips: Floods*
- *After a Flood: Keep in mind indoor air quality*

After a flood, it is normal to worry about the safety of your home, your property, and your drinking water. Floodwater can carry bacteria and chemicals. These can get into your well and make the water unsafe to use.

This guide explains:

- How floods can affect your well
- What to do before you use your well water again
- What you might see after a flood and what to do
- Understanding your test results and where to get more information

Every property and well is different. Even if your well does not look affected, it is still important to take safety steps before using your water again.

How Floods Can Affect Your Well

Floods can affect the quality and safety of your well water in the following ways.

- If floodwater rose above the top of the well, it could have allowed contaminated water with bacteria and chemicals to enter the well.
- If floodwater entered the part of your home where your water system equipment is located (such as plumbing lines, electrical wiring, pressure tank, pump switch, above-ground pump, or treatment system), it could have damaged the electrical components of these items, posing a safety risk. Submersible pumps inside most drilled wells are designed to work underwater and are usually not damaged due to flooding.

Before You Use Your Well Water

If your water system may have been affected by flooding, **do not use your well water** until you know it is safe. Use **bottled water** or **water from another safe source** for:



- | | |
|-----------------------------------|------------------------|
| • Drinking | • Brushing teeth |
| • Preparing food and baby formula | • Giving water to pets |
| • Washing fruits and vegetables | • Bathing |
| • Making juice and ice cubes | |

Before You Take Any Actions

Before you start any repairs or water testing, consider the following:

If you have insurance: Contact your insurance provider first. Ask whether the cost of repairs, cleanup, or water testing is covered.

If you are not insured: Check with local officials or community organizations to see what financial support may be available.

What to Do Next

The next section explains common flood situations and the actions to take for each one. Review the tables below to help determine which situation best matches what you see on your property, and complete the recommended actions.

Common flood situations covered are:

1. [Catastrophic Flooding](#)
2. [Well was Covered by Floodwater](#)
3. [Water System Equipment was Flooded](#)
4. [Flooding Occurred Nearby but Did Not Reach the Well](#)

What you Might See and What to Do

Below are common flood situations and the actions you should take to restore your water system.

Situation 1: Catastrophic Flooding

What you might see	What to do
▶ Active flash flood or raging rivers impacted your property ▶ Destruction or extensive structural damage to surface well caps, drilled well casing, dug well crocks/casing and well seals ▶ Erosion and structural damage to buried water supply and related electrical lines ▶ Signs of contamination from fuel oil tank releases, septic system washouts from your own property, or neighbouring properties ▶ Well damage results in direct floodwater entering into well boreholes	1. Clean up any flood-related damage on your property that could affect your water system. You may choose to hire a qualified professional. This includes damage to your septic system and any chemical or fuel storage tanks. Any chemical spills (such as hydrocarbons) must be cleaned up following the Nova Scotia <i>Contaminated Sites Regulations</i> https://novascotia.ca/nse/contaminatedsites/. 2. Pump out your well completely to remove potentially contaminated water and complete any repairs required. Hire a certified well contractor to do this. You can find a list of well drillers, diggers and pump installers at: https://novascotia.ca/nse/water/wellcontractors.asp. 3. Disinfect your well and plumbing. Bypass any water treatment devices first. Then: a. Let a cold-water faucet run for at least 5 minutes or until the water runs noticeably colder. b. Disinfect your well following these instructions: https://novascotia.ca/nse/water/docs/DisinfectWaterWell.pdf 4. Service any water treatment devices before using them, following the manufacturer's instructions. 5. Find a water testing lab in your area: https://novascotia.ca/nse/water/waterlabs.asp, or www.nshealth.ca/laboratory-services/water-testing 6. Test your water for bacteria (presence/absence of total coliform and <i>E.coli</i>) following the instructions provided by the lab or on our website at https://novascotia.ca/nse/water/sample_micro.asp. 7. Test your water for the following chemicals following the instructions provided by the lab or on our website at https://novascotia.ca/nse/water/sample_chemical.asp. • General chemistry • Metals *If there are signs of a chemical spill, contact your regional Nova Scotia Environment and Climate Change (ECC) office as additional sampling and remediation may be required.

Situation 2: Well was Covered by Floodwater

What you might see	What actions you should take
▶ Flood waters that have risen to the base of well casings immediately at drilled or dug well locations ▶ Flood waters are in contact with visible well casing, or in worst cases, completely submerging well heads ▶ Signs of contamination from fuel oil tank releases, septic system washouts from your own property, or neighbouring properties	1. Clean up any flood-related damage on your property that could affect your water system. You may choose to hire a qualified professional. This includes damage to your septic system and any chemical or fuel storage tanks. Any chemical spills (such as hydrocarbons) must be cleaned up following the Nova Scotia <i>Contaminated Sites Regulations</i> https://novascotia.ca/nse/contaminatedsites/. For dug wells or drilled wells with erosion or damaged well caps: a. Pump out your well completely to remove potentially contaminated water and complete any required repairs. Hire a certified well contractor to do this. You can find a list of well drillers, diggers and pump installers at: https://novascotia.ca/nse/water/wellcontractors.asp. b. Disinfect your well and plumbing. Bypass any water treatment devices first. Then: - Let a cold-water faucet run for at least 5 minutes or until the water runs noticeably colder. - Disinfect your well following these instructions: https://novascotia.ca/nse/water/docs/DisinfectWaterWell.pdf For drilled wells with intact well cap and no signs of erosion: a. Pump down thoroughly. Hire a certified well contractor to do this. You can find a list of well drillers, diggers and pump installers at: https://novascotia.ca/nse/water/wellcontractors.asp. 2. Service any water treatment devices before using them, following the manufacturer's instructions. 5. Find a water testing lab in your area: https://novascotia.ca/nse/water/waterlabs.asp, or www.nshealth.ca/laboratory-services/water-testing 6. Test your water for bacteria (presence/absence of total coliform and <i>E.coli</i>) following the instructions provided by the lab or on our website at https://novascotia.ca/nse/water/sample_micro.asp. 7. Test your water for the following chemicals following the instructions provided by the lab or on our website at https://novascotia.ca/nse/water/sample_chemical.asp. • General chemistry • Metals *If there are signs of a chemical spill, contact your regional Nova Scotia Environment and Climate Change (ECC) office as additional sampling and remediation may be required.

Situation 3: Water System Equipment was Flooded

What you might see	What actions you should take
▶ Passive flooding of the water supply system infrastructure, not including wells (Including pressure tanks, surface well pumps, pressure switches and water treatment tanks) ▶ Submergence of pressure tanks, surface well pumps, electrical pressure switches, plumbing lines and water treatment tanks. ▶ Flooding may cause contamination from other basement equipment such as disrupted fuel oil tanks, common household chemicals (paint cans, fuel storage, etc.) or sanitary drains ▶ You may have experienced a power outage, potentially resulting in complete pressure loss in your water supply system	1. Clean up any flood-related damage on your property that could affect your water system. You may choose to hire a qualified professional. This includes damage to your septic system and any chemical or fuel storage tanks. Any chemical spills (such as hydrocarbons) must be cleaned up following the Nova Scotia <i>Contaminated Sites Regulations</i> https://novascotia.ca/nse/contaminatedsites/. 2. Repair your water system as required and service any water treatment devices before using them, following the manufacturer's instructions. 3. Find a water testing lab in your area: https://novascotia.ca/nse/water/waterlabs.asp, or www.nshealth.ca/laboratory-services/water-testing 4. Test your water for bacteria (presence/absence of total coliform and <i>E.coli</i>) following the instructions provided by the lab or on our website at https://novascotia.ca/nse/water/sample_micro.asp. 5. Test your water for the following chemicals following the instructions provided by the lab or on our website at https://novascotia.ca/nse/water/sample_chemical.asp. • General chemistry • Metals *If there are signs of a chemical spill, contact your regional Nova Scotia Environment and Climate Change (ECC) office as additional sampling and remediation may be required.

Situation 4: Flooding Occurred Nearby but Did Not Reach the Well

What you might see	What actions you should take
► Flood waters are NOT in direct contact with the water well surface location, above underground supply lines, or otherwise affecting water supply system infrastructure ► You have experienced a power outage, potentially resulting in complete pressure loss in your water supply system	If there is evidence that your water system lost pressure (such as sputtering faucets or air escaping from fixtures): 1. Once pressure is restored, let a cold-water faucet run for at least 5 minutes or until the water runs noticeably colder. 2. Find a water testing lab in your area: https://novascotia.ca/nse/water/waterlabs.asp, or www.nshealth.ca/laboratory-services/water-testing 3. Test your water for bacteria (presence/absence of total coliform and <i>E.coli</i>) following the instructions provided by the lab or on our website at https://novascotia.ca/nse/water/sample_micro.asp. <i>While you wait for your bacteria test results, your water is safe to use for bathing and cleaning. For drinking, preparing infant formula, juices, and ice cubes, washing fruits and vegetables, cooking, and brushing your teeth, bring your water to a rolling boil for at least one 1 minute to make it safe. A rolling boil means the water continues to bubble actively, even when stirred.</i> If there is no evidence that your well water system lost pressure: 1. You can use your water as you normally would. Continue to follow routine testing recommendations for private well owners. Routine Well Water Testing: - Test your water for bacteria (presence/absence of total coliform and <i>E.coli</i>) if you have not tested within the last year. - Test your water for general chemistry and metals if you have not tested within the last five years, if the water looks, smells, or tastes different, or if you want to confirm that any water treatment system is working. - See ECC's routine private well sampling recommendations for more information: https://novascotia.ca/well-water-testing/. <i>You can use your water as you normally would. However, if it has been a year or longer since your last bacteria test, or more than five years since your last chemistry test, it is recommended that you test your water to make sure it is still safe.</i>

Understanding Your Test Results

When you receive your test results from the lab, use our Drinking Water Interpretation Tool to help understand them: <https://novascotia.ca/nse/dwit/>

Your water is considered safe if the test results are **below the maximum acceptable concentrations (MAC)** in Health Canada's *Guidelines for Canadian Drinking Water Quality*: [Health Canada's health-related guidelines](#). After flood-related testing is done, ECC recommends:

- Testing for bacteria (presence/absence for total coliforms and *E. coli*) every year
- Testing for general chemistry and metals every five years

If your test results are above guidelines for bacteria, general chemistry, or metals, you can find more information in our Drop on Water factsheets: https://novascotia.ca/nse/water/docs/Drop_on_Water_English.pdf

If your sample results show petroleum hydrocarbons above the lab's detection limits, or if you need help interpreting the results, contact your local Nova Scotia Environment and Climate Change office: **1-877-9ENVIRO (1-877-936-8476)**.