

Reopening Buildings on Municipal Water Supplies – Recommendations for bringing water back on-line

As a result of the COVID-19 pandemic response, the building(s) you operate may have had low to no occupancy, causing the water to sit in the pipes unused for a period of time.

Stagnant water conditions increase the risk for bacterial growth including total coliforms, *E. coli*, and *Legionella pneumophila*, the organism responsible for Legionnaire's disease.

Legionella bacteria thrive in warm stagnant water and are a concern for hot water systems that are not maintained at the appropriate temperature (>60°C). More information on *Legionella* is available at: <https://novascotia.ca/dhw/cdpc/cdc/documents/Legionellosis-General-Information.pdf>

In potable water systems, stagnant water conditions can also cause a loss of leftover disinfectant and increase risks for lead and other chemical contaminants in the water.

Please follow these recommendations before your building is even partially occupied, to reduce the risk of people getting sick. Ensure this procedure is done in consultation with the property owner. Recommendations are based on occupancy levels and are divided into three categories:

- Buildings unoccupied for over a month
- Buildings with less than 25 per cent occupancy for more than a month
- Buildings with more than 25 per cent occupancy

BUILDINGS UNOCCUPIED FOR OVER A MONTH

Step 1 – Hot Water System Reboot

- If possible, drain your hot water tanks and refill with fresh water.
- Ensure the water temperature in the heater and storage tanks is maintained above 60°C and water in any recirculation/return lines stays above 55°C for at least 24 hours before completing Step 2 – System Flushing.

Step 2 – System Flushing

- If possible, remove all aerators, shower heads, etc. and deactivate electronic faucets.
- Open a cold-water faucet located nearest to where water enters the building and allow water to flow until water maintains a constant cold temperature or you can detect a chlorine residual (if applicable).
- From the same faucet, flush the hot water line until it runs hot.
- Move from where water enters the building to the furthest point in the building – that's the closet to furthest zone, closest outlet to furthest outlet. As you proceed through the building, flush each fixture until the water maintains a constant cold temperature. Repeat by flushing the hot water lines in each fixture until the water maintains a constant hot temperature. Continue this process until all potable water lines and any equipment, such as taps, showers, coffee machines, water coolers, ice machines, emergency eyewash stations or emergency showers, have been flushed. Flush all toilets and urinals at least once.
- If you have filters in any of these pieces of equipment, consider replacing them after flushing.
- Clean and disinfect faucet aerators, shower heads and reactivate electronic faucets after flushing is complete. Faucet aerators can trap debris that may contain lead and other metals harmful to your health.

BUILDINGS WITH LESS THAN 25 PER CENT OCCUPANCY FOR MORE THAN A MONTH

Step 1 – Post signage indicating occupants must flush water for 1–2 minutes before drinking.

Step 2 – System Flushing for Maintenance

Weekly:

- Flush cold and hot water lines for five minutes from taps located furthest away in parts of the building that are occupied.

Monthly:

- If possible, remove all aerators, shower heads, etc. and deactivate electronic faucets.
- Open a cold-water faucet located nearest to where water enters the building and allow water to flow until water maintains a constant cold temperature or you can detect a chlorine residual (if applicable).
- From the same faucet, flush the hot water until it runs hot.
- Move from where water enters the building to the furthest point in the building – that's the closet to furthest zone, closest outlet to furthest outlet. As you go, flush each fixture until the water runs constantly cold. Repeat by flushing the hot water lines in each fixture until the water maintains a constant hot temperature. Continue this process until all potable water lines and any equipment tied into the water system, such as taps, showers, coffee machines, water coolers, ice machines, emergency eyewash stations or emergency showers have been flushed. Flush all toilets and urinals at least once.
- If you have filters in any of these pieces of equipment, consider replacing them after flushing.
- Clean and disinfect faucet aerators, shower heads and reactivate electronic faucets after flushing is complete. Faucet aerators can trap debris that may contain lead and other metals harmful to your health.

BUILDINGS WITH MORE THAN 25 PER CENT OCCUPANCY

No specific intervention is required. Consider weekly preventative flushing of hot and cold water lines for five minutes from taps in occupied parts of the building furthest from where water enters the building. This will reduce the risks of poor water quality and protect building occupants.

PROTECTING HEALTH AND SAFETY

When turning on faucets, shower heads and other outlets for a couple of minutes, aerosols will form which may be contaminated with *Legionella* bacteria. Here's how you can limit exposure to aerosols during flushing:

- Flush toilets with the covers down.
- Be careful when rinsing hot water lines, as the water may become very hot and cause burns.
- While flushing, keep the number of people in the area to a minimum.
- Open faucets slowly to avoid the release of aerosols through water hammers, when water spurts out abruptly due to depressurization of the line.
- Open windows or operate the ventilation system.
- Wear an N95 or equivalent respirator, if possible, to protect against inhalation of aerosols.