



The purpose of this fact sheet

As a building owner and operator, you are responsible for the water quality in your building. The longer the building has low or no water use, water can become stagnant and result in a higher risk for deteriorating water quality. During COVID-19, reduced or no water use in buildings may present health risks. This fact sheet provides information related to re-opening your building's water supply.

Water quality concerns from low or no water use in buildings

When water is not used, the chlorine used to treat the water is depleted and may result in the growth of microorganisms in pipes and fixtures. Chlorine is used to treat the water and maintain potable water throughout the Town's distribution system. Water left in pipes and fixtures may also absorb toxic metals such as lead from plumbing.

How to flush a large building

The American Water Works Association (AWWA) provides guidance on restoring water quality when returning plumbing systems to service.

1. Remove or bypass point-of-entry treatment units (filters, softeners, etc.) prior to flushing
2. Ensure your backflow prevention device testing is up to date This will prevent the potential of siphoning contaminants into plumbing
3. Flush to maximize water flow
4. Run enough water through all fixtures and taps, removing aerators and shower heads when possible
5. Flush the cold water lines first, then the hot water lines
6. Replace (with new) all point-of-use filters, including refrigerator filters
7. Additional precautions may be required

Flushing Responsibilities

- The building owner is responsible for the water quality in the plumbing, including the cost of water required for flushing
- When re-opening, owners/operators of large buildings/facilities should co-ordinate their flushing with the local water supplier to avoid low pressure
- Initial flushes of stagnant water may release high concentrations of chemicals and contaminants Flushing should be conducted in a way to minimize splashing/aerosols
- For complex systems, specialized plumbing, or buildings serving at-risk occupants, consider hiring an expert such as plumbers or engineers to ensure water quality is properly restored

Re-opening considerations

- Prepare a plan to restore water quality
- The best immediate action is to flush every fixture in each building
- Inspect mechanical equipment to ensure proper function
- Clean all fixtures including removal and cleaning of aerators, shower heads, etc



In most cases, flushing buildings with water from the Town's distribution system is sufficient for cleaning plumbing systems.



Fact Sheet

Water quality considerations for re-opening buildings

Other recommended steps

- Consider your building's unique characteristics and specialized fixtures, storage and plumbing
- Maximize water flow in the service line by opening all outlets and fixtures simultaneously
- Systematically flush each tap moving from closest to furthest until water runs cold at each location
- Flush toilets and urinals
- If you can measure water quality, it's recommended to measure the free chlorine concentration at the furthest tap in each zone. Otherwise, flush at each outlet and fixture until the water runs clear and cold. A recommended free chlorine concentration is 0.20 mg/L, with a minimum of 0.05 mg/L
- If water heaters and pumps have been shut down, consider hiring an expert to restore the water heating system since legionella bacteria have been shown to multiply in stagnant hot water lines. Legionella management typically relies on thermal control or on-site disinfection. Hot water systems must continue to operate to minimize potential legionella growth
- Flushing should be done periodically. It is a best practice, is easy and has proven water quality benefits
- If there is a strong reason to believe the building's water quality is not restored with flushing, please contact the Health Unit or the municipality in which the building is located. Contact information is listed below

Resources

- CWWA Safely Re-Opening Buildings a Fact Sheet for Building Owners/Operators:
https://cwwa.ca/wp-content/uploads/2020/05/Re-Opening-Buildings-FACT-SHEET_FINAL-amend1.pdf
- AWWA Covid-19 Shutoffs and Return to Service Guidance:
<https://www.awwa.org/Resources-Tools/Resource-Topics/Coronavirus-#10681543-shutoffs-and-return-to-service-guidance>
- ESPRI & HA Environmental COVID-19 Flushing Guide:
https://esprinstitute.org/wp-content/uploads/2020/04/FINAL_Coronavirus-Building-Flushing-Guidance-20200403-rev-1.pdf

Contact Information

- **Town of Orangeville**
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- **Town of Mono**
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- **Wellington-Dufferin-Guelph Health Unit**
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