ABCB

Ensuring the safety of your building water system post COVID-19 restrictions

Advisory Note

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Preface

This advice does not apply to buildings that have a water risk management plan. Health care facilities should implement their plan for re-occupancy of a facility after shut down.

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Introduction

As COVID-19 restrictions are relaxed, it is important to ensure the safety of building water systems before occupancy resumes.

While restaurants, gyms, schools and other buildings have been unoccupied during the restrictions to prevent the spread of COVID-19, water left sitting in pipes could change in quality.

1.1 Water stagnation

When water is not drawn through a buildings water system over an extended period, the water becomes stagnant. The stagnation of water within buildings is typically prevented through regular water use, which brings in fresh water from the public mains (typically containing disinfectant).

Indicators of stagnation include a bad or “off” taste, unpleasant odour or slight discoloration. These factors can indicate bacteriological growth and pipe corrosion. Stagnation can support the accelerated growth of many microorganisms and pathogens, such as Legionella, which can cause harm to building occupants.

It is also possible that water left sitting for long periods of time within a building’s water system could contain excessive amounts of heavy metals.

It is recommended that the building manager, maintenance representative or a plumbing professional ensures that a building’s water supply is thoroughly flushed before occupancy resumes.

1.2 Flush the water system before a business or building reopens

Flush water through all points of use, e.g. showers, sinks, toilets within the building before reopening.

Flushing procedures will vary depending on the building and may need to occur in sections, e.g. floors or individual rooms, due to facility size and water pressure. The

purpose of water system flushing is to replace all water inside building piping with fresh water.

When flushing, appropriate precautions should be considered to avoid generating aerosols and appropriate personal protective equipment used.

Some taps in locations such as kitchen sinks and laundry troughs may not have heated water tempered. Care should be taken to avoid scalding when flushing from these taps.

Note: When developing a flushing procedure, consideration should be given to any local water use restrictions that may be in place.

1.3 Example procedure for flushing a building water supply system

1. Appliances such as coffee machines, ice machines, washing machines, dishwashers, refrigeration's, etc. that are connected to the water service should be disconnected.
2. Remove tap aerators, point-of-use filters and shower hoses where possible.

   Note: Their removal will allow the water flow rate to be faster and limit the amount of sediment trapped during flushing.
3. Organise flushing to maximize the flow of water, for example;
   (a) open all cold water outlets simultaneously to flush the service line and internal pipework, or
   (b) flush all outlets individually, starting near where the water enters the building and moving systematically through the building to the most distant outlet.

   Note 1: Flush all the cold water pipework first, and then the hot water.

   Note 2: Heated water temperatures should be checked before flushing as temperatures may have been reduced or heating plant turned off to conserve energy.
4. Run enough water through all outlets to replace all water inside building piping with fresh water.

   Note: The required duration will vary based on pipework volume and outlet velocity.
5. Reinstall all tap aerators, shower hoses and appliances and replace point-of-use filters with new filter medium.
6. Appliances should be individually flushed with clean water.

7. Additional precautions may be warranted if there is excessive disruption of pipe scale or if there are concerns about biofilm development. Actions that may be warranted include continued use of bottled water, installation of a point-of-use device, or engaging a contractor to thoroughly clean the plumbing system.

1.4 Other considerations

Floor drains

If the building has floor drains, pour water into the drain to make sure that the trap water seal is fully restored in order to keep sewer gases from entering the building. Trap water seals can be lost due to evaporation while the building is unoccupied.