BUILDING PERFORMANCE

ENSURING THE SAFETY OF YOUR BUILDING WATER SYSTEM POST COVID 19 LOCKDOWN

As Covid 19 Alert levels drop, it is important to ensure the safety of your building water systems before occupancy resumes.

While restaurants, gyms, schools and other buildings have been unoccupied during the level 4 lockdown to prevent the spread of COVID-19, water left sitting in pipes could change in quality.

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 odor 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 buildings 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 buildings water supply is thoroughly flushed before occupancy resumes.

Flush your water system before your business or building reopens

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

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

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

Example procedure for flushing a building water supply system

1. 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.
2. 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: Flush all the cold water pipework first, and then the hot water.
3. 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.
4. Replace all tap aerators and point-of-use filters and shower hoses.
5. Additional precautions may be warranted if there is excessive disruption of pipe scale or if there are concerns about biofilm development. Actions that might 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.

Additional 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 within unoccupied buildings.

Building Services (HVAC/fire/electrical/gas systems etc.)

Each building is different and dependent on the level that a building was shut down prior to lockdown, additional work may be necessary to ensure buildings are safely recommissioned before occupancy. It is recommended that building managers contact their appropriate maintenance providers to ensure buildings are safely recommissioned before occupancy where necessary.