

# *Water Safety in Buildings with Prolonged Vacancies*

## Effects of Reduced Water Usage

Safety measures taken to slow the spread of COVID-19 have left buildings empty for extended periods of time. A lack of usage increases water age and stagnation inside the building's plumbing. This water can become unsafe to drink or use as the water ages and pipes corrode, sediment accumulates, and disinfectant levels decrease. Harmful pathogens such as *Legionella* can grow when disinfectant levels decrease and hot water temperatures drop. Turning on water for immediate public use after extended periods of not being used can be dangerous to public health if not properly managed. There are steps which can be taken to reduce this risk.

## Maintaining Building Water Quality

- Review plumbing configurations and water usage in the building
- Inspect plumbing for proper function and good condition
- Maintain water treatment systems such as filters and water softeners
- Maintain hot water systems and insure temperature is kept above 140° F to prevent *Legionella* growth
- Flush the building regularly in order to stabilize scale and control biofilm
- Maintain non-drinking water, water systems (emergency system devices such as eye washes, decorative fountains, spas, pools, etc.)

## Flushing

- Review how water moves through the building, from the street to each point of use (faucets, showers, toilets, drinking fountains, and water using devices such as dishwashers and ice makers)
- Flush the service line that runs from the water main to the building

- Flush cold water lines
- Drain and clean water storage facilities and hot water heaters
- Flush hot water lines
- Flush, clean, and maintain devices connected to the plumbing system including faucets, drinking fountains, ice machines, dishwashers, appliances, and toilets

## Preparing the Building for Reopening

- Remove faucet aerators and filters throughout the system
- Flush the entire building's cold and hot water systems, and all water using appliances
- Clean all non-drinking water, water systems
- Ensure mechanical equipment such as cooling towers, boilers, pumps, and backflow preventers are cleaned and well maintained
- Properly clean and disinfect all plumbing features
- Consider shock disinfection if there is strong reason to believe there has been *Legionella* growth and/or the people who use the building, such as children or elderly people, are at particular risk to infection. Note: This could have adverse effects on the integrity of the building's water system, and in most cases, flushing the system with its normal water supply will rid it of any undesirables

## Water Management Program

Developing and implementing a water management program for long term risk management is an effective way to reduce public health concerns. The Centers for Disease Control and Prevention (CDC) has created a handbook on developing and implementing a water management program. Regular cleaning, maintenance, and flushing of water systems significantly reduce health risks posed by *Legionella*.

### [Developing a Water Management Program](#)

## Additional Resources

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[Information on Maintaining or Restoring Water Quality in Buildings with Low or No Use](#)

[Coronavirus Building Flushing Guidance](#)

[IDPH Plumbing Program General Building Guidance for Reopening](#)

[Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation](#)

[Prevention with Water Management Programs](#)

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