

Water Quality Recommendations for Opening Closed or Less Frequently Used Buildings

When buildings have been shut down or used less frequently, the quality of water in building plumbing can degrade, creating stagnant water. Stagnant or standing water may be susceptible to increased levels of undesirable corrosion and disinfection byproducts (e.g., lead, copper, total trihalomethanes [TTHMs], etc.) and/or low or undetectable levels of disinfectants, such as chlorine, which are an important barrier in protecting drinking water systems from pathogenic contamination. Stagnant water can also cause conditions that increase the risk for growth and spread of *Legionella* and other biofilm-associated bacteria. Please consider taking the following steps to ensure that your facility's water system is safe to use after a prolonged shutdown:

- If available, reference your building's water management program (WMP). If a WMP or similar document is not available, guidance on creating one is available from the Centers for Disease Control and Prevention (CDC) and from others. Please see the links at the bottom of the page for more information.
- To help prevent *Legionella* and other bacteria growth, ensure that your water heater is properly maintained and the temperature is correctly set.
 - Carry out all maintenance activities according to the manufacturer's instructions, including, if recommended, draining water heaters following prolonged disuse. In order to prevent injury, maintenance activities should be performed by professionals familiar with proper plumbing and water system operations.
 - CDC and EPA recommend that your water heater be set to at least 140°F. While higher temperatures can further reduce the risk of *Legionella* growth, scalding becomes a concern at temperatures above 130°F. Measures should be taken to prevent scalding.
- Flush your building's water system.
 - The purpose of flushing is to replace all the stagnant water inside building piping with fresh water direct from your local water utility.
 - Both cold and hot water should be flushed at and through all points of use (e.g., showers, sink faucets, drinking fountains, etc.).
 - Flushing may be enhanced if performed in stages. Start flushing at the points of use closest to the connection with the water utility (i.e., at the meter) first. A plumbing schematic may be needed in order to make this determination.
 - Cold water taps should be flushed until disinfectant levels match those measured at the point of connection. If you do not have a means to check disinfectant levels, contact a licensed plumber for help in determining flushing times.
 - Hot water taps should be flushed until the water reaches its maximum temperature.



- Maintain your building's water system.
 - Ensure all points of use and safety equipment (e.g., point-of-use filters, showerheads, faucets, fire sprinkler systems, eye wash stations, safety showers, etc.) are clean and well-maintained. Normal maintenance activities include flushing, cleaning, and disinfecting each device according to manufacturers' specifications.
 - Consider contacting your drinking water provider to learn about any recent disruptions in the water supply. The water utility may also be able to check that disinfectant levels entering your building meet expected standards.
 - After your building's water system has returned to normal, ensure that the risk of *Legionella* and biofilm growth is minimized by regularly checking water quality parameters such as temperature, pH, and disinfectant levels.



Primary Source

<https://www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html>

Additional Links and Resources

https://esprininstitute.org/wp-content/uploads/2020/04/FINAL_Coronavirus-Building-Flushing-Guidance-20200403-rev-1.pdf

<https://www.awwa.org/Resources-Tools/Resource-Topics/Coronavirus>