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Guidance for Reopening Building Water Systems after Prolonged Shutdown

Public water supplies are safe and unaffected by the SARS-CoV-2 virus that causes COVID-19. However, water quality within buildings that have been vacant or have seen little use during the pandemic restrictions may be impacted by other infectious agents and contaminants as a result of low flow or stagnant water in pipes. Stagnant water in pipes can create conditions that favor the growth and spread of *Legionella* and other harmful bacteria, result in lower chlorine levels in buildings supplied by a public water system that uses a disinfectant, and/or result in increased lead and copper levels that can leach out of pipes and fixtures.

Public water systems are responsible for delivering safe water to their customers' service connections. Building owners are then responsible for ensuring water quality within building plumbing systems. The Oregon Health Authority advises building owners to take precautions prior to resuming normal building use to ensure safe water and protect public health.

Building owners should flush water pipes weekly while the building is vacant and prior to resuming normal building use. Following are considerations for flushing:

1. In general, flush one area and fixture at a time, starting in the basement and working upward to other floors.
2. Remove aerators and flush cold water first, then hot water.
3. Be sure the hot water heater is set to at least 120 degrees Fahrenheit.
4. Consider collecting and analyzing one or more coliform bacteria samples after flushing.

Owners and facilities managers of large buildings should develop a specific flushing plan for their building that avoids stagnation zones, is consistent with their building water management plan and complies with state and local building codes. The services of a licensed plumber may be helpful.

Where can I find additional information?

- Center for Disease Control and Prevention (CDC) has developed "Guidance for Building Water Systems" that includes 8 steps to take prior to reopening buildings to ensure the safety of water: <https://www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html>
- Purdue University's Center of Plumbing Safety has guidance for building owners related to flushing, including example building flushing plans, guidance on necessary calculations and informational videos: <https://engineering.purdue.edu/PlumbingSafety/resources/flushing-plans>