

HOW TO FLUSH A RESIDENCE OR SMALL BUILDING THAT IS RETURNED TO SERVICE AFTER AN EXTENDED PERIOD

As buildings have been shut down or used less frequently, water quality in the buildings may become degraded due to water stagnation. It is always a good practice to flush all water supply lines in a facility after a prolonged closure to ensure that fresh water is in the system. This guidance provides general procedures to ensure that your water system is safe to use after a prolonged shutdown.

The lack of chlorinated water flowing through pipes, combined with irregular temperature changes, is a concern, when a building will be re-opened after an extended period of inactivity. Prolonged building water stagnation can lead to elevated lead, copper, and Legionella levels, as well as discolored water, in building water systems. Any facility, home or business vacated or underutilized for more than three weeks is at risk. When such buildings resume water service, they need to be properly managed to ensure that building water systems and end-use devices are properly flushed out. The flushing instructions required will vary depending on the structure. However, for an appropriate and thorough flushing process, we recommend the following:

1. Prepare for flushing:

- Remove faucet aerators from all faucets and showerheads where possible and replace them after flushing is completed. Their removal will allow water flowrate to be faster and limit the amount of sediment trapped during flushing.
- Remove point-of-use (POU) filters and replace them after flushing. This will limit the amount of sediment that could be trapped during flushing and could become a potential source of contamination. Some types of water treatment devices may need to be disinfected or replaced before being put back into service. Check with the manufacturer for details.
- After all aerators/POU filters are removed, start flushing by opening the water faucets on each floor of your building, moving from the lower levels to the higher levels.

2. Flush household and building water lines, including:

- Interior and exterior faucets, showers, water/ice dispensers, water treatment units, as well as water heaters may need to be flushed to remove any stagnant water.

3. Detailed guidance for specific situations as follows:

- **Cold Water Faucets:** Run until the water feels cold, one minute or more, before drinking, brushing your teeth, or using for food preparation. If you have a single lever faucet, set it to run the cold water first.
- **Hot Water Faucets:** To clear hot-water pipes and water heaters of untreated water, change all faucets to hot water and flush for at least 15 minutes for a typical household 40-gallon hot-water tank and 30 minutes for an 80-gallon hot water tank or larger. Hot water is then safe to use for washing hands, dishes, pots and pans, etc. Never use water from the hot faucet for drinking, rinsing your mouth, or cooking as it can contain elevated levels of dissolved minerals.
- **Dishwashers:** After flushing hot water pipes and water heaters, run the dishwasher empty one time.
- **Humidifiers:** Discard any water used in humidifiers, continuous positive airway pressure (CPAP) machines, and oral, medical, or health-care devices. Rinse the device with clean water.
- **Food and baby formula:** Discard baby formula and other foods prepared with water prior to the shutdown.
- **Refrigerator water-dispensing machine:** Flush any water dispensing machine for at least five minutes before using it for household purposes. For more information, refer to manufacturer specifications.
- **Ice cubes:** Empty automatic ice dispensers of ice made prior to shut down and run through a 24-hour cycle. Discard this ice to assure purging of the icemaker's water supply line.

The American Water Works Association (AWWA) (as of April 3, 2020) posted recommendations for returning homes to service. Those recommendations are found at: <https://www.awwa.org/Resources-Tools/Resource-Topics/Coronavirus#10681543-shutoffsand-return-to-service-guidance>