



IDEM Guidance for Flushing Water Systems

Drinking Water Branch

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This informational document will assist you in re-opening buildings that may have been temporarily shut down or used less frequently over the last several weeks due to COVID-19 pandemic.

Whether you are a community water system with multiple buildings that have been closed or a nontransient noncommunity system such as a school or factory that has been temporarily closed or you are a small transient system like a church or campground; these guidelines will help you in re-opening your water system to ensure that the inside plumbing did not become contaminated.

When water is not used over an extended period, it will become stagnant. One of the problems of stagnant water that can rear its ugly head is *Legionella* and other harmful microorganisms. It is imperative that you follow these guidelines to make sure that you are receiving fresh water and not stagnant water.

Stagnant, or standing water can cause conditions that increase the risk for growth and spread of *Legionella* and other biofilm-associated bacteria. When water is stagnant, hot water temperatures can decrease to the *Legionella* growth range (77–108°F, 25–42°C). Stagnant water can also lead to low or undetectable levels of disinfectant, such as chlorine and could also cause corrosion issues. It is critical to ensure that your water system is safe to use after a prolonged shutdown to minimize the risk of Legionnaires' disease and other diseases associated with water.

Since stagnant water is a potential health risk and can impact water quality, it is necessary to systematically flush your plumbing. These instructions will help by providing a systematic approach on how to do a complete flush.

In general, flushing involves opening taps and other fixtures and letting water run to remove any stagnant water within plumbing and fixtures. To protect the health and safety of our consumers, IDEM recommends that you read carefully and follow the steps for flushing. Thank you for your cooperation.

NOTE: Some buildings have water treatment systems and all those treatment devices need to be cleaned, flushed and maintained as part of the starting up process. After flushing, your water filters need to be replaced. If you have any point of entry water treatment system such as a water softener or filter, please refer to the instruction manual for replacement of the filter.

Flushing Instructions

Please complete these steps in the order set out below. Finish each step completely before moving on to the next step.

1. Flush ALL cold water taps for at least 5 minutes

Begin the cold water flushing, open ALL of the cold-water fixtures, flush each toilet at least one

time. Run all cold water fixtures for at least five minutes. Shut water off after five minutes. This does include the water in your refrigerator water dispenser.

Flushing should begin at the water service entrance and proceed through the building to the end points of the plumbing system in the building(s). Depending on flow and pressure you may need to increase the flushing time to ensure all the stagnant water has been flushed.

2. Flush ALL hot water taps for 15 minutes

Once the cold water lines have been flushed begin the hot water flushing procedure by opening the hot water taps in your bathroom(s). Open ALL hot water taps including lavatory (sink) fixtures, hot water bath fixtures, and any other hot water fixtures, such as kitchens, wet bars, etc. Run these hot water fixtures for at least 15 minutes. Shut water off after 15 minutes. Depending on the size of the hot water tank you may need to flush longer to ensure the water in the tank has drained and fresh water has refilled the tank. These steps should be effective at removing contaminants from the water heater. However, for information on draining and cleaning the water heater please consult the manufacturer.

3. Flush ALL remaining Appliances and Faucets

Open any remaining fixtures such as hose bibs, external faucets or fixtures not used for drinking for at least five minutes to finish the plumbing system flushing. Take additional steps to remove water from other appliances. This includes:

- Ice Makers •Dishwashers •Washing Machines •Humidifiers •CPAP Machines
- Oral, Medical or Health Care Devices •Baby Formula •Water Filters •Water Softeners
- Filters, point of use and whole house

Remover ice from ice maker bin and discard 2 additional batches of ice. Run empty dishwasher and washing machine once on rinse cycle.

4. Ongoing flushes

Periodic flushing is important to improve the water quality. Full building ongoing flushes proceed the same as the initial flush except water tanks do not need to be drained and hot water flushing times are the same as cold water flushing times.

It is a good idea during this flushing time if you have chlorinated water to measure chlorine residual.

Discoloration may occur during flushing, this is expected and not a health issue. Any lingering smell, which is expected, is not a health issue. During the initial flushing, it is a good concept to wear protective respiratory equipment. For information that is more detailed please visit:

<https://engineering.purdue.edu/PlumbingSafety/project>

Other Resources

[CDC Guidance for Building Water Systems](#)

[AWWA Return to Service Guidance](#)