



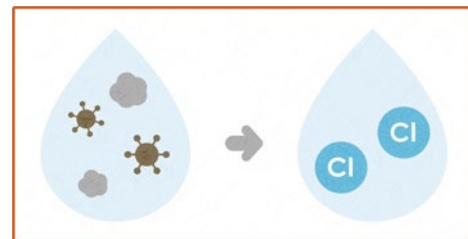
ALL FACILITIES GUIDE FOR FLUSHING POTABLE WATER

Why Should I Flush?

Flushing your potable (drinking) water system is a recommended control measure for reducing sediment and biofilm, controlling temperature, and preventing stagnation. *Legionella* and other opportunistic waterborne pathogens (bacteria and protozoa) that live in water can make people sick.

Stagnant or “still” water is a risk factor for the growth of *Legionella* for the following reasons:

- **Cold water** that warms to its surrounding temperature may allow bacteria (germs) to grow more rapidly.
- **Hot water** that cools may also reach a temperature that aids bacterial growth.
 - Water age risk is exacerbated in warmer or hot water due to the acceleration of disinfectant (germ killer) loss for two reasons:
 - *Legionella* grow faster in warmer water using up the disinfectants.
 - Chlorine based chemicals naturally break down faster in hot water.
- Disinfectants such as chlorine added by the water treatment facility may begin to drop to levels that make them less effective or ineffective.
 - Most City/Town water facilities inject disinfectants into the water supply to protect it from excessive bacterial growth.
 - As water sits in pipes, these chemicals, often chlorine (Cl₂) or monochloramines (NHCl₂), will dissipate (fade/vanish) leaving the water unprotected.
 - If water is continuously moving into and out of a building, it allows a continual stream of protective chemicals into the building.
 - Without this reintroduction of disinfectants, the chemicals will dissipate leaving the water at a higher risk of *Legionella* and other pathogen growth.



Ideally, water should not be in a building for longer than 72 hours, about 3 days. To manage water age, it is necessary to monitor how much water enters the building relative to the size of the water system. Hot and cold-water lines may need to be put on a flushing protocol depending on the building plumbing, water use, occupancy, temperature and other factors.

When should I flush?

Flushing is most often recommended when:

- A facility has been shut down or is at low occupancy because there are no or few occupants to flush or circulate water routinely.
- Large facilities that do not operate at or near 100% capacity due to natural occupancy patterns.

Facilities that are occupied by high-risk persons such as hospitals, healthcare facilities, nursing homes and senior living residences, should have a regular flushing protocol.

How often should I flush?

The minimum, most basic recommended approach for flushing:

- Flush outlets such as sinks and showers on a **weekly** basis.
- Clean and maintain water system components, such as thermostatic mixing valves, aerators, showerheads, hoses, filters, and storage tanks, **according to manufacturer's instructions**. Organic materials in these components give *Legionella* and other pathogenic bacteria food that helps them thrive.
- Flush low-flow piping runs (pipes to areas with little to no water use) and dead legs (pipes that lead to nowhere) at least **weekly**.
- Flush infrequently used fixtures (e.g., eye wash stations, emergency showers) **weekly** as needed to maintain water quality parameters within control limits.
- Flush storage tanks and infrequently used equipment attached to the water system **once per week**.



- Healthcare facilities, senior living residences, and nursing homes should have a weekly flushing routine for any fixtures used infrequently (greater than or equal to 3 days without use).

How long should I flush?

- For cold water: Flush the cold-water line for a minimum of 5 minutes.
- For hot water: Flush the hot-water line until the maximum temperature is reached. Then conduct a flush for an additional 5 minutes. To ensure the maximum temperature has been reached, check and record the temperature every 30 seconds.
- Ensure disinfectant residual is detectable throughout the potable water system.



Sources:

<https://www.cdc.gov/control-legionella/php/toolkit/potable-water-systems-module.html>

<https://legionellacontrolsyste.ms.com/the-myth-of-testing-for-legionella-without-mitigation-why-testing-alone-isnt-enough/>

<https://legionellacontrolsyste.ms.com/about-legionella/water-age-and-its-effects-on-legionella/>