



Guide to Properly Clear (Flush) Commercial Restrooms Prior to Re-Opening Your Building

This guide is specific to commercial restroom fixtures and fittings. This is not an all-inclusive guide for clearing/flushing the potable water plumbing system in a commercial building. In addition to following all site-specific water management plans, building staff should inspect and clear (flush) all water-using appliances like ice machines and dishwashers as well as mechanical equipment, such as cooling towers, boilers, pumps, backflow preventers, etc., and determine if there are any issues regarding the safety of their use. The entire water system for a building (kitchens, laundry, etc.) also needs to be flushed.

The COVID-19 pandemic has resulted in widespread building shutdowns and low occupancy across the globe. As commercial buildings begin to reopen, it is paramount that specific procedures are implemented to properly flush out buildings' water systems to reduce the serious water safety risks that are associated with prolonged system inactivity. Water that sits in plumbing lines for extended periods of time will become stagnant. "Facilities should keep water moving through their buildings to minimize problems associated with bacterial contamination," says Dr. Andrew Whelton, Associate Professor of Civil Engineering and Environmental and Ecological Engineering at Purdue University. "Plumbing fixtures that can be programmed to automatically purge potable plumbing lines can greatly reduce the potential for complications and health risks associated with stagnant water." While not all stagnant water is problematic, this water could have a bad taste, unpleasant odor, debris, or more serious problems, like elevated levels of lead and copper. It may also contain little or no residual disinfectant, such as chlorine, leading to elevated levels of bacteria and other microbiological contaminants like Legionella or Pseudomonas aeruginosa.

It is recommended that buildings purge the entire water distribution system within their commercial facility to ensure fresh water is present before flushing/clearing fixtures and fittings as a best practice.

To help you protect the safety, health, and well-being of your building occupants, Sloan has created these general guidelines to help building engineers and others knowledgeable about the building water supply to safely clear/flush the water in your commercial restrooms.



*SOLIS® 8111 Exposed Sensor Water Closet
Flushometer on ST-2009 Vitreous China Floor-
Mounted Water Closet*



HYB-7000 Vitreous China Hybrid Urinal



*WETS-8009.8110 Vitreous China Floor-Mounted
ADA Pressure-Assisted Water Closet.*

Flushometers for Water Closets and Urinals

- It is recommended that you start at the water closets and urinals that are located farthest from the branch lines in the restroom entry. Flush the farthest water closet and/or urinal at least three times. Each subsequent water closet or urinal need only be flushed twice. If the urinal is an ultra-low flush volume (0.125-0.25 gpf), then flush five to six times each. This will purge the pipes from the main branch to the urinal valve. Flush each valve the maximum amount if the branch line location is unknown.
- Debris from stagnant water can dislodge and foul diaphragms and pistons within a flushometer, causing additional valve run-on situations. If you experience these conditions, check and clear the diaphragm or piston with the proper tools per the [Royal/Sloan/Regal/Gem/Crown](#) flushometer maintenance instructions. Please [contact Sloan](#) Technical Support or your [local Sloan rep agency](#) for additional assistance with procedure and repair parts to have on hand. Sloan [maintenance support videos](#) are available online.
- [Replace](#) the cartridge for waterfree or hybrid urinal fixtures.
- [Bedpan washer](#) flushometers should be engaged in the downward (fully open) position and flushed three times.

Pressure-Assisted and Tank Type Toilets

- Flush a pressure-assisted toilet a minimum of three times, allowing full setup/ re-pressurization between each flush.
- Troubleshooting information and videos can be found on the [Flushmate website](#), and OEM parts are located on the [online parts finder](#).
- Tank type toilets located farthest from the branch lines in the restroom entry should be flushed at least three times. Each subsequent water closet need only be flushed twice. Flush each toilet the maximum amount if the branch line location is unknown.
- Learn more about how to retrofit your pressure assisted handle using [Intelli-Flush™](#) sensing technology.

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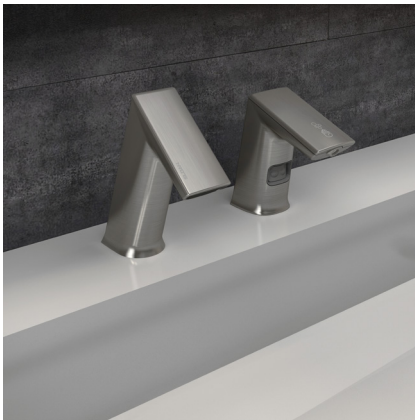
EBF-615 and ESD-600 in Brushed Nickel on Designer Series™ DSCT-82000 Counter Top Sink

Faucets

- Aerators should be removed before the purge process and sanitized (or replaced - recommended) before reinstalling. Learn how to easily remove the aerator from a [BASYS faucet](#).
- Automatic (sensor) faucets are easily flushed by placing a hand under the faucet for a minimum of 90 seconds.
- Some sensor faucet models ([Sloan EBF/ETF](#)) from Sloan with Bluetooth have automatic purge capability using [Sloan Connect® App](#), and you can [set it to purge](#) for an extended period of time and/or daily. Utilizing these models from Sloan can greatly reduce the complications and health risks associated with stagnant water.

Showerheads

- Showers should be run at full opening (both hot and cold) for at least three minutes.
- Learn how to retrofit a manual shower system to sensor operation with our [PWT](#) (Programmed Water Technologies) system.



EFX-250 and ESD-500 in Brushed Nickel on Designer Series™ DSG-84000 Gradient Sink

Safety and Wellness

- Worker safety while flushing a building's plumbing system must be considered. Initial flushes of stagnant water have the potential to release chemical and microbiological contaminants. You can find guidance on worker safety for Legionella control and prevention on the [OSHA website](#).
- As you commence your building operations and begin to focus more on occupant wellness and hygiene, consider installing touch-free products, such as sensor flushometers, faucets, soap dispensers, and hand dryers, to replace manual products to reduce the likelihood of cross contamination. Automatic door openers or door handles with anti-microbial material (copper is best) should also be retrofitted.
- Update or create a water management program to reduce the risk of Legionella growing and spreading within the water system and devices. The CDC has a [toolkit](#) to help create and implement this program.

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Sources

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<https://www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html>
3. Caitlin R. Proctor, William J. Rhoads, Tim Keane, Maryam Salehi, Kerry Hamilton, Kelsey J. Pieper, David M. Cwiertny, Michele Prévost, Andrew J. Whelton *Considerations for Large Building Water Quality after Extended Stagnation, Purdue University, April 8, 2020*
4. Environmental Science, Policy & Research Institute (ESPRI) and AH Environmental Consultants, Inc., *Building Water Quality and Coronavirus: Flushing Guidance for Periods of Low or No Use*
5. Purdue University, Center for Plumbing Safety, <https://engineering.purdue.edu/PlumbingSafety/covid19/covid19-resources>