What happened in my building’s internal water system while the building was out of use?

- The internal building water system begins at the meter where water enters the building and includes all plumbing, storage and fixtures to each tap.

- When the water isn’t used for long periods of time, the disinfectant in the water dissipates. Without the disinfectant, microorganisms may grow on your building’s internal pipes, fixtures, and tanks. Some of these microorganisms may have the ability to cause disease in people who are immunocompromised.

- Water is treated to reduce the risk of lead in the drinking water by forming a protective coating on pipes. When the water sits for long periods this coating can weaken and destabilize. Without the coating, lead can dissolve or shear off as particles and end up in water used for drinking or food preparation.

- Flushing your building’s internal water system is a low-cost way to help protect your employees, customers and visitors. In fact, flushing the water system in a 10,000 square foot building costs less than five dollars.

How do I prepare the building for re-occupancy?

- PVWC recommends flushing the entire building’s internal water system, including all water-using appliances like ice machines and dishwashers. Flushing clears out the low-quality water that accumulated during low use and replaces it with high quality water from the PVWC water supply. The fresh water will help alleviate the problems (loss of protective coatings and growth of microorganisms) that emerged while the water was stagnant.

- If staff are available, flushing should begin immediately, even if you don’t intend to return to work for a few more weeks. Flushing early will result in less deterioration of water quality in the building and a quicker return to normal conditions.

How do I flush the internal water system in a small building?

- First, locate the taps on each floor that are farthest from the floor’s point of water distribution and flush the cold-water taps for 10 minutes.

- Next, flush hot and cold water through all points of use (e.g., showers, sink faucets)

- Flushing might need to occur in segments (e.g., floors or individual rooms) due to facility size and water pressure. The purpose of building flushing is to replace all water inside the building’s internal water system with fresh water.
How do I flush the internal water system in a large building?

Large buildings, such as schools, industrial warehouses and commercial complexes require an initial flush as well as follow-up flushing. The initial flush will draw particles through and out of the building’s internal water system and bring in disinfectant from the distribution system. Follow-up flushing will move high quality throughout the building and repair protective scaling.

*The Initial Flush – Clears out contaminants that accumulated during stagnation and draws in fresh, high-quality water to the piping.*

- It’s important to identify and flush as many other water outlets as possible - utility sinks, hose taps, drinking fountains, etc. - to remove contamination in the plumbing.

**Step 1. Clean fixtures.**
- Clean showerheads.
- Remove and clean aerators
- Replace/maintain point of use filters.

**Step 2. Flush the cold water zone-by-zone.**

*Zones are branches of the building water system with a common source or parts of the building water system served by a common riser.*

- The first zone to flush is the one nearest the building supply.
  - Begin at the tap nearest to the origin of the zone.
  - Flush the cold water by opening the tap wide.
- Open other taps on the same branch, moving from the faucet nearest the origin to the most distant POU tap.
- Continue flushing until the final tap is flushed for at least 5 minutes AND the cold-water temperature is steady.
- Continue to flush all zones moving outward from the supply.

**Step 3. Flush the hot water zone-by-zone.**

- Follow the process outlined in Step 2.
- Flush each tap until the hot water reaches its maximum temperature.
Follow-up Flushes – Repairs protective coating and reduces microorganisms.

Flushing should be conducted weekly for the next 12 weeks following the initial flush. 12 weeks is the approximate amount of time needed to re-stabilize the protective coating. In addition to weekly flushing, make sure that each tap in the building is opened at least once per day.

*Flush the entire building once per week*

**Step 1. Flush the cold water zone by zone**
- Begin at the tap nearest to the origin of the zone.
- Flush the cold water by opening the tap wide.
- Flush each tap for at least 5 minutes.

**Step 2. Flush the hot water zone by zone**
- Begin at the tap nearest to the origin of the zone.
- Flush the hot water by opening the tap wide.
- Flush each tap for at least 5 minutes.

Consider flushing your building’s internal water system on a regular basis. Even when the building’s internal water system has recovered from a lengthy stagnation, flushing is a best practice. It’s easy and has proven water quality benefits. Flushing the water system in a 10,000 square foot building costs less than five dollars.