

TOWN OF BETHLEHEM

Albany County - New York

DEPARTMENT OF PUBLIC WORKS

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David VanLuven
Town Supervisor

George S. Kansas, P.E.
Commissioner of Public Works

MEMORANDUM

TO: Building Owners & Managers served by the Town of Bethlehem Water District

FROM: George S. Kansas, P.E.
Commissioner of Public Works

DATE: May 14, 2020

SUBJECT: Water Quality Guidance for the Re-Opening of Buildings Temporarily Closed during the COVID-19 Pandemic

The "New York State on PAUSE" executive order issued by Governor Cuomo due to COVID-19 has resulted in many buildings with little to no occupancy for weeks (schools, offices, hotels, factories, medical facilities, etc.). This results in stagnant water that can allow chlorine to drop to undetectable levels. Chlorine is used in our water system to ensure that there is no regrowth of biofilms that could contain *Legionella* and other potentially harmful bacteria. Long periods of stagnation in building water systems with no chlorine residual can allow the growth of harmful bacteria, and can cause leaching of metals from pipes, leading to discolored water or elevated lead levels.

Property owners are responsible for maintenance of their internal plumbing systems to ensure water quality does not degrade. If your building, or sections of it, have been unoccupied for an extended period, the Town urges you to take action to ensure that water is safe to use when normal building use resumes. Prior to re-occupancy, consider developing a Water Quality Mitigation Plan for your building. The following mitigation strategies could be used in developing a plan:

- Inspection of all internal water system components to ensure they are still functional and not leaking.
- Thorough flushing of both cold *and* hot water systems through every tap (including drinking fountains, sinks, and showers).
- Post flushing temperature measurement (on cold water system) to ensure stagnant water is removed. (water temperature during May should be around 50 degrees)
- Post flushing testing for free chlorine residual to ensure flushing was successful.
- Draining, cleaning and disinfecting hot water storage tanks.
- Flushing, draining, and/or cleaning of entry point treatment systems such as softeners or particulate filters.

- Bacteriological testing of some representative cold water taps used for drinking or cooking.
- Businesses in smaller buildings (beauty shops, automotive repair facilities, restaurants, etc.) should thoroughly flush every tap (sinks, drinking fountains, showers) for a minimum of 30 minutes.

Every building plumbing system is unique, so it will be important to consider the design of your plumbing system when developing a mitigation plan. There are several resources available to use to develop a plan. Please consider using the resources below to develop a plan to ensure your building's water system is safe:

- USEPA Guidance: <https://www.epa.gov/coronavirus/information-maintaining-or-restoring-water-quality-buildings-low-or-no-use>
- CDC guidance: <https://www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html>
- Water Research Foundation's Flushing Guidance: <https://www.waterrf.org/system/files/resource/2019-05/4572.pdf>
- The Purdue University [Center for Plumbing Safety rapid response study](https://engineering.purdue.edu/PlumbingSafety/covid19/faq-building-water-safety): <https://engineering.purdue.edu/PlumbingSafety/covid19/faq-building-water-safety>
- The Environmental Science, Policy & Research Institute (ESPRI) [roadmap for flushing contaminants from buildings](https://esprinstitute.org/coronavirus-building-flushing-guidance/): <https://esprinstitute.org/coronavirus-building-flushing-guidance/>
- Phigenics, developed a free webinar on [Building Water Management](https://www.youtube.com/watch?v=orxE_0yhJtI&feature=youtu.be): https://www.youtube.com/watch?v=orxE_0yhJtI&feature=youtu.be
- Ohio EPA's [Guidance for Premise Plumbing Water Service Restoration](https://epa.ohio.gov/Portals/28/documents/pws/guidance-for-premise-plumbing-water-service-restoration.pdf): <https://epa.ohio.gov/Portals/28/documents/pws/guidance-for-premise-plumbing-water-service-restoration.pdf>
- Washington State Department of Health's [COVID-19 Guidance for Legionella and Building Water System Closures](https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/LegionellaandBuildingWaterSystemClosuresCOVID-19.pdf): <https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/LegionellaandBuildingWaterSystemClosuresCOVID-19.pdf>