



Monroe County Water Authority

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Maintaining or Restoring Water Quality in Buildings with Low or No Use

Summary

The “New York State on PAUSE” executive order issued by Governor Cuomo on March 20, 2020 in response to the COVID-19 pandemic has resulted in many buildings and facilities (offices, schools, hotels, factories, medical facilities, stores, restaurants, etc.) with little to no occupancy for long periods of time. These conditions may allow for stagnant water conditions to develop within a building’s internal water system plumbing where free chlorine residual concentrations in the water decrease to undetectable levels. Chlorine is used in our water system to prevent regrowth of biofilms that could contain Legionella and other potentially harmful microbes.

The Monroe County Water Authority’s (Water Authority) mission is to reliably provide quality, affordable water that fosters economic vitality and enhanced quality of life for Monroe County and area communities who request service. Our water quality routinely meets or exceeds the applicable regulatory requirements and water quality standards of the federal *Safe Drinking Water Act* and the New York State *Public Health Law*.

Property owners and managers are responsible for maintenance of their internal plumbing systems to ensure water quality does not degrade. The Water Authority provides this information to help address and mitigate potential issues with premise plumbing stagnation.

Why is stagnation a concern?

Stagnation in building water systems is a condition that may develop from long periods of time where there is little or no use with an absence of free chlorine residual concentrations. This situation may allow for the growth of bacteria, and can cause leaching of metals from internal plumbing materials, pipes, and water fixtures leading to discolored water or elevated lead levels.

Steps to take and what can be done

If your building, or sections of it, have been unoccupied for an extended period, the Water Authority urges you to take proactive steps to ensure that water is safe to use when normal building occupancy and use resumes. Prior to re-occupancy, consider developing a *Water Quality Mitigation Plan* or a water management program for your building. The following mitigation strategies could be used in developing a plan or program:

- 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° Fahrenheit).
- Post flushing testing for free chlorine residual concentrations to ensure flushing was successful.

- Draining, cleaning and disinfecting hot water storage tanks. Refer to manufacturer guidelines and instructions.
- Flushing, draining, and/or cleaning of entry point treatment systems such as softeners or particulate filters following guidance from the equipment manufacturers and vendors.
- 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).

Every building plumbing system is unique, so it is 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.

Information on checking water quality parameters

Some water quality parameters such as temperature, pH, and free chlorine residual concentrations can be checked on-site with the use of the appropriate supplies and equipment. A number of resources and references suggest checking the water entering the building and at points of use after flushing to verify that fresh water is being flushed through the entire plumbing system. Achieving stable temperature, pH, and free chlorine residuals can be a good indicator that the premise plumbing and systems have been adequately flushed.

Other water quality parameters, such as bacteriological testing, may require the use of services performed by an environmental laboratory approved by New York State for drinking water testing. The New York State Department of Health maintains a list of accredited Environmental Laboratory Approval Program (ELAP) laboratories that provide services for drinking water testing. This list can be found and accessed at the following website:

<https://apps.health.ny.gov/pubdoh/applinks/wc/elappublicweb/>

State and local public health department contacts

Consider contacting your state or local public health department for assistance if you have specific concerns or to determine if additional requirements or considerations are necessary prior to re-opening. Contact information for these agencies is provided in the table below based on your county building location.

County	Department or Agency	Telephone Number
Monroe	Monroe County Department of Public Health	(585) 753 - 2991
Orleans	Orleans County Public Health Department	(585) 589 - 3278
Genesee	Genesee County Department of Public Health	(585) 344 - 2580 ext. 5555
Wyoming	Wyoming County Health Department	(585) 786 - 8890
Livingston	Livingston County Department of Health	(585) 243 - 7270
Ontario	New York State Department of Health – Geneva D.O.	(315) 789 - 3030

Resources and References:

United States Environmental Protection Agency (EPA):

- www.epa.gov/coronavirus/information-maintaining-or-restoring-water-quality-buildings-low-or-no-use

Centers for Disease Control & Prevention (CDC):

- www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html

The Water Research Foundation:

- www.waterrf.org/system/files/resource/2019-05/4572.pdf

Purdue University:

- www.engineering.purdue.edu/PlumbingSafety/covid19/fag-building-water-safety

The Environmental Science, Policy & Research Institute (ESPRI):

- www.esprinstitute.org/coronavirus-building-flushing-guidance/

Phigenics – *Building Water Management* (free webinar):

- www.youtube.com/watch?v=orxE_0yhJtI&feature=youtu.be

Ohio Environmental Protection Agency (OEPA) & Ohio Department of Health (ODOH):

- www.epa.ohio.gov/Portals/28/documents/pws/guidance-for-premise-plumbing-water-service-restoration.pdf

Washington State Department of Health:

- www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/LegionellaandBuildingWaterSystemClosuresCOVID-19.pdf