

MEMORANDUM

TO: Plumbing Contractors/Master Plumbers

FROM: Brien Bellous, Plumbing and Medical Gas Section Supervisor

DATE: December 15, 2022

RE: REMINDER – Water System Disinfection and Testing Requirement

IMPORTANT REMINDER

Water System Disinfection and Testing

This is a reminder that beginning January 3, 2023, Franklin County Public Health (FCPH) will be requiring all plumbing contractors to properly purge and disinfect new plumbing systems and verify through bacteriological testing that the system is free of harmful bacteria. This is a requirement of Ohio Plumbing Code section 610.

Contractors must complete the FCPH Potable Water System Disinfection Documentation Form and provide a copy of the satisfactory bacteriological water sample lab report at the time of the final plumbing inspection. Failure to provide this information will result in a disapproved final inspection.

The Documentation Form, fact sheets regarding disinfection and water sampling, a list of disinfection contractors are included in this email and will be available on our website at <https://myfcph.org/environmental-health/plumbing/>.

Please feel free reach out to Brien Bellous with any questions you may have. Brien can be reached at BrienBellous@franklincountyohio.gov or 614-525-5333. We appreciate your cooperation in this important matter.



Franklin County Public Health
 280 East Broad Street
 Columbus, Ohio 43215-4562
 (614) 525-3160
 www.myfcph.org

Potable Water System Disinfection Documentation

Plumbing & Medical Gas Inspection Section

In accordance with the Ohio Administrative Code 4101:3-601 and Section 610 of the Ohio Plumbing; "New potable water systems shall be purged of deleterious matter and disinfected prior to utilization."

In order to document that disinfection of the potable water system has been completed prior to taking a bacteriological water sample(s), this form shall be completed by the plumbing contractor.

**** THIS COMPLETED AND SIGNED FORM SHALL BE LEFT ON SITE FOR FINAL PLUMBING INSPECTION ****

Instructions:

- Complete all fields with the requested information.
- Sign and date the completed form.
- Retain a copy for your records.
- Leave a completed and signed copy for the plumbing inspector.
- For questions or clarification contact Brien Bellous at (614) 525-5333.

Information and Dates

Jobsite Address
Name of Plumbing Contractor or Contractor Performing Disinfection
Date of Disinfection
Disinfection Method Used <input type="checkbox"/> 50 ppm Chlorine for 24 hours <input type="checkbox"/> 200 ppm Chlorine for 3 hours

By signing below, I hereby declare and confirm that the above-referenced potable water system has been properly disinfected according to Section 610 of the Ohio Plumbing Code.

Signature of Person Performing Disinfection	Date
Printed Name of Person Performing Disinfection	

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Disinfection of Potable Water Systems FACT SHEET

Plumbing and Medical Gas Section

OHIO PLUMBING CODE

SECTION 610

DISINFECTION OF POTABLE WATER SYSTEM

610.1 General. New potable water systems shall be purged of deleterious matter and disinfected prior to utilization. The method to be followed shall be that prescribed by the health authority or water purveyor having jurisdiction or, in the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this section. This requirement shall apply to "on-site" or "inplant" fabrication of a system or to a modular portion of a system

Authority and Requirements

- Disinfection is required by Section 610 of the Ohio Plumbing Code.
- Section 610 outlines how to perform disinfection using chlorine (see below).
- Other disinfection methods from AWWA are referenced within Section 610 of the code.
- Franklin County Public Health is requiring documentation that all potable water system have been disinfected according to the Ohio Plumbing Code.

Steps to Disinfect the Water System

601.1 General

1. The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.
2. The system or part thereof shall be filled with a water/chlorine solution containing not less than 50 parts per million (50 mg/L) of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; **or** the system or part thereof shall be filled with a water/chlorine solution containing not less than 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours.
3. Following the required standing time, the system shall be flushed with clean potable water until the chlorine is purged from the system.
4. The procedure shall be repeated where shown by a bacteriological examination that contamination remains present in the system

Why is disinfection important?

Dirt, contaminants, bacteria, microorganisms, pathogens, and stagnant water are introduced into pipes and fixtures during manufacturing, transportation, storage, construction, and installation. Flushing and simply relying on the small amounts of chlorine in municipal water supplies (less than 4 ppm) is not enough to ensure that harmful pathogens have been removed from the new water system. In addition, cases of waterborne diseases like *Legionella* continue to increase in the U.S. and Franklin County. This is an increasing concern for the building industry, commercial property owners, and homeowners.

How do you know if the chlorine levels are at 50 ppm or 200 ppm?

The easiest way to measure chlorine levels is by using a simple chlorine dip style test strip that measures readings between 0-200 pm. These are readily available online, at pool supply stores, and some food service suppliers.

How do you ensure that the chlorine is distributed through the water system?

Introduce chlorine into the system where water enters the building. Open all cold and hot faucets, outdoor spigots, outlets, and flush toilets. Start with the faucet/outlet closest to the main where chlorine is being added. Once you smell chlorine use your test strips to test the water to ensure there is 50 or 200 ppm of chlorine detected (refer to the code). When the desired ppm is achieved, close the faucet, and move to the next closest faucet/outlet and repeat using the test strips and closing the faucet when the proper chlorine level is achieved. Do this throughout the entire water system. Let the system sit for the required time outlined in the code.

Did you know?

There are companies that specialize in chlorination and disinfection services which may be appropriate on large commercial projects.



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Post Disinfection Water Sampling FACT SHEET

Plumbing and Medical Gas Section

Authority and Requirements

- Bacteriological water testing is required by Section 610 of the Ohio Plumbing Code.
- After disinfection of the potable water system has been completed and the system is flushed to purge the chlorine, the only way to verify that there are no harmful bacteria present is to test the water.
- Water shall be tested for Total Coliform and *E. coli*.
- Water samples of the water system shall be tested only by an Ohio EPA Certified/Accepted laboratory.
- To find a complete list of certified/accepted laboratories please use the following link:
<https://epa.ohio.gov/static/Portals/28/documents/labcert/Combined-Lab-List.pdf>

Below are Ohio EPA Certified/Accepted Laboratories located in Central Ohio*

<p>Benchmark Environmental Labs, Inc. 4319 Indianola Avenue, Columbus, OH 43214 (614) 267-4588</p>	<p>MASI Laboratory 7940 Memorial Drive Plain City, OH 43064 (614) 873-4654</p>	<p>Superior Laboratories 1075 Amity Road, Galloway, OH 43119 (614) 870-6826</p>
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Water Sampling

- Contact an Ohio EPA certified laboratory to obtain sterile testing bottles (100 ml), the required paper work, and instructions on how to sample, store, and transport the water sample so not to compromise or contaminate the sample.
- Acceptable coliform test types include: MMO-MUG, Quanti-Tray, and Membrane-Filtration.
- Basic Sampling Information
 - Make sure the chlorine used for disinfection is completely flushed from the water system.
 - Use only sterile bottles provided by the laboratory.
 - Locate a cold-water faucet that is not a ball, disc, or cartridge style faucet (if possible).
 - Wash your hands before sampling.
 - Remove aerators and screens, if applicable.
 - Disinfect the faucet opening by spraying or applying bleach or use a flame to heat the area. DO NOT use a flame on faucets that have any plastic components.
 - Run the cold water for 3-5 minutes.
 - Before sampling, turn down the water so that water does not splash, open the sealed bottle and fill to the designated fill line. Be careful not to overfill and allow water to run over the bottle.
 - Tightly seal the bottle.
 - Complete all paperwork and properly label the bottle.
 - Store the water sample under refrigeration or in a cooler with an ice pack. Do not allow to freeze.
 - Water samples must be received and set up for analysis by the lab within 30 hours of the sample's collection. Results may take 36-96 hours depending on the test type.

* This list has been compiled from the Ohio EPA list of Certified Laboratories. Franklin County Public Health does not endorse or recommend a specific laboratory, but any laboratory used shall be Ohio EPA Certified to perform analysis on public drinking water and certified to test for Total Coliform and *E. coli*.



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Water System Disinfection Companies

Plumbing and Medical Gas Section

This list has been compiled by Franklin County Public Health. However, our agency does not endorse or recommend a specific company on this list. You may choose to hire or contact another company on your own.

Barclay Water Management, Inc.

55 Chapel Street, Ste.400

Newton, MA 02458

Website: www.barclaywater.com

Contact Person(s):

Chris Demecs, Area Manager

(614) 551-4580

cdemecs@barclaywater.com

Ryan Binns, District Manager

(614) 301-4791

rbinns@barclaywater.com

Solid Blend Technologies, Inc.

10 Granite Dr.

Dayton, Ohio 45415

Website: www.solidblendtechnologies.com

Contact Person:

Amy Ruppert

(937) 581-6299

aruppert@solidblendtechnologies.com

Industrial Water Management, LLC.

20 South Third St., Suite 210

Columbus, OH 43215

Website: www.iwm-usa.com

Contact Person(s):

Jim Lark, CEO

Office:(614) 407-7881

Cell: (440) 458-0002

jl@iwm-usa.com