



MassDEP

Drinking Water Program

One Winter Street – 5th Floor; Boston, MA 02108

Program.Director-DWP@mass.gov or 617-292-5770



Drinking Water Program Updates

2020-04-24

This week's Program Director email has these topics of interest:

1. COVID-19 Information
 - MassDEP COVID-19 Info
 - *SURVEY on cloth masks needs*
 - MassDEP PWS Info
 - MassDEP COVID-19 Conference Calls
 - FEMA Letter to Emergency Managers
 - Documentation for Essential Workers
 - Download the Water Utility Response On-The-Go App
 - EPA COVID-19 Webinar Recording Available
2. PWS Sharing Best Practices and Tips - MWRA Coliform SOP
3. Severe Weather Preparations
4. 2020 New England Healthy Communities Grant
5. Exceptional Drinking Water Operator Nominations for 2019
6. Trainings

COVID-19 Information

Massachusetts COVID-19 Information

For all information go to <https://www.mass.gov/info-details/covid-19-state-of-emergency>

On 3/24/20 Governor Baker announced the launch of a new messaging tool called “AlertsMA”. This tool allows residents to subscribe to real-time notifications by texting the keyword **COVIDMA** to **888-777**. After signing up, you will receive short messages and links to information on your cell phone or other mobile device.

* Survey on How Many Cloth Masks Does Each Public Water Supplier or Waste Water Facility Need

If you have already completed this survey, thank you for your timely response.

Massachusetts water and wastewater utilities have been informed by the U.S. Environmental Protection Agency of a planned federal distribution of up to 30,000 reusable cloth (non-N95) masks to Massachusetts water and wastewater utilities. More information will be provided when available.

To help us determine the number of masks that would be allocated to each facility or contract operating firm, **please have a representative of your facility or contract operating firm fill out this survey as soon as possible. Only one response is needed from each Public Water Supplier, Waste Water Utility or Contract Operating firm:**

<https://www.surveymonkey.com/r/FBDY8KR>.

MassDEP Public Water Supply Information

MassDEP is coordinating with the water supply industries, agencies, and organizations to provide information about the impacts of COVID-19 in Massachusetts.

- Recorded weekly meetings with Commissioner Suuberg: [Water Suppliers Meetings on COVID-19](#)
- Recorded weekly meetings with Commissioner Suuberg: [Wastewater Treatment System Operators Meetings on COVID-19](#)
- Questions from drinking water operators answered by MassDEP and updated 4/17/2020 [Water Supplier FAQs](#)
- [Bacteria sampling at outside taps/spigots/hose bibs](#) (PDF 97 KB)
- [Bacteria sampling at hydrants using hydrant sampler](#) (PDF 87 KB)
- [Mitigating lead and copper levels in facilities after school closure due to COVID-19](#) (PDF 115 KB)
- Emergency Closure Form for non-community Systems: <https://www.mass.gov/doc/emergency-certification-of-public-water-system-temporary-closure-non-operational-status/download>
- Results of licensed operator sharing services survey: <https://www.mass.gov/doc/list-of-drinking-water-and-wastewater-licensed-operators-indicating-willingness-to-assist-pwss/download>

MassDEP COVID-19 Conference Calls

MassDEP's Commissioner Suuberg is holding weekly Zoom conference calls to all operators and interested parties. Here is a link to MassDEP's webpage, where recordings of Commissioner Suuberg's calls with the operators as well as FAQs for both water supply and wastewater are published: <https://www.mass.gov/lists/covid-19-information-for-drinking-water-and-wastewater-operators>. MassDEP will continue to populate this webpage with other relevant information related to the COVID-19 crisis.

The next call with Commissioner Suuberg is scheduled for Tuesday, April 28, at 2 PM . (Eastern Time (US and Canada)) **Please email all drinking water questions to MassDEP at program.director-dwp@mass.gov. You may also email questions to jpederson@masswaterworks.org by noon on Tuesday.**

Topic: MassDEP call with Public Water Systems re: COVID-19

Join Zoom Meeting: <https://zoom.us/j/550814507>

By Phone: +1 929 436 2866 US (New York)

With Computer Audio: <https://zoom.us/j/716180953> (please turn your video off!)

Meeting ID: **550 814 507**

One tap mobile

+19294362866,,550814507# US (New York)

+13126266799,,550814507# US (Chicago)

Dial by your location

+1 929 436 2866 US (New York)

+1 312 626 6799 US (Chicago)

+1 301 715 8592 US

+1 346 248 7799 US (Houston)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US

Meeting ID: **550 814 507**

Find your local number: <https://zoom.us/j/550814507>

FEMA Letter to Emergency Managers specifically mentions water works professionals as essential workers

The Federal Emergency Management Agency (FEMA) released a letter on April 15, 2020 to the Nation's Emergency Managers, which outlines lessons learned from the first 30 days of FEMA leading the "Whole-of-America" response to the COVID-19 pandemic.

This letter expressed the need for personal protective equipment (PPE) at water treatment facilities. The use of PPE is vital for both regular occupational activities and specifically to reduce the exposure to COVID-19 among workers while carrying out mission-essential work.

“However, as President Trump said, other workers, too, have an essential responsibility to continue their jobs. Some of these jobs include activities critical to the resilience of the nation during this pandemic – fire, emergency medical services and law enforcement personnel keeping our communities safe; energy companies keeping our lights on; **water treatment facilities keeping water flowing from our taps**; telecommunications companies keeping our communications networks functioning; and, food producers and distributors keeping groceries on the shelves in our local stores.”

You can access the FEMA Administrator April 15, 2020, letter to Emergency Managers below.

[Access the FEMA Letter to Emergency Managers](#)

US EPA Documentation for Essential Workers

Ensuring that drinking water and wastewater services are fully operational is critical to containing the COVID-19 and protecting Americans from other public health risks. Handwashing and cleaning depend on providing safe and reliable drinking water and effective treatment of wastewater.

U.S. Environmental Protection Agency (EPA) developed a [template](#) for state, localities, and drinking water and wastewater utilities to use to provide documentation for workers considered essential.

Download the Water Utility Response On-The-Go App

The recently released [Pandemic Incident Action Checklist \(IAC\)](#) is now included in the [Water Utility Response On-The-Go \(Response OTG\) mobile app](#). This checklist includes actions your utility can take to prepare for, respond to, and recover from a pandemic impacting your systems and your community.

The App allows users to:

- Identify and contact emergency response partners
- Monitor local and national severe weather
- Review and complete incident-specific checklists
- Populate, save and email damage assessment forms with photo attachments
- Access Incident Command System procedures and resources

Response OTG is available on the App Store for Apple devices and on Google Play for Android devices. For more information, visit [this site](#).

EPA COVID-19 Webinar Recording Available

EPA held a webinar on April 7, 2020 entitled “COVID-19 Planning and Response: Overview of EPA’s Pandemic Incident Action Checklist for Water Utilities.” The webinar provided an overview of the recently released [Pandemic IAC](#); case study from Todd Brown, the Town of Marbleton, Wyoming Public Works Director, who discussed the actions his small system has taken in response to COVID-19; and a Q&A session.

The recording link, offered below, provides access to the full, one-hour long webinar. Note: the audio quality has been improved since the webinar.

[Access the Webinar Recording](#) Please contact Ison.Dawn@epa.gov for access to the slides from the webinar.

PWS Sharing Best Practices and Tips - MWRA Coliform SOP

The MWRA sent a letter to their MWRA-supplied communities with attached guides or standard operating procedures for coliform sampling. The MWRA has granted MassDEP permission to publish their SOP/guides. Do be aware that parts of the residual SOP are particular to the specific model of residual meter that MWRA communities use. Below is an excerpt from the letter.

“MWRA is aware that communities may be using additional staff to collect their routine coliform samples. We understand that some staff may not be as familiar with the chlorine testing steps or coliform sampling techniques as the primary sampler. Improper sampling technique can result in total coliform or *E. coli* positive samples. Therefore, MWRA drafted the following guides to help with cross-training needs. ”

The **attached** four Guides include:

- How to Collect a Coliform Sample for Drinking Water Analysis
- How to Test Total Chlorine Residual with a Low-range HACH Pocket Colorimeter II
- How to Test Total Chlorine Residual with a Mid-range HACH Pocket Colorimeter II
- Community TCR Letter to Superintendents – highlights important details regarding sampling technique

Another good tip from the MWRA is to keep a Sampling Manual that contains documentation of your sampling sites. It should include the following details that can be invaluable information for a non-routine sampler, including:

- Photographs and details regarding sampling building, floor, room, and tap. Ensure the faucet meets the criteria for a suitable coliform sample tap.
- Address and contact phone number during business and non-business hours
- Service line details including length, diameter, and calculated flushing time to obtain a representative sample
- Typical chlorine residuals and seasonal temperatures typical for each site

Severe Weather Preparations

While pandemic response is top of mind, we wanted to reach out to make sure you're staying ahead of other threats. Severe weather has been sweeping across much of the U.S., so make sure your system is prepared for dangerous storms and above-average precipitation this spring.

<https://www.epa.gov/crwu/tools-assess-risks-water-utilities-extreme-weather>

2020 New England Healthy Communities Grant

EPA is making grant money available for New England communities to reduce environmental risks, protect and improve human health and improve the quality of life. EPA New England's Healthy Communities Grant Program is currently accepting applications for projects that will benefit one or more New England communities. EPA plans to award a total of approximately 10 cooperative agreements.

Eligible applicants include state and local governments, public nonprofit institutions or organizations, private nonprofit institutions or organizations, quasi-public nonprofit institutions or organizations, federally recognized tribal governments, K-12 schools or school districts; and non-profit organizations (e.g., grassroots and/or community-based organizations). Applicants can request up to \$35,000 with a 5% local match requirement.

To help answer questions from prospective applicants, the Healthy Communities Grant Program will host two webinars before the proposal package is due. The information sessions are being offered on May 12 and 21, 2020. These information sessions are optional, but RSVP's are required. A registration form can be found in the Request for Applications.

More Information:

- How to apply for a 2020 New England Healthy Community Grant:
https://www3.epa.gov/region1/eco/uep/grants_2020hc.html

- Additional background on EPA's New England Healthy Community Grants:
<http://www.epa.gov/region1/eco/uep/hcgp.html>

Exceptional Drinking Water Operator Nominations for 2019

Because of the current world Pandemic, the Awards Program is being postponed. The details have yet to be decided on how to honor public water systems while keeping social distance. More information will follow when it is known.

However, If you would like to honor a specific operator for an exceptional job done in 2019 please send a short narrative to Program.Director-DWP@mass.gov detailing the operators' achievements.

Anyone can nominate an operator, but the operator must have been a licensed treatment or distribution operator in 2019. Did a peer do an outstanding job? Did one of your staff accomplish excellence? If so MassDEP would love to hear about it.


Training

When you need training please look at the training calendar located at:

<http://www.mass.gov/eea/agencies/massdep/water/drinking/drinking-water-training-class-schedules.html> for upcoming trainings.

If you need a refresher on recently given trainings, you can review several training videos located at:

https://www.youtube.com/playlist?list=PLJn2AKOcYr7lutGJB-UfDKtQPF_o_249m

or click here:  **YouTube**

MassDEP is sending this important drinking water information to all PWS responsible persons who are listed on the state database. If you are no longer the correct responsible person for the PWS please reply with the correct contact information. MassDEP needs one responsible contact person from each PWS.

Operators, consultants, and others who are interested in Drinking Water Program updates are encouraged to request to be subscribed to this email list. You may also request to be unsubscribed by replying to this email.

This MassDEP Program Director technical assistance email is funded by the Safe Drinking Water Act Assessment (Section 70) Program. The Assessment is paid by all consumers of public water in Massachusetts and is collected by public water systems. For more information about the Assessment Program, go to

<http://www.mass.gov/eea/agencies/massdep/news/advisory-committees/safe-drinking-water-act-assessment-advisory-committee.html>.



How to Take a Coliform Sample for Drinking Water Analysis



Inspect area at the designated sample site & tap. Remove the aerator and any attachments (e.g., hoses, tubing).



Put on single use Nitrile/Latex gloves.



Use a bleach-wipe or other disinfectant to clean the inside & outside of the tap.



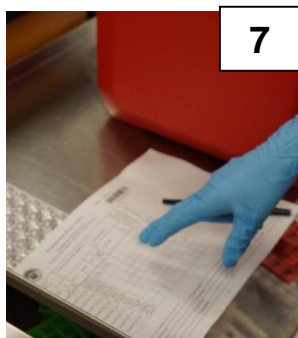
Flush the tap for as long as it will take to obtain a sample representative of the system.



Place a thermometer into a sampling cup under the water flow. Continue flushing until temperature is stable.

Collection Date: 05/04/2020		Weston Water Dept. (MWRA)		Trip: 20200323-400032	
Sample Number	Type Code	Source	Name	Time	Comments
4253289	RS 01	390 South Ave. Fire Station			
4253290	RS 02	394 Boston Post Rd Fire Station			
4253291	RS 05	Kendall Green Market, 284 North Ave.			
4253292	RS 06	Black Oak Rd. Bronze Station - 9 Black Oak			

Record this temperature (°C) on the Chain of Custody (COC) form.



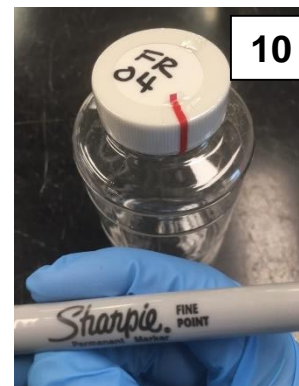
Test Chlorine Residual (see testing SOP) and record on the COC form, along with sampler name & time.



Reduce tap flow to a pencil thickness. Let tap run 1 minute.



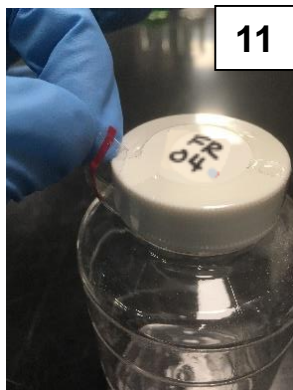
Inspect coliform bottle. Do not use a bottle with a crack or compromised sterility seal.



Label the cap of the coliform bottle with waterproof marker to match the "Type & Code" on the COC form. This describes the community and location sampled.



How to Take a Coliform Sample for Drinking Water Analysis



Remove the cellophane from the cap by removing the red tab first, then the rest.



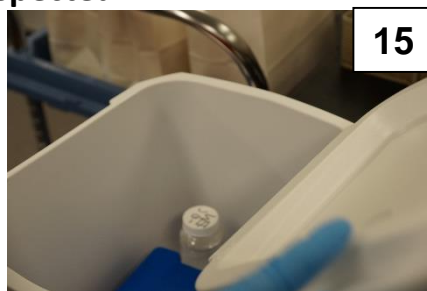
Carefully remove the cap. Keep threads facing down. Never put the cap down. Do not touch the threaded areas. Discard & fill a replacement bottle if contamination is suspected.



Fill coliform bottle to the shoulder, above the 100mL line. Do not overfill the bottle as this will remove the preservative.



Immediately cap the coliform bottle and gently invert sample twice to mix preservative. If cap or bottle falls or breaks, discard and restart sampling.



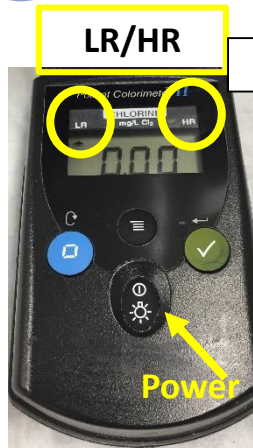
Immediately place sample into a **dedicated drinking water sampling cooler with an ice pack. Do not use wet ice! Transfer sample(s) to laboratory. The hold time is 30 hours for a chlorinated sample.**

Best Management Practices

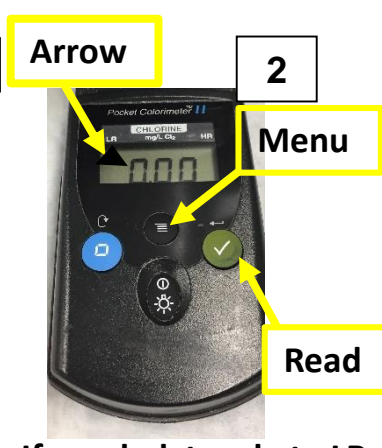
- 1) Develop system sampling manual:** The document should include photographs and details of sample sites & taps, addresses, contact phone numbers during business/non-business hours, & details of building, floor, room. Document service line details including materials, length, diameter, and calculated flushing time to obtain a representative sample. List typical total chlorine residuals and temperatures at each site with seasonal trends. Train primary & secondary staff routinely.
- 2) Conduct sanitary sampling surveys at all TCR sites:** Review premise plumbing conditions including unusual plumbing configurations, mixing valves or tap fixtures, inline filters, and backflow preventers. Pay attention to low chlorine residuals or samples with unusually warm temperatures. Perform further investigation to determine if an alternate locations should be used. Review service line conditions & determine how long it takes to obtain a representative system sample.



How to Measure a Low-Range Total Chlorine Residual (0-2.2 mg/L) using a Hach Pocket Colorimeter II



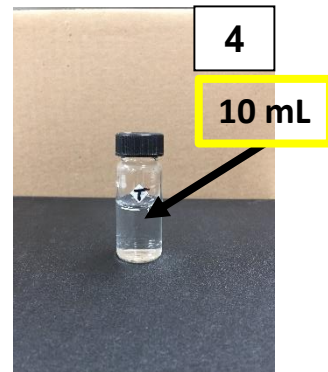
Turn on a Low-Range (LR)/High-Range (HR) Colorimeter.



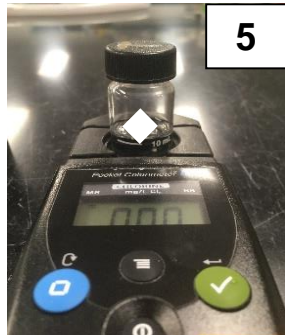
If needed, toggle to LR channel by pressing Menu then Read (✓) until arrow is under LR.



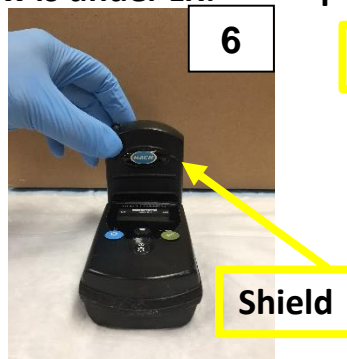
Use tap water to rinse the glass sample cell and cap 3 times.



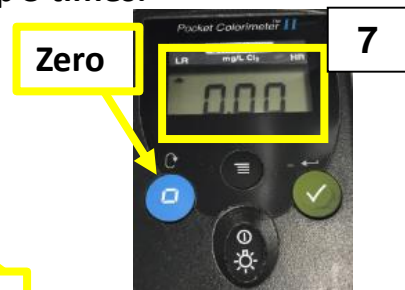
Fill to the 10 mL line with tap water.



Wipe down sample cell. Place in colorimeter with diamond facing toward you.



Cover with the light shield.



Press the zero (0) button. Screen should read 0.00.

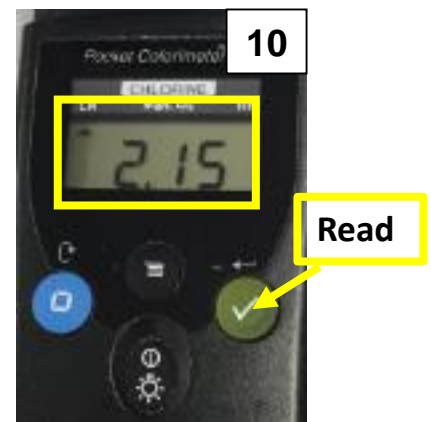


Check the expiration date on powder pillow.

Remove sample cell from colorimeter and uncap. Pour the powder from a **10-mL, Total Chlorine** packet into the sample cell. Cap and shake gently.



Set a timer to 3 minutes. Read the sample between 3-6 minutes after powder addition.



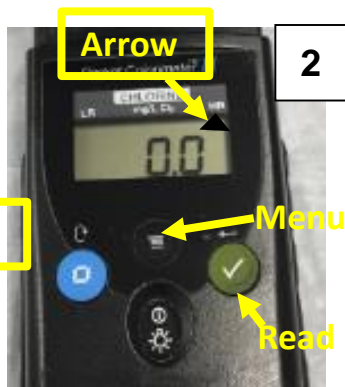
Repeat steps 5-6. Press Read (✓) button. Result will display. If chlorine residual is not typical, retest with a fresh sample or contact Supervisor. **If result is blinking 2.20, retest on HR.**



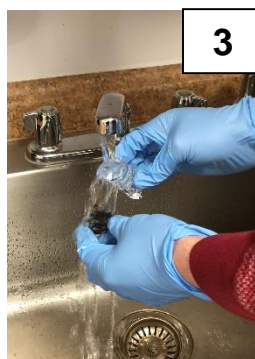
How to Measure a High-Range Total Chlorine Residual (2.2-10 mg/L) using a Hach Pocket Colorimeter II



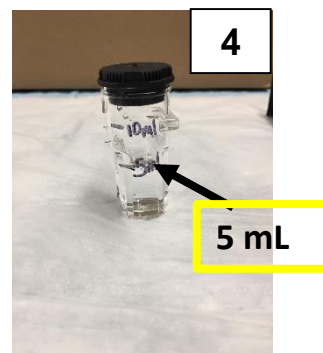
Turn on either a MR/HR or LR/HR Colorimeter.



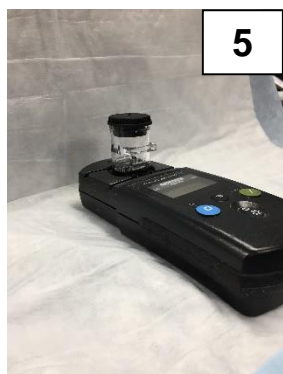
If needed, toggle to HR channel by pressing Menu then Read (✓) until arrow is under HR.



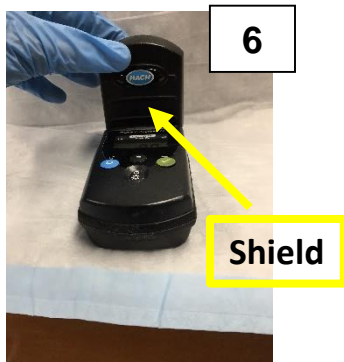
Use tap water to rinse the *plastic* sample cell and cap 3 times.



Fill to the 5 mL line with tap water.



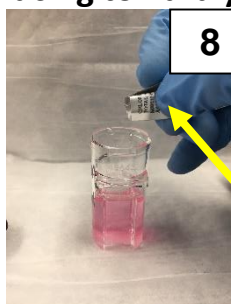
Wipe down sample cell. Place in colorimeter with the "ledge" facing toward you.



Cover with the light shield.



Press the zero (0) button. Screen should read 0.0.

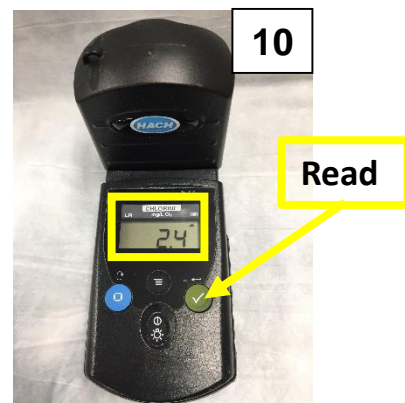


8 Check the expiration date on the powder pillow.

Remove sample cell from colorimeter and pour the powder from **one 25-mL Total Chlorine (for MR colorimeter) or two 10-mL Total Chlorine (for LR colorimeter)** packet(s) to the sample cell. Cap and shake gently.



Set a timer to 3 minutes. Read the sample between 3-6 minutes after powder addition.



Repeat steps 5-6. Press Read (✓) button. Result will display. If chlorine residual is not typical, retest with a fresh sample or contact Supervisor.



How to Measure a Mid-Range Total Chlorine Residual (0-4 mg/L) using a Hach Pocket Colorimeter II



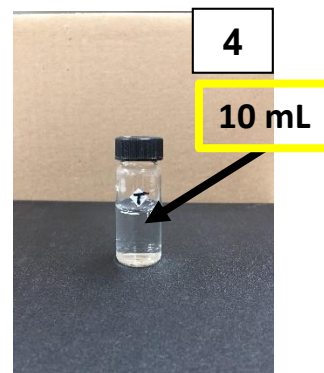
Turn on a Mid-Range (MR)/High-Range (HR) Colorimeter.



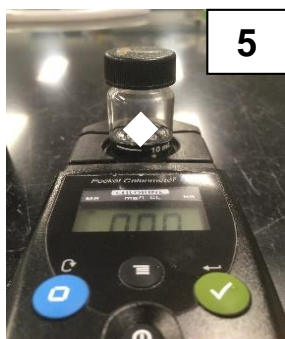
If needed, toggle to MR channel by pressing Menu then Read (✓) until arrow is under MR.



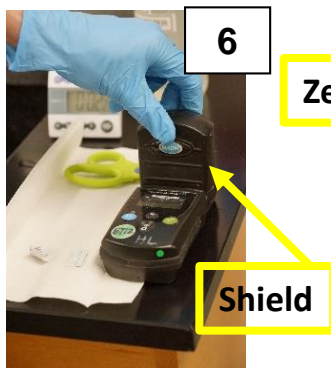
Use tap water to rinse the glass sample cell and cap 3 times.



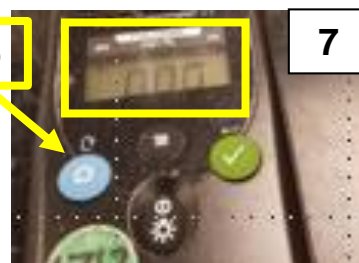
Fill to the 10 mL line with tap water.



Wipe down sample cell. Place in colorimeter with diamond facing toward you.



Cover with the light shield.



Press the zero (0) button. Screen should read 0.00.

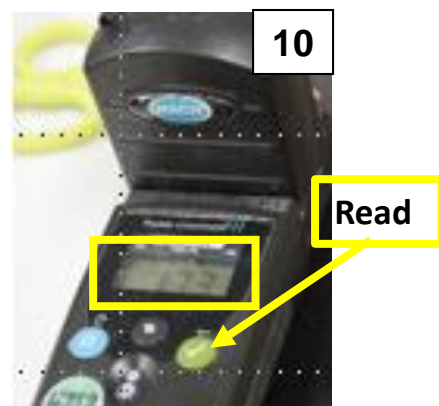


Check the expiration date on the powder pillow.

Remove sample cell from colorimeter and uncup. Pour the powder from a **25-mL, Total Chlorine** packet into the sample cell. Cap and shake gently.



Set a timer to 3 minutes. Read the sample between 3-6 minutes after powder addition.



Repeat steps 5-6. Press Read (✓) button. Result will display. If chlorine residual is not typical, retest with a fresh sample or contact Supervisor.



MASSACHUSETTS WATER RESOURCES AUTHORITY

Chelsea Facility
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Chelsea, Massachusetts 02150

Telephone: (617) 242-6000
Facsimile: (617) 305-5990

Frederick A. Laskey
Executive Director

December 16, 2019

Subject: Best Management Practices for Total Coliform (TCR) Sampling

Dear Water Communities:

In the last few months, two MWRA communities have had samples that tested positive for *E. coli*, with one community required to issue a Boil Water Order. While the exact source of the *E. coli* cannot be definitively determined, there were deficiencies that may have had a role in these detections.

MWRA would like to remind Water Departments that proper technique is of the utmost importance when sampling for bacteria. Boil Water Orders can lead to bad publicity and a loss of consumer confidence in the public water supply. To help water superintendents, MWRA staff have put together the following best management practices.

Conduct sanitary sampling surveys at all TCR Locations

We strongly recommend that water department managers and samplers conduct visits to all of their TCR sites, including upstream and downstream sites to assess the conditions at the sites to ensure they meet all criteria for a clean tap water sample.

- Review the service line conditions and calculate how long it will take to flush the water in order to obtain a representative system sample.
- Review premise plumbing conditions including unusual plumbing configurations, mixing valves or tap fixtures, inline filters, and backflow preventers.
- Pay special attention to any location(s) with a low chlorine residual. If there is a location that is of concern, perform further investigation to determine if an alternate location could be used. Note that any change to sampling sites requires MassDEP approval and MWRA testing laboratory notification beforehand.

Create a TCR Sampling Manual and document the following:

- A list of all sample sites, with addresses and business hours;
- Contact person and phone number for access during business and non-business hours;
- Pictures of sample sites and taps – documenting the building, floor, and room;
- Service line details including materials, length, diameter, volume of water and calculated flushing time needed to obtain a representative distribution sample;
- Typical chlorine residuals and temperatures for the distribution system area (include seasonal trends);
- List the contact name and phone number of the MWRA lab and a water department supervisor for sampling issues.

Carefully documenting these details ensures that staff, including back-up sampling staff, can find the proper tap and flush for the appropriate amount of time. If needed, MWRA staff can provide examples of sample site documentation.

Use Proper Technique at Each Sample Location

When taking a TCR sample, proper technique is of the utmost importance.

- Remove aerators prior to each sample collection.
- Wear gloves for tap cleaning and sampling. Gloves must be worn at all times and changed between sites.
- The tap must be cleaned using a hype or bleach wipe each time.
- The tap must be run until the water is representative of water supplied to the community – as indicated by a consistent temperature and adequate chlorine residual.
- Sample collections typically take 15 to 20 minutes to collect using the correct techniques.
- Do not use a Colilert bottle that has a crack or a compromised sterility seal.
- Collect bacteria samples when flow is at a pencil-thickness.
- Bacteria samples need to be collected using aseptic technique to prevent contamination (wear gloves, do not put the cap down or touch the interior of the cap with your fingers, do not let the bottle lip touch the tap and do not overfill the bottle and evacuate the preservative).
- The samples must also be refrigerated or kept with ice packs prior to transfer to the testing lab.
- Dedicate sample coolers to drinking water samples only. Label cooler to ensure this.
- Sample taps with battery-operated sensors or combined hot and cold water faucets are not recommended for coliform sampling.
- Clean drinking water coolers regularly with soap and water. Ensure that your vehicle is also clean, and that wastewater and water samples are kept separate so that there is no cross contamination.

To help samplers follow proper sampling techniques, MWRA will be providing gloves and hype wipes to all community samplers. Samplers will be able to pick up supplies at either the Chelsea, Southborough, or Quabbin Laboratories starting on December 16, 2019.

Attend Sampler Training

MWRA offers community sampler training on a biennial basis and upon request. Each community sampler is strongly encouraged to attend this training; back-up samplers and water department managers can attend as needed. The training demonstrates the proper techniques for bacteria sampling and sample tap testing. Please let us know if any of your samplers staff require training.

System-Wide Best Management Practices

It is important to review sample results system wide, focusing on total coliform, chlorine residuals, and temperature trends in order to see possibilities for water quality improvements. If

you would like to review your distribution sampling data, please contact us and we can arrange a community meeting with various staff from MWRA's EnQual and Operations departments.

Encourage samplers to contact you when system temperatures or chlorine residuals are not typical or when there appears to be a premise plumbing change at the sample site. In this case, you may want to delay your bacteria sample collection until a supervisor has inspected the site.

Several MWRA communities have had issues maintaining adequate chlorine residuals within their local storage tanks. Cycle tanks routinely and adequately in order to maintain water quality and reduce water aging. Tank mixers can be considered to ensure uniform chlorine residual throughout the tank and prevent stratification. In addition, hydraulic models are a useful tool to help optimize your system, including tank turnover. If you are interested in learning more, please contact Valerie Moran at Valerie.Moran@mwra.com or 617-305-5813.

We hope you find this information helpful. If you have any questions about your total coliform sampling program or you would like staff training, please contact Joshua Das at Joshua.Das@mwra.com or 508-424-3679.

Sincerely,

A handwritten signature in blue ink, reading "Mark H. Johnson". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

Mark H. Johnson, PE
Director, Waterworks