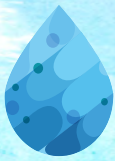




MASSACHUSETTS
WATER RESOURCES
AUTHORITY 2020
DRINKING WATER
TEST RESULTS



WATER IS ESSENTIAL!

This report contains very important information about your drinking water. Please translate it, or speak with someone who understands it.

Si usted desea obtener una copia de este reporte en español, llámenos al teléfono 617-788-1190.

La relazione contiene importanti informazioni sulla qualità dell'acqua della Comunità. Tra-durlo o parlarne con un amico che lo comprenda.

O relatório contém informações importantes sobre a qualidade da água da comunidade. Traduza-o ou peça a alguém que o ajude a entendê-lo melhor.

Sprawozdanie zawiera ważne informacje na temat jakości wody w Twojej miejscowości. Poproś kogoś o przeloczenie go lub porozmawiaj z osobą która je dobrze rozumie.

يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك. يرجى ترجمته أو ابحت التقرير مع صديق لك يفهم هذه المعلومات جيداً.

H katóvov avatóra pavovasiáçí avovónes plivofóvovetev tva to povtvo vevv avç. Pivavkavav va to pevavvovavte tva va to avçlavavvavte pev kavvovov povv to kavvavlavvav avvavvavvavç.

Im Bericht steht wichtige Information über die Qualität des Wassers Ihrer Gemeinschaft. Der Bericht soll übersetzt werden, oder sprechen Sie mit einem Freund, der ihn gut versteht.

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

इस रिपोर्ट में 'महत्वपूर्ण जानकारी' के विषय पर बहुत जरूरी जानकारी दी गई है। कृपया इसका अनुवाद करें/पढ़ें, या किसी जानकार से इस बारे में पूछें।

របាយការណ៍នេះមានព័ត៌មានសំខាន់ៗអំពីគុណភាពទឹកស្របក្នុងតំបន់របស់អ្នក។ សូមប្រកបប្រឹក្សាមិត្តភក្តិរបស់អ្នកដើម្បីបកប្រែឬពន្យល់អំពីរបាយការណ៍នេះ។

이 보고서는 귀하의 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충분히 이해하시는 친구와 상의하십시오.

Bản báo cáo có ghi những chi tiết quan trọng về phẩm chất nước trong cộng đồng quý vị. Hãy nhớ người thông dịch, hoặc hỏi một người bạn biết rõ về vấn đề này.

Ce rapport contient des informations importantes à propos de votre eau potable. Demander à quelqu'un de traduire ces informations pour vous ou discuter avec une personne qui comprend ces informations.



Massachusetts Water Resources Authority
The Chicopee Water Dept.
South Hadley F.D. No. 1
Wilbraham Water Division

Where To Go For Further Information

Massachusetts Water Resources Authority (MWRA)	www.mwra.com	617-242-5323
Department of Conservation and Recreation (DCR)	www.mass.gov/dcr/watersupply	617-626-1250
Massachusetts Dept. of Public Health (DPH)	www.mass.gov/dph	617-624-6000
Massachusetts Dept. of Environmental Protection	www.mass.gov/dcr/watersupply	617-292-5500
US Centers for Disease Control & Prevention (CDC)	www.cdc.gov	800-232-4636
List of State Certified Water Quality Testing Labs	www.mwra.com/testinglabs.html	617-242-5323
Source Water Assessment and Protection Reports	www.mwra.com/sourcewater.html	617-242-5323
Information on Water Conservation	www.mwra.com/conservation.html	617-242-SAVE

Public Meetings

MWRA Board of Directors	www.mwra.com/boardofdirectors.html	617-788-1117
MWRA Advisory Board	www.mwraadvisoryboard.com	617-788-2050
Water Supply Citizens Advisory Committee	www.mwra.com/wscac.html	413-213-0454

For A Larger Print Version, Call 617-242-5323.

This report is required under the Federal Safe Drinking Water Act. MWRA PWS ID# 6000000





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Dear Customer,

This report brings you the results of our annual water quality testing. While 2020 was a year filled with uncertainty, one thing remained constant: the quality of your drinking water was excellent. MWRA takes hundreds of thousands of tests each year, and for 2020, we again met every federal and state drinking water standard.

As providers of essential services, the women and men of MWRA have been on the job every day during the pandemic to make sure that the customers in our service area received uninterrupted delivery of safe drinking water.

Our reservoirs have ample supplies to meet the demands of our service area. However, water is the most precious resource and we encourage everyone to save water wherever possible. You can find tips on how to conserve water on our website at www.mwra.com.

Lead continues to be a priority for us and our member communities. To date, 11 communities have utilized over \$17 million through our zero-interest loans to remove lead service lines. All three Chicopee Valley Aqueduct communities continue to be below the Lead Action Level.

PFAS, or ‘forever chemicals’ have been in the news a lot lately. As expected, given our well-protected sources, our test results easily meet the newly issued Massachusetts Department of Environmental Protection standards. No changes in our treatment are needed, and we continue to monitor this important issue.

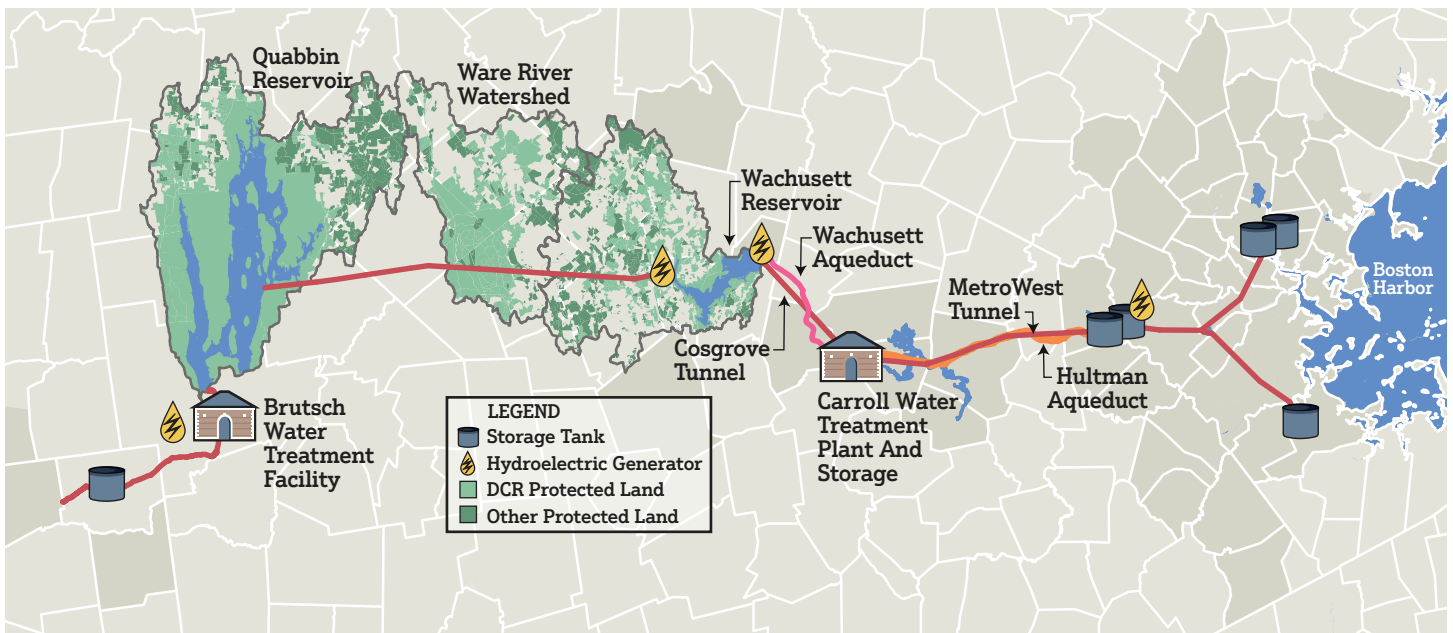
I hope you will take a few moments to read this report. We have great confidence in the water we deliver to your homes and businesses and we want you to as well. Please contact us if you have any questions or comments about your water quality, or any of MWRA's programs.

Sincerely,



Frederick A. Laskey
Executive Director

For more information on MWRA and its Board of Directors, visit www.mwra.com.



Safe Drinking Water Is Essential



Safe drinking water is essential - to life, human health, and public safety. Healthcare, fire services and other emergency responders rely on safe, available water. In 2020, MWRA worked with the three CVA communities to supply every home, business, school and hospital tap.

Essential Information About Your Water

This 2020 Water Quality Report will provide you with essential information on your drinking water-how we test, treat, and ensure the safety of your water-every day, without interruption.

MWRA's Water Sources

MWRA supplies about 7 million gallons of high quality water each day to three Chicopee Valley Aqueduct (CVA) communities-Chicopee, Wilbraham and the South Hadley Fire District #1 (FD#1), from the Quabbin Reservoir. Water from the Ware River is also added to the supply at times.

The Quabbin watershed-the area that drains water into the reservoir-is naturally protected with over 85% of the watershed covered in forest and wetlands, which help filter the rain and snow as they enter streams that flow into the reservoirs. This water comes into contact with soil, rock, plants, and other material as it follows its natural path to the reservoirs. While this process helps to clean the water, it can also dissolve and carry very small amounts of material, including radioactive material, into the reservoir. Minerals from soil and rock do not typically cause problems in the water. Water can also transport contaminants including bacteria, viruses or other potential pathogens, from



human and animal activity. Test results show few contaminants are found in the reservoir water. The few that are detected are in very small amounts that are well below EPA standards.

Water Source Protection

A Source Water Assessment Program report was developed by the Department of Environmental Protection (DEP), for the Quabbin and Wachusett Reservoirs. The DEP report commends the Department of Conservation and Recreation (DCR) and MWRA staff on our source water protection plans, and states that our "watershed protection programs are very successful and greatly reduce the actual risk of contamination." MWRA and DCR follow the report recommendations to maintain the pristine watershed.

Testing from Forest to Faucet

MWRA and your community work together to test your drinking water frequently, from the water's source in the Quabbin Reservoir to the tap. MWRA laboratories conduct hundreds of thousands of tests every year for 120 potential contaminants. You can learn more about our testing at www.mwra.com. The 2020 water quality tests for the Quabbin Reservoir are shown below. These results confirm the quality and safety of the water delivered each day.

Turbidity (the cloudiness of the water) is one measure of overall water quality. There are two standards for turbidity. All water must be below 5 NTU (Nephelometric Turbidity Units) and water can only be above 1 NTU if it does not interfere with effective disinfection. Typical levels at the Quabbin Reservoir were 0.26 NTU and all samples were below 1 NTU 100% of the time. The highest level was 0.96 NTU.

MWRA also tests reservoir water for pathogens, such as fecal coliform bacteria, and the parasites *Cryptosporidium* and *Giardia*. They can enter the water from



animal or human waste. All test results were well within state and federal testing and treatment standards. For more information visit www.mwra.com.

Testing Your Community's Water System

MWRA and local water departments test water all the way to the tap. We test water samples in city and town pipes each week for total coliform and *E. coli* bacteria. Total coliform bacteria can come from the intestines of warm-blooded animals, or can be found in soil, plants or other places. Most of the time these bacteria are not harmful; however, their presence could signal that harmful bacteria from fecal waste may be there as well. *E. coli* is a pathogen found in human and animal fecal waste that can cause illness. No *E. coli* was found in any CVA community water in 2020.

Monitoring Water for PFAS

PFAS compounds, used since the 1950s for everything from stain and water proofing to firefighting, continue to be an environmental concern. In 2020, the MassDEP published a drinking water standard for PFAS. Tests of MWRA water showed only trace amounts of these compounds, well below the new state maximum contaminant level (MCL) of 20 parts per trillion. See www.mwra.com.

TEST RESULTS - AFTER MWRA WATER TREATMENT

Compound	Units	(MCL) Highest Level Allowed	(We Found) Detected Level-Average	Range Of Detections	(MCLG) Ideal Goal	Violation	How It Gets In The Water
Barium	ppm	2	0.006	0.006-0.006	2	No	Common mineral in nature
Nitrate [^]	ppm	10	0.012	ND-0.012	10	No	Atmospheric deposition
Fluoride	ppm	4	0.05	0-0.2	4	No	Natural sources

KEY: MCL=Maximum Contaminant Level. The highest level of a contaminant allowed in water. MCL's are set as close to the MCLGs as feasible using the best available technology. MCLG=Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. ppm = parts per million. [^]The maximum result is reported for nitrate, not the average.

Essential Protection And Monitoring

Source Protection and Treatment

MWRA and DCR protect the water you drink by testing, treating and protecting water quality from the streams in the watershed, through hundreds of miles of MWRA and thousands of miles of local pipes, all the way to your home. MWRA works with the DCR to protect 150,000 acres of permanently preserved forested land and wetlands in the watershed. DCR maintains a nationally recognized protection program that includes extensive water quality maintenance and development regulations. MWRA maintains a state-of-the-art monitoring –24 hours a day, 7 days a week—before and after treatment. This system helps us confirm the water is free of contaminants, and allows MWRA to respond rapidly to any changes in water quality.

Your drinking water is treated at the Brutsch Water Treatment Facility before it enters the Chicopee Valley Aqueduct. MWRA’s licensed treatment operators carefully add measured doses of chlorine, and further treat the water with ultraviolet light (UV). UV light is essentially a more potent form of the natural disinfection from sunlight. Both disinfection processes are designed to kill pathogens (germs) that may be present in the water. Licensed operators in Chicopee perform additional booster disinfection at the point where the local pipes take water from aqueduct. Each community also treats the water to reduce the leaching of lead from home plumbing.



CONSERVATION IS ESSENTIAL

Some parts of the state are experiencing drought conditions. Although the Quabbin Reservoir is well within the “Normal” operating range for this time of year, MWRA urges its customers to conserve water wherever possible. Our website has many tips on how to save water both indoors and outdoors. Every drop counts!

Important Health Information: Drinking Water and People with Weakened Immune Systems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA’s Safe Drinking Water Hotline 1-800-426-4791.

Contaminants in Bottled Water and Tap Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (1-800-426-4791) or MWRA. In order to ensure that tap water is safe to drink, the Massachusetts DEP and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health (MDPH) regulations establish limits for contaminants in bottle water, which must provide the same protection for public health.

Important Research for New Regulations

MWRA works with EPA and health research organizations to help define new national drinking water standards by collecting data on contaminants that are not yet regulated. Due to our well-protected sources, very few of these potential contaminants are found in MWRA water. Information on this testing, as well as other water quality data, including information on PFAS, *Giardia* and *Cryptosporidium*, and other contaminants can be found at www.mwra.com.

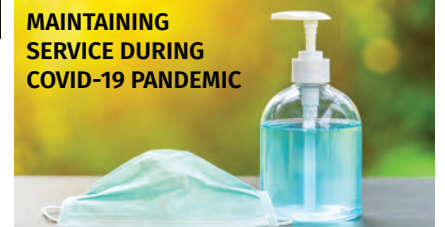
MWRA Bacteria Testing Results

MWRA carries out daily testing for total coliform bacteria to monitor the water delivered to the CVA communities. Coliforms are bacteria that are naturally



present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. In August 2020, four samples at our monitoring station were positive for total coliform, but absent for *E. coli*. Repeat samples collected after each detection were absent for both total coliform and *E. coli*. As a result, we were required to conduct a Level 1 Assessment of MWRA’s CVA water system, which we did. A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria were found in the water. We were required by DEP to complete four corrective actions. MWRA completed all four on time, and provided a report to DEP in October. No additional actions were required.

MAINTAINING SERVICE DURING COVID-19 PANDEMIC



MWRA’s emergency planning and commitment to providing reliable service allowed us to keep the water and sewer systems working continuously over the past year. We activated our long-standing pandemic response plan, protected our staff with changed work rules and social distancing, and met all drinking water testing and safety requirements.

CHICOPEE

Phone: 413-594-3420
PWS ID # 1061000

The Chicopee Water Department's Corrosion Control Facility continues to provide excellent water quality by adjusting the water's pH and alkalinity levels. Sodium Carbonate and Sodium Bicarbonate (baking soda) are used to make this adjustment. A phosphate blend also adds an extra level of protection by further reducing corrosion throughout the system. The benefits of these treatment processes are evident in the reduced levels of dissolved metals such as lead, copper, and iron in the city's water supply.

Under the Safe Drinking Water Act, water samples must be collected specifically for the analysis of lead and copper. Household plumbing is the main contributor of these metals in our drinking water and the water's chemistry is adjusted to minimize corrosion within the homes of Chicopee's residents.

In 2018, 30 samples were collected for the analysis of lead and copper in Chicopee's drinking water. The Environmental Protection Agency (EPA) has reduced the number of samples that must be collected by the Chicopee Water Department due to its successful maintenance of low to absent levels of lead and copper in the water system. The next round of lead and copper samples will be collected in the spring of 2021.

Though it has been a challenging year for all, various water system upgrades and additions were made, including: 800 feet of ductile iron pipe on Munger Road and 650 feet of ductile iron pipe on Schoolhouse Road. Accompanying the new water mains, 10 new hydrants were installed. These system upgrades have improved the flow capacity for all residences and fire protection, as well as improved redundancy in the system. Additionally, Chicopee began its meter modernization program for residential and commercial meters.

For disinfection, Chicopee now uses Sodium Hypochlorite in place of the previously used (and much more hazardous) chlorine gas. This change was made in an effort to increase safety for the treatment plant operators and the residents of Chicopee.

For more information on your drinking water, or to find out about public meetings, please go to our website at: www.chicopeema.gov/Facilities/Facility/-Details/Chicopee-Water-Department-29 or call us at: (413)594-3557.

WILBRAHAM

Phone: 413-596-2807
PWS ID # 1339000

The Corrosion Control Facility on Miller Street in Ludlow continues to operate without issue while injecting Sodium Silicate into the drinking water in compliance with the federally mandated Lead and Copper Rule. The next round of Lead and Copper testing is to occur during the summer of 2021.

The Water Department finished installing the remaining 400 feet of 8" PVC water main on the Glenn Drive water extension project; 12 new service connections along with 2 fire hydrants were added for adequate fire protection. The Wilbraham Water Department plans to continue replacing and/or extending the water mains in Town as needed.

Within the last year, the Wilbraham Water Department made pump repairs at the McIntosh Pump station and the Glenn Drive Pump Station. Routine maintenance was done to the other two pump stations, the 2.1 million gallon storage tank and the Corrosion Control Facility.

The Wilbraham Water Department repaired one significant water main break on Springfield Street. Our crew also repaired several service line leaks within the distribution system, and numerous new construction homes were built with new service connections as well. The Water Department has continued efforts of installing new water meters throughout the distribution system to ensure accurate consumption of each household and business along with installing remote electronic readers. The water usage for 2020 was 460,497,000 gallons. This represents a 9% increase compared to 2019.

Information on water quality and public meetings can be found on our website at: www.wilbraham-ma.gov/194/Water.



SOUTH HADLEY FIRE DISTRICT #1

Phone: 413-532-0666
PWS ID # 1275000

The year 2020 began business as usual and abruptly became a "new normal" with the COVID-19 Pandemic. We saw significant increases in usage due to people working and schooling from home and the extremely dry year. Water main replacements were prioritized by leak history, pipe type and the annual street paving list. The Board would like to thank our staff for performing the inspection of the project in-house resulting in significant cost savings.

Our Treatment Facility located on Fuller St. in Ludlow continues to add Sodium Silicate for corrosion control to comply with the federal Lead and Copper Rule. Sampling in 2019 showed that our 90th percentile for Lead was 6.84 ppb and for Copper was 6.41 ppb. We will be sampling again in June of 2022.

We had total coliform detections during August that required a Level 1 Assessment, a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. We were required to conduct and completed one Level 1 assessment. We were required to take 2 corrective actions and completed both. Based on our disinfection byproducts results, in 2019, we re-examined the target chlorine residual at our Alvord St. Tank. We decided to adjust the target from 1.0 ppm to 0.75 ppm, and to try to turn over 1/3 of our tank daily. Based on historical residual data, we made a corrective action by adjusting tank cycling.

We feel strongly that the Water Department – Fire District No. 1 has been operated very efficiently, providing the ratepayers with high quality service at the lowest possible cost. We are fortunate to be a member of the MWRA system. Please take a moment to view our website with historical and updated information about our Department and public meetings at: www.shdistrict1.org.

Essential Information About Lead



Important Information On Lead in Your Drinking Water

Lead poisoning typically comes from exposure to lead paint dust or chips. But lead in drinking water also can contribute to total lead exposure. Depending on the kind of plumbing in your home, lead levels in water can be elevated. To lower your family's risk for exposure, review the steps on this page to reduce lead levels in your home environment.

What You Need to Know

MWRA water is lead-free when it leaves the reservoir. And MWRA and local pipes that carry the water to your community are made mostly of iron and steel, and don't add lead to the water. Lead can enter your tap water through pipes in your home, your service line (the line that connects your home to the water main) if it is made of lead, lead solder used in plumbing, or from some brass fixtures. Corrosion or wearing away of lead-based materials can add lead to tap water, especially if water sits for a long time

in the pipes before it is used. Lead levels found in tap water in sampled homes have dropped significantly since the CVA communities improved treatment to make water less corrosive. This means the water is less likely to absorb lead from pipes and other fixtures.

CVA Communities Meet Lead Standard

Under EPA regulations, your local water department must test tap water in a sample of homes that are likely to have high lead levels. These are usually older homes with lead service lines or lead solder. The EPA rule requires that 9 out of 10, or 90% of these sampled homes must have lead levels below the Action Level of 15 parts per billion (ppb). All three CVA communities' results were below the lead Action Level.

Important Information From EPA About Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. MWRA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-425-4791 or www.epa.gov/safewater/lead.

REDUCE EXPOSURE TO LEAD IN YOUR HOME

- Let the water run before using it: fresh water is better than stale. To save water, fill a pitcher with fresh water and place in the refrigerator for future use.
- Run each faucet used for drinking or cooking until the water becomes cold anytime your water has not been used for more than six hours.
- Never use hot water from the faucet for drinking or cooking, especially when making baby formula or other food for infants or young children.



- Check your plumbing fixtures to make sure they are lead-free. Read the labels closely.
- Remove loose lead solder and debris. Every few months remove the aerator from each faucet in your home and flush the pipes for 3 to 5 minutes.
- Be careful of places where you may find lead in or near your home. Paint, soil, dust and pottery may contain lead. Call the Massachusetts Department of Public Health at 1-800-532-9571 or 1-800-424-LEAD for information on health and lead.

LOCAL TEST RESULTS FOR 2020	Total Trihalomethanes (TTHMs) in ppb MCL=80 ppb (Avg)		Haloacetic Acids (HAA5) in ppb MCL=60 ppb (Avg)		Chlorine in ppm MRDL=4 ppm (Avg) MRDLG=4 ppm		Lead in ppb AL=15 ppb MCLG=0		Copper in ppb AL=1300 ppb MCLG=1300		Sodium in ppm
	Annual Average	Range	Annual Average	Range	Annual Average	Range	# Samples over AL	90% Value	# Samples over AL	90% Value	
Chicopee	61	31-69	58	12-60	0.57	0.02-1.19	0 of 30	0.0**	0 of 30	136**	18.8
South Hadley FD #1	66	34-68	44	14-34	0.39	0-1.16	2 of 30	6.84*	0 of 30	6.41*	7.96
Wilbraham	64	38-68	34	15-24	0.31	0.2-1.0	0 of 20	9.3**	0 of 20	86**	8.04

MRDL=Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. **MRDLG**=Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination. **ppm**=parts per million. **ppb**=parts per billion. *Sampled in 2019. **AL**=Action Level-The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. **Sampled in 2018.