GET TO KNOW YOUR DRINKING WATER

Massachusetts Water Resources Authority
2019 Drinking Water Test Results

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, llamenos al telefono 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. Tra-duza-o ou peça a alguém que o ajude a entendê-lo melhor.

Sprawozdanie zawlera ważne informacje na temat jakości wody w Twojej miejscowści. Poproś kogoś o przellurnaczenie go lub porozmawiaj z osobą która je dobrze rozumie.

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

Η κατοθεν αναφορα παρουσιαζη σπουδαιες πληροφορειες για το ποσιμο νερο σας. Πρακακλω να το μεταφρασετε η να το σξολειασετε με καποιον που το καταλαβαινη απολητως.

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 aversteht.

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 "पीने के पानी" के विषय पर बहुत जरूरी जानकारी दी गई है। कृपया इसका अनुवाद कीजिये, या किसी जानकार से इस बारे में पूछिये।

ឯកសារការណ៍នេះមានពត៌មានសំខាន់ៈពីទឹកបរិភោគ ។ សូមបកប្រែ ឬពិគ្រោះជាមួយអ្នកដែលមើលយល់ឯកសារការណ៍នេះ ។

이 보고서에는 귀하가 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 nhờ 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.

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Massachusetts Water Resources Authority And Your Local Water Department

Where To Go For Further Information

Massachusetts Water Resources Authority (MWRA)	www.mwra.com	617-242-5323
Massachusetts Dept. of Environmental Protection	www.mass.gov/dep	617-292-5500
Massachusetts Dept. of Public Health (DPH)	www.mass.gov/dph	617-624-6000
Department of Conservation and Recreation	www.mass.gov/dcr/watersupply	617-626-1250
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

MWRA BOARD OF DIRECTORS

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

Dear Customer,

I am pleased to share with you the results of our water quality testing for 2019. The hundreds of thousands of tests we take every year ensure your water is safe and of the highest quality, and every federal and state drinking water standard was met.

Of course, the coronavirus is first and foremost in everyone's mind this year. While this report looks back on water quality results from 2019, I want to assure you that your drinking water does not contain or carry the virus and that your water quality remains excellent. The dedicated women and men who run this critical water system have been hard at work throughout the pandemic – protecting the watersheds, running the treatment plants, taking samples every day and performing maintenance.

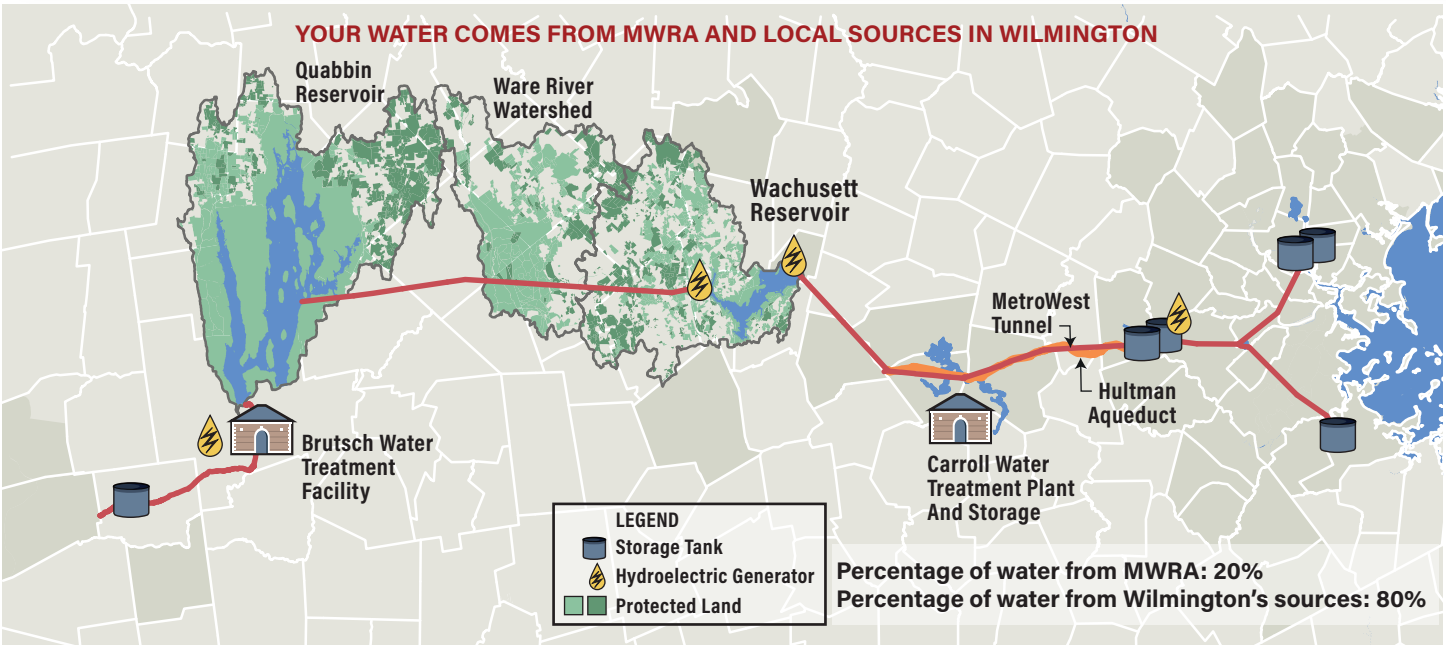
Lead in drinking water also remains an important issue and we continue to make progress on reducing the risk by treating the water to make is less corrosive, and working with our member communities to identify and remove lead service lines. More information can be found on pages 4 and 5 of this report.

May 2020 also marked the 10th anniversary of the large water main break we had in Weston. Since that time, we have continued work on projects that allow us to re-route the water in the event of a break so that service will not be interrupted. We have begun the initial design phase for two new water tunnels that will allow us to inspect and make repairs to the existing tunnel system, although construction of this project is still several years away.

I hope you will take a few moments to read through this important report and get to know your water. We have great confidence in the water we deliver to your home and we want you to share that confidence. Please contact us if you have any questions about this report or any of MWRA's programs.

Sincerely,

Frederick A. Laskey
Executive Director



FIND OUT ABOUT
YOUR DRINKING WATER

Why Your Water Tastes Great-High Quality Source Water

Your water comes from the Quabbin Reservoir, about 65 miles west of Boston, and the Wachusett Reservoir, about 35 miles west of Boston. Water from the Ware River can also add to the supply at times. These pristine reservoirs supply wholesale water to local water departments in 51 communities. The two reservoirs combined supplied about 200 million gallons a day of high quality water to consumers in 2019. **Your water also comes from local water supplies. Please see page 7 for more information.**

Rain and snow falling on the watersheds - protected land around the reservoirs - turn into streams that flow to the reservoirs. This water comes in 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.

The Quabbin and Wachusett watersheds are naturally protected with over 85% of the watersheds covered in forest and wetlands. To ensure safety, the streams and reservoirs are tested often and patrolled daily by the Department of Conservation and Recreation (DCR).

Minerals from soil and rock do not typically cause problems in the water. But water can also transport contaminants from human and animal activity. These can include bacteria and pathogens - some of which can cause illness. The test data in this report show that these contaminants are not a problem in your reservoirs' watersheds.

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program report for the Quabbin and Wachusett Reservoirs. The DEP report commends DCR and MWRA on the existing source water protection plans, and states that our "watershed protection programs are very successful and greatly reduce the actual risk of contamination." MWRA follows the report recommendations to maintain the pristine watershed areas. **Your water also comes from local supplies that have a separate report.**

Testing Our Water - From Forest to Faucet

MWRA analyzes your drinking water continuously, from the source in a protected natural watershed, to the pipes in your community. MWRA works with towns and cities, and the Department of Environmental Protection, EPA, and the Massachusetts Department of Public Health (MDPH) to ensure the safety of the water at your tap. 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's standards

Turbidity (or cloudiness of the water) is one measure of overall water quality. 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. In 2019, typical levels in the Wachusett Reservoir were 0.34 NTU, with the highest level of tur*bidity a*t 0.78 NTU, well below the standard.

MWRA also tests reservoir water for pathogens such as fecal coliform, bacteria and the parasites *Cryptosporidium* and *Giardia* that 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, please visit www.mwra.com/ucmr/2019.html.

DID YOU KNOW? MWRA won the best tasting water in New England again in 2019. We're proud of our great tasting water.

Learn About Your Water Quality

MWRA tests your water after as well as before treatment to check the water you drink. MWRA conducts hundreds of thousands of tests per year on over 120 contaminants (a complete list is available on www.mwra.com). Details on 2019 test results are in the table below. The bottom line is that water quality is excellent. **For results on your local water sources, please see page 7.**

KNOW ABOUT PFAS PFAS compounds, used for everything from stain and water proofing to firefighting, were in the news a lot in 2019. MWRA water testing showed only very low levels, well below proposed state standards. See mwra.com for more details.

TEST RESULTS AFTER 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	0.010	0.01-0.011	2	No	Common mineral in nature
Mono-Chloramine	ppm	4-MRDL	2.08	0-3.8	4-MRDLG	No	Water disinfectant
Fluoride	ppm	4	0.69	0.1-0.83	4	No	Additive for dental health
Nitrate^	ppm	10	0.145	0.04-0.145	10	No	Atmospheric deposition
Total Trihalomethanes	ppb	80	27.6	8.49-25.6	NS	No	Byproduct of water disinfection
Haloacetic Acids-5	ppb	60	18.6	4.9-19.8	NS	No	Byproduct of water disinfection
Total Coliform	%	5%	1.4% (Sept)	ND-1.4%	NS	No	Naturally present in environment

KEY: MCL=Maximum Contaminant Level. The highest level of a contaminant allowed in water. MCLs are set as close to the MCLGs as feasible using the best available technology. **MCLG**=Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. **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 **NS**=no standard **ND**=non-detect **^**=As required by DEP, the maximum result is reported for nitrate, not the average.

FIND OUT ABOUT

HOW WE PROVIDE SAFE DRINKING WATER

COVID CONCERNS

Your water does not contain the coronavirus. Our well-protected watersheds and effective disinfection mean that you don't need to buy bottled water. Despite the emergency, we continue to run the system and monitor water quality.

Quabbin Reservoir Forest

DID YOU KNOW? **Your water is monitored by a state-of-the-art system in real time —24 hours a day, seven days a week, before and after treatment —to make sure it is free of contaminants. This allows MWRA to rapidly respond to any changes in water quality.**

MWRA maintains state-of-the-art treatment procedures to make sure your water is safe, fresh, and tastes great. Part of the reason that the water tastes so good is MWRA's advanced water treatment at the John J. Carroll Water Treatment Plant in Marlborough. First, your water is treated with ozone—produced by pure oxygen. Ozone disinfects the water, killing bacteria, viruses and other organisms. It also improves water clarity and makes the water taste better. Next, we use ultraviolet light (UV) disinfection, further improving the quality of the water. UV light is essentially a more powerful form of the natural disinfection from sunlight, and further ensures that any pathogens in the water from our reservoirs are rendered harmless.

In addition, fluoride is added to promote dental health, and the water chemistry is adjusted to reduce corrosion of home plumbing. Last, we add mono-chloramine (combining chlorine and ammonia), a mild and long-lasting disinfectant to provide continuing protection of the water as it travels through miles of pipelines to your home. **Your local water may have different treatment. Please see page 7.**

Ozone generator in Carroll Water Treatment Plant

Providing Reliable Service

MWRA is committed to providing a reliable supply of safe water to our customer communities. We plan for emergencies, train our staff on how to respond, and regularly drill to be sure we are prepared. During the coronavirus pandemic, MWRA activated its long-standing pandemic response plan to focus our staff resources on essential work, and protect the health of our staff so that we could continue to provide you water meeting all drinking water safety standards.

Ensuring Redundancy

Redundant pipelines and tunnels allow inspection and maintenance of key facilities while ensuring uninterrupted service. We recently completed a second pipe to the north in Stoneham, Reading and Woburn, providing service to six communities, as well as the Wachusett Aqueduct Pumping Station in Marlborough, which now provides a second way to get water to the treatment plant. We are also nearing completion of a redundant pipeline south of Boston. Design is underway to repair and improve the Weston Aqueduct Supply Main 3 in Weston, Waltham, Belmont, Arlington and Medford. And planning for two new tunnels north and south of Boston that will provide redundancy for the entire region is now well underway.

On-going Pipeline Rehabilitation

MWRA continues to rehabilitate and replace pipelines throughout the distribution system to improve both reliability and water quality. MWRA also provides zero-interest loans to customer communities for local pipeline projects. In 2019, $26.7 million was loaned to communities for 21 projects for the replacement or rehabilitation of older unlined pipes or replacement of lead service lines.

FACTS ABOUT SODIUM

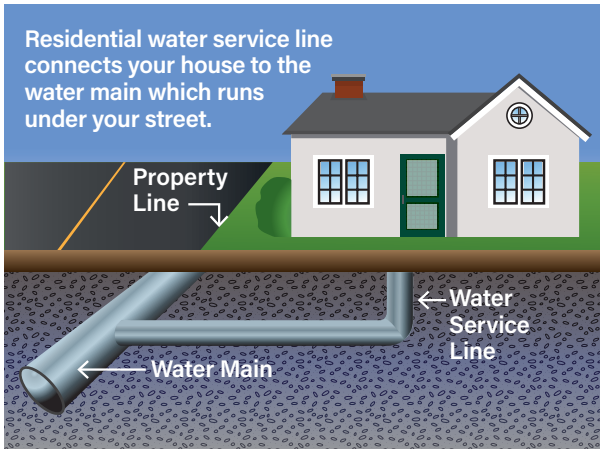
Sodium in water contributes only a small fraction of a person's overall sodium intake (less than 5%). MWRA tests for sodium monthly and the highest level found was 40.7 mg/L (about 10 mg per 8 oz. glass). This would be considered Very Low Sodium by the Food and Drug Administration (FDA).

FIND OUT ABOUT

LEAD IN YOUR DRINKING WATER

News on Lead in Tap Water

Lead in tap water continues to be in the news and you may have some concerns about the safety of your tap water. MWRA's water system has been below the Lead Action Level for 15 years. Of over 2,700 samples taken in the last 6 years, 98% were below this 15 ppb level.



What You Need to Know—Lead in Your Tap Water

MWRA water is lead-free when it leaves our reservoirs. 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.

MWRA's corrosion control program helps limit the amount of lead in your water. In 1996, MWRA began adding sodium carbonate and carbon dioxide to adjust the water's pH and buffering capacity. This change makes the water less corrosive and reduces leaching of lead into drinking water. Lead levels found in sample tests of tap water have dropped by about 90% since this treatment change. Learn more about lead in drinking water at www.mwra.com.

MWRA Meets Lead Standard in 2019

Under EPA rules, MWRA and your local water department must test tap water each year in a sample of homes likely to have high lead levels –those with lead solder or lead service lines. The EPA rule requires that 9 out of 10, or 90% of the sampled homes must have lead levels below the Action Level of 15 ppb in their drinking water.

All sampling rounds over the past 15 years have been below the EPA Action Level. Results for the 451 samples taken in September 2019 are shown in the table. Nine out of ten homes were below 8 ppb —well below the Action Level of 15 ppb.

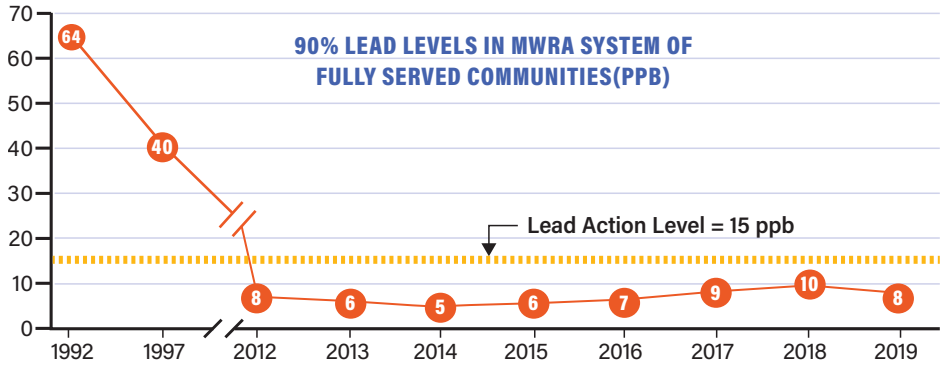
Your community letter on page 7 will provide you with local results and more information.

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 1-800-426-4791 or www.epa.gov/safewater/lead.

LEAD AND COPPER RESULTS-2019	90% Value	Target Action Level	Ideal Goal (MCLG)	#Homes Above AL #Homes Tested
Lead (ppb)	7.97	15	0	16/451
Copper (ppm)	0.116	1.3	1.3	0/451

KEY: AL=Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.



WHAT IS AN ACTION LEVEL?

An Action Level is the amount of lead that requires actions to reduce exposure. If your drinking water sample is above the Lead Action Level, you might need to take additional steps. If more than 10% of your community's samples were over the Lead Action Level, your water department is taking action. See page 7.

FIND OUT ABOUT

REDUCING YOUR LEAD RISK

WHY IS LEAD IN DRINKING WATER IMPORTANT?

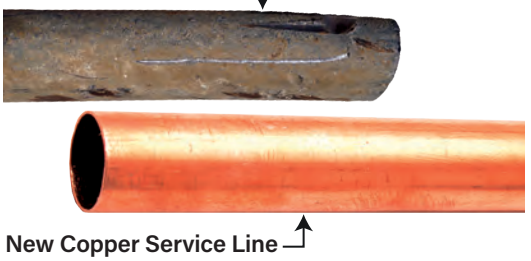
Lead poisoning typically comes from exposure to lead paint dust or chips. But lead in drinking water also can contribute to total lead exposure. Depending on the kind of plumbing in your home, or the connection to the water main, lead levels in water can be elevated. To lower your family's risk for lead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

Remove Your Lead Pipe - Reduce Lead in Your Water

Lead can come from many sources in the home. A service line connects your building's plumbing to the water main in your street. In some older buildings, it is made of lead and can add significant amounts of lead to your drinking water. Removing and replacing it completely can eliminate the main source of lead in your drinking water. Preventing lead exposure is particularly important if a pregnant woman or child lives in the home or apartment.

Water Service Lines – Old And New

You can identify lead service line by carefully scratching with a key.



New Copper Service Line

Do I Have a Lead Service Line?

Identifying and removing a lead service line can significantly reduce any lead in your drinking water.

One way to find out if you have a lead service line: Scratch the pipe near your water meter with a key. Lead pipes will show a dull grey or silver color, while copper pipes will not. To find out more about your service line contact your local water department. For more information go to www.mwra.com.

MWRA Program to Replace Lead Service Lines

MWRA and its Advisory Board approved $100 million in zero-interest loans to member communities to fully replace lead service lines. Each community can develop its own local plan, and many communities have already moved forward. To find out more, please read your community letter on page 7 or contact your local water department.

How Do I Test My Tap Water for Lead?

Go to the list of certified laboratories and sampling instructions available on the lead testing page at www.mwra.com. You may also call MWRA at 617-242-5323 for additional information. Some communities have testing services available for their residents.

Free Lead Testing For Schools

The plumbing in some schools can contain lead. To help communities identify problems with lead in school drinking water, MWRA provides free testing for schools and childcare centers. Water samples are tested at our laboratory and the results are provided to the local school, health and water departments. For more information, go to www.mwra.com. We have completed over 38,000 tests from 478 schools across 44 communities. Most of the results are available on the DEP website at www.mass.gov/dep (search for lead in schools). Results may also be available from your local school department.

Reduce Exposure to Lead in Your Home

Lead can enter your drinking water through pipes in your home, or your lead service line (that connects your home to the water main). Take these steps to reduce lead in your drinking water.

- 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 after 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.
- Contact your local water department to find out if you have a lead service line—and find out how to replace it.
- 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.

FIND OUT ABOUT
MWRA'S WATER QUALITY PROGRAM

WATER TESTING ACROSS THE ENTIRE SYSTEM

MWRA's Water Quality Program, in partnership with your community, conducts hundreds of thousands of tests every year for over 120 possible contaminants. The data show our water quality to be excellent. MWRA works continuously with water departments in the cities and towns we serve to ensure the safety and quality of your drinking water.

Quabbin Reservoir

Partners in Testing Your Local Drinking Water

MWRA collaborates with water departments to test 300 to 500 water samples from local pipes each week for total coliform bacteria. Most of the time these bacteria are not harmful. However, their presence in the water may signal that bacteria from fecal waste, which could cause disease, may be there as well. If a water sample tests positive, we run more specific tests for *E.coli*, a bacteria found in human and animal fecal waste, which may cause illness. If total coliform is detected in more than 5% of the samples taken in a month, the local water system is required to investigate the possible source and to fix any identified problems.

If your community found any total coliform or *E.coli* in your drinking water, it will be listed in the community letter on page 7.

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 bottled water, which must provide the same protection for public health.

Learn About New Regulations and Research

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. Information on this testing, as well as other water quality data, including information on PFAS compounds, *Giardia* and *Cryptosporidium*, and more detailed data on lead can be found at **www.mwra.com/UCMR/2019**.

CROSS CONNECTION INFORMATION

Massachusetts DEP recommends the installation of backflow prevention devices for inside and outside hose connections to help protect the water in your home as well as the drinking water system in your town. For more information on cross connections, please call 617-242-5323 or visit www.mwra.com/crosscon.

Help Us Know About Your Drinking Water

MWRA takes customer concerns seriously. Every call is investigated. Most complaints are related to discolored water (usually related to local construction or hydrant use), or conditions in a building's plumbing. If you have any questions or concerns, contact your local water department, or call MWRA at (617) 242-5323.

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).

Wilmington DPW - Water & Sewer Division
121 Glen Road, Wilmington, Massachusetts 01887

Public Water Supply
#3342000

Office of the Director
115 Andover Street, Wilmington, MA 01887

Telephone (978) 658-4711
Fax (978) 694-2003 TTY (978) 694-1417

Wilmington Water Supply The Wilmington distribution system consists of over 138 miles of water main, 1250 public fire hydrants and three water storage tanks and provides drinking water to 99 percent of all residents and businesses in the Town. The Town has four active wells that serve as the primary supply of water for the system:

Source Name	Mass DEP Source ID#	Source Type	Location of Source
Brown's Crossing	3342000-01G	Ground Water	115 Andover Street
Barrow's	3342000-02G	Ground Water	Sewell Road
Shawsheen Avenue	3342000-05G	Ground Water Under the Influence of Surface Water	Shawsheen Avenue
Salem Street	3342000-08G	Ground Water	Salem Street-Rear

*For a list of inactive wells, or additional information relative to our water source please contact the Water Division Office at 978-658-4711

After being treated at one of the two water treatment plants, water is pumped to three storage tanks and to the homes and businesses throughout Wilmington.

In times of high demand, MWRA (Massachusetts Water Resource Authority) water is used to supplement the Town's supply. On an annual basis, Town wells supply about 80 percent of water and MWRA provides about 20 percent. Wilmington also maintains interconnections and agreements with North Reading, Burlington, and Woburn.

How Is My Water Treated?

Aeration: The treatment process begins with aeration, which reduces carbon dioxide and hydrogen sulfide levels to lower treatment costs and improve taste.

Lime: Hydrated Lime is utilized at the treatment plants to raise water Alkalinity and pH levels. The elevated pH level is necessary to reduce corrosion in the distribution system and to meet lead and copper regulations.

Alum: Aluminum sulfate (alum) is added to the water before it passes into the flocculation basins. The alum prompts small particles to coagulate, or stick together, forming floc particles and removing color from the water. The floc particles continue to grow and stick together, becoming heavier before moving into the settling basins.

Potassium Permanganate: Potassium Permanganate is utilized at the beginning of the treatment process to remove iron and manganese. The permanganate oxidizes the dissolved metals so they will coagulate and can be removed during settling or filtration.

Sedimentation Settling Basins: In the settling basins, the floc particles settle to the bottom forming a layer of solids, which is removed by a siphon device and discharged to lagoons for disposal. The clear water at the top of the settling basin flows into the filter basins.

Filter Basins: The filter basins consist of four feet of granular activated carbon (GAC) to remove any remaining fine particles. The GAC filter also removes any remaining taste and odor, volatile organic compounds, and aids in polishing the water.

Chloramination: Chloramine is a form of chlorine created by combining chlorine with food-grade ammonium sulfate. Chloramine keeps the water safe by protecting against biological growth in the distribution system while producing less disinfection by-products.

What is in My Water?

Only the following regulated contaminants were detected in 2019.

	MCL	MCLG	AMOUNT DETECTED	RANGE	Violation	Source
Haloacetic Acids -5	60 ppb	NS	23.4 ppb	0-80 ppb	No	Byproduct of disinfection
Total Trihalomethanes	80 ppb	NS	44.2 ppb	0-88 ppb	No	Byproducts of disinfection
Nitrate^	10 ppm	10 ppm	0.76 oom	0.1-0.76 ppm	No	Fertilizer, Septic Tanks, Erosion of nature
Nitrite^	1 ppm	1 ppm	0,095 ppm	0-0.095 ppm	No	
Barium	2 ppm	w ppm	0.026 ppm	0.026 ppm	No	Common mineral in nature
Sodium	NS	20 ppm	69.9 ppm	69.9 ppm	No	Common mineral in nature, road salt
Monochloramine	4 ppm	4 ppm	1.86 ppm	0.3-2.6 ppm	No	Disinfectant

KEY: MCL=Maximum Contaminant Level. The highest level of a contaminant allowed in water. MCLs are set as close to the MCLGs as feasible using the best available technology. **MCLG**=Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. **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 **N**S=no standard ^=As required by DEP, the maximum result is reported for nitrate and nitrite, not the average.

PFAS Testing: You have probably heard of per- and polyfluoroalkyl substances (together abbreviated as PFASs). These are a class of human-made chemicals typically associated with manufacturing of non-stick coatings, waterproofing and stain proofing treatments. They have also been associated with certain fire-fighting foams. Wilmington conducted voluntary testing for PFAS compounds during 2019. There is no current federal or state standard, and Massachusetts is proposing a standard of 20 parts per trillion (ppt) for a group of six of the PFAS compounds. We found only one, PFOA, and the highest result was 3.3 ppt, which is well below the proposed state standard of 20 ppt.

Additional Test Results: The four individual compounds in this table are regulated as a sum as Total Trihalomethanes (as shown in the table below).

Disinfectant Byproduct Component[1]	Butters Row Treatment Plant	Sargent Treatment Plant
Bromodichloromethane	3.9 ppb	4.5 ppb
Bromoform	0.75 ppb	1.0 ppb
Chlorodibromomethane	4.4 ppb	5.6 ppb
Chloroform	1.8 ppb	1.9 ppb

[1] These four compunds are regulated on a combined basis as Total Trihalomenthanes (TTHMs). Samples take on July 14 and 15, 2019.

We also test the water for a number of other characteristics in your water. These are not health related, but can influence the taste or appearance of the water.

Aesthectic Compounds	Butters Row Treatment Plant	Sargent Treatment Plant
Iron	0.013 ppm	0.011 ppm
Calcium	46.3 ppm	57.6 ppm
Total Dissolved Solids	390 ppm	600 ppm
Hardness	139 ppm	170 ppm
Sulfate	45 ppm	52.1 ppm
Alkalinity	0.004 ppm	64 ppm
Manganese	6.97	0.011 ppm
pH@25C	95.1 ppm	7.41
Chloride	0.31 NTU	347 ppm
Turbidity		0.53 NTU

Source Water Assessment & Protection Program: To provide the highest protection for the source water (the wells), Wilmington has established Zoning, Inhabitant and Board of Health bylaws, which include groundwater protection, floor drain regulations, and water use restrictions. If you would like to see a copy of the DEP Source Water Assessment & Protection Program (SWAP) Report for our sources, it is available at the Wilmington Water Division and online at www.mass.gov/dep/water/drinking/3342000.pdf. For more detailed information, call us at (978) 658-4711 or go to www.wilmingtonma.gov/water-sewer-division.

Mandatory Outdoor Water Restrictions: NO Outdoor Watering between the hours of 9:00 AM and 5:00 PM.
Sprinkler Systems: Both above ground or installed underground, can be used once per week, subject to the restrictions above.
VIOLATION OF THESE WATER USE RESTRICTIONS WILL RESULT IN A MINIMUM $50.00 PER DAY FINE!

Water & Sewer Commission Meetings: The Commission meets the 3rd Thursday of each month at 5:30 p.m. at the Town Hall, unless otherwise posted. Please call in advance if you want to discuss a specific issue, and we will include your topic on our agenda.

Joseph Lobao, Utility & Business Manager