



Water

and the power of uv light

Your 2013 Drinking Water Test Results
Massachusetts Water Resources Authority

This report contains very important information about your drinking water. Please translate it, or speak with someone who understands it.	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.
Si usted desea obtener una copia de este reporte en español, llámenos al telefono 617-788-1190.	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。
La relazione contiene importanti informazioni sulla qualità dell'acqua della Comunità. Tra-durlo o parlarne con un amico che lo comprenda.	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。
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.	इस रिपोर्ट में पीने के पानी के विषय पर बहुत जरूरी जानकारी दी गई है। कृपया इसका अनुवाद अनिज्मे, या किसी जानकार से हमारे से पूछिये।
Sprawozdanie zawiera ważne informacje na temat jakości wody w Twojej miejscowości. Poproś kogoś o przelustrzenie go lub porozmawiaj z osobą która je dobrze rozumie.	របាយការណ៍នេះមានព័ត៌មានសំខាន់ៗស្តីអំពីគុណភាពទឹក ។ សូមមេត្តាប្រមូលព័ត៌មានជាមួយអ្នកដែលយល់អំពីភាពសំខាន់ៗ ។
يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك يرجى ترجمته، أو البحث للتقرير مع صديق لك يفهم هذه المعلومات جيداً.	이 보고서는 우리가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충분히 이해하시는 친구와 상의하십시오.
Η κατάσταση αναφοράς παρουσιάζει στοιχείας πληροφοριές για το ποσόν νερού σας. Προκειμένου να το μεταφράσετε ή να το συζητήσετε με κάποιον που το καταλαβαίνει ατολήτως.	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.



Massachusetts Water Resources Authority
and Your Local Water Department

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

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
Department of Conservation and Recreation	www.mass.gov/dcr/watersupply.htm	617-626-1250
Massachusetts Dept. of Public Health (DPH)	www.mass.gov/dph	617-624-6000
US Centers for Disease Control & Prevention (CDC)	www.cdc.gov	800-232-4636
List of State Certified Water Quality Testing Labs	www.mwra.com/04water/html/testinglabs.html	617-242-5323
Source Water Assessment and Protection Reports	www.mwra.com/sourcewater.htm	617-242-5323
Information on Water Conservation	www.mwra.com/conservation.html	617-242-SAVE

Public Meetings

MWRA Board of Directors	www.mwra.com/02org/html/boardofdirectors.htm	617-788-1117
MWRA Advisory Board	www.mwraadvisoryboard.com	617-788-2050
Water Supply Citizens Advisory Committee	www.mwra.com/02org/html/wscac.htm	413-213-0454



For a large print version, call 617-242-5323.



Dear Customer,

I am pleased to share with you the results of our water quality testing. MWRA takes hundreds of thousands of tests each year, and for 2013, we again met every federal and state drinking water standard. The big news this year is that we are nearly complete with a new ultraviolet (UV) disinfection facility at the Quabbin Treatment Plant, improving the quality of drinking water we deliver to you.

UV light is essentially a more potent form of natural disinfection from sunlight. UV enables MWRA to inactivate the most difficult to kill pathogens - which could potentially be in the source water - without the use of additional chemicals and any associated disinfection by-products. The UV process and MWRA's high quality source water allow MWRA to meet new regulatory requirements cost effectively.

Starting this Fall for the first time, the CVA water will have two primary disinfection processes – chlorine and UV. This means better, safer water.

I hope you will take a few moments to read this report. We want you to have the same confidence we have in the water we deliver to over 2 million customers. Please contact us if you have any questions or comments about your water quality, or any of MWRA's programs.

Sincerely,

Frederick A. Laskey
Frederick A. Laskey
Executive Director

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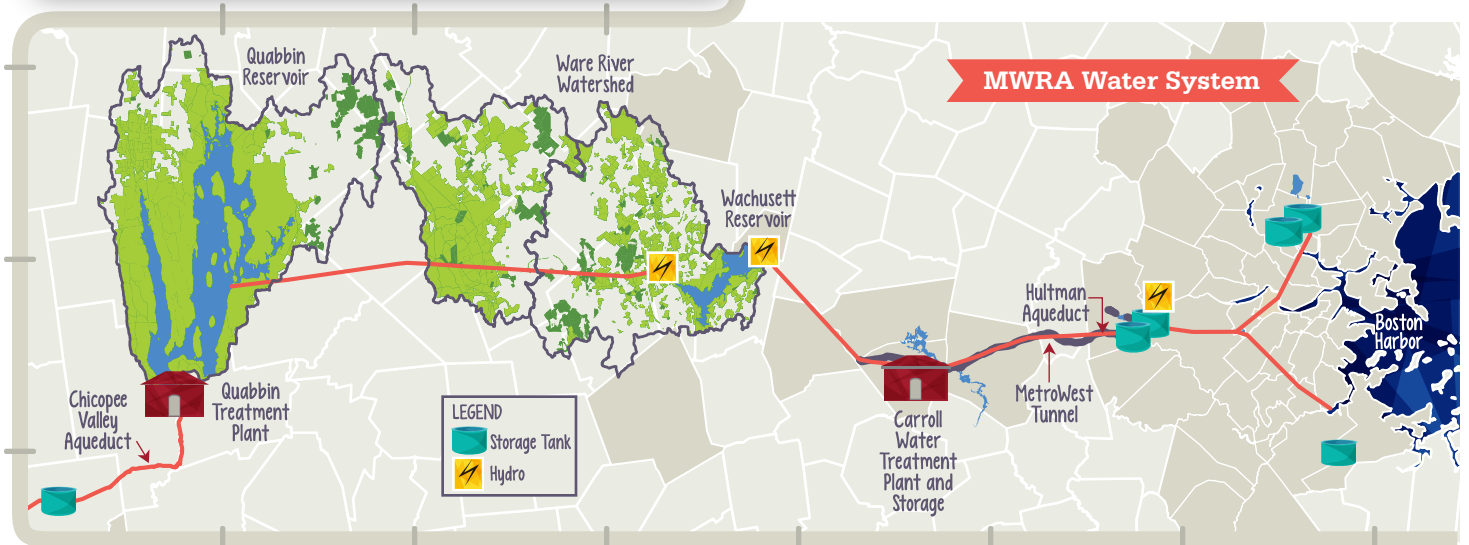
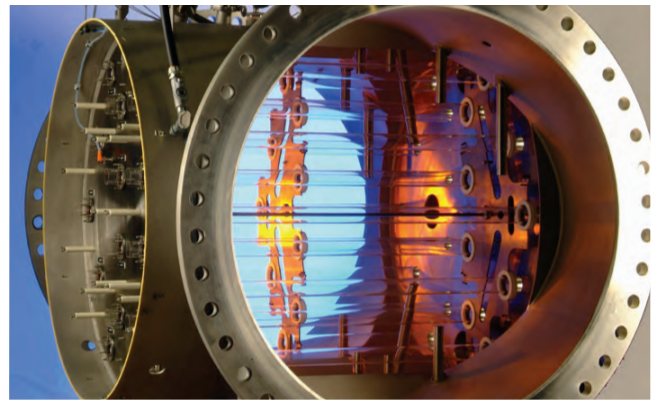
Water Treatment – From the Reservoir to Community Pipelines

Your water is treated at the Quabbin Treatment Plant before it enters the Chicopee Valley Aqueduct. The first treatment step is disinfection of reservoir water. MWRA's licensed treatment operators carefully add measured doses of chlorine. This disinfection process is 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 the Aqueduct. Each community also treats the water to reduce leaching of lead from home plumbing.

Water must travel through the 15-mile Chicopee Valley aqueduct and through some of the hundreds of miles of local distribution pipes under your streets before it reaches your tap. To continue providing high quality water, each part of the water system needs routine maintenance and, when necessary, improvements or new facilities.



What is UV? UV disinfection uses ultra-violet light to inactivate pathogens. Water flows through the stainless steel units which contain UV lamps. These lamps emit light which shines through the water to disinfect it. No chemicals are added, and there is no residual effect once the water passes through the lamp. UV disinfection has been identified by EPA as one of the best technologies to inactivate pathogens, and provides an extra layer of protection for your water.





Where Does Your Water Come From?

MWRA supplies about 10 million gallons of high quality water each day to three Chicopee Valley communities: Chicopee, Wilbraham, and South Hadley Fire District #1 (FD#1). MWRA also serves 48 cities and towns in greater Boston and MetroWest. Your water comes from Quabbin Reservoir. Water from the Ware River can add to the supply at times.

Rain and snow falling on the watersheds - protected land around the reservoirs - turn into streams that flow to the reservoirs. Water comes in contact with soil, rock, plants, and other material as it follows nature’s path to the reservoir. While this process helps clean the water, it can also dissolve and carry very small amounts of material into the reservoir. Minerals from soil and rock do not usually cause problems in the water. But water can also transport contaminants from human and animal activity. These can include bacteria and viruses - some of which can cause illness. The test results in this report show that these are not a problem in Quabbin Reservoir’s watershed.

Quabbin watershed is protected naturally as over 90% of the watershed is covered in forest and wetlands. About 83% of the total watershed land cannot be developed. The natural undeveloped watershed helps to keep MWRA water clean and clear. Also, to ensure safety, the streams and the

reservoir are tested often and patrolled daily by the Department of Conservation and Recreation (DCR).

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program Report for the Quabbin Reservoir. The DEP report commends DCR and MWRA on the existing source protection



plans, and states that our “watershed protection programs are very successful and greatly reduce the actual risk of contamination.” The report recommends that DCR and MWRA maintain present watershed plans and continue to work with the residents, farmers, and other interested parties to maintain the pristine watershed areas.

Testing Your Water – Every Step of the Way

Test results show few contaminants are found in the reservoir water. The few that are found are in very small amounts, 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. Typical levels at the Quabbin Reservoir are 0.3 NTU. In 2013, turbidity was below 1 NTU over 99.99% of the time, with the highest level at 1.12 NTU. This did not interfere with effective disinfection.

MWRA also tests reservoir water for pathogens -such as fecal coliform, bacteria, viruses, and the parasites *Cryptosporidium* and *Giardia*. They can enter the water from animal or human waste. No *Cryptosporidium* or *Giardia* was found in the water in 2013.

Test Results – After Treatment

EPA and state regulations require many water quality tests after treatment to check the water you are drinking. MWRA conducts tens of thousands of tests per year on over 120 contaminants (a complete list is available on www.mwra.com). Details about 2013 test results are in the table below.

Chicopee Valley 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	0.006	0.006-0.007	2	No	Common Mineral in Nature
Di(2-Ethylhexyl) Phthalates	ppm	6	1.1	1.1	0	No	Suspected Lab Contamination
Fluoride	ppm	4	0.06	0.02-0.08	4	No	Common Mineral in Nature
Nitrate^	ppm	10	0.013	0.005-0.013	10	No	Atmospheric Deposition

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. ppm=parts per million ^As required by DEP, the maximum result is reported for nitrate and nitrite, not the average.

Tests in Community Pipes

MWRA and local water departments work together to test water all the way to the tap. We test samples of water in the city and town systems each week for total coliform 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. The EPA requires that no more than 5% of the samples in a given month may be positive for total coliform. If a water sample tests positive for total coliform, we run more specific tests for *E. coli*. *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 in 2013.



Drink Local and Be Green

Tap water is delivered straight to your home without trucking or plastic waste. Bottled water produces over 10,000 times the amount of greenhouse gases compared to tap water. Half of our energy needs for water and wastewater treatment are met with green power including hydro-energy, wind turbines, and solar panels.

Drink local! Drink tap water! Be green!



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. The Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How Would I know About A Problem With My Water Supply?

MWRA and your local water department keep close watch on the water supply. If there is a problem with your water, you would get the news by radio, television, newspapers, state and local government, health officials, and from MWRA.

Information About Cross Connections

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 617-242-5352 or visit www.mwra.com/crosscon.html.

Your Tap Water – Award Winning and Affordable!

In 2013, we won **New England's Best-Tasting** water award from the New England Water Works Association and the **National Sustainability Award** from the American Council for an Energy-Efficient Economy. Great tasting, green, and also cheap! Tap water costs less than a penny per gallon delivered straight to your home, while bottled water can cost from \$1 to \$8 a gallon. **Make the smart choice and drink tap water.**



UV treatment units

Your Community Information

Each community has specific treatment and improvements that are listed below:

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 level of dissolved metals such as lead, copper, and iron in the city's water supply.

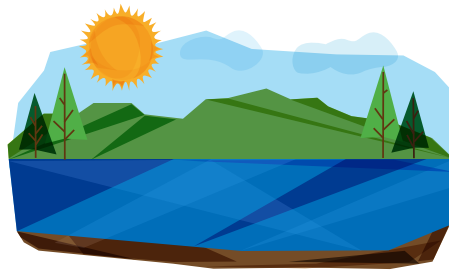
Under the Safe Drinking Water Act, water samples must be collected specifically for the analysis of lead and copper. Household plumbing is the main contributor of these metals in our drinking water and the water's chemistry is adjusted to minimize corrosion well before it reaches the homes of Chicopee's residents. Our last successful sampling round was in 2012, when 30 samples were collected for the analysis of lead and copper in Chicopee's drinking water. The 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 2015.

The Chicopee Water Department maintains 274 miles of distribution water mains through over 16,000 connections to approximately 55,000 residents. Water main projects are ongoing in Montgomery/Sheridan Street areas and will progress into the North Williamansett area. Also, a source redundancy transmission project will take place in 2015 in the Burnett Road area. The CWD also responded to about 120 leaks last year and maintains emergency service 24/7.

Wilbraham Phone: 413-596-2807
PWS ID# 1339000

The Corrosion Control Facility on Miller Street in Ludlow, which injects sodium silicate into the water, continues to operate successfully. The last lead and copper sampling round in 2012 was excellent indicating our Corrosion Control Program continues to work flawlessly as it has since its beginning in 1997.

During 2013 the list of duties performed by the Water Division included: 14 new water service installations (8 of them in the Washington Heights sub-division), two fire hydrants were replaced, and two new pressure reducing valves (PRV) were installed. The new PRVs automatically reduce the high pressure coming from Quabbin Reservoir to a useable pressure range compatible with our water distribution system hydraulics. The Glenn Drive Water Booster Station had a major renovation accomplished with the installation of new stainless steel eight inch diameter suction & discharge headers and isolation valves. Total water usage in 2013 was 403,451,000 gallons, which was 9% less than 2012.



The MA DEP Drinking Water Program conducted its once every three years Sanitary Survey Inspection of the Wilbraham Water Department in April, 2013, and a Maintenance Plan was submitted to DEP in August, 2013.

South Hadley Fire District #1
Phone: 413-532-0666
PWS ID# 1275000

The District has been successfully using Sodium Silicate for corrosion control in order to comply with the federally mandated Lead and Copper Rule since 1998. Sodium Silicate increases the pH of the water and provides a microscopic coating on the inside of the residential plumbing systems to prevent possible lead leaching from solder and fixtures into the water. Our next required sampling round of 30 homes will be spring of 2016.

Within the past year, our crew has repaired seven water main breaks and five service leaks throughout the distribution system. In addition to the repair work, four new services have been connected to the distribution system. We continue to replace old and problematic water mains within the distribution system, including this past year on Mt. View St. The new main will ensure reliability of supply, maintain water quality and fire protection. The Board is enthusiastic in recognizing the hard-working efforts of our staff installing the new water mains with in-house equipment, which is then done at a significantly reduced cost. In addition to installing water mains, we also had some interior warranty repair work performed in our 1.5 million gallon water tank on Industrial Drive.

We feel strongly that the Water Department – Fire District No.1 has been operated very efficiently by providing the residents with what they expect from a municipal department at the lowest possible cost. We would also like to extend our thanks to the Fire Department, Police Department, Fire District No. 2 and the Town Departments for their cooperation.

South Hadley had two TCR violations this year, one in September (9.1%) and one in November (11%). Both were associated with low chlorine residuals. We recently received approval to install a booster chlorination system at our Alvard St. tank to hopefully prevent coliform issues like this in the future.

Please take a moment to view our website with historical and frequently updated information about our Department at the following address www.shdistrict1.org.

What You Need to Know about Lead in Tap Water


All three CVA communities met EPA standards for lead in tap water. MWRA water is lead-free when it leaves the reservoirs. MWRA and local pipes that carry the water to your community are made mostly of iron and steel and do not add lead to the water. However, lead can get into tap water through pipes in your home, lead solder used in plumbing, and 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.

What Are We Doing About Lead?

Your local water department tests tap water at a number of homes in the communities. But not just any homes. Under EPA regulations, homes that are likely to have high lead levels - usually older homes likely to have lead service lines or lead solder must be tested. 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).

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. All three CVA communities were below the lead Action Level in their most recent sampling.

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.

Most Recent Test Results	Total Trihalomethanes (TTHMs) in ppb MCL=80 ppb MCLG=no standard		Halocetic Acids (HAA5) in ppb MCL=60 ppb MCLG=no standard		Chlorine in ppm MRDL=4 ppm MRDLG=4 ppm		Lead in ppb AL=15 ppb MCLG=0		Copper in ppm AL=1.3 ppm MCLG=0		Sodium in ppm
	Annual Average	Range	Annual Average	Range	Annual Average	Range	# Samples over AL	90% Value	# Samples over AL	90% Value	
Chicopee	48.3	32.2-58.5	29.7	5.4-31.0	0.88	1.52	2 of 30	3.8*	0 of 30	0.13*	14.5
South Hadley FD #1	53.0	26.5-51.1	21.0	13.7-19.8	0.56	0.07-1.02	3 of 30	5.4	0 of 30	0.03	7.5
Wilbraham	54.7	30.9-54.8	18.3	16.1-19.9	0.6	0.1-1.0	0 of 20	1.4*	0 of 20	0.54*	6.9

KEY: The definitions for MCL and MCLG are on page 2. *Results are from 2012. AL=Action Level-The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. 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

How do I reduce my exposure to lead in drinking water?

Run the tap until after the water feels cold. To save water, fill a pitcher with fresh water and place in the refrigerator for future use.

Never use hot water from the faucet for drinking or cooking, especially when making baby formula or other food for infants.

Ask your local water department if there are lead service lines leading to your home.

Check your plumbing fixtures to see if they are lead-free. Read the labels closely.

Test your tap water. Call the MWRA Drinking Water Hotline (617-242-5323) or visit our website for more tips and a list of DEP certified labs that can test your water.

Be careful of places you may find lead in or near your home. Paint, soil, dust and some pottery may contain lead.

Call the Department of Public Health at 1-800-532-9571 or EPA at 1-800-424-LEAD for health information.