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.

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. Traduca o parlatene con un amico che la comprenda.

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

Sprawozdanie zawiera ważne informacje na temat jakości wody w Twojej miejscowości. Przeczytaj je lub opowiedz o nich swojemu przyjacielowi, który je dobrze zrozumie.

此报告非常重要的信息关于您的饮用水。请翻译它，或者与理解它的人交谈。

この資料には、あなたの飲料水に関する大切な情報が含まれています。内容をよく理解するために、日本語に翻訳していただけるか、相談を受けてください。

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

Where To Go For Further Information

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Where To Go For Further Information

Massachusetts Water Resources Authority
Massachusetts Dept. of Environmental Protection
Department of Conservation and Recreation
Massachusetts Dept. of Public Health (DPH)
US Centers for Disease Control & Prevention (CDC)
List of State Certified Water Quality Testing Labs
Source Water Assessment and Protection Reports
Information on Water Conservation
Public Meetings

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
Executive Director
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.
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.

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.

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.

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.
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.

The Corrosion Control Facility 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.

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 Alvord 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.

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.

**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.

**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.

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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.

<table>
<thead>
<tr>
<th>Most Recent Test Results</th>
<th>Total Trihalomethanes (TTHMs) in ppb</th>
<th>Halocetic Acids (HAAS) in ppb</th>
<th>Chlorine in ppm</th>
<th>Lead in ppb</th>
<th>Copper in ppm</th>
<th>Sodium in ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MCL=80 ppb MCLG=no standard</td>
<td>MCL=60 ppb MCLG=no standard</td>
<td>MRDL=4 ppm</td>
<td>AL=15 ppb</td>
<td>AL=1.3 ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>Chicopee</td>
<td>Annual Average 48.3 Range 32.2-58.5</td>
<td>Annual Average 29.7 Range 5.4-31.0</td>
<td>0.88 1.52</td>
<td>2 of 30</td>
<td>3.8* 0 of 30</td>
<td>14.5</td>
</tr>
<tr>
<td>South Hadley FD #1</td>
<td>Annual Average 53.0 Range 26.5-51.1</td>
<td>Annual Average 21.0 Range 13.7-19.8</td>
<td>0.56 0.07-1.02</td>
<td>3 of 30</td>
<td>5.4 0 of 30</td>
<td>7.5</td>
</tr>
<tr>
<td>Wilbraham</td>
<td>Annual Average 54.7 Range 30.9-54.8</td>
<td>Annual Average 18.3 Range 16.1-19.9</td>
<td>0.6 0.1-1.0</td>
<td>0 of 20</td>
<td>1.4* 0 of 20</td>
<td>6.9</td>
</tr>
</tbody>
</table>

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

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.

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.