

Massachusetts Water Resources Authority and Your Local Water Department



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This is a "right-to-know" report and contains important information on the quality of your drinking water!

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

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MARIE T. TURNER

Dear Customer,

The Massachusetts Water Resources Authority is pleased to send you this year's annual report on your drinking water quality. MWRA has great confidence in the water we deliver to your home and we want you to have the same confidence.

MWRA and your local water department test thousands of water samples each week, under strict federal and state guidelines. The results for 2007 are excellent. MWRA again met every standard for the 120 contaminants we test for every year.

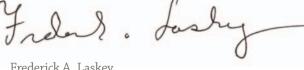
In recent months, you may have heard news reports about pharmaceuticals found in drinking water supplies in some parts of the country. The most common sources of pharmaceuticals are wastewater treatment plants that discharge to water bodies that are also used as drinking water sources. Rest assured that the water MWRA delivers comes from protected reservoirs with no wastewater treatment plant in the watersheds. And, just to be sure, recent tests have shown no traces of pharmaceuticals in MWRA water.

Another topic that's frequently in the news is bottled water versus tap water. Sure, bottled water is convenient when you're on the go and is a healthy alternative to soft drinks. But in dozens of taste and quality tests here and across the country, the only area where bottled water and tap water differ significantly is cost. At less than a penny per gallon, tap water is the cleanest, safest and most cost effective choice.

This report contains important information and I hope you take a moment to read through it. Please contact us if you have any questions or comments about your water quality, or any of MWRA's programs.

Frederick A. Laskey

Executive Director





THIS REPORT IS REQUIRED UNDER THE FEDERAL SAFE DRINKING WATER ACT AND PROVIDES IMPORTANT INFORMATION ON:

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Share your comments. Call or email us and let us know what you think about this report or your water. For instance, have you noticed a change in the taste of your water? Water quality complaints from our customers are at an all time low.

Massachusetts Water Resources Authority Building 39, Charlestown Navy Yard, Boston, MA 02129 617-242-5323, www.mwra.com, Español 617-788-1190

This report is required under the Federal Safe Drinking Water Act Public Law 104-182, Section 1414(c)(4) MWRA PWS ID #6000000, Chicopee PWS ID #1061000 South Hadley FD #1 PWS ID #1275000 Wilbraham PWS ID #1339000

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. MWRA also serves 47 cities and towns of 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, viruses, pesticides and fertilizers - some of which can cause illness. The test results in this report show that these are not a problem in Quabbin Reservoir's watershed.

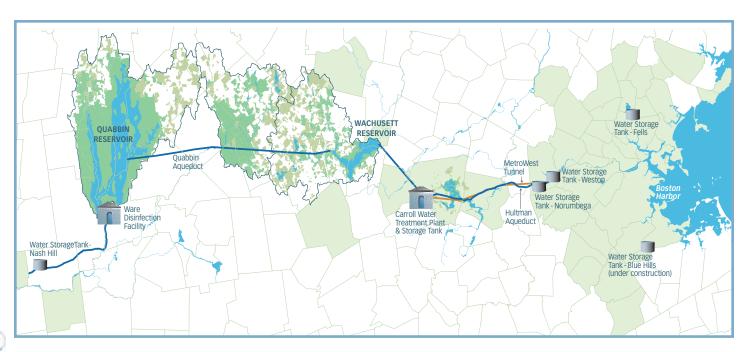
Quabbin watershed is protected naturally as over 90% of the watersheds are covered in forest and wetlands. About 83% of the total watershed land cannot be developed. The natural undeveloped watershed helps to keep MWRA water clean and clear. Also, to ensure safety, the streams and the reservoir are tested 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 and Wachusett Reservoirs. The report notes that wildlife (birds and aquatic animals), agriculture, transportation



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 the radio, television and newspapers, from MWRA, and local and state water and health officials.

corridors, transmission lines, and residential land use are the key issues in the watershed. 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





FROM THE RESERVOIR TO YOUR HOME

THAT PENNY PER GALLON ALSO PROVIDES YOU WITH ADVANCED TREATMENT, IMPROVEMENTS, AND MAINTENANCE AS THE WATER TRAVELS FROM THE RESERVOIR TO YOUR HOME.

Improvements to the System

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.

MWRA- The covered Nash Hill Storage Tanks were completed in June 1999 to replace the Nash Hill open reservoir. These tanks help to lessen the risk that contamination will get into your tap water. The treatment facilities were completed in the summer of 2001. The new facilities provide more efficient disinfection for your water. In 2005, on-line water quality monitoring was added at Nash Hill to ensure better monitoring of the water supply. Also in 2007, construction finished on a two-year pipeline project to provide improved reliability in emergencies for all three communities.

Chicopee- In 2007, the Chicopee Water Department continued to upgrade the distribution system by installing approximately 7,500 feet of new ductile iron pipe in various locations throughout the city. Approximately 7,000 feet of pipe was laid in conjunction with the Fairview CSO project, and the remaining 500 feet was laid in-house by Water Department personnel. In total, 12 streets received upgrades with ductile iron pipe: Britton St., Montcalm St., Beaudry Ave., Furguson St., Langevin St., New Ludlow Rd.,

Ideal St., Woodland Ave., Holgate Ave., Lavalle Ave., Irene St., and Gaspee St. In addition to the new pipe laid on these streets, 20 new fire hydrants were installed, helping to improve overall fire protection.

In late 2007, the Chicopee Water Department entered into an agreement to have the Bourbeau Elevated Storage Tank on Royal Street inspected and repainted. Painting the tank will insure many years of continued service to the Fairview section of the city. The work is scheduled to take place during the Fall of 2008.

Wilbraham— As part of the MWRA pipeline project, two new interconnections, one on the Chicopee Valley Aqueduct and one at Wilbraham's point of entry on Miller Street, Ludlow were constructed. The next step in the project is to provide higher water pressure for Wilbraham at our system point of entry. This increased pressure will be utilized during the summer months when demand from irrigation systems triples water usage which decreases our distribution system pressure by 8 to 10 PSI. There is a pressure reducing valve at the Miller Street Chamber that will regulate pressure as needed.

During the past twenty years there have been five (5) water breaks in the area on Main Street between Merrill Road and Vista Road. During 2007, to eliminate this problem, the Water Department replaced 1,000 feet of old 16 inch transit main and 1,100 feet of old cast iron main with new ductile iron pipe. The Wilbraham Water Department was ranked by the Department of Environmental Protection (DEP) in the top 5% of all consecutive Public Water Systems (PWS) in the state for 2007. The DEP recognized Wilbraham Water Department's achievement in an award ceremony at the University of Massachusetts in Amherst, MA during May, 2007.

South Hadley Fire District No.1– Within the past year, our crew has repaired nine water main breaks throughout

the distribution system and the 16" transmission pipeline from Ludlow. Repair of these leaks stopped a significant loss of water for the

department. In addition to the repair work, seventy-five new services have been connected to the distribution system.

As part of our continual commitment to improving the distribution system, our staff has replaced a total of 4,980 ft. of water main including fire hydrants and water services on Vivianni Street and High Street. In conjunction with the Town of South Hadley's CSO sewer separation project, the District replaced the 6" main on Abbey St. between Memorial Dr. and Plainville Circle with a 12" main and the remaining water

main will be replaced in fiscal year 2009. The new mains

will ensure reliability of supply, improved water quality and fire protection. The Board is thankful for the diligent efforts of our maintenance staff installing the new distribution mains with inhouse equipment. These efforts continue to allow the District to cost-effectively replace significant amounts of water mains throughout the distribution system with funds appropriated within our budget. Our staff will continue this effort as circumstances, funding and time permit.



TESTING YOUR WATER every step of the way

Tests Before Treatment

We test the water as it leaves the reservoir to see how well protected our watersheds are. 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



Tap and bottled water must meet the same water standards, although tap water must meet more intensive Environmental Protection Agency (EPA) testing requirements in comparision to bottled water which is regulated by the Food and Drug Administration (FDA). MWRA water meets all federal and state standards, so you are receiving clean, crisp water straight from the tap – no bottles, no extra cash, no costly transport, no trash.

standards. Turbidity (or cloudiness of water) is one measure of overall water quality.

Typical levels at Quabbin Reservoir are 0.3 NTU (Nephelometric Turbidity Units). Quabbin's turbidity level was always below both EPA's standard of 5.0 NTU and stricter Massachusetts standard of 1.0 NTU

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. All test results were well within state and federal testing and treatment standards.

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 warmblooded 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.

How Did We Do in 2007?

No bacteria were found in any CVA community system in 2007.

Bottled vs. Tap – The Smart Choice!

While tap water costs around 1 penny per gallon, bottled water can range from about \$1 to over \$8 dollars per gallon.



Tests After Treatment

EPA and state regulations also require many water quality tests after treatment to check the water you are drinking. MWRA follows - and even goes beyond - these tests. We conduct tens of thousands of tests per year on over 120 contaminants. The water quality is excellent. All of the levels are below EPA's allowable limits. For a complete list of contaminants, go to www.mwra.com.

Reservoir Water 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	0.007	0.007-0.008	2	No	Common mineral in nature
FLUORIDE	ppm	4	0.02	nd-0.06	4	No	Natural deposits
NITRATE	ppm	10	0.016	0.015-0.016	10	No	Natural deposits

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



BECAUSE OF ITS EXCELLENT WATERSHED CONDITIONS AND PROTECTION, QUABBIN RESERVOIR DOES NOT NEED AN EXTRA FILTRATION STEP IN ITS TREATMENT. THE STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION SET SPECIAL CONDITIONS IN 1991 TO MAINTAIN QUABBIN'S HIGH QUALITY WATER.

But, even high quality water must be properly treated. MWRA's licensed treatment operators treat water at the reservoir before it enters the Chicopee Valley Aqueduct. The first treatment step is the primary disinfection where MWRA's licensed operators carefully add measured doses of chlorine to the water to kill pathogens that may be present. 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.

Chicopee Water Department:

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 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 chemistry is adjusted to minimize corrosion well before it reaches the homes of Chicopee's residents. The Environmental Protection Agency (EPA) has reduced the number of samples that must be collected by the Chicopee Water Department from 120 to 30 due to its successful maintenance of low to absent levels of lead and copper in the water system. The Chicopee Water Department has also continued upgrading its SCADA (Supervisory Control and Data Acquisition) computer system by adding many new alarms and better overall control of its treatment processes.

Wilbraham:

The Water Department's Corrosion Control Program (CCP) was implemented in 1997 and continues to operate very well. The effectiveness of our CCP is determined by lead and copper sampling analysis. During 2007, the Wilbraham Water Dept. completed Lead & Copper sampling at 20 homes and 2 schools (Minnechaug High and Wilbraham Middle School) in the distribution system. This Massachusetts

Department of Environmental Protection (DEP) required sampling was possible due to the cooperation of residents willing to perform first draw sampling at their homes. The results of the sampling were excellent; indicating our Corrosion Control Program (injecting Sodium Silicate) continues to work flawlessly as it has since its beginning in 1997.

South Hadley Fire District #1:

The District continues the successful use of Sodium Silicate for corrosion control in order to comply with the federally mandated Lead and Copper Rule. Sodium Silicate increases the pH of the water and also provides a coating on the inside of the residential plumbing systems to prevent any possible lead leaching into the water. Due to the success of our last round of samples in February of 2007, the DEP has reduced our sampling from 60 to 30 sites within the distribution system. These sites will be sampled yearly for the next two years. Dependent upon the success of those samples, we will be allowed to sample once every three years.



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

what you need to know about

LEAD IN YOUR TAP WATER

ALL THREE CVA COMMUNITIES MET THE 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 WATER.

Lead can get into tap water through pipes in the 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 long time in the pipes before use.

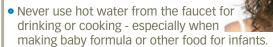
What Are We Doing About Lead?

Your local water department tests tap water at a number of homes in the communities. But not just any homes. Under Environmental Protection Agency 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 2007.

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

What can I do to reduce exposure to lead in drinking water?



- Ask your local water department if there are lead service pipes leading to your home.
- Test your tap water. Contact MWRA (617-242-5323, www.mwra.com) for more tips and a list of certified labs.
- 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's Lead Exposure Office at 617-284-8400 if you have questions.

What Does This Table Tell Me?

This table lists results for lead, copper, sodium, and disinfection by-products including trihalomethanes and haloacetic acids. All results for lead, copper, sodium, and disinfection by-products were IN COMPLIANCE with drinking water regulations.

Local Test Results for 2007 - All in Compliance											
	Trihalo: (TTHM MCL:	otal methanes Is) in ppb =80 ppb LG=0	(HAA MCL	etic Acids 5) in ppb =60 ppb LG=0	Lead in Action Le of 15 MCL	vef (AL) opb	(AL) Action Level (AL) of 1.3 ppm		Chlorine in ppm MRDL-4 ppm (Avg) MRDL=4ppm		Sodium in MS/L
Your City or Town	Annual Average	Range	Annual Average	Range	#Samples Over Al	90% Value	# Samples Over AL	90% Value	Annual Average	Range	
Chicopee	47.5	34.0-71.2	37.8	13.6-85.8	2 of 30	6.0	0 of 30	0.17	0.6	0.03-1.2	15.2
South Hadley FD #1	57.1	43.0-70.6	21.8	5.4-52.4	4 of 60	9.4	0 of 60	0.03	0.3	0.02-0.77	5.9
Wilbraham	55.6	13.2-73.4	16.4	1-36.1	0 of 20	4.3	0 of 20	0.`3	0.3	0.2-0.7	5.9
Westover-Air Force Base	44.1	19.3-53.6	17.2	2.5-36.0	0 of 10	3.7	0 of 10	0.17	0.6	0.27-1.01	

Definitions for MCL and MCLG are on page 3. MRDL - Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is 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. AL=Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. ppm=parts per million ppb=parts per billion AVG=Average MG/L=milligrams per liter

Important Information from EPA about Lead



Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels in your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap until after it is cold before using tap water.

important information from

EPA AND DEP



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. 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.

For further information..



Hopefully, you have enjoyed reading this report and have confidence in your drinking water. If you would like more information on your water quality, a monthly report is available at www.mwra.com or by calling 617-242-5323. Thank you for reading this report.

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

Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

www.mwra.com	617-242-5323
www.mass.gov/dep	617-292-5500
www.mass.gov/dcr/waterSupply.htm	617-626-1250
www.mass.gov/dph	617-624-6000
www.cdc.gov	1-800-311-3435
www.mwra.com/water/html/qual6.htm	617-242-5323
www.mwra.com/sourcewater.htm	617-242-5323
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