



Your Drinking Water

test results 2004



Massachusetts Water Resources Authority and Chicopee, South Hadley F.D. #1, and Wilbraham

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This is a "right-to-know" report required to be sent to you under the U.S. environmental protection laws. It contains important information on the quality of your drinking water!

<p>This report contains very important information about your drinking water. Please translate it, or speak with someone who understands it.</p>	<p>Si usted desea obtener una copia de este reporte en español, llámenos al telefono 617-788-1190.</p>	<p>La relazione contiene importanti informazioni sulla qualità dell'acqua della Comunità. Tra-durlo o parlane con un amico che lo comprenda.</p>	<p>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.</p>	<p>Sprawozdanie zawiera ważne informacje na temat jakości wody w Twojej miejscowości. Poprosz kogoś o przelumnaczenie go lub porozmawiaj z osobą która je dobrze rozumie.</p>	<p>يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك. يرجى ترجمته، أو ابحث التقرير مع صديقك يفهم هذه المعلومات جيداً.</p>	<p>Η κατεύθυνση αναφοράς παρουσιάζει αποκλίσεις πληροφοριών για το ποσόν νερού στις Προκακλώ για το μεταφράσετε η να το σχολιαστείτε με κάποιον που το καταλαβαίνει αλληλώς.</p>	<p>Отчет содержит важную информацию о качестве воды в Вашем районе. Переведите его или попросите друга, хорошо понимающего текст, объяснить Вам его содержание.</p>
<p>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.</p>	<p>这份报告中有些重要的信息，讲到关于您所在社区的品水的质量。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。</p>	<p>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。</p>	<p>इस रिपोर्ट में 'पीने के पानी' के निम्न पर बहुत जरूरी जानकारी दी गई है। कृपया इसका अनुवाद कीजिये, या किसी जन्कार से इस बारे में पूछिये।</p>	<p>ရေသောက်ရန်အရေးကြီးသောအချက်အလက်များကို ဖော်ပြထားပါသည်။ အချက်အလက်များကို ဖော်ပြထားပါသည်။</p>	<p>이 보고서에는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충분히 이해하시는 친구와 상의하십시오.</p>	<p>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.</p>	<p>Le rapport contient des informations concernant la qualité de l'eau de votre communauté. Faites-le traduire, ou parlez-en à un ami qui le comprend bien.</p>

 A LARGE PRINT VERSION OF THIS REPORT IS AVAILABLE. PLEASE CALL US AT 617-242-5323 FOR A COPY.



Massachusetts Water Resources Authority • Charlestown Navy Yard • 100 First Avenue • Boston, MA 02129

June 2005

Dear Customers,

The Massachusetts Water Resources Authority is pleased to send you the annual report on your drinking water quality. The report describes the journey the water takes from the reservoir to your tap and contains other important information regarding the water we deliver to your home. Under strict federal and state guidelines, the MWRA and your local water department take many water quality samples each week. The results for 2004 are excellent. Of the 120 contaminants we test for each year, MWRA met every standard. Simply put, MWRA's water is top quality.

MWRA and your local water department have continually improved the Chicopee Valley system. These improvements include a new tank in 1999 and new disinfection facilities in 2001. Future construction is planned to improve system pipelines and use a stronger disinfectant. These advances will insure that future generations have top quality water through the century.

I hope you will take a few moments to read this important report on your water. MWRA has great confidence in the water that is delivered to over 2 million customers, and we hope that you will have the same confidence. 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

what's inside

Share Your Thoughts

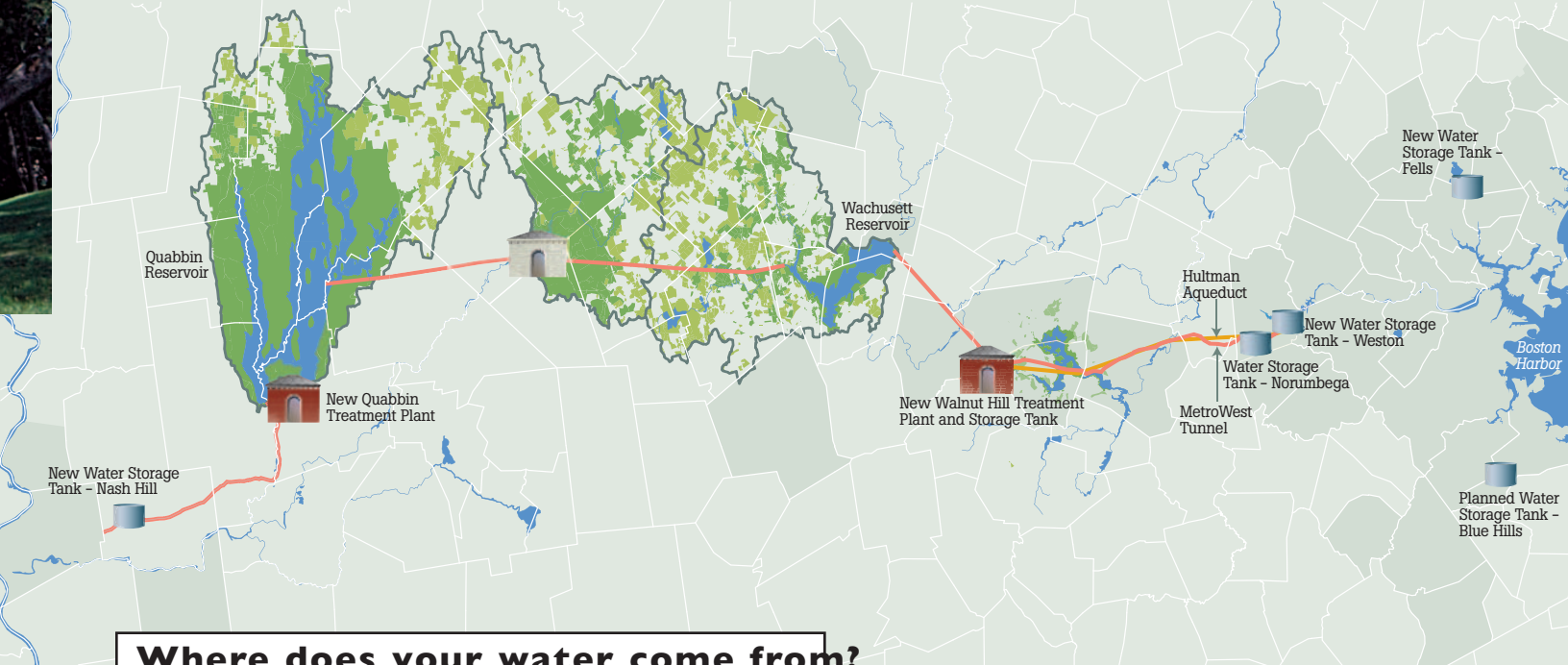
Help us improve this report by sending your comments. Give us a call, send a letter or e-mail, and let us know what you think.

Massachusetts Water Resources Authority
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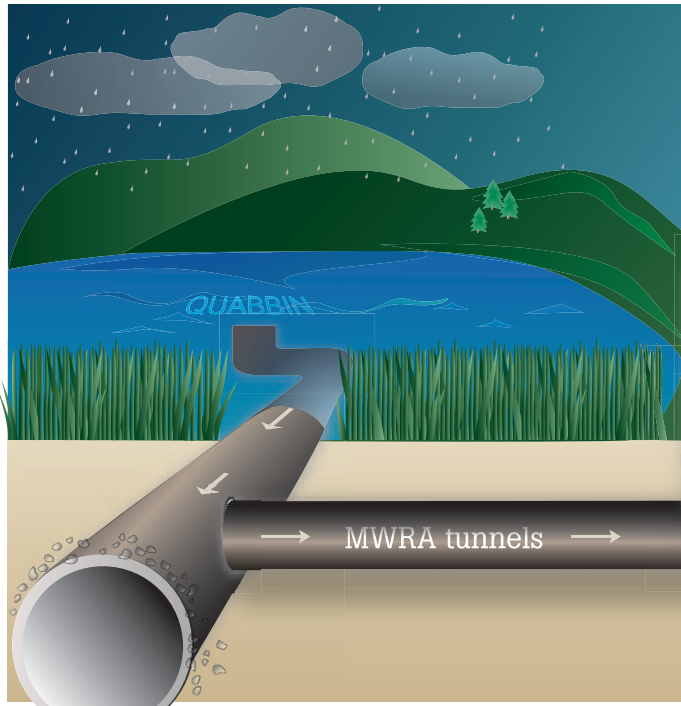
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THIS REPORT IS REQUIRED under the Federal safe Drinking Water Act Public Law 104-182, Section 1414(c) (4) MWRA PWS ID #6000000, Chicopee ID #1061000, South Hadley FD ID #1339000, Wilbraham ID #1275000



Where does your water come from?



MWRA supplies wholesale water to three Chicopee Valley communities: Chicopee, Wilbraham, and South Hadley Fire District #1 (FD#1). MWRA also serves 44 cities and towns of greater Boston and Metro West. Your water comes from Quabbin Reservoir. Water from the Ware River can add to the supply at times. The reservoir provides about 10 million gallons of high quality water each day to Chicopee, Wilbraham, and South Hadley Fire District #1.

Rain and snow falling on the watersheds - protected land around our watersheds - 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 into the reservoir. Minerals from soil and rock, including low levels of natural radioactive materials, do not typically 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 data 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 reservoirs 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 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" from any of the above issues. 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.



major improvements

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



MWRA - The covered Nash Hill Storage Tanks were completed in June 1999 to replace the Nash Hill open reservoir. This tank helps to lessen the risk that contamination will get into your tap water. New treatment facilities were completed in the summer of 2001. These facilities provide more consistent primary disinfection for your water.

In September 2004, a microwave communication system for the Ludlow chlorine monitoring facility, the Ware disinfection facility, and the Nash Hill water storage tanks in the CVA area was completed. Each facility can now be remotely controlled and monitored from other MWRA locations. Also, new pipelines are planned for the CVA system to allow more reliable delivery, even in emergencies. Construction is expected to begin this summer.

CHICOPEE - In 2004, Chicopee Water Department continued to improve its system through replacement of older pipes with newer ductile iron pipes or through installation of new pipes, with a total of over 12,000 feet installed. 5700 feet of 12-inch cast iron pipe was installed, mainly along Grattan Street. Nearly 4900 feet of 8-inch cast iron pipes was installed, including Sheridan Street, Olea Street, and Sandtrap Way. 1110 feet of 6-inch cast iron pipe was installed along Lawrence Road, Coolidge Road, and Gardner Road, as well as an additional 825 feet of 4-inch ductile iron pipe along Burnett Road. Chicopee Water Department will continue to improve the water system in 2005 with further replacements and installations. Additionally, in cooperation with MWRA, the Water Department is involved with designing system redundancy for the Chicopee Valley Aqueduct to ensure an uninterrupted supply of water.

SOUTH HADLEY FIRE DISTRICT NO. 1 - As part of our commitment to continue improving the distribution system, approximately 5500 feet of water main has been replaced in three different sections of the District within the past year. The most significant water main replacement occurred as part of the Bardwell Infrastructure Improvement Project. This project was a joint venture between the District and Town Highway Dept. in conjunction with funds from a Community Block Development Grant administered by the Pioneer Valley Planning Commission. Approximately 3900 feet of water main and all appurtenances were replaced between Main St. and Lathrop St. The District's staff also engaged in two sizeable replacement projects. In the past year, we have installed 500 feet of 6" water main and one hydrant on Joan St. and 700 feet of 8" water main and two hydrants on Summit St. The new mains will ensure reliability of supply, improved water quality, and flow for fire protection. We are fortunate to have personnel and equipment in order to complete projects in-house. As circumstances and time permit, our staff will continue this effort, which results in considerable cost savings to the ratepayers.

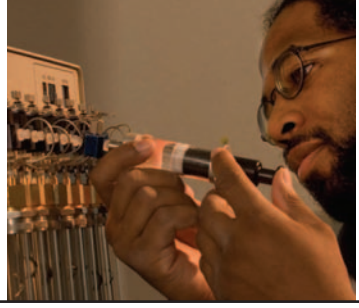
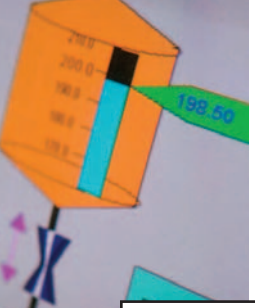
Also, within the next year, the District will begin the \$1.1 million upgrade to our Ludlow Facility. The project will consist of a new booster pump, building improvements, and a permanent corrosion control system. The facility will be monitored and controlled by the Districts' Supervisory Control and Data Acquisition system.

WILBRAHAM - During 2004, the Water Department repaired 5 water breaks and installed 21 new water services. Total water usage in 2004 was approximately 442 million gallons. One of the water breaks was a very difficult and expensive operation to repair, as a 16-inch water main and 8-inch crossover connection were leaking beneath a stream that fed the culvert on Main Street. The leaking water mains were three feet beneath the bottom stream that fed the culvert, and groundwater from the stream had to be constantly pumped from the evacuated area during the repair process. The use of a private waterworks construction contractor was required to repair the leaks, with the total project cost at \$15,000.

The Water Department had Health Consultants, Inc of West Newton, Pennsylvania perform a leak detection survey of the water distribution system during 2004. A total of 74 miles of water mains were surveyed for leaks using sonic detection equipment at a cost of \$7,326. The survey found three underground leaks with a total of fifty gallons per minute loss of water. All leaks were repaired within 24 hours of discovery. The cost of the survey was well worth the investment as the annual amount of the leakage was 26 million gallons of water.

* Information about Cross Connections

For 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.mwra.com or call 617-242-5323 for more information.



Testing your water – every step of the

Tests Before Treatment

We test the water as it leaves the reservoir to see how well protected our watershed is. 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 water) is one measure of overall water quality. Typical levels at Quabbin Reservoir are 0.3 NTU (Nephelometric Turbidity Units). In 2004, turbidity was always below EPA's standard of 5.0 NTU. Quabbin's turbidity level was always below EPA's standard of 5.0 NTU and the stricter Massachusetts standard of 1.0 NTU, with the highest value of 0.6 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 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. This allows us to better understand the quality of your water.

What does this table tell me?

EPA requires that we test for over 120 contaminants. For a complete list, go to www.mwra.com. MWRA found only those noted in this report.

What is the bottom line?

The water quality is excellent. All of the levels are well below EPA's allowable limits.



Water Test Results – After Treatment

Compound	Units	(MCL) highest level allowed	(We found) detected level	Range of detections	(MCLG) Ideal goal	Violation	How it gets in the water
Barium	ppm	2	0.007	0.006-0.007	2	no	Common mineral in nature
Fluoride	ppm	4	0.12	0.03-0.12	4	no	Natural deposits
Nitrate	ppm	10	0.02	0.007-0.02	10	no	Breakdown of disinfectants

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 ppb=parts per billion.



How would I know about a problem with the 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 and newspapers, from MWRA, your local water and health departments, and the state Departments of Public Health (DPH) and Environmental Protection (DEP).



Results for treated water – In community

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.

✳ **How did we do in 2004? No coliforms were found in any CVA community system in 2004.**

Water Treatment – From the Reservoir to Community Pipelines

Because of its excellent watershed conditions and protection, Quabbin Reservoir does not need a 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 primary disinfection where we carefully add measured doses of chlorine to water to kill pathogens that may be present. Licensed operators from CVA communities perform additional booster disinfection at the point where the local pipes take water from the Aqueduct. This process, called residual disinfection, protects the water while in the local pipes. Each community also treats the water to reduce leaching of lead from home plumbing.

Chicopee Water Department:

The treatment plant adds sodium bicarbonate (similar to baking soda) and three other compounds to adjust the water chemistry. This treatment has eliminated "red" water problems at the tap caused by iron from the water mains, green stains on home plumbing fixtures caused by copper, and the absorption of lead



from home plumbing. The lead and copper data on the next page shows that this treatment has been very successful. As a result, Chicopee has been granted the option to reduce the frequency of sampling under the regulations from 30 sites once every six months to 30 sites once every three years. The next round of lead and copper sampling will take place in the spring of 2005.

South Hadley Fire District# 1:

The Departments' continued use of Sodium Silicate for Corrosion Control is still successful in complying with the Department of Environmental Protection (DEP) Lead and Copper Rule. Due to this successful use of silicate, the District passed the requirements for Lead and Copper for three consecutive years and is now required to sample every three years.

Wilbraham:

The Water Department's Corrosion Control Program (CCP) that was implemented in 1997 continues to operate very well. The effectiveness of our CCP is determined by lead and copper sampling analysis. Sampling performed during 2004 indicates our lead and copper results were well within the Mass DEP range.

The Public Health and Bioterrorism Preparedness and Response Act of 2002 was signed into law on June 12, 2003. This Act requires certain public water systems, including Wilbraham, to develop a Vulnerability Assessment and an Emergency Response Plan by December 31, 2004. Wilbraham Water completed both documents during 2004, with the assistance of the consulting firm, Dufrense-Henry, Inc of Northampton, MA.

✳ My water is cloudy or discolored once in a while. Can I drink it?

You can safely drink, cook with, or bathe in this water. If you have a concern, call the MWRA or your local water department. Water is piped under pressure throughout the system. Sometimes air can become trapped in the water causing cloudiness. This happens more often in cold weather. This cloudiness is only temporary, and the water clears up in a short time. Rust from old iron pipes can cause a red, brown, or yellow color in water. Changes in water speed or direction in your local pipes cause rust to be carried along. This can happen when the valves are being repaired, the system is being flushed or tested, or fire hydrants are in use. Wait until the water is clear before doing laundry to avoid staining clothes.



Good news 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 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. However, 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 a long time in the pipes before use.

What Are We Doing About Lead?

Your local water department tests tap water at a number of

What does this table tell me?

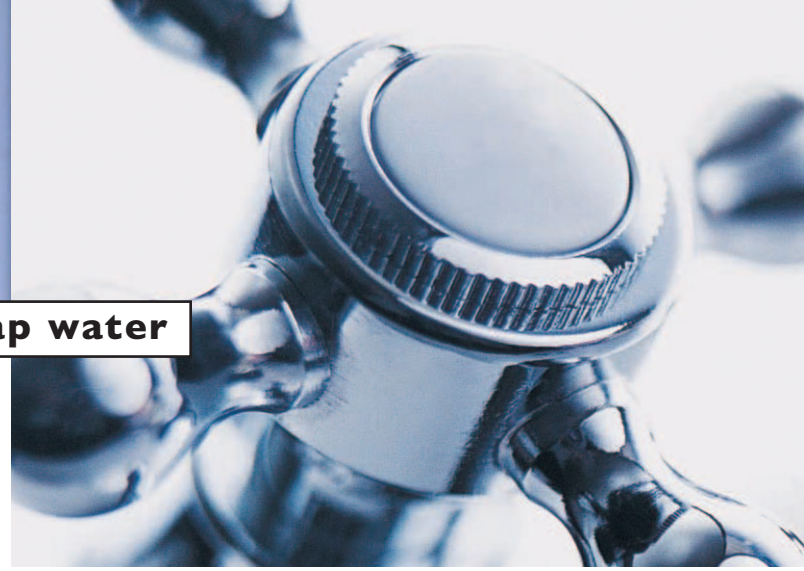
This table lists results for lead, copper, sodium, and disinfection by-products including trihalomethanes and haloacetic acids. All results for lead, copper, sodium, and disinfection by-products were **IN COMPLIANCE** with drinking water regulations.

Local Test Results For 2004

Your city or town	Total Trihalomethanes (TTHMs) in ppb MCL=80 ppb MCLG=0		Haloacetic Acids (HAA5) in ppb MCL=60 ppb MCLG=0		Lead in ppb AL = 15 ppb MCLG=0		Copper in ppm AL = 1.3 ppm MCLG=1.3 ppm		Chlorine in ppb MRDL=4 ppb MRDLG=4 ppb		Sodium in ppm
	Annual Average	Range	Annual Average	Range	# Homes Above AL	90% Value	# Homes Above AL	90% Value	Annual Average	Range	
Chicopee	39	25-50	28	16-41	0 of 31	3	0 of 31	0.18	0.76	0.02-1.59	22
South Hadley FD #1	49	36-71	18	4-25	3 of 15	12	0 of 15	0.03	0.35	0.05-0.7	6.7
Wilbraham	43	27-58	17	1-32	1 of 16	12.6	0 of 16	0.09	0.3	0.1-0.7	6.2
Westover Air Force Base ¹	49	28-83	39	25-47	0 of 6	ND	0 of 6	0.21	0.53	0.05-1.14	NA

Definitions of MCL and MCLG are available on page 4. **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 **avg**=compliance based on average.

¹ Westover Air Force Base receives wholesale water from Chicopee. Consumers in these systems should see Westover insert page for water quality analysis. **NA**= Testing not required



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 met the EPA standards for lead in tap water.



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

- * Be careful of places you may find lead in your home. Paint, soil, dust, and some pottery may contain lead.
- * Run the tap until after the water feels cold. Then fill a pitcher with fresh water and place in 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 pipes leading to your home.

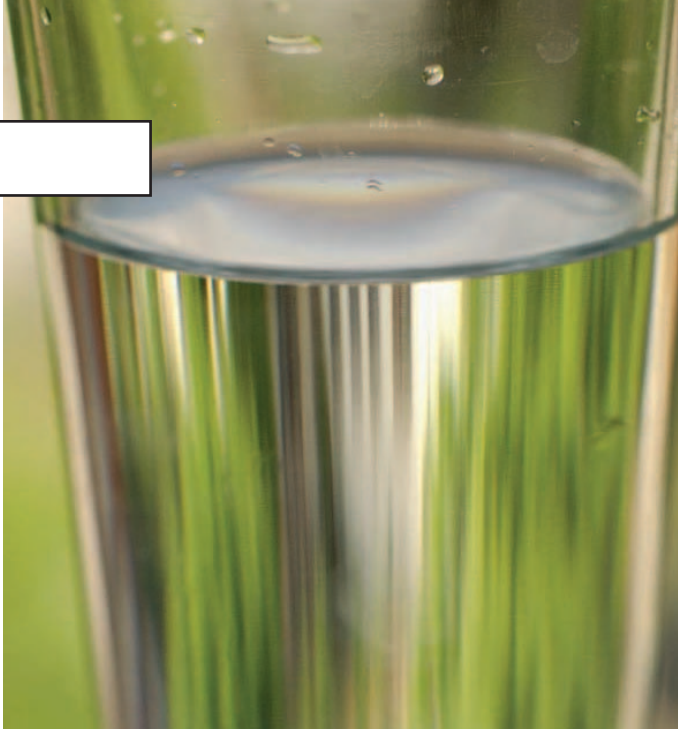
* Test your tap water. Contact MWRA (617) 242-5323, www.mwra.com for tips and a list of certified labs.

* Call the Massachusetts Department of Public Health at 1-800-532-9571 for health information.

Important information about lead

From EPA 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 in 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 lead levels in your home's water, you may wish to have your water tested and flush your tap until after the water is cold before using.

Important Information from EPA



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 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 your local water supplier.

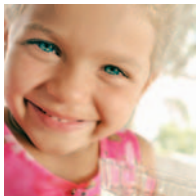


In order to ensure that tap water is safe to drink, the Massachusetts DEP and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.



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 providers. EPA/CDC guidelines on appropriate means to lessen



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



Is my water considered hard or soft?



Your water is considered soft, and is good for laundry and shampooing. Water is measured by "hardness", which is the amount of dissolved minerals in your water. MWRA water has a hardness of about 12 mg/l (or less than 1 grain/gallon by older measures). For comparison, hard water would have greater than 75-mg/l hardness. If you have any questions on the character of your water, feel free to contact us.

where to go for further information

Health Issues	Websites	Phone
Massachusetts Department of Public Health (DPH)	www.mass.gov/dph	617-624-6000
US Centers for Disease Control & Prevention (CDC)	www.cdc.gov	800-311-3435
List of State Certified Water Quality Testing Labs	www.mwra.com/water/html/qual6.htm	617-242-5323
Water Systems & Regulations		
Massachusetts Water Resources Authority (MWRA)	www.mwra.com	617-242-5323
Massachusetts Department of Environmental Protection	www.mass.gov/dep	617-292-5500
Department of Conservation & Recreation	www.mass.gov/dcr	617-626-1250
Source Water Assessment and Protection Report	www.mwra.com/sourcewater.htm	617-242-5323
Community Water Systems		
Chicopee Water Department		413-594-3420
South Hadley Fire District #1 Water Department		413-532-0666
Wilbraham Water Department		413-596-2807



IF YOU WOULD LIKE MORE IN-DEPTH INFORMATION on your water quality, a monthly report is available. Please visit our website or call 617-242-5323. Thank you for reading this report.