

2003
drinking
water
test results

drinking water

what you should know about your



MASSACHUSETTS WATER RESOURCES AUTHORITY



Massachusetts
Water Resources
Authority
and Your Local
Water Department

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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 teléfono 617-788-1190.</p>	<p>La relazione contiene importanti informazioni sulla qualità dell'acqua della Comunità. Tra-durla o parlarne 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. Poproś kogoś o przelumaczenie 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 صديق لك يفهم هذه المعلومات جيداً.</p>	<p>Η κατοχή αναφορά παρουσιάζει αποδοχές πληροφορίες για το ποσοστό νερού σας. Προσπαθήστε να το μεταφράσετε ή να το εξηγήσετε με κάποιον που το καταλαβαίνει καλύτερα.</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。</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 विषय पर बहुत जरूरी जानकारी दी गई है। कृपया इसका अनुवाद कीजिये, या किसी जानकार से इस बारे में पूछिये।</p>	<p>រាយការណ៍នេះមានព័ត៌មានសំខាន់ៗសំដៅទីក្រុងនិងស្ថានភាពទឹកផ្ទះរបស់អ្នក។ សូមបញ្ជាក់ប្រសិនបើអ្នកមិនយល់យល់រាយការណ៍នេះ។</p>	<p>이 보고서는 귀하의 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.

a letter from the EXECUTIVE DIRECTOR



share your THOUGHTS

Your comments on all of our reports help us improve them. We have continued to keep costs down on this report. Each copy costs only 31 cents to print and mail. Give us a call, send a letter or e-mail, and let us know what you think.

MASSACHUSETTS WATER RESOURCES AUTHORITY
100 FIRST AVENUE, 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 104-12, SECTION 1414(C)(4) PWS ID #6000000



MASSACHUSETTS WATER RESOURCES AUTHORITY
CHARLESTOWN NAVY YARD • 100 FIRST AVENUE • BOSTON, MA 02129

Dear Customer:

June, 2004

Once again, I am pleased to send you this annual report on your drinking water quality. The report describes how we treat, test, and deliver tap water to your home. The Massachusetts Water Resources Authority (MWRA) and your local water department test up to 500 samples each week, and for over 120 contaminants each year. This report includes the results of those tests for 2003.

The results show that the source water is excellent, and in 2003 MWRA met every standard except for lead. Lead is not in the source water but can enter through some household plumbing, and therefore some homes may have higher lead levels. Lead can pose a significant health risk. Please read pages 5, 6, and the insert for more information on lead in tap water and to learn what MWRA has been doing to reduce lead. If you are worried about lead in your tap water, let the water run until after it's cold before using – this will help flush any possible lead out.

After a decade of planning, design, and construction, the new water tunnel and the major covered storage facilities are complete. For the first time in the history of our region's great water system, there are no open distribution reservoirs in service within the metropolitan area. Once the water leaves the Wachusett Reservoir, it does not see the light of day until it comes out of the tap in your home. And when the new treatment plant is completed early next year, water quality will be even better.

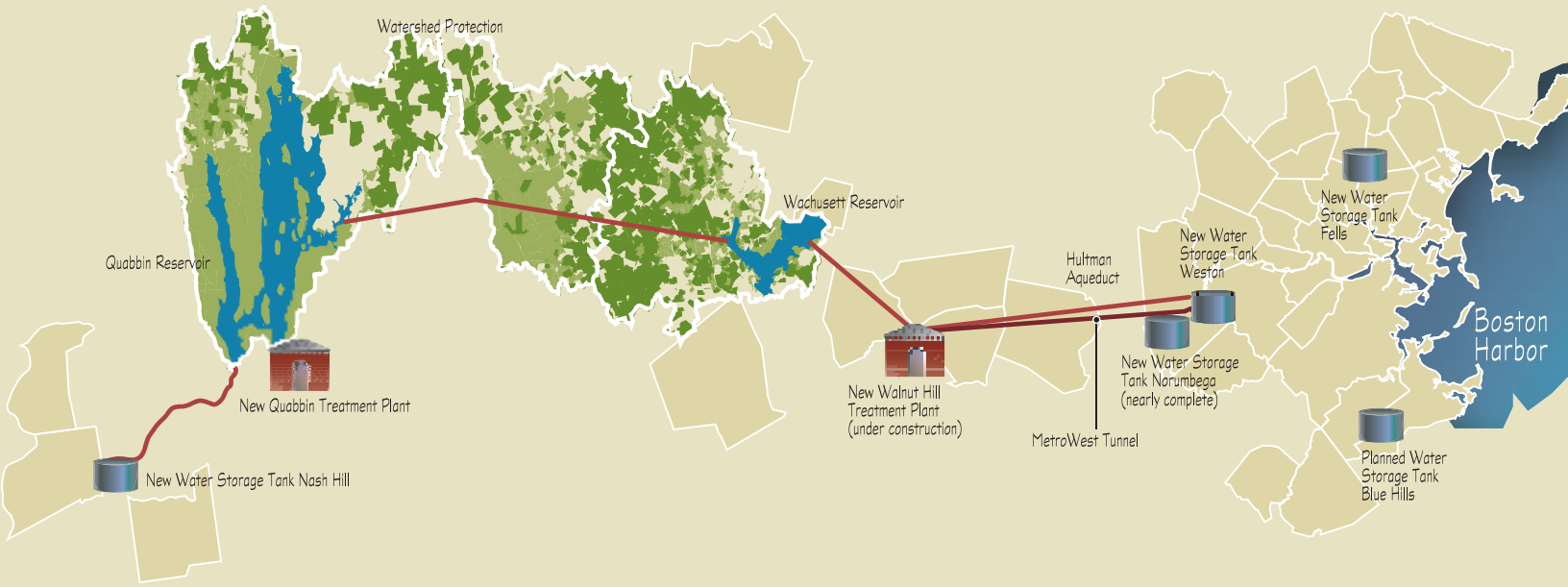
I hope you will take a few moments to read this important report on your water. MWRA has great confidence in the water we deliver to over 2 million customers and we hope that this report will give you the same confidence. Please contact us if you have any questions or comments about your water quality,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



Sincerely,
Frederick A. Laskey
Frederick A. Laskey
Executive Director

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Where does your WATER come from?

The MWRA supplies wholesale water to local water departments in 40 cities and towns of greater Boston and MetroWest and three in Western Massachusetts. This water comes from Quabbin Reservoir, about 65 miles west of Boston, and Wachusett Reservoir, about 35 miles west of Boston. The reservoirs combined provide about 250 million gallons of high quality water to consumers each day.

Rain and snow falling on the watersheds - protected land around the reservoirs - turn into streams that flow to the reservoirs. This water comes in contact with soil, rock, plants, and other material as it follows nature's path to the reservoirs. 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, including low levels of natural radioactive materials, 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 data in this report show that these are not a problem in your reservoirs' watersheds.

Quabbin and Wachusett watersheds are protected naturally, as over 85% of the watersheds are covered in forest and wetlands. About 75% of the total watershed land cannot be built on. The natural undeveloped watersheds help 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).

MAJOR IMPROVEMENTS UNDERWAY

MWRA's Integrated Water Supply Improvement Program is a 10-year, \$1.7 billion series of projects designed to improve system reliability and security with new water treatment and transmission facilities. The major components are:

METROWEST WATER SUPPLY TUNNEL

The new 17.6-mile tunnel is the backbone of the MWRA's new water system. The tunnel began operating in November 2003. It will connect the new treatment plant at Walnut Hill in Marlborough to the greater Boston area. The new tunnel greatly improves dependability, capacity, and safety. This is now the main transmission line with the old Hultman Aqueduct as the back-up.

WATER STORAGE TANKS

The last of MWRA's open distribution reservoirs was replaced with a covered storage tank in March 2004. Five new tanks now provide better water quality control and security for water on the way to your tap. The Norumbega Storage Tank in Weston is the largest covered storage tank in the country and holds 115 million gallons. Other new covered storage tanks are in Weston, Ludlow, Stoneham, and Marlborough. Future tanks are planned for the Quincy and Stoneham regions.

WALNUT HILL WATER TREATMENT PLANT

This new plant will provide state-of-the-art treatment to drinking water. It will consolidate all treatment steps into one plant, and will use ozone rather than chlorine for primary disinfection. Ozone will provide stronger disinfection for pathogens, such as *Cryptosporidium*, and will reduce levels of disinfection byproducts. The plant is scheduled to be up and running in early 2005.

PIPELINE REHABILITATION

MWRA and local water departments continue to work to replace, clean, and reline both MWRA and locally-owned older pipes to maintain the water's high quality.

from RESERVOIR to your HOME

Your water is tested each step of the way – from the reservoir to the tap to ensure that the water you receive is top-quality.

TESTS BEFORE TREATMENT

We test the water as it leaves the reservoir to see how well our watershed protection is working. Test results show few contaminants are found in the reservoir water. The few that are found are at very low levels, well below EPA's standards.

Turbidity (or cloudiness of water) is one measure of overall water quality. Typical levels at Wachusett Reservoir are 0.3 NTU (Nephelometric Turbidity Units). In 2003, turbidity was always below EPA's standard of 5.0 NTU. It was below the stricter Massachusetts standard of 1.0 NTU over 99.99% of the time, with the highest level at 1.55 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. All test results were well within state and federal testing and treatment standards.

WATER TREATMENT

MWRA's licensed treatment operators treat water at several places in the system. The first treatment step is the primary disinfection of reservoir water. We

carefully add measured doses of chlorine to the water to kill any pathogens (germs) that may be present in the water. Next, the water chemistry is adjusted to reduce corrosion of lead and copper from home plumbing (see page 5). Fluoride is then added to reduce cavities. Last, we add chloramine, a mild and long-lasting disinfectant combining chlorine and ammonia, which protects the water while it is in the local pipelines.



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 monitor the quality of your water.

WHAT DOES THIS TABLE TELL ME?

EPA requires that we test for over 120 contaminants. MWRA found no contaminants above EPA standards in the source water.

How does MWRA protect my water?

DCR rangers, in partnership with MWRA, patrol the Quabbin and Wachusett Reservoirs and incoming streams within the watershed every day. The water is tested daily for many parameters, and many more tests are performed weekly and monthly. Operators monitor the water that comes to your community 24 hours a day, 365 days a year.



Also, in response to any heightened alerts from the Department of Homeland Security, MWRA has taken extra security steps including locking down operational facilities, added facility checks, increased water quality monitoring, and many other security measures.

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	0.012	0.007-0.012	2	No	Common mineral in nature
Chloramine	ppm	4 (MRDL)	1.19	0.01-2.15	4 (MRDLG)	No	Water disinfectant
Fluoride	ppm	4	1.34	0.04-1.34	4	No	Additive for dental health
Nitrate	ppm	10	0.17	0.02-0.17	10	No	Natural deposits, stormwater/fertilizer runoff
Nitrite	ppm	1	0.01	0.01	1	No	Breakdown of disinfectant
Alpha Emitters	pCi/L	15	0.9	0.1-0.9	0	No	Erosion of natural mineral deposits
Beta Particles	pCi/L	50*	3.3	0.4-3.3	0	No	Erosion of natural mineral deposits
Combined Radium	pCi/L	5	1	0.1-1	0	No	Erosion of natural mineral deposits
Total Trihalomethanes	ppb	Avg=80	Avg=66.2	32.7-88.4	0	No	Byproducts of water disinfection
Haloacetic Acids-5	ppm	Avg=60	Avg=26.8	1.6-54.9	0	No	Byproducts of water disinfection

KEY: **MCL** = Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology **MCLG** = Maximum Contaminant Level Goal - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety **MRDL** - Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. **MRDLG** - Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants. **ppm** = parts per million **ppb** = parts per billion **pCi/l** = picoCuries per liter *EPA considers 50 pCi/L to be the level of concern for beta particles **Avg** = Average

QUESTION

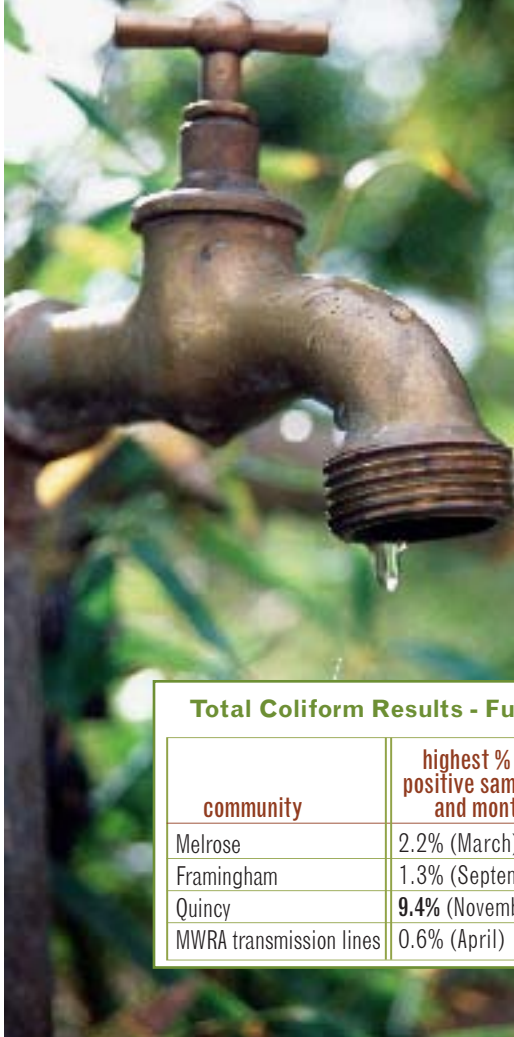
My water is cloudy or discolored once in a while. Can I drink it?

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.



Total Coliform Results - Fully Supplied

community	highest % of positive samples and month	violations of EPA's 5% limit
Melrose	2.2% (March)	No
Framingham	1.3% (September)	No
Quincy	9.4% (November)	Yes*
MWRA transmission lines	0.6% (April)	No

TESTS IN COMMUNITY PIPES

MWRA and local water departments work together to test water all the way to the tap. We test 300 to 500 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, and they also can be found in soil, on plants, and other places. Most of the time, these bacteria are not harmful to humans. 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 2003?

The table reports test results from 30 communities that receive all of their water from MWRA. Total coliform were only found in 3 communities. *Only one of these communities exceeded the EPA standard. In 15 follow-up tests, no *E.coli* was found. (Quincy residents should read their community letter on page 7.)

NEW EPA REGULATIONS

MWRA has been working with EPA and other researchers to define new national drinking water rules by testing for compounds which are not regulated. Our results will be used with those of other water suppliers to help EPA set regulations for these compounds if they are necessary. MWRA is also participating with Tufts University on a nationally-funded study testing for *Cryptosporidium* and *Giardia*.

Ongoing Research for New Regulations

tests	measurement units	2003 average
Radon	pCi/L	13 (Range 3-25)
Viruses	MPN/L	0.002
Cryptosporidium	oocysts per 100L	0.01
Giardia	cysts per 100L	0.01
Aeromonas	MPN/100 ml	72

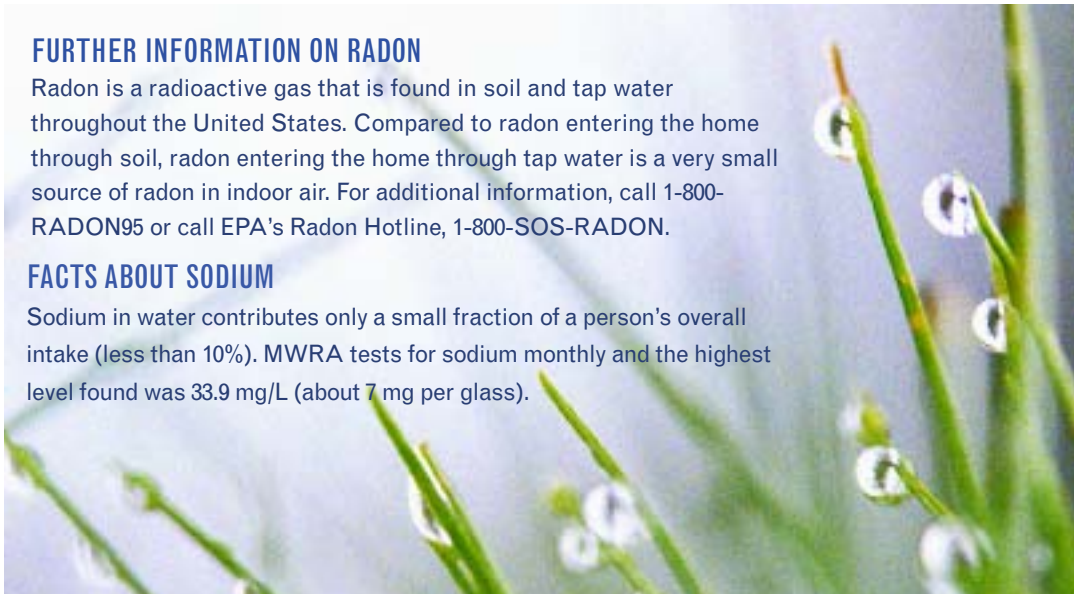
KEY: pCi/L=picoCuries per liter MPN = most probable number

FURTHER INFORMATION ON RADON

Radon is a radioactive gas that is found in soil and tap water throughout the United States. Compared to radon entering the home through soil, radon entering the home through tap water is a very small source of radon in indoor air. For additional information, call 1-800-RADON95 or call EPA's Radon Hotline, 1-800-SOS-RADON.

FACTS ABOUT SODIUM

Sodium in water contributes only a small fraction of a person's overall intake (less than 10%). MWRA tests for sodium monthly and the highest level found was 33.9 mg/L (about 7 mg per glass).





LEAD in TAP WATER

MWRA's source water and the water in distribution pipes in your community is lead free. However, water left in contact with lead pipes or fixtures for a long time can leach from lead pipes, lead solder, and some brass fixtures, or the service line that connects the distribution main to your home plumbing, if it is made of lead.

WHAT IS BEING DONE TO REDUCE LEAD IN TAP WATER

MWRA has been taking steps to make its water less corrosive, thereby reducing the leaching of lead into drinking water. In 1996, MWRA began operating a new facility in Marlborough where sodium carbonate and carbon dioxide are added to adjust the water's pH and buffering capacity. This change has made the water less likely to leach lead from the pipes. Lead levels found in sample tests of tap water have dropped significantly since this treatment change. Also, local water departments are working to decrease lead corrosion by replacing existing lead service lines.

LEAD RESULTS

Each year, all MWRA communities must test tap water in a sample of homes that are likely to have high lead levels. These are usually homes with lead

service lines or lead solder. Under the Lead and Copper Rule, if more than 10% of tap water samples exceed the action level of 15 parts per billion (ppb), water systems must take additional steps, including changes to treatment.

Since 1996, lead levels have declined dramatically, finally getting below the Action Level in 2002.

However, lead levels exceeded the Action Level in 2003. Note that not enough samples were collected. (See page 6 and the insert for more information.) A round of testing with the correct number of samples was conducted in March 2004.

Preliminary results of this testing indicate that the MWRA system will be below the lead action level.



- Be careful of other places you may find lead in or near 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 water and place in refrigerator for future use.
- Never use hot water from the faucet for drinking or cooking, especially when making baby formula.
- Never boil water to remove lead. Boiling water for an extended time may make the lead more concentrated.
- Get your water tested for lead. Call 617-242-5323 or go to www.mwra.com for a list of laboratories and more information on lead.
- Ask your local water department if there are lead service pipes leading to your home.

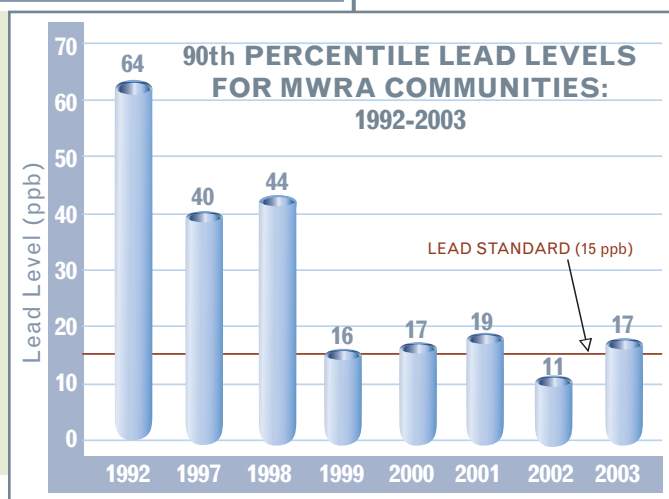
IMPORTANT INFORMATION FROM EPA ABOUT LEAD

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.

	Range	90% value	(Target) Action Level	(Ideal Goal) MCLG	# homes that failed AL / # homes tested	Exceedance
LEAD	1.2-180 ppb	17.1	15 ppb	0	54 / 437	Yes
COPPER	0.003-0.56 ppm	0.14 ppm	1.3 ppm	0	0 / 437	No

Action Level (AL) -The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Maximum Contaminant Level Goal (MCLG) -The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.



QUESTION

How would I know about a problem with the water supply?



MWRA and your local water department keep a close watch on the water supply. The law requires that you be told 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).

important INFORMATION FROM EPA & DEP...

MONITORING REQUIREMENTS NOT MET FOR LEAD AND COPPER

During a review of MWRA's lead and copper sampling program, DEP determined that MWRA communities did not always collect the required number of samples between 1992 and 2003. Based on DEP regulations, MWRA communities were required to sample a total of 440 samples in 2003. However, only 425 samples were collected. The correct number of samples was collected in March 2004. (For more information on lead and its health effects, see page 5 and the insert.)

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 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, Massachusetts DEP and EPA prescribe regulations that 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 care 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).

WHERE TO GO FOR FURTHER INFORMATION

HEALTH ISSUES

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 SYSTEM & 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

PUBLIC MEETINGS

MWRA Board of Directors	www.mwra.com/02org/html/gov.htm	617-788-1117
MWRA Advisory Board	www.mwra.com/adbrd/html/hpadbd.htm	617-742-7561
Water Supply Citizens Advisory Committee	www.mwra.com/02org/html/wscac.htm	413-586-8861

water CONSERVATION



Wasting water can add up quickly. On average, a family of four uses 90,000 gallons of water each year: each person uses about 60 gallons of water each day. Consumers are discovering that more efficient water use can reduce the impact on the water supply and their wallets. Here are some ways to make your home and your habits more water efficient.

FIX LEAKS

A leaky faucet is easy to see. But hidden leaks in the toilet, under the sink, or behind a washing machine can waste large amounts of water and also damage floors or ceilings. Take a reading of your water meter. Check again in an hour. If the reading has changed, you've got at least one leak. Investigate!

INSTALL A LOW-FLUSH TOILET

Toilets account for over a third of the water used in most homes. Installing a new ultra low flush toilet will save thousands of gallons each year and can reduce your bathroom water use by more than half.

INSTALL A LOW-FLOW SHOWERHEAD AND FAUCET AERATOR

Some showerheads may still use over 5 gallons per minute. A low-flow showerhead uses 2.5 gallons or less and can save you over 20 gallons per 10-minute shower. In one year, that's over 7000 gallons. Faucets can use 2 to 7 gallons of water per minute - a low-flow aerator can reduce the flow by about 25%.

OUTDOOR WATER SAVINGS TIPS

Summer is an especially important time to save water. Water consumption can increase up to 50% in the summer months due to outdoor water use.

tips TO SAVE water outdoors

- **Water your lawn (and other landscaping) in the early morning or evening to avoid evaporation.**
- **Be sure sprinklers water only on your lawn, not the pavement.**
- **Never water on a windy, rainy, or hot day.**
- **Never use the hose to clean debris from your driveway or sidewalk. Use a broom.**
- **Apply mulch around flowers to reduce evaporation, promote plant growth, and control weeds.**



THE INCH RULE

Most lawns, shrubs, vegetables, and flowers need just one inch of water per week. If there has been an inch of rainfall during the week, you don't need to water at all.

For more information on these or any other water saving tips, please call 617-242-SAVE or visit www.mwra.com

Overwatering can actually weaken your lawn by encouraging shallow roots that are less tolerant of dry periods and more likely to be damaged by insects.



IMPORTANT information about your DRINKING WATER

Monitoring Requirements not met for Lead and Copper

This notice was published by MWRA, PWS ID# 6000000, in March 2004.



This notice is intended for homes and businesses in communities in metropolitan Boston and MetroWest that receive all of their water supply from the Massachusetts Water Resources Authority (MWRA). It covers the period from January to December 2003.

MWRA was recently notified that we violated monitoring requirements for the lead and copper program. Although this is not an emergency, as our customers you have the right to know what happened, what you should do, and what we are doing to correct the situation.

What happened? All 28 MWRA fully-served communities regularly test for lead and copper in tap water at volunteer homes and schools. During a review of MWRA's lead and copper sampling program, DEP determined that MWRA communities have not always collected the required number of samples. Based on Department of Environmental Protection (DEP) regulations, MWRA communities were required to sample a total of 440 samples in 2003. However, only 425 of the samples were collected. Because we collected too few samples, DEP's rules require the following language:

We are required to monitor your drinking water for specific contamination on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 2003, we did not complete all monitoring for lead and copper, and therefore cannot be sure of the quality of our drinking water as it relates to lead and copper during that time.

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 water over many years could develop kidney problems or high blood pressure.

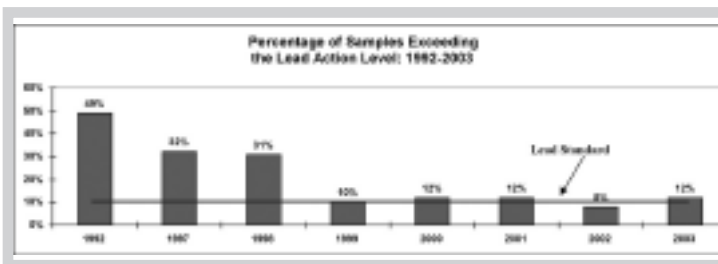
What are the Lead Levels? MWRA's source water and the water in distribution pipes in your town is lead free. However, water left in contact with lead pipes or fixtures for a long time can leach out lead. This can include your home plumbing, such as lead pipes, lead solder, and some brass fixtures, or the service line that connects the distribution main to your home plumbing, if it is made of lead.

Under the Lead and Copper Rule, if more than 10% of tap water samples exceed the action level of 15 parts per billion (ppb), water systems must take additional steps, including changes to treatment. MWRA treatment changes since 1996 have reduced the amount of lead leaching from your plumbing. Lead levels have declined dramatically, finally getting below the action level in 2002. However, lead levels may have again exceeded the action level in 2003. Preliminary results show that 372 (88%) of the 425 samples collected were below the action level. 53 samples (12%) exceeded the action level. MWRA believes that some of those samples may not be valid. DEP is currently reviewing the samples to determine whether or not the MWRA and its member communities exceeded the lead action level.

Contact MWRA at 617-242-5323 or go to www.mwra.com for more information on lead levels.

What should I do? If you are concerned about the possibility of lead leaching from your home plumbing or service line, you may want to:

- Run the tap until the water feels cold. Then fill a pitcher with 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.
- Never boil water to remove lead. Boiling water for an extended time may make the lead more concentrated.
- Get your water tested for lead. Call 617-242-5323 or go to www.mwra.com for a list of laboratories and more information on lead.
- Ask your local water department if there are lead service pipes leading to your home.



What is being done? MWRA is working with communities to be sure that each community collects the required number of samples in 2004. A round of sampling, with the correct number of samples, was conducted in March 2004 under a DEP approved sampling plan. Results will be mailed to you in MWRA's annual water quality report this June. A second round of sampling will be taken in September 2004.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses) or do not speak English. You can do this by posting this notice in a public place or distributing copies by hand or mail.

El anuncio contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguien que lo entienda bien.

For more information about your drinking water or our programs to improve the water system, please contact the MWRA at 617-242-5323 or visit our web site at www.mwra.com.

ADDITIONAL INFORMATION ON LEAD IN DRINKING WATER FROM EPA

SOME HOMES IN THE MWRA SERVICE AREA HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. FOR FURTHER INFORMATION, PLEASE READ THE FOLLOWING NOTICE.

The United States Environmental Protection Agency (EPA) and MWRA are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under federal law, MWRA has been required to have a program in place to minimize lead in your drinking water by July 1996. This program includes:

1. Corrosion control treatment (treating the water to make it less likely that lead will dissolve into the water); and
2. A public education program.

Based on sampling results, the following ten communities – Everett, Framingham, Lynnfield Water District, Medford, Melrose, Newton, Norwood, Somerville, Weston and Winthrop – will be conducting lead service replacement programs. If you have any questions, please contact your local water department (for contact information, see page 7 in the

report). This notice also explains simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

HEALTH EFFECTS OF LEAD: Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery, porcelain, and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body.

Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies.

In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

LEAD IN DRINKING WATER: Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. EPA estimates that drinking water can make up 20% or more of a person's total exposure to lead.

HOW LEAD ENTERS OUR WATER: Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing.

These materials include lead-based solder used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER: Despite MWRA's best efforts mentioned earlier to control water corrosivity, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. For more information on having your water tested, or a list of local laboratories, please call 617-242-5323 or go to www.mwra.com.

If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:

1. FLUSH YOUR SYSTEM. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. Flushing usually uses less than one or two gallons of water and costs less than 50 cents per month.

To flush, let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet until after the water gets noticeably colder, usually about 15 - 30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking.

To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash dishes or water plants.

If you live in a high-rise building, letting the water flow before using it may not lessen your risk from lead. This is because high rise plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

2. USE ONLY COLD WATER FOR COOKING AND DRINKING. Try not to cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.

3. REMOVE LOOSE SOLDER AND DEBRIS FROM PLUMBING MATERIALS. Remove loose solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced. To do this, remove the faucet strainers from all taps and run the water from 3 - 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

4. IDENTIFY AND REPLACE LEAD SOLDER. If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks

dull gray, and when scratched with a key looks shiny. In addition, notify the MA DEP about the violation.

5. FIND OUT IF YOUR SERVICE LINE IS MADE OF LEAD. Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the city's record of building permits which should be maintained in the files of your local water department.

A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. Your local water department should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb of lead to your drinking water, after MWRA's comprehensive treatment program is in place, your local water department is required to replace the portion of the line they own. If the line is only partially owned by your local water department, they are required to provide the owner of the privately-owned portion of the line with information on how to replace the privately-owned portion of the service line, and offer to replace that portion of the line at the owner's expense. If they replace only the portion of the line that they own, they also are required to notify you in advance and provide you with information on the steps you can take to minimize exposure to any temporary increase in lead levels that may result from the partial replacement; to take a follow-up sample at their expense from the line within 72 hours after the partial replacement; and to mail or otherwise provide you with the results of that sample within three business days of receiving the results. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

6. HAVE AN ELECTRICIAN CHECK YOUR WIRING. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

IF LEAD LEVEL PERSISTS: The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

7. PURCHASE OR LEASE A HOME TREATMENT DEVICE: Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap. However, all lead reduction claims should be investigated. Be sure to check the actual performance of a specific treatment device before and after installing the unit. A good resource to call is the National Sanitation Foundation: 1-877-867-3435 or www.nsf.org.

8. PURCHASE BOTTLED WATER FOR DRINKING AND COOKING: If your water at the tap has elevated levels of lead after flushing, bottled water is an option, but it may cost as much as 1,000 times more than water from your faucet.

FOR MORE INFORMATION: You can consult a variety of sources for additional information:

- Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.
- State and local government agencies that can be contacted include:
 - The MWRA (617-242-5323 or www.mwra.com) can provide you with information about your community's water supply, and a list of local laboratories that have been certified by DEP for testing water quality.
 - Your local water department can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home (see phone number on page 7);
 - The MA State Department of Public Health at 1-800-532-9571 can provide you with information about the health effects of lead and how you can have your child's blood tested.