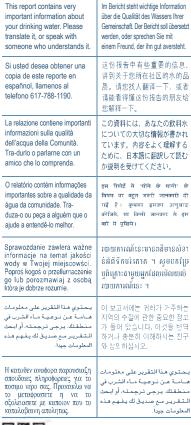


**Drinking Water** Test Results 2014 Massachusetts Water **Resources Authority** 





Massachusetts Water Resources Authority and Your Local Water Department

This report is required under the Federal Safe Drinking Water Act. MWRA PWS ID# 600000

## Where to go for further information

|   | Massachusetts Water Resources Authority (MWRA)     | www.mwra.com                                 | 617-242-5323 |
|---|--|--|--------------|
|   | Massachusetts Dept. of Environmental Protection    | www.mass.gov/dep                             | 617-292-5500 |
|   | Department of Conservation and Recreation          | www.mass.gov/dcr/watersupply.htm             | 617-626-1250 |
| - | Massachusetts Dept. of Public Health (DPH)         | www.mass.gov/dph                             | 617-624-6000 |
|   | US Centers for Disease Control & Prevention (CDC)  | www.cdc.gov                                  | 800-232-4636 |
|   | List of State Certified Water Quality Testing Labs | www.mwra.com/o4water/html/testinglabs.html   | 617-242-5323 |
|   | Source Water Assessment and Protection Reports     | www.mwra.com/sourcewater.htm                 | 617-242-5323 |
| - | Information on Water Conservation                  | www.mwra.com/conservation.html               | 617-242-SAVE |
|   | Public Meetings                                    |  |              |
|   | MWRA Board of Directors                            | www.mwra.com/o2org/html/boardofdirectors.htm | 617-788-1117 |
| _ | MWRA Advisory Board                                | www.mwraadvisoryboard.com                    | 617-788-2050 |
|   | Water Supply Citizens Advisory Committee           | www.mwra.com/o2org/html/wscac.htm            | 413-213-0454 |
|   |  |  |              |

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





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Dear Customer,

Clean, fresh water that tastes great – that's what you expect when you fill your glass, and that's what MWRA delivers right to your faucet. In fact, MWRA water was chosen as the best tasting in the country in 2014 at an annual conference of water specialists.

And it's not just the taste of the water that's good. MWRA takes hundreds of thousands of tests each year, and your water met every state and federal drinking water standard. System-wide, we remain below the Lead Action Level. Please read the letter on page 4 for more information on your community's local water system.

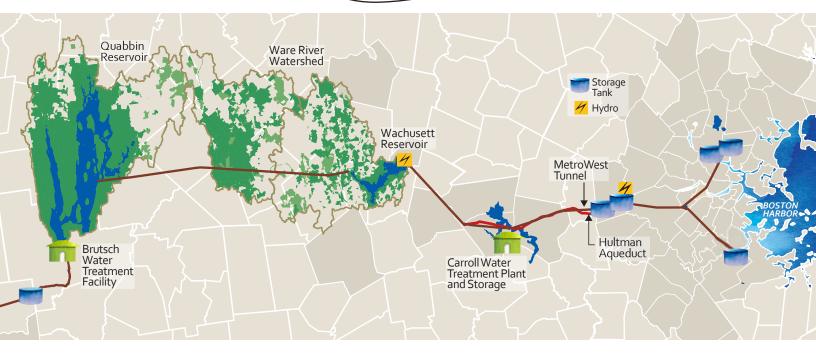
There are several reasons our water tastes so good, beginning with high-quality source water. Next is the state-of-the-art treatment we provide - starting with ozone in 2005 and then adding UV light in 2014. After treatment, the water does not see the light of day until it reaches your tap. MWRA is now finishing up construction of the last of its covered water storage projects with the Spot Pond Tank in Stoneham slated for completion later this year.

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

Sincerely,

or hearly Frederick A. Laskey

Executive Director





### WHY YOUR WATER TASTES GREAT - HIGH **QUALITY SOURCE WATER**

Your water comes from the Quabbin Reservoir, about 65 miles west of Boston, and the Wachusett Reservoir, about 35 miles west of Boston. These pristine reservoirs supply wholesale water to local water departments in 51 communities. The two reservoirs combined supplied about 200 million gallons a day of high quality water to consumers in 2014.

The Quabbin and Wachusett watersheds are naturally protected with over 85% of the watersheds covered in forest and wetlands. To ensure safety, the streams and reservoirs are tested often and patrolled daily by the Department of Conservation and Recreation (DCR).

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 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 do not typically cause problems in the water. But, water can also transport contaminants from human and animal activity. These can include bacteria and viruses - some of which can cause illness. The test data in this report show that these contaminants are not a problem in your reservoirs' watersheds.

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program report for the Quabbin and Wachusett Reservoirs. 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." MWRA follows the report recommendations to maintain the pristine watershed areas.

### **TESTING YOUR WATER - EVERY STEP OF THE WAY**

Test results show few contaminants are found in the reservoir water. The few that are found are in very small amounts, well below EPA's standards.

Turbidity (or cloudiness of the water) is one measure of overall water quality. All water must be below 5 NTU (Nephelometric Turbidity Units), and water can only be above 1 NTU if it does not interfere with effective disinfection. In 2014, turbidity was always below both the 5.0 and 1.0 NTU standards, with the highest level at 0.62 NTU. Typical levels at the Wachusett Reservoir are 0.3 NTU.

MWRA also tests reservoir water for pathogens such as fecal coliform, bacteria, viruses, and the parasites Cryptosporidum 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.

### **TESTING RESULTS - AFTER TREATMENT**

EPA and state regulations require many water guality tests after treatment to check the water you are drinking. MWRA conducts hundreds of thousands of tests per year on over 120 contaminants (a complete list is available on www.mwra.com). Details about 2014 test results are in the table below. The bottom line is the water quality is excellent.



# Sodium facts ~~~~~

Sodium in water contributes only a small fraction of a person's overall sodium intake (less than 10%). MWRA tests for sodium monthly and the highest level found was 34.8 mg/L (about 9 mg per 8 oz. glass). This would be considered Very Low Sodium by the Food and Drug Administration.

|                       |       | (MCL)<br>Highest<br>Level | (We found)<br>Detected<br>Level- | Range of    | (MCLG)     |           |                                     |
|-----------------------|-------|---------------------------|----------------------------------|-------------|------------|-----------|-------------------------------------|
| Compound              | Units | Allowed                   | Average                          | Detections  | Ideal Goal | Violation | How it gets in the water            |
| Barium                | ppm   | 2                         | 0.008                            | 0.007-0.009 | 2          | No        | Common mineral in nature            |
| Monochloramine        | ppm   | 4-MRDL                    | 1.9                              | 0-3.9       | 4-MRDLG    | No        | Water disinfectant                  |
| Fluoride              | ppm   | 4                         | 1.02                             | 0.87-1.1    | 4          | No        | Additive for dental health          |
| Nitrate^              | ppm   | 10                        | 0.06                             | 0.01-0.06   | 10         | No        | Atmospheric deposition              |
| Nitrite^              | ppm   | 1                         | 0.006                            | ND-0.006    | 1          | No        | Byproduct of water disinfection     |
| Total Trihalomethanes | ppb   | 80                        | 13.3                             | 3.7-17.3    | ns         | No        | Byproduct of water disinfection     |
| Haloacetic Acids-5    | ppb   | 60                        | 10.2                             | 0-15.9      | ns         | No        | Byproduct of water disinfection     |
| Total Coliform        | %     | 5%                        | 1.0% (Aug)                       | ND-1.0%     | 0          | No        | Naturally present in environment    |
| Combined Radium       | pCi/L | 5                         | 1.76                             | 1.76        | 0          | No        | Erosion of natural mineral 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. 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 ns=no standard pCi/L=picoCurie per liter ^As required by DEP, the maximum result is reported for nitrate and nitrite, not the average.

### WHY YOUR WATER TASTES GREAT -WATER TREATMENT

One of the reasons that the Boston area water tastes so good is that MWRA has state-of-the-art treatment at the John J. Carroll Water Treatment Plant in Marlborough. Since 2005, your water has been treated with ozone - produced by applying an electrical current to pure oxygen. Ozone has ensured strong protection against microbes and viruses, improved water clarity, and makes the water taste better. Starting in 2014, we also added ultraviolet (UV) disinfection, further improving the quality of the water. UV light is essentially a more potent form of the natural disinfection from sunlight, and ensures that any pathogens potentially in our reservoirs are rendered harmless.

In addition, the water chemistry is adjusted to reduce corrosion of lead and copper from home plumbing. Fluoride is added to promote dental health, and in April 2015 the dose was lowered to 0.7 ppm based on CDC and EPA recommendations. Last, we add monchloramine, a mild and long lasting disinfectant to protect the water as it travels to your home.



### **TESTS IN COMMUNITY PIPES**

MWRA and local water departments test 300 to 500 water samples 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, they 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 month may be positive. If a water sample does test positive, we run more specific tests for E.coli, which is a bacteria found in human and animal fecal waste and may cause illness. No E.coli was found in any MWRA community in 2014. If your community found any total coliform, it will be listed within the community letter on page 4.

# Award winning tap water!

In 2014, MWRA won **Best Tasting Water in the US** at the American Water Works Association Annual Conference. We competed against water suppliers from across the country. MWRA also received the Public Water System Award for excellent performance from the Massachusetts Department of Environmental Protection.

### **RESEARCH FOR NEW REGULATIONS**

MWRA has been working with EPA and other researchers to define new national drinking water standards by testing for unregulated contaminants. To read more about these regulations, and to see a listing of what was found in MWRA water, please visit **www.mwra.com/UCMR/2014.html**.

### DRINKING WATER AND PEOPLE WITH WEAKENED IMMUNE SYSTEMS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (1-800-426-4791).

### **CONTAMINANTS IN BOTTLED WATER**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791) or MWRA. In order to ensure that tap water is safe to drink, the Massachusetts DEP and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### INFORMATION ABOUT CROSS CONNECTIONS

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

## Tap water- the smart choice ~~~~~

Although tap water and bottled water have to meet the same standards, tap water is delivered straight to your home without trucking or plastic waste. Bottled water produces over 10,000 times the amount of greenhouse gasses compared to tap water. Tap water costs less than a penny per gallon, while bottled

water can cost between \$1 and \$8 per gallon. Tap water is the smart choice!





# TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS WATER AND WASTEWATER DIVISION

Public Water Supply # 3100000

PETER A. SELLERS EXECUTIVE DIRECTOR | PUBLIC WORKS

PAUL G. BARDEN DEPUTY DIRECTOR | PUBLIC WORKS "Dedicated to Excellence in Public Service"

### Dear Resident:

Once again we are proud to provide you with this year's Consumer Confidence Report. This report has been compiled to provide you with information regarding the drinking water that we provide to you on a daily basis in conjunction with the Massachusetts Water Resources Authority (MWRA).

The Town of Framingham operates one of the largest drinking water systems within the MWRA service area as well as in the state of Massachusetts. Framingham's water, which is purchased from the MWRA, is treated and disinfected at their state-of-the-art Carroll Treatment Plant located in Marlborough. The water is then conveyed to the Town's distribution system through 4 MWRA connections. The Framingham Water Department is then responsible for the distribution of public potable water as well as providing fire suppression service to over 17,000 residential and commercial accounts within the community. The average daily demand of 7 million gallons is distributed throughout the Town via a complex distribution system consisting of 250 miles of underground piping, over 2,000 hydrants, 20,000 meters, 4,900 gate valves, 4 pumping stations and 2 booster stations as well as 6 storage tanks with a capacity approaching 9 million gallons.

The Framingham Water Department collects drinking water samples from fifteen homes and two schools which are subsequently tested for lead and copper content. Due to Framingham's excellent results, the United States Environmental Protection Agency (EPA) has reduced our requirements to sample these locations to only once a year. Our 2014 sampling results have once again successfully met the goals established by the EPA, which states that 10% of the samples taken cannot exceed 15 parts per billion (ppb) for lead and 1.3 parts per million (ppm) for copper. The 90th percentile for lead was 3.72 ppb and copper was 0.0827 ppm during the September sampling event.

The Framingham Water Department also analyzes 72 bacteriological samples each month to ensure the quality and protection of your drinking water. The Town maintained full compliance with the EPA's standards related to bacteria testing better known as the Total Coliform Rule. The EPA requires that no more than 5% of the samples in a month test positive. In 2014, Framingham's result for June was 1.3%. The results for all other months during 2014 were zero.

The Department of Public Works continues to improve its water distribution infrastructure through a multi-year Capital Improvement Program. This endeavor includes numerous water system projects such as the rehabilitation of existing pump stations and storage tanks as well as the replacement of water pipes that in some cases predate the 1900s. These projects have been developed to ensure that our residents and businesses receive the highest quality water with sufficient quantity and pressure for domestic use as well as fire protection services. During the last few years, these projects have included the replacement of many miles of water pipe as well as several hundred water gate valves and hydrants.

Please visit the Town's website at www.framinghamma.gov for additional information regarding your water system. This site will also allow you to view upcoming meetings and agendas that may be related to discussions concerning the water system which may be of interest to you.

If you have any questions or comments on your water or would like additional information, please call us at the following numbers:

| Water Billing | 508-532-5605 | Water Operations | 508-532-6050 |
|---------------|--------------|------------------|--------------|
| Water Meters  | 508-532-6050 | MWRA             | 617-242-5323 |

Respectfully, Blake D. Lukis



### INVESTMENTS IN YOUR WATER SYSTEM

### Preparing Dams for Climate Change

Since 2006, MWRA has spent over \$21 million on dam safety projects. All MWRA dams, dikes, spillways and appurtenances are inspected routinely by licensed dam safety engineers and are in good condition.

### Protecting Reservoirs While Providing Open Space

The best way to deliver clean, safe water is to start with high quality source water. Since 1985, \$134.5 million has been invested in land preservation around the Quabbin, Ware and Wachusett watersheds.

### **Monitoring Water Quality in Real Time**

Your water is monitored by a state-of-the-art system in real time – 24 hours a day, seven days a week – to make sure it is free of contaminants. This allows MWRA to respond to changes in water quality almost immediately.

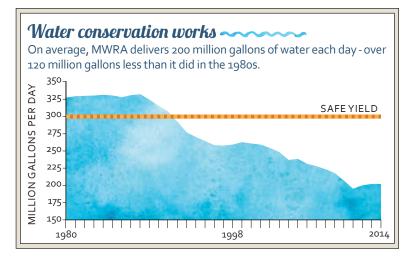
### **Taking Advantage of Gravity**

MWRA operates three hydroelectric generators that capture the energy of the water as it flows east providing \$1.5 million in renewable energy annually.



### Covered Storage Keeps Water Safe and Clean

MWRA has constructed a network of covered storage tanks across the service area that keep your water protected from the treatment plant to your tap. The Spot Pond Tank in Stoneham will open later this year.



# What you need to know about lead in tap water ~~~~~

MWRA water is lead-free when it leaves the reservoirs, and MWRA and local pipes do not add lead to the water. However, lead can get into water through household plumbing including some service lines (the pipe from the street to your house). Check with your local water department if you have a lead service line. If you do, you should replace it.

Under EPA rules, each year your local water department must test water in homes that are likely to have high lead levels. The requirement is that 90% of the sampled homes must have lead levels below the Lead Action Level of 15 ppb. Since corrosion control treatment began in 1996, lead levels in tested homes have dropped over 90%, and 19 straight sampling rounds have been below the EPA Action Level.

For tips on how to reduce your possible exposure to lead at **www.mwra.com/lead**.

### SEPTEMBER 2014 LEAD & COPPER RESULTS

|                 | Range |     |     | Goal) | # Home<br>Above AL/#<br>Homes Tested |
|-----------------|-------|-----|-----|-------|--------------------------------------|
| Lead<br>(ppb)   | 0-66  | 5.4 | 15  | 0     | 7/450                                |
| Copper<br>(ppm) | 0-0.5 | 0.1 | 1.3 | 1.3   | 0/450                                |

**KEY:** AL=Action Level-The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. Definition of MCLG available on page 2.

# Important information from EPA about lead ~~~~~

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. MWRA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater/lead, or MWRA at 617-242-5353 or www.mwra.com/lead.