

For more information, please contact MWRA at (617) 242-5323, or visit www.mwra.com.

WATER QUALITY UPDATE An Analysis of December 2004 Sampling Data

MASSACHUSETTS WATER RESOURCES AUTHORITY
100 First Avenue, Charlestown Navy Yard, Boston, MA 02129



MWRA WATER QUALITY UPDATE

December 2004 Highlights

- **MWRA achieved CT disinfection requirements for the month.** CT results appear on Page 5. The running annual averages for DBPs are higher this year as compared to last year, but still within standards. See page 7. No community violated the Total Coliform Rule criteria. See Page 6.
- **The MWRA transitioned from the Wachusett Aqueduct to the Cosgrove Tunnel beginning at 8:00PM on the 10th** after repairs to Shaft C were completed. The Interim Corrosion Control Facility (ICCF) was shutdown from 3:00p on the 10th to 8:00a on the 11th. The Cosgrove Tunnel activation was completed by 1:30 am on the 11th.
- **Boston and Winthrop reported a combined 161 complaints on the 8th** when a water main break occurred at 150 Bennington Street in East Boston. The complaints varied from discolored water to no water. The main was repaired the same day.
- **DEP issued a boil water alert for the Town of Norwood** when a vehicle struck a fire hydrant at Route 1 and Ellis Street on the 20th causing a water main break. This resulted in over 408 complaints. The complaints varied from discoloration, low pressure, no water and other questions regarding the water main break. The water main was repaired the evening of 22nd and the boil water alert was lifted the same day when water samples taken were absent of Total Coliform and *E. Coli*.
- **According to the DEP regulations, water suppliers are required to test for perchlorate** down to one part per billion between two and four times over the next year. MWRA tested for Perchlorate four times in 2004 and results were below the lab detection limit at the two different labs which provided the testing. The March and April samples were less than 0.50 ug/L. The September and November samples were less than 0.18 µg/L. MWRA has never detected perchlorate in the water supply.
- **Annual compliance VOC samples were collected on the 30th per DEP requirements.** Benzene was detected at low levels in samples collected from the Interim Corrosion Control and Commonwealth Avenue. 1,2-dichloroethane was also detected at very low levels in the ICC sample. Levels were well below drinking water standards (MCLs). Additional samples since January 13, 2005 do not show the presence of these compounds at any location. MWRA is continuing to investigate possible causes for these results.

Let us know what you think [\(617\) 242-5323](tel:6172425323)

Release Date: January 20, 2004

Water Quality Update

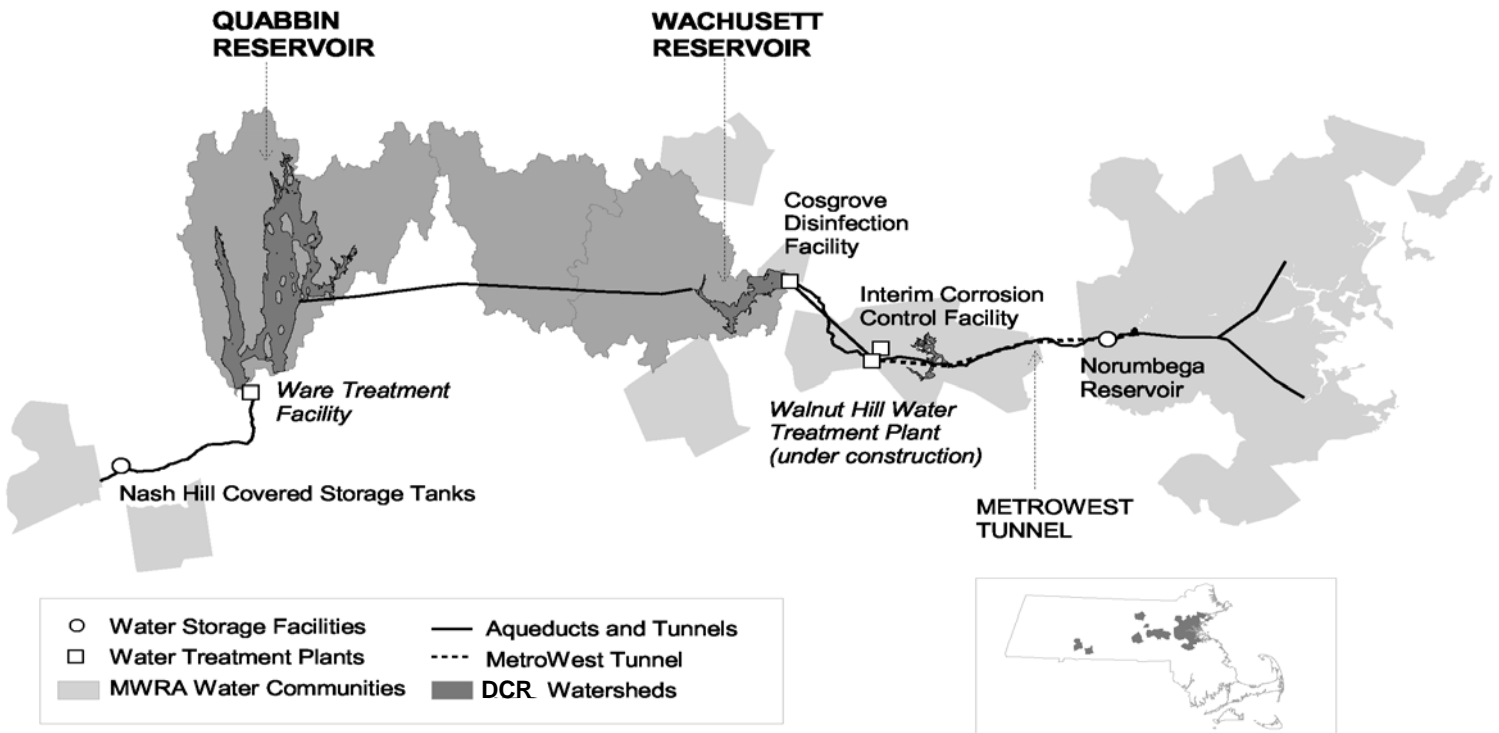
This is a monthly report containing information about the quality of water supplied by MWRA. It provides a more detailed review of water quality than the annual water quality report that is mailed each June to customers in our service area. The report is available at www.mwra.com.

The Water System

MWRA provides about 250 million gallons of water each day to 46 cities and towns in Massachusetts. Each municipality is responsible for distributing the water within its own community. More than two million people are served by the MWRA water supply system.

Quabbin Reservoir is the primary source of water for our system and one of the country's largest water supply impoundments, with a capacity of 412 billion gallons. Quabbin water represents source water for the Chicopee Valley Aqueduct (CVA) system. Water is transferred from Quabbin Reservoir to the 65 billion gallon Wachusett Reservoir in Clinton via the Quabbin Aqueduct. Wachusett water represents source water for MetroWest and Metropolitan Boston communities. The watershed areas of the Quabbin and Wachusett Reservoirs total 401 square miles. The Department of Conservation and Recreation (DCR), which manages the watersheds, and MWRA are committed to protection of the water supply through aggressive watershed protection as the first line of defense against water contamination. Three-quarters of the watersheds are protected lands and over 80% are either forest or wetlands.

The map below indicates the location of reservoirs, treatment facilities, and service communities.



Indicators of Water Quality

Tests are conducted on water sampled at the source reservoirs (source or raw water) and also on water after treatment (treated water). MWRA routinely uses six general indicators of water quality: microbial, corrosiveness, disinfection by-products, turbidity and algae, disinfectant residual, and mineral analysis. Testing frequencies vary by parameter.

The Federal Safe Drinking Water Act (SDWA) sets standards for source and treated water quality. The standards relate to coliform, turbidity, watershed protection, disinfection and disinfection by-products, over 120 potential chemical contaminants, and waterborne disease outbreaks. MWRA monitors for these parameters on schedules ranging from daily to annually.

Customer communities must also meet certain standards under the SDWA concerning distribution of treated drinking water. The Total Coliform Rule (TCR) helps to alert communities to possible microbial contamination as well as the adequacy of residual disinfection within the local distribution system. MWRA tests over 1500 samples per month. Under the SDWA, a violation of the TCR occurs when greater than 5% of the samples in a community are positive for total coliform during a month.

Source Water – Microbial Results

December 2004

Source Water - Microbial Results

Total coliform bacteria are monitored in both source and treated water to provide an indication of overall bacteriological activity. Most coliforms are harmless. Fecal coliform, a subclass of the coliform group, which are identified by their growth at temperatures comparable to those in the intestinal tract of mammals. They act as indicators of possible fecal contamination. The Surface Water Treatment Rule for unfiltered supplies requires that no more than 10% of source water samples prior to disinfection over any six-month period have more than 20 fecal coliforms per 100ml.

Sample Site: Quabbin Reservoir

Quabbin Reservoir water is sampled at the Ware Disinfection Facility (WDF) raw water tap before entering the CVA system as of July 13th. Prior data was sampled at Winsor Dam. MWRA met the six-month running average standard for fecal coliform continuously at this location over the last year.

Twelve of the 31 samples were positive during December. None of the samples exceeded a count of 20 cfu/100ml.

For the current six-month period, 0.5% of the samples have exceeded a count of 20 cfu/ 100ml.

Sample Site: Wachusett Reservoir

Wachusett Reservoir water is sampled before it enters the MetroWest and Metropolitan Boston systems at the Cosgrove Intake. On December 11, sampling was shifted from the Wachusett Intake back to the Cosgrove Intake.

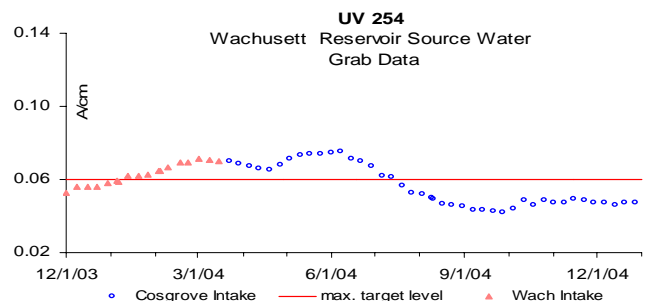
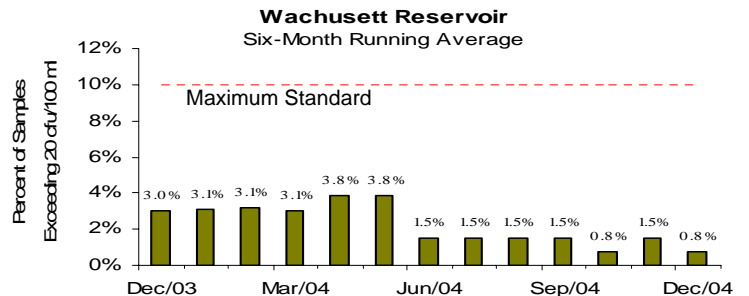
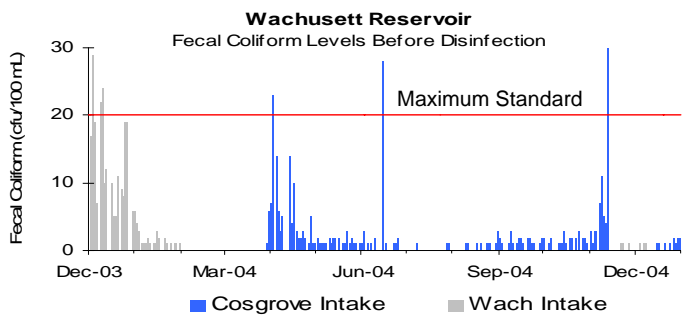
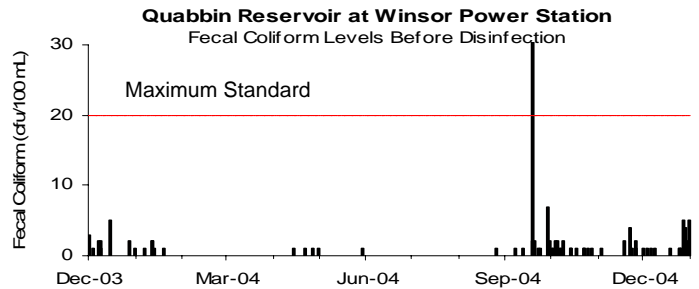
Fecal coliform levels tend to increase during the winter because, when water bodies near Wachusett ice over, waterfowl seek open water. Many roost at Wachusett, which tends to freeze later in the year than smaller ponds nearby.

Ten of the 15 samples were positive during December at the Cosgrove Intake. Three of the 8 samples were positive at the Wachusett Intake. None of the samples exceeded a count of 20 cfu/100ml.

For the current six-month period, 0.8% of the samples have exceeded a count of 20 cfu/100ml (One of the samples exceeded 20 cfu/100ml).

UV

UV-254 is a surrogate measure of reactive organic matter and is a good predictor for DBP levels. Levels are currently around 0.048 A/cm.

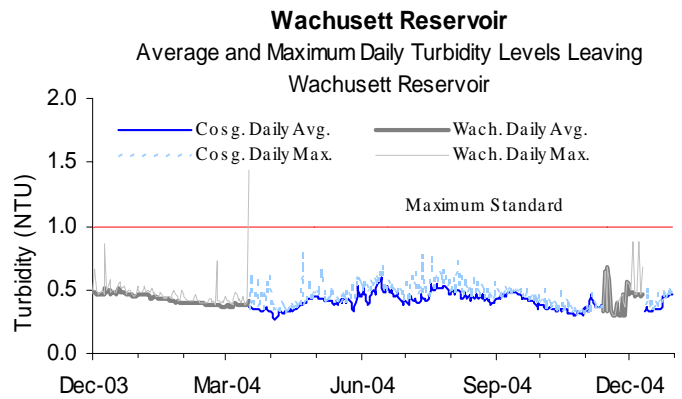
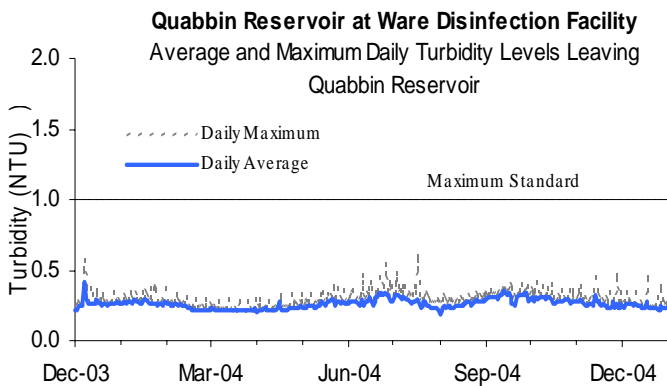


Source Water – Turbidity and Algae Results December 2004

Source Water – Turbidity Results

Turbidity is a measure of suspended and colloidal particles including clay, silt, organic and inorganic matter, algae and microorganisms. The effects of turbidity depend on the nature of the matter that causes the turbidity. High levels of particulate matter may have a higher chlorine demand or may protect bacteria from the disinfectant effects of chlorine, thereby interfering with the disinfectant residual throughout the distribution system.

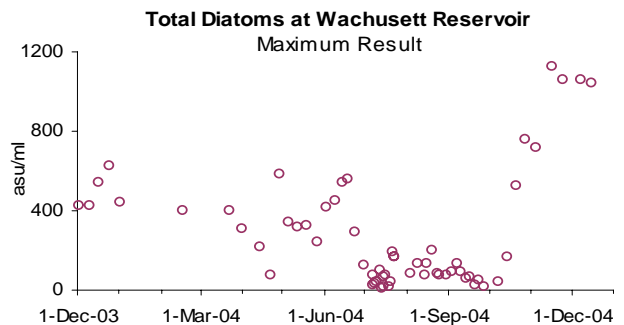
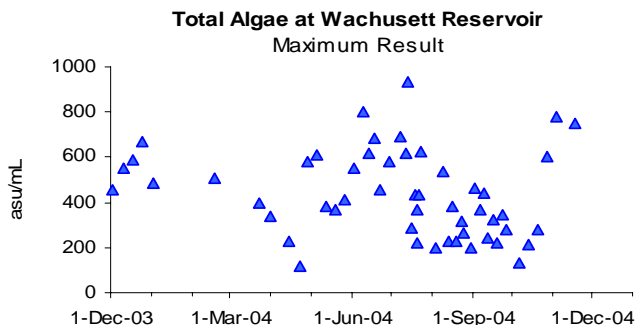
Samples for turbidity from Quabbin Reservoir are collected at the Ware Disinfection Facility before chlorination. Samples from Wachusett Reservoir were taken at Wachusett Intake before chlorination from November 1, 2003 to March 16, 2004, October 26, 2004 and November 13, 2004 to December 10, 2004. Otherwise, samples were taken at the Cosgrove Intake before chlorination. The Massachusetts Department of Environmental Protection standard for source water turbidity for unfiltered water supply systems is a maximum of 1.0 NTU; the EPA standard is a maximum of 5.0 NTU. Maximum turbidity results at Quabbin and Wachusett were within DEP standards for the month.



Source Water – Algae Results

Algal levels in reservoirs are monitored by DCR and MWRA. These results, along with taste and odor complaints, are used to make decisions on source water treatment for algae control. Most taste and odor complaints at the tap are due to algae, which originate in source reservoirs, typically in trace amounts. Occasionally, a particular species grows rapidly, increasing its concentration in water. When *Synura*, *Anabaena*, or other nuisance algae blooms, MWRA may treat the reservoirs with copper sulfate, an algaecide.

The high diatom levels are due to a bloom of *Asterionella* which is typical for this time of the year. Higher diatom levels have shown to be predictive of low golden brown (such as *Synura* and *Chrysosphaerella*) levels in the following summer/fall. Of the 604 complaints received during December from local water departments, one concerned taste and odor that may be due to algae.



Treated Water – Disinfection and pH Results

December 2004

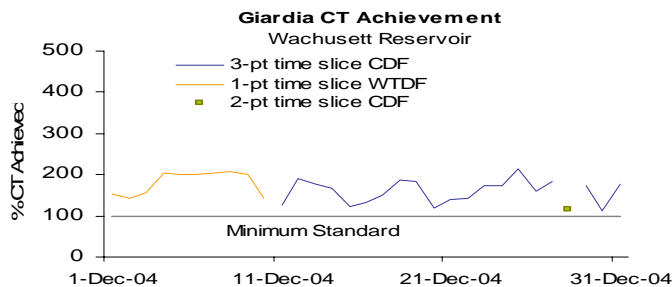
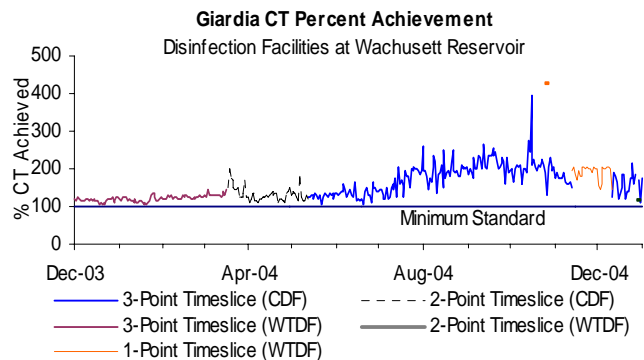
Treated Water - Primary Disinfection

MWRA provides disinfection adequate to achieve EPA's requirement of 99.9% inactivation of *Giardia* cysts and 99.99% inactivation of viruses in drinking water using a calculation based on three sample points that DEP approved in June, 1999. Depending on the number of sample points that are providing accurate information, CT may be reported on one, two or three points.

CT achievement for *Giardia* assures CT achievement for viruses, which have a lower CT requirement. The concentration (C) of the disinfectant in the water over time (T) yields a measure of the effectiveness of disinfection, CT. The required CT varies with disinfectant type, water temperature, pH, and other factors. MWRA calculates daily CT inactivation rates at maximum flow, as specified by EPA regulations.

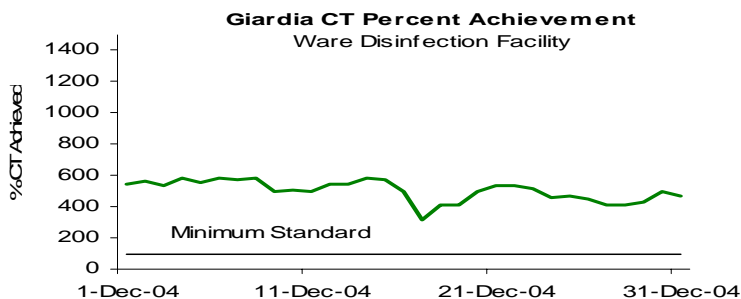
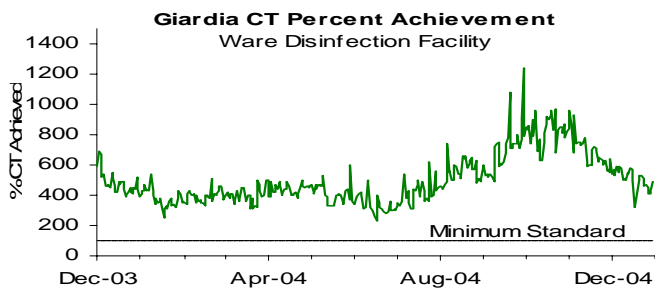
Wachusett Reservoir - MetroBoston Supply:

Chlorine dose at the Wachusett Temporary Disinfection Facility (WTDF) remained at 1.8 mg/L prior to being take offline on the 10th at 8pm. The transition to the Cosgrove Disinfection Facility (CDF) was completed by 1:30am on the 11th. The dose at the CDF varied between 1.8 to 2.2 mg/L since the 11th. CT was met each day in December, as well as every day for the last year.



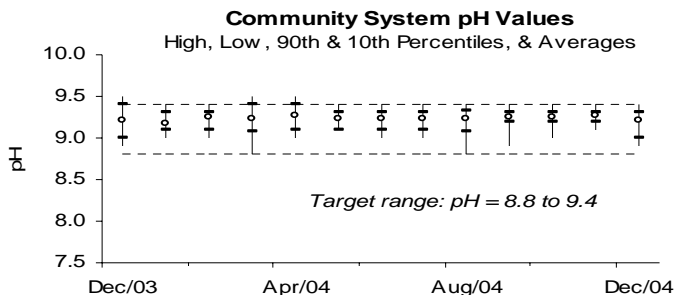
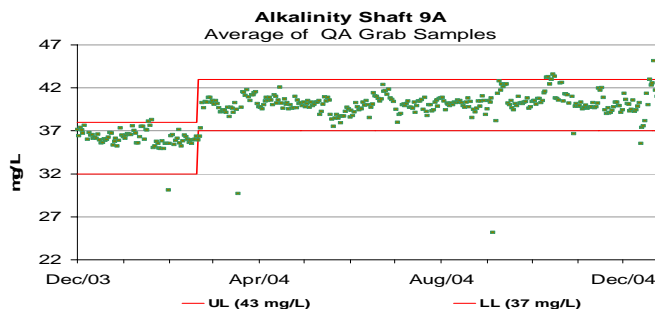
Quabbin Reservoir at Ware Disinfection Facility (CVA Supply):

Chlorine dose remained at 1.3 mg/L . CT was met each day in December, as well as every day for the last year.



Treated Water – pH and Alkalinity Results

MWRA adjusts the alkalinity and pH of Wachusett water to reduce its corrosivity in order to minimize the leaching of lead and copper from service lines and home plumbing systems into the water. MWRA's target for distribution system pH is 9.1 and alkalinity is 40 mg/l. MWRA QA and operator staff test pH and alkalinity daily at Shaft 9A. MWRA staff also collects and analyzes samples for pH from 28 community locations on a biweekly schedule to measure pH levels. MWRA's goal is to have 80% of distribution system pH samples fall between 8.8 and 9.4. In December, 100% of the samples were within the target range.



Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program December 2004

While all communities collect bacteria samples for the Total Coliform Rule (TCR), 37 systems (including Deer Island and Westboro State Hospital) use the MWRA's Laboratory for TCR compliance testing. These systems collect samples for bacteriological analysis and measure water temperature and chlorine residual at the time of collection. The other 9 MWRA customer communities (including Lynn's GE plant) have their samples tested elsewhere and these towns should be contacted directly for their monthly results.

There are 144 sampling locations for which MWRA is required to report TCR results. These locations include a subset of the community TCR locations as well as sites along the MWRA transmission system, water storage tanks and pumping stations.

The Safe Drinking Water Act (SDWA) requires that no more than 5% of all samples may be total coliform positive in a month (or that no more than 1 sample be positive when less than 40 samples are collected each month). Public notification is required if this standard is exceeded.

Escherichia coli (*E. coli*) is a specific coliform species that is almost always present in fecal material and whose presence indicates likely bacterial contamination of fecal origin. If *E. coli* are detected in a drinking water sample, this is considered evidence of a critical public health concern. Additional testing is conducted immediately and joint corrective action by DEP, MWRA, and the community is undertaken. Public notification is required if follow-up tests confirm the presence of *E. coli* or total coliform. MWRA considers a disinfectant residual of 0.2 mg/L a minimum target level at all points in the distribution system.

Highlights

None of the 1,789 community samples (0.00%) system-wide tested positive for confirmed total coliform during the month of December. None of the 662 MWRA samples (0.00%) tested positive for confirmed total coliform. No samples tested positive for *E. coli*.

All thirty-seven systems that submitted chlorine residual data maintained an average disinfectant residual of at least 0.2 mg/L. 2.1% of the system samples had a disinfectant residual lower than 0.2 mg/L.

TCR results by Community

Town	Samples Tested for Coliform (a)	Total Coliform # (%) Positive	E.coli % Positive	Public Notification Required?	December 2004 Minimum Chlorine Residual (mg/L)	December 2003 Minimum Chlorine Residual (mg/L)	December 2004 Average Chlorine Residual (mg/L)	December 2003 Average Chlorine Residual (mg/L)
ARLINGTON	65	0 (0%)			0.03	0.05	1.09	0.79
BELMONT	32	0 (0%)			0.35	0.08	1.28	0.92
BOSTON	250	0 (0%)			0.14	0.34	1.54	1.38
BROOKLINE	68	0 (0%)			1.11	0.75	1.69	1.42
CHELSEA	32	0 (0%)			0.37	0.51	1.49	1.32
DEER ISLAND	16	0 (0%)			1.44	1.06	1.60	1.38
EVERETT	40	0 (0%)			0.86	0.42	1.21	0.81
FRAMINGHAM (c)	72	0 (0%)			0.07	0.21	1.25	1.24
LEXINGTON	36	0 (0%)			0.93	0.09	1.57	1.23
LYNNFIELD	6	0 (0%)			0.31	0.38	0.76	0.82
MALDEN	60	0 (0%)			0.81	0.74	0.98	0.95
MARBLEHEAD	24	0 (0%)			0.18	0.14	1.36	1.00
MARLBOROUGH (b)(c)	52	0 (0%)			0.15	0.48	1.06	1.18
MEDFORD	68	0 (0%)			0.25	0.24	1.34	1.03
MELROSE	36	0 (0%)			0.02	0.01	0.65	0.34
MILTON	32	0 (0%)			0.88	0.06	1.22	0.96
NAHANT	10	0 (0%)			0.08	0.06	0.68	0.80
NEEDHAM (b)	41	0 (0%)			0.02	0.02	0.21	0.35
NEWTON	88	0 (0%)			0.34	0.22	1.53	1.34
NORTHBOROUGH	17	0 (0%)			0.10	0.45	1.44	1.34
NORWOOD	45	0 (0%)			0.02	0.01	1.25	0.90
QUINCY	92	0 (0%)			0.05	0.12	1.39	1.17
REVERE	63	0 (0%)			0.45	0.40	1.44	1.36
SAUGUS	32	0 (0%)			1.31	1.11	1.46	1.32
SOMERVILLE	99	0 (0%)			0.13	0.03	1.31	1.12
SOUTHBOROUGH (c)	9	0 (0%)			0.11	0.06	0.64	0.74
STONEHAM	35	0 (0%)			0.76	0.54	1.53	1.34
SWAMPSCOTT	18	0 (0%)			0.50	0.45	1.30	0.79
WAKEFIELD (b)	55	0 (0%)			0.51	0.25	1.30	0.90
WALTHAM	85	0 (0%)			0.05	0.02	1.23	0.85
WATERTOWN	50	0 (0%)			0.48	0.30	1.27	0.80
WELLESLEY (b)	36	0 (0%)			0.05	0.17	0.61	0.39
WESTBORO HOSPITAL	5	0 (0%)			0.26	0.10	0.67	0.40
WESTON (c)	16	0 (0%)			0.70	0.19	1.63	0.40
WINCHESTER (b)	20	0 (0%)			0.09	0.03	0.92	0.47
WINTHROP	24	0 (0%)			0.58	0.34	1.50	1.24
WOBURN (b)	60	0 (0%)			0.05	0.07	0.59	0.61
Total:	1789	0(0%)						
MASS. WATER RESOURCES AUTHORITY (d)	662	0 (0%)			0.03	0.02	1.42	1.22

(a) The number of samples collected depends on the population served and the number of repeat samples required.

(b) These communities are partially supplied, and may mix their chlorinated supply with MWRA chloraminated supply.

(c) These communities locally chloramine.

(d) MWRA sampling program includes a subset of community TCR sites as well as sites along the transmission system, tanks and pumping stations.

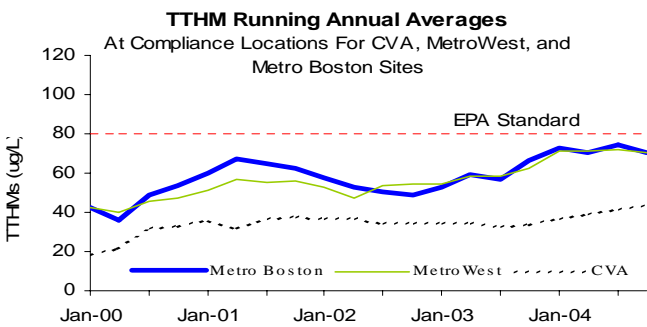
Treated Water - Disinfection By-Product (DBP) Levels in Communities

December 2004

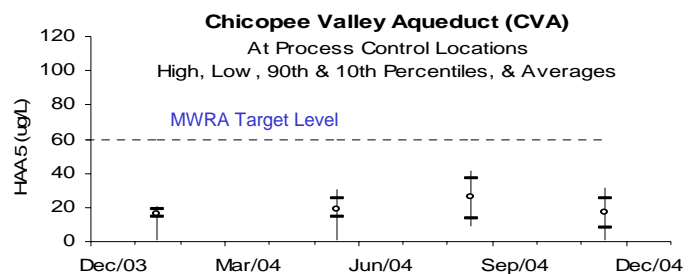
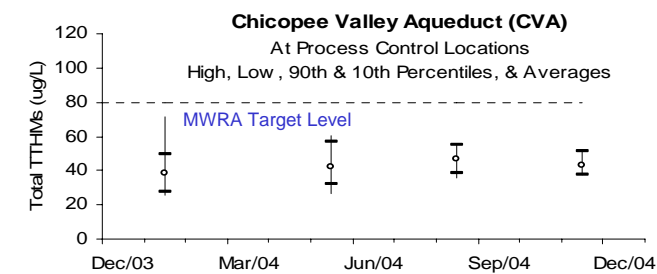
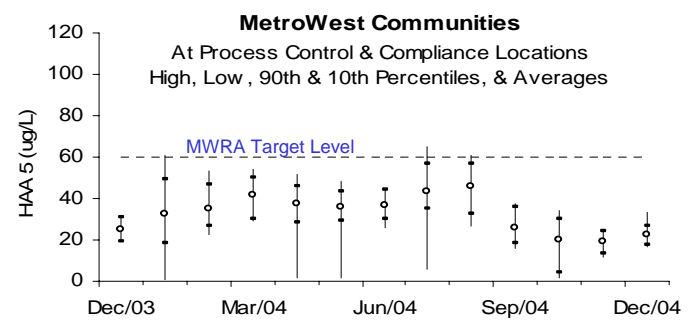
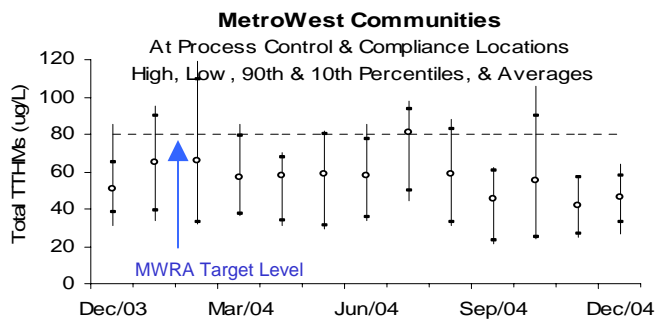
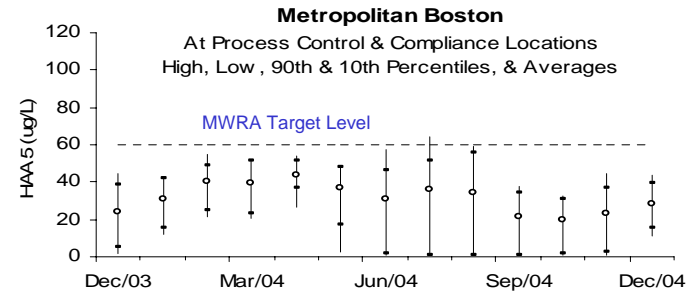
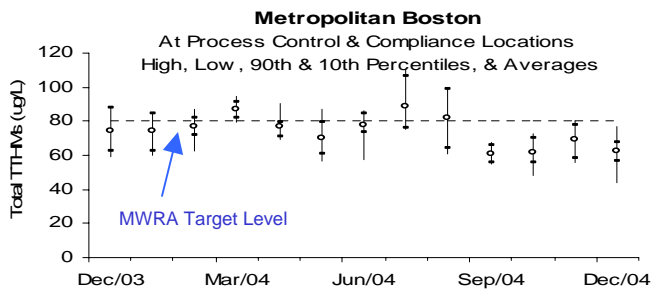
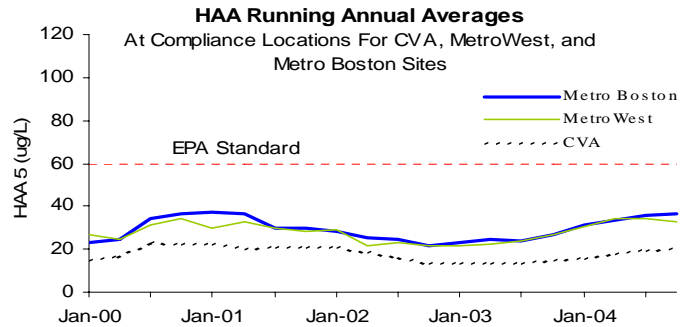
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAAs) are by-products of disinfection treatment with chlorine. Chlorination levels, the presence of organic precursors, pH levels, the contact time of water with chlorine used for disinfection, and temperature all affect TTHM and HAA levels. DBPs are of concern due to their potential adverse health effects at high levels. EPA's running annual average standards are 80 ug/L for TTHMs and 60 ug/L for HAA5. DEP requires that compliance samples be collected quarterly. MWRA samples weekly at some locations, monthly and quarterly at others. **Metro Boston numbers are used for compliance purposes;** results presented below from CVA and MetroWest sampling sites enable MWRA staff to monitor control of MWRA treatment processes. Individual CVA and MetroWest communities are responsible for their own compliance monitoring and reporting. They must be contacted directly for their results.

The running annual average for TTHMs and HAA5s at compliance locations, represented in the top two graphs below, remained below current standards.

TOTAL TRIHALOMETHANES



HALOACETIC ACIDS



MWRA Monthly Water Quality Analysis

December 2004

This page provides information on water quality at six locations in the MWRA transmission system. Results reflect a "snapshot" in time and may not represent typical conditions. Elevated levels of a particular parameter may occur from time to time. MWRA staff review these numbers carefully and follow-up unusual results by re-analyzing samples, collecting new samples, or auditing sample sites. More rigorous daily or weekly monitoring of select parameters at these and other locations provides a better overall picture of water quality and is reported for some parameters elsewhere in this document. Monitoring for parameters indicated in bold is quarterly, as they either (1) have minimal variability or (2) are always below detection levels.

Component	CVA System		Metropolitan Boston				Standards		
	Quabbin Reservoir at Ware Disinfection Facility (Raw)	Ludlow Monitoring Station (Treated)	Wachusett Reservoir at Wachusett Intake (Raw)	ICC Marlboro (Treated)	Comm Ave., Newton (Treated)	Shaft 9A, Malden (Treated)	Standard	Units	Exceedance
Alkalinity	2.6	3.2	5.4	38.8	38.8	38.4		MG/L	
Aluminum	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	50-200 (e)	UG/L	NO
Ammonia-N	0.011	0.008	0.025	< 0.005	0.388	0.386		MG/L	
Antimony	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	6 (a)	UG/L	NO
Arsenic	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	50 (a)	UG/L	NO
Barium	7.3	7.5	9.6	9.6	9.5	9.4	2000 (a)	UG/L	NO
Beryllium	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	4 (a)	UG/L	NO
Bromate	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	10 (a)	UG/L	NO
Bromide	11.7	7.4	17.6	10.5	5.9	6.1		UG/L	
Cadmium	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	5 (a)	UG/L	NO
Calcium	2250	2330	4730	4760	4840	4860		UG/L	
Chloride	7.7	8.9	21.8	23.2	24.0	24.1	250 (e)	MG/L	NO
Chlorine, Free	NS	0.81	NS	0.93	NS	NS	4 (c)(d)	MG/L	NO
Chlorine, Total	NS	NS	NS	NS	1.94	1.86	4 (c)(d)	MG/L	NO
Chromium	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	100 (a)	UG/L	NO
Coliform, Fecal, MF Method	0	NS	0	NS	NS	NS	20 (b)	CFU/100 mL	NO
Coliform, Total, MF Method (h)	1	0	0	0	0	0	100 (b) 0 (c)	CFU/100 mL	NO
Copper **	< 3.0	< 3.0	59.0	6.1	6.6	8.8	1300 (f) 1000 (g)	UG/L	NO
Cyanide	< 0.01	< 0.01	< 0.01	< 0.01*	< 0.01	< 0.01	0.2 (a)	MG/L	NO
Fluoride	< 0.12	< 0.06	0.07	1.00	1.08	0.98	4 (a)	MG/L	NO
Hardness	7.8	8.3	15.4	15.5	15.8	15.2		MG/L	
Iron **	14.6	14.0	32.6	20.6	20.3	20.5	300 (e)	UG/L	NO
Lead	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	15 (a)	UG/L	NO
Magnesium	565	584	880	885	892	864		UG/L	
Manganese	4.9	2.8	15.0	12.8	13.6	13.9	50 (e)	UG/L	NO
Mercury	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2 (a)	UG/L	NO
Nickel	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		UG/L	
Nitrate-N	0.007	0.007	0.031	0.045	0.075	0.046	10 (a)	MG/L	NO
Nitrate/Nitrite	0.016	0.017	0.075	0.071	0.073	0.073			
Nitrite	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1 (a)	MG/L	NO
Orthophosphate	< 0.003	< 0.003	< 0.003	0.005	0.005	0.004		MG/L	
pH	7.3	7.3	7.0	9.0	9.2	9.2		S.U.	
Potassium	448	440	874	962	982	948		UG/L	
Selenium	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	50 (a)	UG/L	NO
Silica (SiO2)	1450	1430	1920	2620	2690	2590		UG/L	
Silver	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	100 (e)	UG/L	NO
Sodium	4.6	5.5	12.4	30.0	30.3	30.3		MG/L	
Specific Conductance	50	56	109	185	173	174		UMHO/cm	
Standard Plate Count, HPC (48 Hrs @ 35C)	NS	NS	6	2	2	4	500 (c)	CFU/mL	NO
Sulfate (SO4)	5.0	5.0	6.9	6.9	6.7	7.0	250 (e)	MG/L	
Thallium	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2 (a)	UG/L	NO
Total Dissolved Solids	58	63	88	110	107	113	500 (d)	MG/L	
Total Organic Carbon	1.8	2.0	2.2	2.5	1.9	2.4		MG/L	
Total Phosphorus	< 0.005	< 0.005	< 0.005	0.011	0.009	< 0.005		MG/L	
UV-254	0.022	0.017	0.048	0.034	0.044	0.044		A	
Zinc **	2.1	2.2	1.7	< 1.5	1.7	< 1.5	5000 (e)	UG/L	NO

(a) = Primary MCL standard (health related). DEP "Drinking Water Regulations", 310CMR 22.00.

(b) = Primary MCL standard (health related), applies to source (raw) water only. DEP "Drinking Water Regulations", 310CMR 22.00.

(c) = Primary MCL standard (health related). DEP "Drinking Water Regulations", 310CMR 22.00. Applies to samples of treated water downstream of Wachusett and Quabbin Reservoirs.

(d) = Maximum Residual Disinfectant Level. DEP "Drinking Water Regulations", 310CMR 22.00.

(e) = Secondary MCL standard (aesthetic related). DEP "Drinking Water Regulations", 310CMR 22.00.

(f) - Refers to 90th percentile Action Level

(g) - Refers to a single sample, secondary MCL

(h) - Confirmed results only are reported

MCL = Maximum Contaminant Level

CFU = Colony Forming Unit

S.U. = Standard Units

UG/L = micrograms per liter = parts per billion

NS = No sample

NTU = Nephelometric Turbidity Unit

MG/L = milligrams per liter = parts per million

< = less than method detection limit

HPC = Heterotrophic Plate Count

Inv Res = Invalid sample result

** = Metal results may be elevated due to local plumbing at the sample tap.

Italic Bold = Quarterly Samples

Most results are based on single grab samples collected on December 6 and 13, 2004 and analyzed by MWRA and contract laboratories. **Quarterly Samples are from October 2004.** The Wachusett Reservoir quarterly results are from the Cosgrove Intake.

NOTE: MWRA tests for cadmium and mercury are more sensitive than the EPA-set levels of detection and reporting. For cadmium any level below 1.0 ug/L and for mercury any level below 0.2 ug/L are under the EPA minimum detection limits. MWRA will continue to report any result below these detection limits here in the monthly report but will follow EPA reporting requirements and not report them in the EPA-regulated annual Consumer Confidence Report.

The 4th quarter sample for cyanide was invalidated due to improper preservation. The result presented here is from the third quarter sample (collected in July 2004).