MASSACHUSETTS WATER RESOURCES AUTHORITY

Deer Island, 33 Tafts Avenue, Boston, Massachusetts 02128

WATER QUALITY UPDATE

An Analysis of March 2026 Sampling Data

For more information, please contact MWRA at (617) 242-6000, or visit www.mwra.com.

March 2026 Highlights

•**Maintenance work on Train B has been completed.** Train B has been offline since January 27, 2026. Following successful disinfection and flushing of Tank B, Train B was reactivated and finished water sampling commenced on March 28, 2026. CWTP is at full-plant status.

•**In March, MWRA met all regulatory targets for pathogen inactivation at Brutsch Water Treatment Facility and Carroll Water Treatment Plant**, achieving greater than the required 99% *Cryptosporidium* inactivation and 99.9% *Giardia* inactivation at all times. See pages 5 and 6.

•**MWRA met all regulatory targets for the month**. No community triggered the requirement for an Assessment under the Revised Total Coliform Rule. See Page 7.

•**To reduce paper usage, printing, and postage costs, and to provide the most detailed information on water quality, MWRA changed to an electronic version of this report in 2015.**

We are continually updating the report. Let us know what you think.

Call *(617) 788-4822 or email Beverly.Anderson@mwra.com*

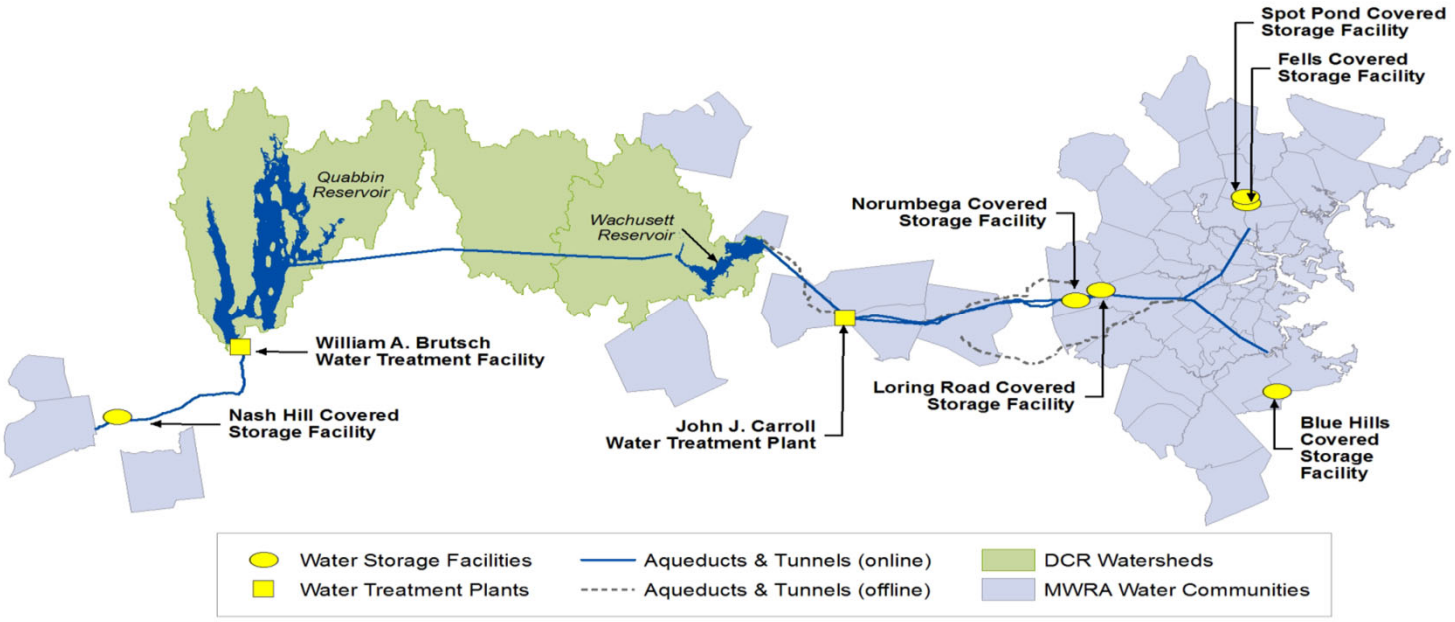
Release Date: April 20, 2026

Water Quality Update
This is a monthly report about the quality of water supplied by MWRA. It provides a more detailed review than the annual water quality report that is mailed each June. The reports are available at www.mwra.com. Data within this report are subject to verification and correction.

The Water System
The MWRA supplies wholesale water to local water departments in 53 communities, 47 in greater Boston and MetroWest, three in Western Massachusetts, and as a back-up supply for three others. 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, and about 200 million gallons are supplied each day. Quabbin Reservoir is the primary source of water for the whole MWRA system, and one of the country's largest reservoirs, with a capacity of 412 billion gallons. Within this report, Quabbin water represents source water for the three communities in the Chicopee Valley Aqueduct (CVA) system (Chicopee, Wilbraham and South Hadley FD1).

Water is then transferred from Quabbin Reservoir to the 65 billion gallon Wachusett Reservoir in Clinton via the Quabbin Aqueduct. Within this report, Wachusett water represents source water for MetroWest and Metropolitan Boston communities. The 401-square mile watershed areas of the Quabbin and Wachusett Reservoirs are naturally protected with over 85% of the watersheds covered in forest and wetlands. To ensure the safety of the water, the Department of Conservation and Recreation (DCR) patrols the watersheds, and with cooperation from MWRA, tests the streams and reservoirs frequently.

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



Water Treatment
The water MWRA supplies from the Wachusett Reservoir is treated at the state-of-the-art John J. Carroll Treatment Plant. The water is treated with ozone, sodium bisulfite for ozone quench, ultra-violet light (UV), sodium carbonate and carbon dioxide for corrosion control, fluoride, and chloramines. Water supplied from the Quabbin Reservoir is treated at the William A. Brutsch Water Treatment Facility with UV and chlorine. Each of the three CVA communities provides corrosion control.

Indicators of Water Quality
MWRA tests the water extensively for over 120 different contaminants and parameters across the system; this includes several hundred thousand tests each year. EPA and MA DEP set the standards for source and treated water quality, and include standards for total and fecal coliform, turbidity, disinfection and disinfection by-products, pathogens, metals, and other potential chemical contaminants. A full list is available at www.mwra.com. Tests are conducted on water sampled at the source reservoirs (source or “raw water”) and also on water after treatment (“treated water”). MWRA also routinely monitors for a variety of parameters that tell us about disinfection, corrosivity, and the organic and inorganic constituents in the water. Testing frequencies vary by parameter.

Customer communities must also meet certain standards under the EPA regulations 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 2,000 community samples per month.

Source Water – Microbial and UV-254 Results
March 2026

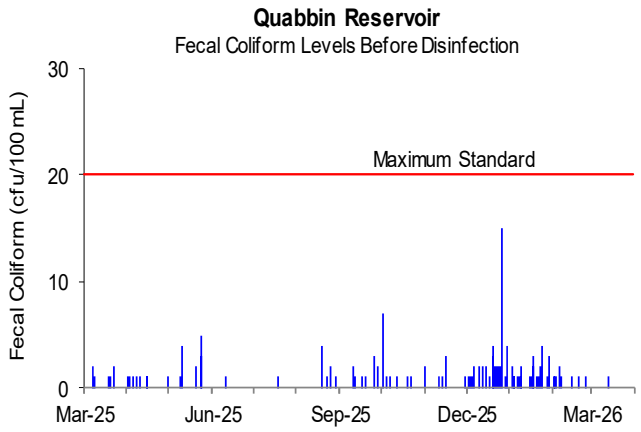
Source Water - Microbial Results

Total coliform bacteria are monitored in both source and treated water to provide an indication of overall bacteriological activity. Most coliforms are harmless. However, fecal coliform, a subclass of the coliform group, 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 water supplies allows for no more than 10% of source water samples prior to disinfection over any six-month period to have more than 20 fecal coliforms per 100mL.

Sample Site: Quabbin Reservoir

Quabbin Reservoir water is sampled at the Brutsch Water Treatment Facility raw water tap before being treated and entering the CVA system.

One of the 31 samples was positive this month. None of the samples exceeded a count of 20 cfu/100mL. **For the current six-month period, 0.0% of the samples have exceeded a count of 20 cfu/100mL.**

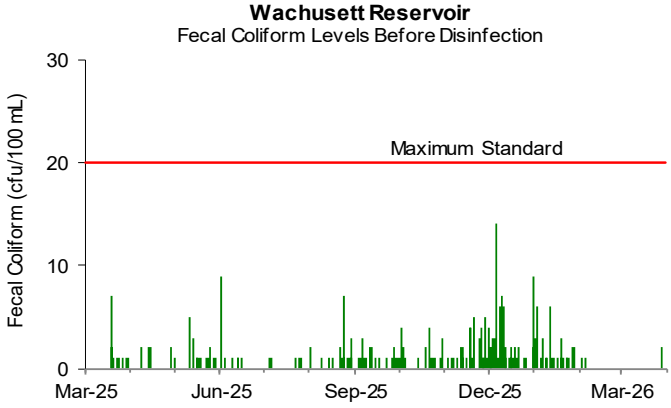


Sample Site: Wachusett Reservoir

Wachusett Reservoir water is sampled at the Carroll Water Treatment Plant raw water tap in Marlborough before being treated and entering the MetroWest/Metropolitan Boston systems.

In the wintertime when smaller water bodies near Wachusett Reservoir freeze up, many waterfowl will roost in the main body of the reservoir - which freezes later. This increased bird activity tends to increase fecal coliform counts. DCR has an active bird harassment program to move the birds away from the intake area.

One of the 31 samples was positive this month. None of the samples exceeded a count of 20 cfu/100mL. **For the current six-month period, 0.0% of the samples have exceeded a count of 20 cfu/100mL.**

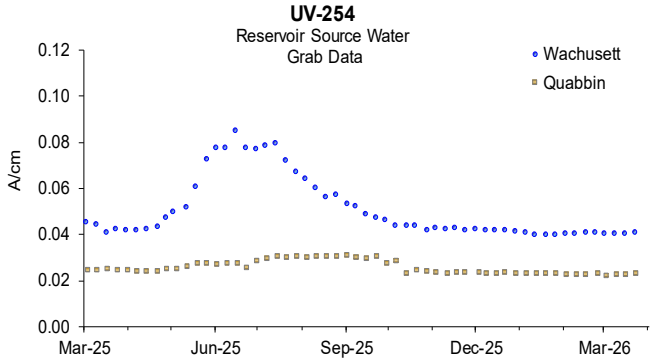


Source Water - UV Absorbance

UV Absorbance at 254nm wavelength (UV-254), is a measure of the amount and reactivity of natural organic material in source water. Higher UV-254 levels cause increased ozone and chlorine demand resulting in the need for higher ozone and chlorine doses, and can increase the level of disinfection by-products. UV-254 is impacted by tributary flows, water age, sunlight and other factors.

Quabbin Reservoir UV-254 levels averaged 0.022 A/cm for the month.

Wachusett Reservoir UV-254 levels averaged 0.041 A/cm for the month.



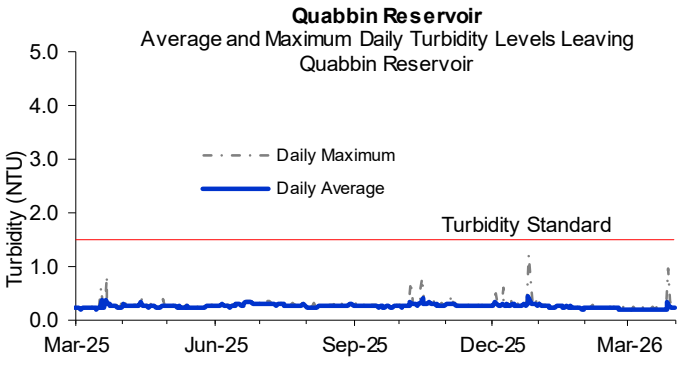
Source Water – Turbidity and Algae Results
March 2026

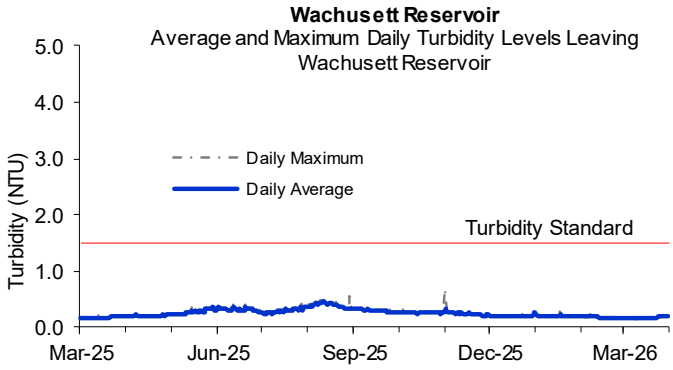
Source Water - Turbidity Results

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 disinfectant demand or may protect bacteria from disinfection effects, thereby interfering with the disinfectant residual throughout the distribution system.

There are two standards for turbidity: all water must be below five NTU (Nephelometric Turbidity Units), and water can only be above one NTU if it does not interfere with effective disinfection.

Turbidity of Quabbin Reservoir water is monitored continuously at the Brutsch Water Treatment Facility (BWTF) before UV and chlorine disinfection. Turbidity of Wachusett Reservoir is monitored continuously at the Carroll Water Treatment Plant (CWTP) before ozonation and UV disinfection. Maximum turbidity results at Quabbin and Wachusett were within DEP standards for the month.



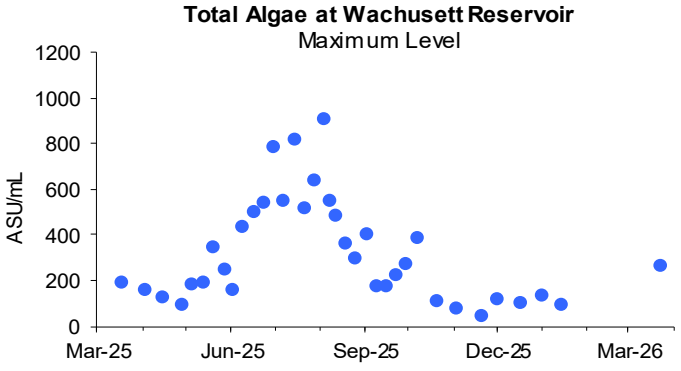


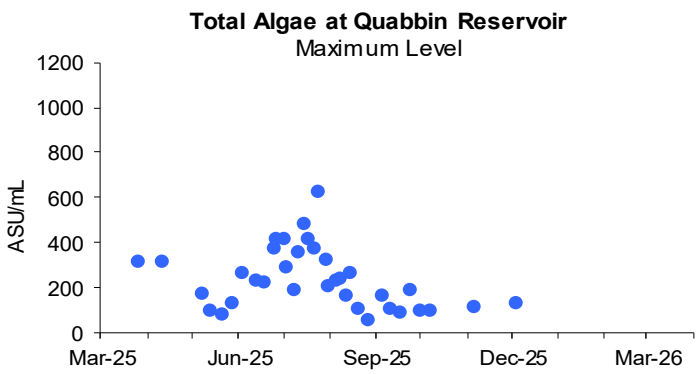
Source Water - Algae Levels

Algae levels in the Wachusett and Quabbin Reservoir 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.

Taste and odor complaints at the tap may be 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*, *Dolichospermum* (formerly called Anabaena), or other nuisance algae bloom, MWRA may treat the reservoirs with copper sulfate, an algaecide. During the winter and spring, diatom numbers may increase. While diatoms are not a taste and odor concern, consumers using filters may notice more frequent changing of the filters is needed.

No complaints which may be related to algae were reported this month from local water departments. Algae sampling has resumed at Wachusett reservoir. Monthly Quabbin reservoir sampling resumes in May. There have been no samples collected since late January as significant ice cover on the reservoirs prevented safe algae sampling.





Treated Water – Disinfection Results
March 2026

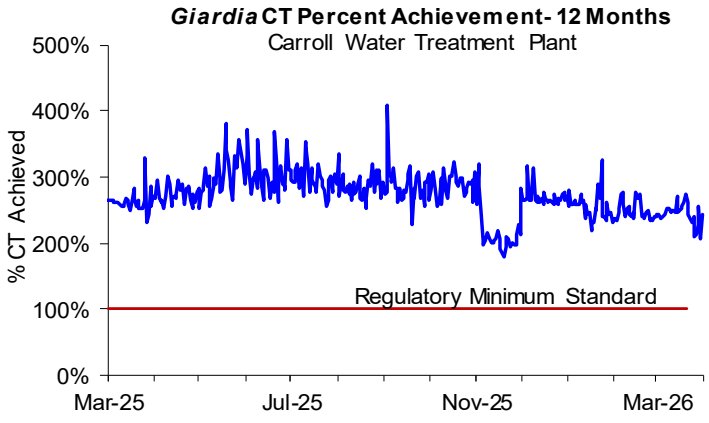
Treated Water - Primary Disinfection

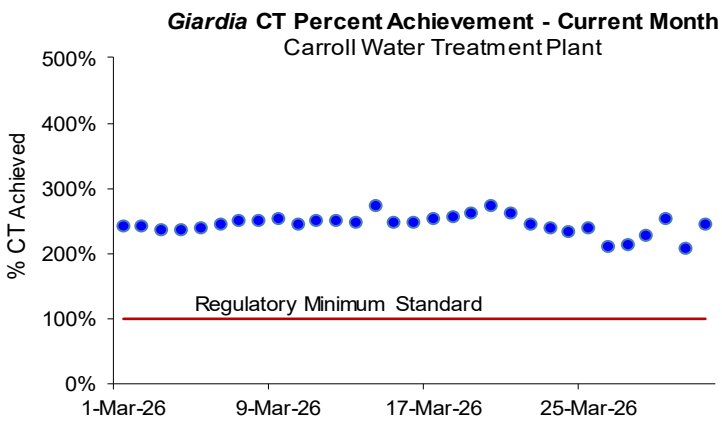
At the Carroll Water Treatment Plant (CWTP), MWRA meets the required 99.9% (3-log) inactivation of *Giardia* using ozone (reported as CT: concentration of disinfectant x contact time) and the required 99% (2-log) inactivation of *Cryptosporidium* using UV (reported as IT: intensity of UV x time). MWRA calculates inactivation rates hourly and reports *Giardia* inactivation at maximum flow and *Cryptosporidium* inactivation at minimum UV dose. MWRA must meet at least 100% of required CT and IT.

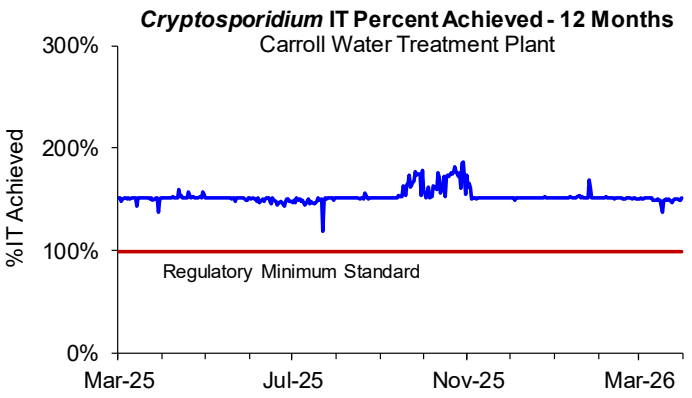
CT achievement for *Giardia* assures CT achievement for viruses, which have a lower CT requirement. For *Cryptosporidium*, there is also an "off-spec" requirement. Off-spec water is water that has not reached the full required UV dose or if the UV reactor is operated outside its validated ranges. No more than 5% off-spec water is allowed in a month.

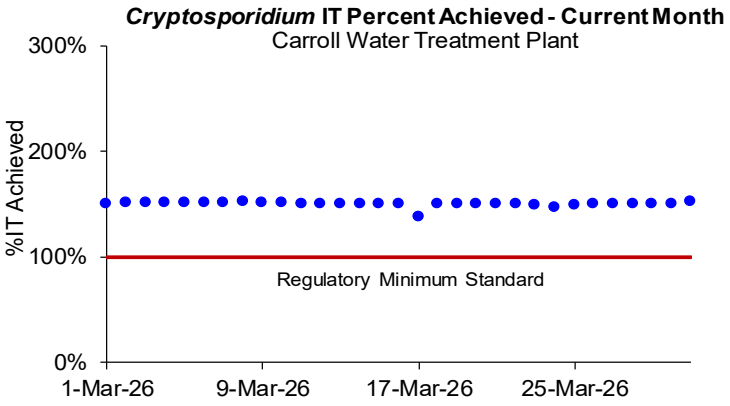
Wachusett Reservoir - MetroWest/MetroBoston Supply

- The chlorine dose at the CWTP varied between 2.80 to 2.95 mg/L for the month.
- Ozone dose at the CWTP varied between 1.2 to 1.4 mg/L for the month.
- *Giardia* CT was maintained above 100% at all times the plant was providing water into the distribution system during the month.
- During November 2025, automated programming for determining ozone CT at CWTP transitioned to using valve position to determine ozone flow activity in lieu of diffuser flow meters that have become obsolete and less reliable for determining ozone flow activity. Additionally, an ozone grid operational change resulted in lower ozone residuals, thus a lower CT inactivation than typical, but still within compliance.





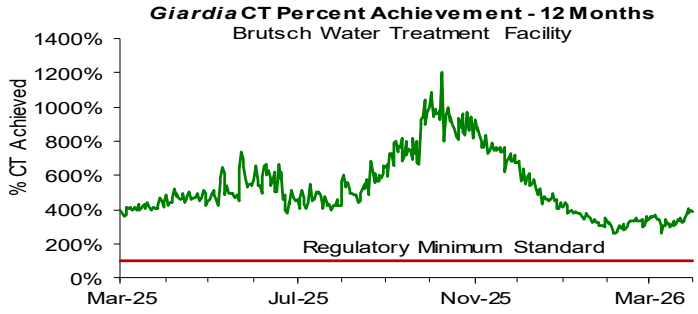


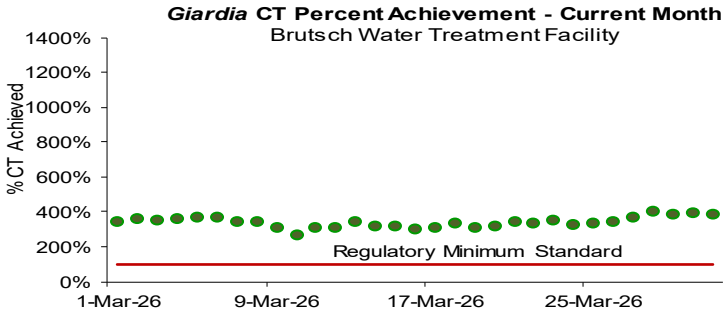


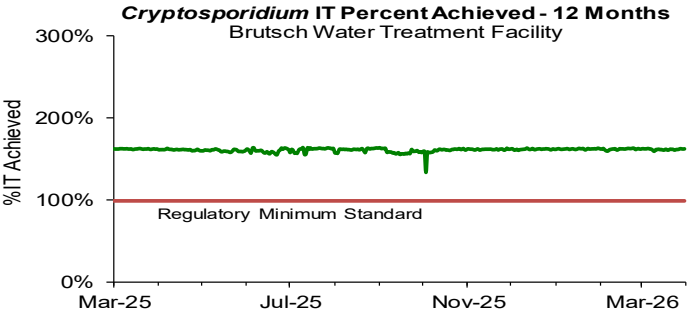
Treated Water – Disinfection, pH and Alkalinity Results
March 2026

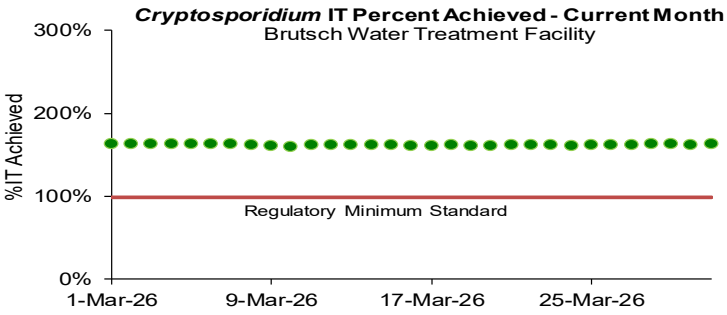
Quabbin Reservoir at Brutsch Water Treatment Facility (BWTF) (CVA Supply)

- The chlorine dose at BWTF is adjusted in order to achieve MWRA's seasonal target of 0.70 to 0.75 mg/L (January 1 – March 31), 0.75 to 0.80 mg/L (April 1 – June 30 and November 1 – December 31), and 0.85 to1.05 mg/L (July 1 – October 31) at Ludlow Monitoring Station.
- The chlorine dose at BWTF varied between 1.36 to 1.42 mg/L for the month.
- *Giardia* CT was maintained above 100% at all times the plant was providing water into the distribution system during the month.
- *Cryptosporidium* IT was maintained above 100% during the month. Off-spec water was less than 5%.







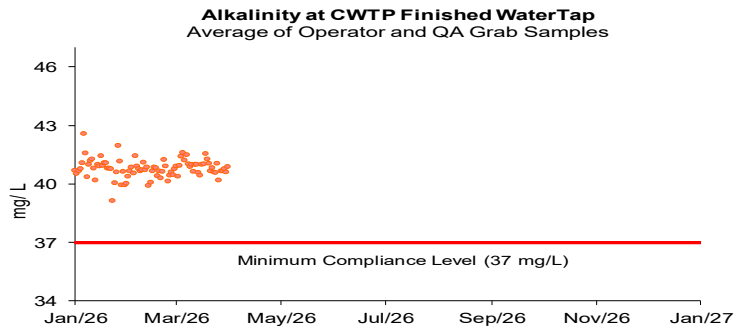


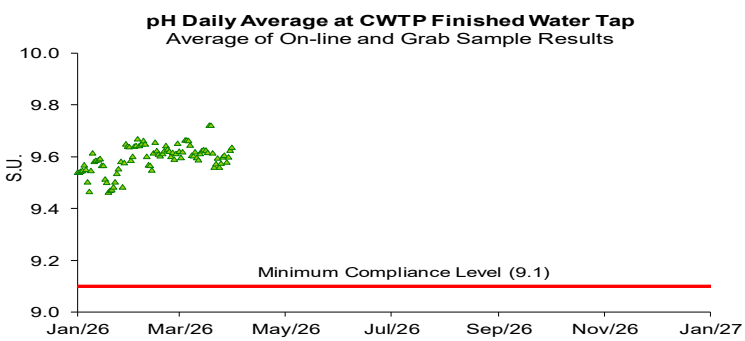
Treated Water - pH and Alkalinity Compliance

MWRA adjusts the alkalinity and pH of Wachusett water at CWTP to reduce its corrosivity, which minimizes the leaching of lead and copper from service lines and home plumbing systems into the water. MWRA's target for distribution system pH is 9.3; the target for alkalinity is 40 mg/L. Per DEP requirements, samples from the CWTP finished water have a minimum compliance level of 9.1 for pH and 37 mg/L for alkalinity. Samples from 27 distribution system locations have a minimum compliance level of 9.0 for pH and 37 mg/L for alkalinity. Results must not be below this level for more than 9 days in a six-month period. MWRA tests finished water pH and alkalinity daily at the CWTP Fin B sampling tap. When CWTP undergoes winter maintenance, samples are collected at the CWTP Fin A sampling tap. Distribution system samples are collected in March, June, September, and December.

Each CVA community provides its own corrosion control treatment. Individual CVA reports are found here: https://www.mwra.com/your-water-system/drinking-water-quality/annual-water-quality-test-results-0.

Quarterly distribution system samples were collected over a two week period in March. Distribution system sample pH ranged from 9.5 to 9.7 and alkalinity ranged from 40 to 42 mg/L. Over the past six months, no sample results were below the compliance levels.





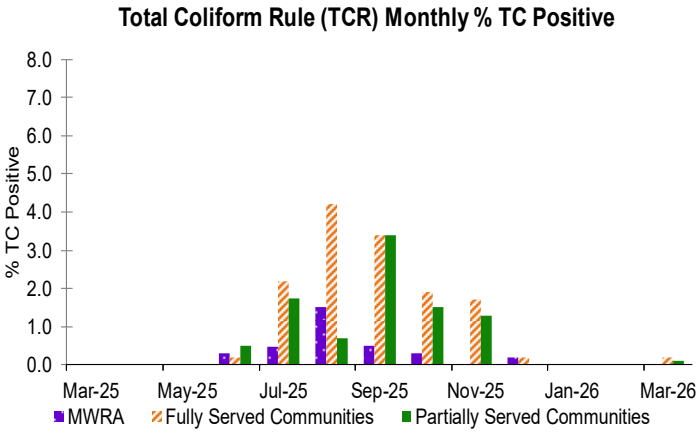
Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program
March 2026

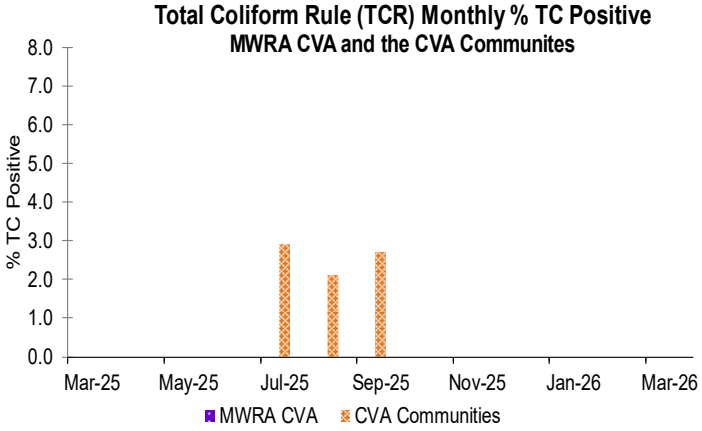
While all communities collect bacteria samples and chlorine residual data for the Total Coliform Rule (TCR), data from the 46 systems that use MWRA's Laboratory or provide data to MWRA are reported below. Each community executes their own sampling program as required by MassDEP; the total number of samples collected depends upon the population served and the number of repeat samples required. MWRA's program includes sampling at the entry point to the distribution system, along the transmission system, as well as at all water storage tanks. A subset of the community sampling locations are included in MWRA's Shared Community TCR Program and are considered locations indicative of MWRA water as it enters the community system; however, these sites may be influenced by local pipe conditions or water meter activity.

While samplers test chlorine residual in the field additional samples are collected for bacteria testing at a certified laboratory. Samples are tested for total coliform and *Escherichia coli* (*E.coli*). *E.coli* is a specific coliform species whose presence likely indicates potential contamination of fecal origin. If *E.coli* are detected in a drinking water sample, this is considered evidence of a potential public health concern. Public notification is required if repeat tests confirm the presence of *E.coli* or total coliform. Total coliform provide a general indication of the sanitary condition of a sample tap and/or water supply. If total coliform are detected in more than 5% of samples in a month (or if more than one sample is positive when less than 40 samples are collected), the water system is required to investigate the possible cause with a Level 1 or 2 Assessment, and correct any identified problems. A disinfectant residual is intended to maintain the sanitary integrity of the water; MWRA considers a residual of 0.2 mg/L a minimum target level at all points in the distribution system.

		Total Coliform		*E.coli*	Assessment	Chlorine Residual (mg/L)		
		# Samples	# (%) Positive	#Positive	Required	Max	Min	Avg
MWRA	MWRA Locations	112	0 (0%)	0		2.3	1.6	2.1
	Shared Community/MWRA sites	503	0 (0%)	0		2.8	0.9	1.9
	Total: MWRA	615	*0 (0%)*					
Fully Served	ARLINGTON	52	0 (0%)	0		2.2	1.4	2.0
	BELMONT	40	0 (0%)	0		2.1	1.5	1.9
	BOSTON	270	0 (0%)	0		2.4	1.4	1.9
	BROOKLINE	94	1 (1.1%)	0	No	2.2	1.3	1.8
	CHELSEA	55	0 (0%)	0		2.3	1.4	1.8
	DEER ISLAND	20	0 (0%)	0		2.0	1.9	1.9
	EVERETT	52	0 (0%)	0		2.7	1.4	2.2
	FRAMINGHAM	91	0 (0%)	0		2.4	0.5	1.9
	LEXINGTON	56	0 (0%)	0		2.4	1.6	2.1
	LYNNFIELD	6	0 (0%)	0		2.0	1.3	1.7
	MALDEN	90	0 (0%)	0		2.1	1.3	1.8
	MARBLEHEAD	24	0 (0%)	0		2.0	1.4	1.8
	MARLBOROUGH	54	0 (0%)	0		2.6	0.5	2.1
	MEDFORD	72	0 (0%)	0		2.0	0.9	1.9
	MELROSE	36	0 (0%)	0		1.9	1.5	1.8
	MILTON	34	0 (0%)	0		2.8	1.0	1.8
	NAHANT	10	0 (0%)	0		2.0	1.0	1.7
	NEWTON	93	0 (0%)	0		2.1	1.6	1.9
	NORTHBOROUGH	16	0 (0%)	0		2.1	1.4	1.8
	NORWOOD	33	0 (0%)	0		2.1	0.2	1.8
	QUINCY	102	0 (0%)	0		2.5	1.3	1.9
	READING	44	0 (0%)	0		2.2	0.4	1.6
	REVERE	72	0 (0%)	0		2.3	1.6	2.0
	SAUGUS	40	0 (0%)	0		2.0	1.5	1.8
	SOMERVILLE	84	0 (0%)	0		2.3	1.8	2.0
	SOUTHBOROUGH	12	0 (0%)	0		2.5	1.5	2.2
	STONEHAM	28	0 (0%)	0		2.3	1.9	2.0
	SWAMPSCOTT	19	0 (0%)	0		2.0	1.3	1.8
	WALTHAM	75	0 (0%)	0		2.5	1.5	2.0
	WATERTOWN	44	0 (0%)	0		2.1	1.3	1.9
	WESTON	15	0 (0%)	0		2.0	1.7	1.9
	WINTHROP	24	0 (0%)	0		2.0	1.7	1.9
	Total: Fully Served	*1757*	*1 (0.1%)*					
Partially Served may mix their chlorinated supply with MWRA chloraminated supply	BEDFORD	19	0 (0%)	0		2.3	1.8	2.0
	BURLINGTON	58	0 (0%)	0		2.6	1.9	2.3
	CANTON	39	0 (0%)	0		2.2	0.4	1.5
	HANSCOM AFB	14	1 (7.1%)	0	No	1.9	0.2	1.6
	NEEDHAM	41	0 (0%)	0		2.2	0.4	1.2
	PEABODY	94	0 (0%)	0		2.9	1.6	2.3
	WAKEFIELD	43	0 (0%)	0		2.1	1.3	1.9
	WELLESLEY	40	0 (0%)	0		2.0	0.1	1.0
	WILMINGTON	32	0 (0%)	0		2.5	1.4	1.9
	WINCHESTER	39	0 (0%)	0		2.0	0.4	1.3
	WOBURN	75	0 (0%)	0		2.0	0.3	1.1
	Total: Partially Served	*494*	*1 (0.2%)*					
	Total: Fully and Partially Served	*2251*	*2 (0.1%)*					
CVA Part of the Chicopee Valley Aqueduct System. Free chlorine system	MWRA CVA Locations	36	0 (0%)	0		0.9	0.5	0.7
	CHICOPEE	65	0 (0%)	0		0.8	0.1	0.5
	SOUTH HADLEY FD1	20	0 (0%)	0		0.7	0.1	0.4
	WILBRAHAM	15	0 (0%)	0		0.8	0.1	0.4
	Total: CVA	*136*	*0 (0%)*					

Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program
March 2026





Chlorine Residuals in Fully/Partially Served Communities

Fully Served Communities

		% <0.1	% <0.2	% <0.5	% <1.0	% >1.0
2026	Mar	0.00	0.1	0.3	0.9	99.1
	Feb	0.00	0.2	0.5	1.4	98.6
	Jan	0.06	0.1	0.5	1.7	98.3
2025	Dec	0.05	0.5	1.0	3.0	97.0
	Nov	0.12	1.6	3.6	8.7	91.3
	Oct	0.17	0.7	2.8	6.1	93.9
	Sep	0.05	0.4	2.1	4.6	95.4
	Aug	0.06	0.3	1.9	5.2	94.8
	Jul	0.00	0.1	1.0	4.3	95.7
	Jun	0.00	0.0	0.4	3.0	97.0
	May	0.00	0.2	0.5	1.7	98.3
	Apr	0.00	0.1	0.6	1.3	98.7
	Mar	0.00	0.0	0.7	1.5	98.5

Partially Served Communities

		% <0.1	% <0.2	% <0.5	% <1.0	% >1.0
2026	Mar	0.5	1.0	4.5	16.0	84.0
	Feb	0.8	1.3	6.3	17.6	82.4
	Jan	0.9	2.2	9.8	20.9	79.1
2025	Dec	1.4	3.9	13.3	24.0	76.0
	Nov	2.4	5.7	14.6	29.3	70.7
	Oct	1.9	4.4	9.6	22.0	78.0
	Sep	1.5	3.3	9.1	20.7	79.3
	Aug	1.7	2.6	7.9	19.4	80.6
	Jul	1.4	3.0	7.3	15.1	84.9
	Jun	1.5	2.6	6.8	13.2	86.8
	May	1.0	2.0	6.8	10.8	89.2
	Apr	0.9	2.7	7.7	14.2	85.8
	Mar	1.2	2.8	10.9	21.2	78.8

Free Chlorine Residuals in the CVA System

Chicopee

		% <0.1	% <0.2	% <0.5	% <1.0	% >1.0
2026	Mar	1.5	1.5	33.8	100	0.0
	Feb	1.5	4.6	13.8	98	1.5
	Jan	1.5	3.1	20.0	97	3.1
2025	Dec	7.7	20.0	50.8	100	0.0
	Nov	24.6	36.9	75.4	100	0.0
	Oct	23.1	35.4	70.8	100	0.0
	Sep	16.9	24.6	61.5	100	0.0
	Aug	18.5	30.8	60.0	100	0.0
	Jul	10.8	20.0	63.1	100	0.0
	Jun	10.8	20.0	55.4	100	0.0
	May	4.6	7.7	33.8	100	0.0
	Apr	1.5	1.5	30.8	100	0.0
	Mar	0.0	1.5	24.6	98	1.5

South Hadley

		% <0.1	% <0.2	% <0.5	% <1.0	% >1.0
2026	Mar	15.0	15.0	80.0	100	0.0
	Feb	10.0	20.0	75.0	100	0.0
	Jan	15.0	25.0	70.0	100	0.0
2025	Dec	10.0	35.0	80.0	100	0.0
	Nov	10.5	31.6	78.9	100	0.0
	Oct	10.0	20.0	65.0	100	0.0
	Sep	25.0	41.7	66.7	100	0.0
	Aug	18.2	54.5	81.8	100	0.0
	Jul	16.7	29.2	70.8	100	0.0
	Jun	20.0	25.0	80.0	100	0.0
	May	40.0	60.0	85.0	100	0.0
	Apr	20.0	35.0	75.0	100	0.0
	Mar	5.0	15.0	70.0	100	0.0

Wilbraham

		% <0.1	% <0.2	% <0.5	% <1.0	% >1.0
2026	Mar	6.7	26.7	66.7	100	0.0
	Feb	6.7	26.7	60.0	100	0.0
	Jan	0.0	26.7	73.3	100	0.0
2025	Dec	0.0	53.3	80.0	100	0.0
	Nov	0.0	53.3	73.3	100	0.0
	Oct	0.0	40.0	86.7	100	0.0
	Sep	0.0	36.8	84.2	100	0.0
	Aug	0.0	21.1	89.5	100	0.0
	Jul	0.0	20.0	73.3	100	0.0
	Jun	0.0	40.0	80.0	100	0.0
	May	0.0	33.3	86.7	100	0.0
	Apr	6.7	33.3	80.0	100	0.0
	Mar	0.0	13.3	73.3	100	0.0

Treated Water - Disinfection By-Product (DBP) Levels in Communities
March 2026

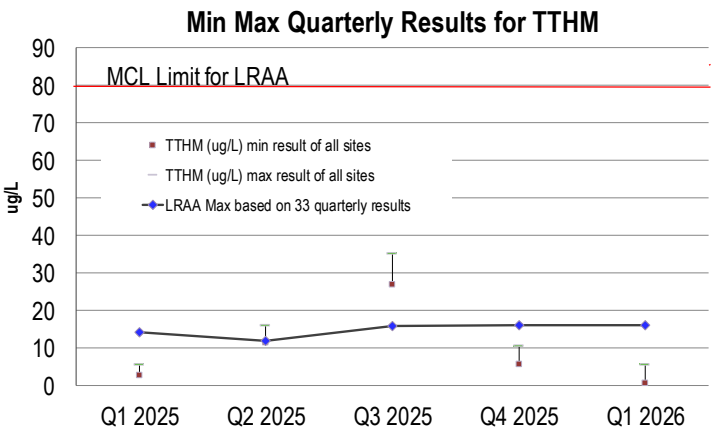
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. They are of concern due to their potential adverse health effects at high levels. EPA's locational running annual average (LRAA) standard, using the most recent four quarterly results, is 80 µg/L for TTHMs and 60 µg/L for HAA5s. The locational running annual average at each individual sampling location must be below the standard.

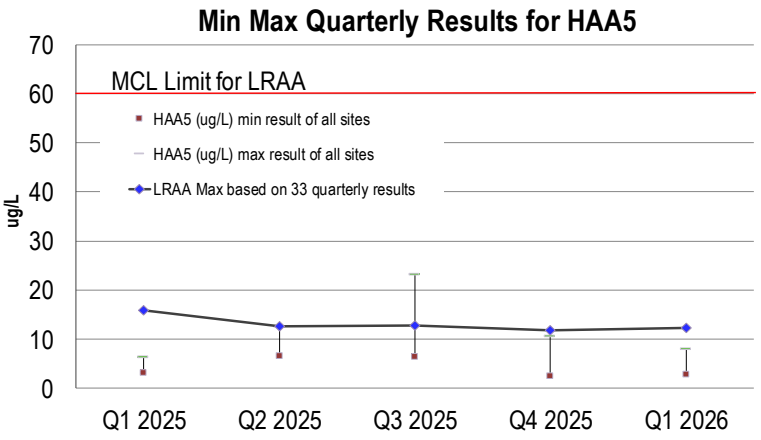
Bromate is tested monthly as required for water systems, like CWTP, that treat with ozone. EPA's RAA Maximum Contaminant Level (MCL) standard for bromate is 10 µg/L. The current RAA for Bromate at the CWTP finished water tap is 0.0 µg/L.

MWRA's TTHM and HAA5 sampling program includes sampling at 33 MetroWest and Metro Boston communities sites. Partially served and CVA communities are responsible for their own compliance monitoring and are regulated individually.

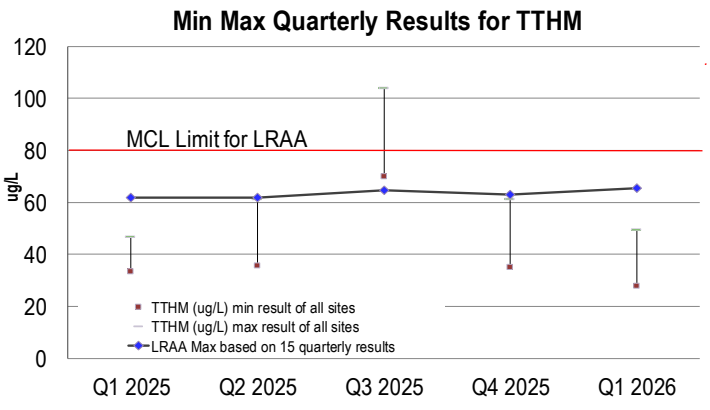
The LRAA for TTHMs and HAA5s for MWRA's Compliance Program (represented as the line in the top two graphs below) remains below current standards. The Max LRAA in the quarter for TTHMs = 16.1 µg/L; HAA5s = 12.3 µg/L. No LRAA exceedances or violations occurred this quarter for MetroBoston and for any of the CVA communities.

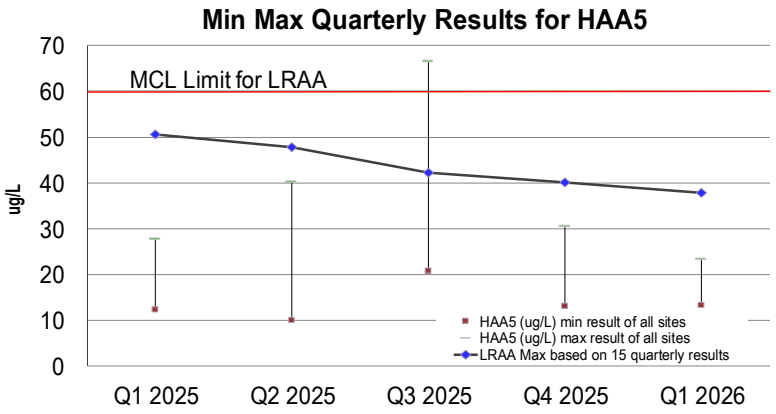
MetroBoston Disinfection By-Products





CVA Disinfection By-Products (Combined Results Chicopee, Wilbraham, & South Hadley FD1)





Notes: CVA Disinfection charts are updated at the end of each quarter.