

Cumberland Water

We Want You to Know About Your Drinking Water

A Water Quality Report for our Customers

In the Town of Cumberland all areas north of Marshall Avenue including Ashton, Berkeley, Arnolds Mills, Cumberland Hill, and Diamond Hill.

High Quality Drinking Water

The Cumberland Water Department is committed to providing our customers with high quality drinking water 24 hours a day, 365 days a year. To ensure that we deliver this quality product, the Cumberland Water Department has made significant investments in water treatment and distribution facilities, water quality monitoring, water sources, and purchasing protective lands. This report will provide information about the water system such as: where your water comes from; how it is treated; improvements being made to the water system; and other issues that affect the water you drink.

In Cumberland Water's Northern Region there are 6 groundwater wells and 1 surface water treatment plant which withdraws water from our Sneech Pond Reservoir. At the Southern end of our system we have a Booster Pump Station that draws water from the Pawtucket Water Supply Board and at the Northern end of our system there is a metering station which will draw water from Woonsocket. Your tap water may come from a variety of sources depending on where you live and the season of the year. During summer months, when there is the greatest demand for water, the connections to Pawtucket and Woonsocket are operated more often to supplement supplies.

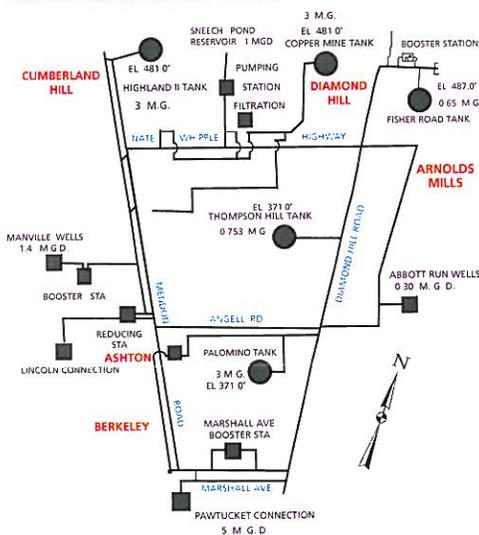


Diagram of the Cumberland Water System

State and Federal drinking water regulations require that **surface water** supplies use a disinfectant to prevent waterborne diseases, and potassium hydroxide to adjust the pH. Because groundwater is naturally filtered through soil it does not usually require additional filtration. However, State and Federal drinking water regulations require certain chemical treatments, and the chemicals we use are chlorine and potassium hydroxide.

(Ashton and Berkeley) receive water mainly from the Marshall Avenue Booster Station and the Abbott Run Valley Wells. (Cumberland Hill, Diamond Hill, and Arnolds Mills) receive water mainly from the Treatment Plant, Manville Wells, Abbott Run Valley Wells and the Woonsocket metering station. At the treatment plant drinking water is filtered to remove contaminants and unwanted taste and odors. Some chemicals are added as part of the treatment process. To satisfy State and Federal drinking water regulations we add chlorine as a disinfectant to prevent waterborne diseases. Alum is used in the sedimentation process to remove particulates and solids. Potassium Hydroxide is used to adjust the pH (a proper pH will help prevent the leaching of lead and copper from household plumbing) and Fluoride is added to promote healthy teeth in growing children.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be

expected to contain at least small amounts of some contaminants. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. 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 Environmental Protection Agency's Safe Drinking Water Hotline (**1-800-426-4791**).

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 microbiological contaminants are available from the Safe Drinking Water Hotline (**1-800-426-4791**).

For questions about the quality of our drinking water or of this report, call the Cumberland Water Department at **658-0666**.

The Cumberland Water Department purchases a portion of its water from the Pawtucket Water Supply Board. If you have any questions with regard to their water quality, please call **729-9050**.

The Cumberland Water Department purchases a portion of its water from the Woonsocket Water Department. If you have any questions with regard to their water quality, please call **767-1411**.

The Cumberland Water Department has sampled for a series of unregulated contaminants in 2015. Unregulated contaminants are those substances that don't yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that data from these tests are available. If you are interested in examining the results, please contact Christopher Champi at **401-658-0666**.

The Cumberland Water Department vigilantly safeguards its water supplies. This brochure is a summary of the quality of water provided to customers last year. It is a record reflecting the hard work of our employees to bring you water that is absolutely safe.

The Cumberland Water Department is committed to providing you with information about your water supply, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

William S. Murray, Mayor

Robert Anderson, P.E., Public Works Dir.

Chris Champi, Superintendent

Peter Drezek, Foreman

Michael Kuchar, Operator IV

Edward Aubin, Operator III

Scott Caldwell, Operator II

Andy Costa, Equipment Operator

Brent Vadenais, Operator III

Brian Black, Operator II

Richard Duncan, Operator III

Edward Labonte, Operator III

Brian Lynch, Operator II

Louis Provencal, Operator II

Bill Descoteaux, Operator III

Tony Miguel, Operator II

Michael Bouchard, Operator III

Mark Dailey, Clerk III

Colene Smith, Clerk III

Margaret Lawton, Collections

Source Water Assessment

The University of Rhode Island and the RI Department of Health, in cooperation with other State and Federal agencies, have assessed the threats to the quality of Cumberland's water supply sources. The assessment considered the intensity of development, the presence of businesses and facilities that use, store or generate potential contaminants, how easily contaminants may move through the Source Water Protection Area (SWPA), and the sampling history of the water.

The assessment found that Cumberland's water sources are at **LOW RISK** of contamination. This does **NOT** mean that the water cannot become contaminated. Protection efforts are important to assure continued water quality. A summary of the Source Water Assessment Report is available from our office, or from the Rhode Island Department of Health, Office of Drinking Water Quality.

Substances Detected in Cumberland Drinking Water in 2015

Regulated Substances	Period	Unit	MCL	MCLG	Highest Det. Level	Range	Major Sources	SDWA Violation
Fluoride ¹	2015	ppm	4	4	0.89	0.04 – 0.89	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizers and aluminum factories.	NO
Barium	2015	ppm	2	2	0.021	0.021	Erosion of natural deposits.	NO
Nitrate	2015	ppm	10	10	1.18	0.5 – 1.18	Run-off from fertilized areas; Leaching from septic tanks; Erosion of natural deposits.	NO
Nitrite	2015	ppm	1	1	< 0.02	< 0.02	Run-off from fertilized areas; Leaching from septic tanks; Erosion of natural deposits.	NO
Chromium	2015	ppb	100	100	1.0	ND – 1.0	Erosion of natural deposits.	NO
Total Organic Carbon (TOC)	2015	Removal Ratio	TT	N/A	1.21 ⁵	0.98 – 1.40	Naturally present in the Environment.	NO
Total Coliform Bacteria	2015	N/A	Coliform bacteria in ≤5% of monthly samples	0	0.0%	0.0%	Naturally present in the Environment.	NO
Turbidity ⁴	2015	NTU	TT	0.01	0.25	0.02 – 0.25	Soil run-off.	NO
Chlorine	2015	ppm	MRDL 4	MRDLG 4	0.38 ⁵	0.34 – 0.39	Water additive used for disinfection.	NO
Total Trihalomethanes (TTHM)	2015	ppb	80	N/A	58.6 ⁶	11.3 – 73.3	By-product of drinking water chlorination.	NO
Haloacetic Acids (HAA5) ⁵	2015	ppb	60	N/A	16.7 ⁶	0.0 – 28.3	By-product of drinking water chlorination.	NO
Combined Radium	2014	PCi/L	5	0	0.63	0.081 – 0.63	Erosion of natural deposits.	NO
Lead and Copper	Period	MCLG	Action Level (AL)	90th %ile	# of Sites Over AL	Units	Major Sources	SDWA Violation
Copper ²	2014	1.3	AL=1.3	0.369	0	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	NO
Lead ³	2014	0	AL=15	3.7	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.	NO
Unregulated Substances	Period	Unit	MCL	MCLG	Highest Det. Level	Range	Major Sources	SDWA Violation
Sodium	2015	ppm	100	N/A	72.7	25.6 – 72.7	Erosion of natural deposits.	NO
Unregulated Contaminant Monitoring Rule 3 ⁹								
Unregulated Substances	Period	Unit	MCL	MCLG	Average Det. Level	Range	Major Sources	SDWA Violation
Chromium-6	2015	ppb	N/A	N/A	0.067	0.03 – 0.12	Erosion of natural deposits, produced by industrial processes.	NO
Chlorate	2015	ppb	N/A	N/A	147.7	76 – 300	Disinfecting by-product; ions formed during the slow decomposition of sodium hypochlorite.	NO
Perfluorooctanoic Acid	2015	ppt	N/A	N/A	81	81	Teflon, fire fighting foam, cleaners, cosmetics, greases, paints.	NO
Strontium	2015	ppb	N/A	N/A	82.4	28 – 270	Erosion of natural deposits.	NO
Vanadium	2015	ppb	N/A	N/A	0.308	0.24 – 0.36	Erosion of natural deposits.	NO
1:4 Dioxane	2015	ppb	N/A	N/A	0.117	0.10 – 0.13	Solvent or solvent stabilizer used in manufacturing processes.	NO

¹ Cumberland Water adds fluoride to its treated water as an aid in dental cavity prevention in young children.

² At 90th percentile, no site exceeding Action Level.

³ At 90th percentile, no site exceeding Action Level. 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. Cumberland Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When 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 drinking 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 or online at <http://www.epa.gov/safewater/lead>.

⁴ For 2014, 0.27 ntu was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting turbidity limit was 100%.

⁵ Running Annual Average.

⁶ Locational Running Annual Average.

Substances Detected in Pawtucket Drinking Water in 2015

Regulated Substances	Period	Unit	MCL	MCLG	Detected Level	Range	Major Sources	SDWA Violation
Fluoride ¹	2015	ppm	4	4	0.87	0.39 – 0.87	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizers and aluminum factories.	NO
Copper ²	2013	ppm	AL=1.3	1.3	0.139	0.023 – 0.163	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	NO
Lead ³	2013	ppb	AL=15	0	3.0	< 1.0 – 5.0	Corrosion of household plumbing systems; Erosion of natural deposits.	NO
Total Organic Carbon (TOC)	2015	Removal Ratio Result	TT	N/A	1.22 ⁶	0 – 1.62	Naturally present in the Environment.	NO
Total Coliform Bacteria	2015	N/A	Presence of Coliform bacteria in ≤5% of monthly samples	0	0.00%	0.00%	Naturally present in the Environment.	NO
Turbidity ⁴	2015	NTU	TT	0	0.59	0.011 – 0.59	Soil runoff.	NO
Chlorine	2015	ppm	4	4	1.07 ⁶	0.06 – 2.20	Water additive used to control microbes.	NO
Nitrate	2015	ppm	10	10	4.51	0.60 – 4.51	Erosion of natural deposits. Run-off of fertilizer. Septic systems.	NO
Total Trihalomethanes (TTHM)	2015	ppb	80	N/A	42.3 ⁷	20.2 – 58.5	By-product of drinking water chlorination.	NO
Haloacetic Acids (HAA5) ⁵	2015	ppb	60	N/A	35.7 ⁷	12.4 – 31.3	By-product of drinking water chlorination.	NO
Barium	2015	ppm	2	2	0.036	0.036	Erosion of natural deposits.	NO
Combined Radium 226/228	2009	PCi/L	5	0	1.02	1.02	Erosion of natural deposits.	NO

Unregulated Substances

Sodium	2015	ppm	100	N/A	58.9	7.64 – 58.9	Erosion of natural deposits.	NO
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¹ Pawtucket Water adds fluoride to its treated water to prevent tooth decay and improve dental health in children.

² At 90th percentile, no site exceeded Action Level.

³ At 90th percentile, no site exceeded Action Level. 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. The Pawtucket Water Supply Board is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When 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 or online at <http://www.epa.gov/safewater/lead>.

⁴ For 2015, 0.59 ntu was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting turbidity limit was 99.97%.

⁵ These results represent the sum of 5 Haloacetic Acids. HAA5s are required monitoring under the Disinfection By-Product regulation.

⁶ Running Annual Average.

⁷ Locational Running Annual Average.

Key to Table and Definitions

AL = Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

ALG = Action Level Goal: The level of a contaminant in drinking water below which there is no known or expected health risk. ALGs allow for a margin of safety.

MCL = Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water.

MCLG = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health.

MRDL = Maximum Residual Disinfectant Level: The level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbiological contaminants.

MRDLG = Maximum Residual Disinfectant Level Goal: The level of disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbiological contaminants.

MRL = Minimum Reporting Level

NTU = Nephelometric Turbidity Units: Measurements of the clarity, or turbidity, of water. Turbidity in excess of 5 NTUs is just noticeable to the average person.

pCi/L = Picocuries per liter.

ppm = parts per million or milligrams per liter (mg/l) or one ounce in 7,350 gallons of water.

ppb = parts per billion or micrograms per liter (µg/l) or one ounce in 7,350,000 gallons of water.

ppt = parts per trillion or nanograms per liter (ng/l) or one ounce in 7,350,000,000 gallons of water.

TT = Treatment Technique: A required process intended to reduce the level of contaminant in drinking water.

N/A = Not Applicable.

ND = Not Detected.

Substances Detected in Woonsocket Drinking Water in 2015								
Regulated Substances	Year Sampled	Units	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	Range Low - High	Typical Sources	Violation
Fluoride	2015	ppm	4	4	0.61	0.07 - 0.97	Erosion of natural deposits; Water additive which promotes strong teeth.	NO
Barium	2015	ppm	2	2	0.36	0.015 - 0.046	Erosion of natural deposits.	NO
Chlorine	2015	ppm	(4)	(4)	0.37	ND - 0.95	Water additive used to control microbes.	NO
Haloacetic Acids (HAA5)	2015	ppb	60	N/A	11.4	2.2 - 25.5	By-product of drinking water disinfection.	NO
Nitrate	2015	ppm	10	10	0.273	0.100 - 0.490	Run-off from fertilized areas; Leaching from septic tanks; Erosion of natural deposits.	NO
Nitrite	2015	ppm	1	1	0.02	ND - 0.02	Run-off from fertilized areas; Leaching from septic tanks; Erosion of natural deposits.	NO
TTHM's (Total Trihalomethanes)	2015	ppb	80	N/A	38.6	21.4 - 57.2	By-product of drinking water chlorination.	NO
Total Coliform Bacteria (% positive samples)	2015	N/A	5% of monthly samples are Positive	0	0.92	N/A	Naturally present in the Environment.	NO
Total Organic Carbon	2015	Removal Ratio	TT	N/A	1	0.0 - 1.9	Naturally present in the Environment.	NO
Turbidity ¹	2015	NTU	TT	N/A	0.329	0.014 - 0.329	Soil run-off.	NO
Turbidity ¹ (Lowest monthly percent of samples meeting limit)	2015	NTU	TT	N/A	99.94%	N/A	Soil run-off.	NO
Lead and Copper	Year Sampled	Units	MCLG	Action Level (AL)	Amount Detected	Sites Above AL / Total Sites	Typical Sources	Violation
Copper	2014	ppm	1.3	AL=1.3	0.05	0 / 32	Corrosion of household plumbing systems; Erosion of natural deposits.	NO
Lead	2014	ppb	0	AL=15	3	0 / 32	Corrosion of household plumbing systems; Erosion of natural deposits.	NO
Secondary Substances	Year Sampled	Units	SMCL	MCLG	Amount Detected	Range Low - High	Typical Sources	Violation
Aluminum	2015	ppb	200	N/A	172	0.0 - .744	Erosion of natural deposits; residuals from some surface water treatment processes.	NO
Fluoride	2014	ppm	2.0	N/A	0.32	N/A	Erosion of natural deposits; water additive which promotes strong teeth	NO
Unregulated Substances	Year Sampled	Units	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	Range Low - High	Typical Sources	Violation
Sodium	2015	ppm	100	N/A	99.7	70.7 - 120.0	Erosion of natural deposits.	NO
Unregulated Contaminant Monitoring Rule 3								
Substances	Year Sampled	Units	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	Range Low - High	Typical Sources	Violation
Chlorate	2013	ppm	N/A	N/A	17.61	ND - 83.74	Disinfecting by-product; ions formed during the slow decomposition of sodium hypochlorite.	NO
Hexavalent Chromium	2013	ppb	N/A	N/A	0.025	ND - 0.06	Erosion of natural deposits; produced by industrial processes.	NO
Strontium	2014	ppb	N/A	N/A	59.75	58.848 - 60.642	Naturally present in the environment.	NO
Vanadium	2014	ppb	N/A	N/A	0.701	0.586 - 0.816	Metal used as an alloying addition to iron and steel.	NO

¹ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. During the reporting year, a minimum of 98.48 percent of all samples taken to measure turbidity met water quality standards.