

Cumberland Water Department

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 draws 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 to supplement supplies.

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 Arnold 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

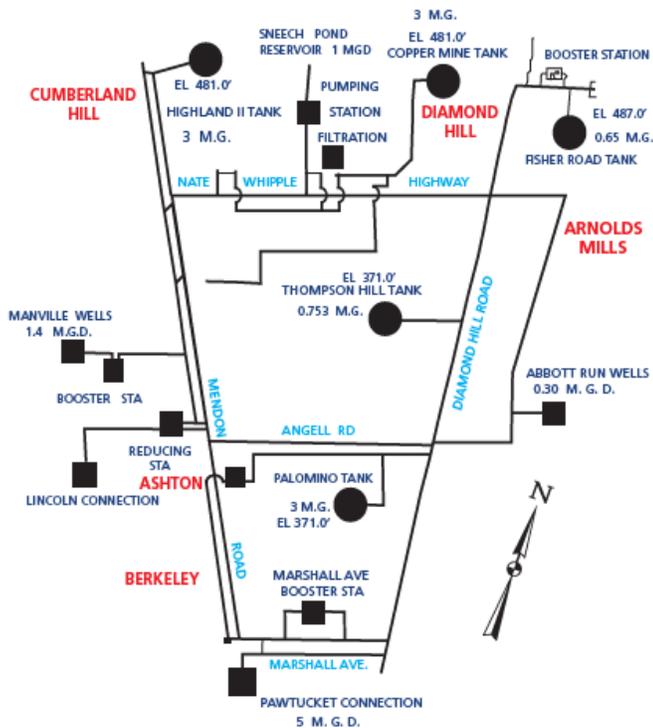


Diagram of the Cumberland Water System

of the treatment process. To satisfy State and Federal drinking water regulations we add chlorine as a disinfectant to prevent water borne 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. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic waste water discharges, oil and gas production, mining or farming. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. 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. 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 **(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**.

CWD has sampled for a series of unregulated contaminants in 2019. 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.

Jeffrey J. Mutter, Mayor

Robert Anderson, PE, Public Works Dir.

Peter Drezek, Foreman

Michael Kuchar, Operator IV

Scott Caldwell, Operator II

Brian Black, Operator II

Louis Provencal, Operator III

Michelle Plante, Operator II

Bethany Descoteaux, Operator II

George Beaulieu, Operator III

Michael Bouchard, Operator III

Kim Berard, Collections

Chris Champi, Superintendent

Thomas Peck, Assist. Superintendent

Edward Aubin, Operator III

Andy Costa, Equipment Operator

Brian Lynch, Operator, II

Bill Descoteaux, Operator III

Brad Yankee, Operator II

Raymond Wood, Operator II

Tony Miguel, Operator II

Mark Dailey, Clerk III

Margaret Anderson, Clerk III

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 business 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 2019

Regulated Substances	Period	Unit	MCL	MCLG	Highest detected level	Range	Major sources	SDWA Violation
Fluoride ¹	2019	ppm	4	4	1.11	0.38 - 1.11	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	NO
Barium	2019	ppm	2	2	0.022	0.022	Erosion of natural deposits	NO
Nitrate	2019	ppm	10	10	1.70	0.16 - 1.70	Runoff from fertilized areas; Leaching from septic tanks; Erosion of natural deposits	NO
Nitrite	2019	ppm	1	1	< 0.02	< 0.02	Runoff from fertilized areas; Leaching from septic tanks; Erosion of natural deposits	NO
Chromium	2019	ppb	100	100	< 1.0	< 1.0	Erosion of natural deposits	NO
Nickel	2019	ppb	N/A	N/A	< 5.0	< 5.0	Erosion of natural deposits	NO
Arsenic	2019	ppb	10	0	< 1.0	< 1.0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste.	NO
Di(2-ethylhexyl) Phthalate	2019	ppb	6	0	< 1.0	< 1.0	Discharge from rubber and chemical factories.	NO
Total Organic Carbon (TOC)	2019	Removal Ratio	TT	N/A	1.20 ⁵	0.81 - 1.48	Naturally Present in the environment	NO
Total Coliform Bacteria	2019	N/A	Presence of Coliform bacteria in ≤5% of monthly samples	0	0.0%	N/A	Naturally Present in the environment	NO
Turbidity ⁴	2019	NTU	TT	0.01	0.27	0.01 - 0.27	Soil run off	NO
Turbidity ⁴	2019	Lowest monthly percent of samples meeting limit	TT (95% of samples < 0.3TU)	N/A	100%	N/A	Soil run off	NO
Chlorine	2019	ppm	<u>MRDL</u> 4	<u>MRDLG</u> 4	0.42 ⁵	0.38 - 0.46	Water additive used for disinfection	NO
Total Trihalomethanes (TTHM)	2019	ppb	80	N/A	63.8 ⁶	37.1 - 81.8	By-product of drinking water chlorination	NO
Haloacetic Acids (HAA5) ⁵	2019	ppb	60	N/A	38.6 ⁶	ND - 48.1	By-product of drinking water chlorination	NO
Combined radium	2017	pCi/L	5	0	0.99	0.057 - 0.99	Erosion of natural deposits	NO
Lead and Copper	Period	MCLG	Action Level (AL)	90th Percentile	# of Sites over AL	Units	Major Sources	SDWA Violation
Copper ²	2017	1.3	AL=1.3	0.082	0	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	NO
Lead ³	2017	0	AL=15	1.3	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.	NO
Unregulated Substances	Period	Unit	MCL	MCLG	Highest detected level	Range	Major sources	SDWA Violation
Sodium	2019	ppm	1000	N/A	84.5	27.0 - 84.5	Naturally occurring; road salt	NO
Per - and Polyfluoralkly (PFAS)	Period	Unit	EPA Health Advisory	MCLG	Highest detected level	Range	Major sources	SDWA Violation
Perfluorooctanoic Acid ⁸ (PFOA)	2019	ppt	70 ⁷	N/A	41.5	< 4.0 - 41.5	Fire-fighting foams, cleaners, cosmetics, greases and lubricants	NO
Perfluorooctane Sulfonic Acid ⁸ (PFOS)	2019	ppt	70 ⁷	N/A	9.78	< 4.0 - 9.78	Fire-fighting foam, circuit board etching acids, alkaline cleaners, floor polish, and pesticides	NO
Perfluorobutanesulfonic Acid ⁸ (PFBS)	2019	ppt	N/A	N/A	4.31	< 4.0 - 4.31	Used as surfactants and repellents in flame retardants, metal plating and pesticides	NO
Perfluorohexanoic Acid ⁸ (PFHxA)	2019	ppt	N/A	N/A	5.17	< 4.0 - 5.17	Used as surfactants and repellents in flame retardants, metal plating and pesticides	NO
Perfluorobutanoic Acid ⁸ (PFBA)	2019	ppt	N/A	N/A	11.2	<< 4.0 - 11.2	Used as surfactants and repellents in flame retardants, metal plating and pesticides	NO
Perfluorononanoic Acid ⁸ (PFNA)	2019	ppt	N/A	N/A	4.78	< 4.0 - 4.78	Used as surfactants and repellents in flame retardants, metal plating and pesticides	NO
Unregulated Contaminant Monitoring Rule 4								
Unregulated Substances	Period	Unit	MCL	MCLG	Average detected level	Range	Major sources	SDWA Violation
Bromide	2019	ppb	N/A	N/A	10.4	< 20.0 - 20.8	Erosion of natural deposits.	NO
Manganese	2019	ppb	N/A	N/A	12.955	2.41 - 23.5	Naturally present in the environment.	NO
Total Organic Carbon (TOC)	2019	ppm	N/A	N/A	3.81	3.81	Naturally present in the environment.	NO
Haloacetic Acids (HAA5)	2019	ppb	N/A	N/A	6.21	< 0.30 - 13.5	By-product of drinking water chlorination	NO
Haloacetic Acids (HAA6)	2019	ppb	N/A	N/A	2.06	< 0.30 - 3.63	By-product of drinking water chlorination	NO
Haloacetic Acids (HAA9)	2019	ppb	N/A	N/A	4.64	< 0.30 - 13.5	By-product of drinking water chlorination	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 sites exceeding Action Level

³ At 90th percentile no sites 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

⁴ For 2019, 0.27 ntu was the highest turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 100%. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

⁵ Running Annual Average. Total organic carbon (TOC) has no harmful side effects. However, TOC provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems or nervous system effects, and may lead to an increased risk of getting cancer.

⁶ Locational Running Annual Average

⁷ The USEPA has established a health advisory level individually or combined for PFOA and/or PFOS of 70 parts per trillion

⁸ Some PFAS compounds have been shown to cause development toxicity, immunological toxicity, and effects on cholesterol metabolism, particularly PFOA, PFOS, PFHxS, PFHpA, PFNA, and PFDA. The toxicity of other PFAS compounds is currently not well understood, although they remain in the blood for shorter periods of time. Rhode Island is in the process of developing regulations for PFAS in drinking water.

Substances Detected in Pawtucket Drinking Water in 2019

Regulated Substances	Period	Unit	MCL	MCLG	Detected level	Range	Major sources	SDWA Violation
Fluoride ¹	2019	ppm	4	4	0.71	0.28 - 0.71	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizers and aluminum factories.	NO
Copper ²	2019	ppm	AL=1.3	1.3	0.264	0.027 - 0.324	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	NO
Lead ³	2019	ppb	AL=15	0	2.0	<1.0 - 12.0	Corrosion of household plumbing systems; Erosion of natural deposits.	NO
Total Organic Carbon (TOC)	2019	Removal Ratio Result	TT	NA	1.51 ⁶	1.36 - 2.40	Naturally present in the environment.	NO
Total Coliform Bacteria	2019	NA	Presence of Coliform bacteria in ≤5% of monthly samples	0	0.00%	0.00%	Naturally present in the environment.	NO
Turbidity ⁴	2019	NTU	TT	0	0.240	0.033 - 0.240	Soil runoff.	NO
Chlorine	2019	ppm	4	4	0.92 ⁶	0.08 - 1.51	Water additive used to control microbes.	NO
Nitrate ⁵	2019	ppm	10	10	5.33	0.07 - 5.33	Erosion of natural deposits. Runoff of fertilizer. Septic systems.	NO
Total Trihalomethanes (TTHM)	2019	ppb	80	NA	53.6 ⁸	6.5 - 69.0	By-product of drinking water chlorination.	NO
Haloacetic Acids (HAA5) ⁷	2019	ppb	60	NA	20.9 ⁸	1.0 - 19.7	By-product of drinking water chlorination.	NO
Barium	2019	ppm	2	2	0.04	0.04	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	Period	Unit	MCL	MCLG	Detected level	Range	Major sources	
Sodium	2019	ppm	100	NA	58.9	26.3 - 58.9	Erosion of natural deposits.	NO
Per- and Polyfluoroalkyl (PFAS)	Period	Unit	MCL	MCLG	Detected level	Range	Major sources	
PFOS	2019	ppt	NA ⁹	NA	12.5	<4.0 - 12.5	man made chemicals used to make household and commercial products that resist heat and chemical reactions and repel oil, stains, grease and water	NO
PFOA	2019	ppt	NA ⁹	NA	12.4	<4.0 - 12.4		NO
PFPeA	2019	ppt	NA	NA	6.96	<4.0 - 6.96		NO
PFHxA	2019	ppt	NA	NA	6.59	<4.0 - 6.59		NO
PFHpA	2019	ppt	NA	NA	4.78	<4.0 - 4.78		NO
PFBS	2019	ppt	NA	Na	5.74	<4.0 - 5.74		NO
Unregulated Contaminant Monitoring Rule 4¹⁰	Period	Unit	MCL	MCLG	Average detected level	Range	Major sources	
Bromide	2019	ppb	NA	NA	40.5	36.0 - 44.0	Erosion of natural deposits.	NO
TOC	2019	ppm	NA	NA	3.76	3.33 - 4.53	Naturally present in the environment.	NO
Haloacetic Acids (HAA5)	2019	ppb	60	NA	9.4	1.4 - 17.6	By-product of drinking water chlorination.	NO
Haloacetic Acids (HAA6Br)	2019	ppb	NA	NA	8.2	3.8 - 10.7	By-product of drinking water chlorination.	NO
Haloacetic Acids (HAA9)	2019	ppb	NA	NA	16.7	4.4 - 27.1	By-product of drinking water chlorination.	NO
Manganese	2019	ppb	NA	NA	29.7	17.5 - 43.7	Erosion of natural deposits.	NO

¹ Pawtucket Water adds fluoride to its treated water to prevent tooth decay and improve dental health in children.

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

³ @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 at <http://www.epa.gov/safewater/lead>.

⁴ For 2018, 0.274 ntu was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting turbidity limit was 100%.

⁵ Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High Nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

⁶ Running Annual Average.

⁷ These results represent the sum of 5 Haloacetic acids. HAA5s are required monitoring under the Disinfection By-Product regulation.

⁸ Locational Running Annual Average.

⁹ The USEPA has established a health advisory level for PFOA and/or PFOS of 70 parts per trillion

¹⁰ Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose for monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard.

¹¹ EPA established a 10-day Health Advisory for Manganese of 300 parts per billion

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. ALG's allow for a margin of safety.

MCL=Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

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

MRDL=Maximum Residual Disinfectant Level: The highest 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbiological contaminants

MRL=Minimum Reporting Level

NTU=Nephelometric Turbidity Units: Measurement of the clarity, or turbidity of water. Turbidity in excess of 5 NTU's 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 (ug/l) or one ounce in 7,350,000 gallons of water

ppt=parts per trillion or nanograms per liter 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

Regulated Substances Detected in Woonsocket Drinking Water in 2019

Substance (unit of measure)	Year Sampled	MCL {MRDL}	MCLG {MRDLG}	Amount Detected	Range Low-High	Violation	Typical Source
Barium ¹ (ppm)	2019	2	2	0.044	0.012 - 0.044	NO	Erosion of natural soil deposits
Chlorine (ppm)	2019	{4}	{4}	0.45	ND - 1.08	NO	Water additive used to control microbes
Chromium ¹ (ppb)	2019	100	100	1.0	ND - 1.0	NO	Erosion of natural deposits; Discharge from steel and pulp mills.
Di(2ethylhexyl) Phthalate ¹ (ppb)	2019	6	0	1.0	ND - 1.0	NO	Discharge from rubber and chemical factories.
Fluoride (ppm)	2019	4	4	1.68	ND - 1.68	NO	Erosion of natural deposits; Water additive which promotes strong
Haloacetic Acids {HAA's} (ppb)	2019	60	NA	17.8	10.1 - 23.8	NO	By- product of drinking water disinfection.
Nitrate ¹ (ppm)	2019	10	10	0.500	0.08 - 0.500	NO	Runoff from fertilized areas; Leaching from septic tanks; Erosion of natural deposits.
TTHM's (ppb) (Total Trihalomethanes) ⁴	2019	80	NA	49.2	19.3 - 83.2	NO	By- product of drinking water disinfection.
Total Coliform Bacteria (Positive Samples)	2019	TT	NA	4	NA	NO	Naturally present in the environment
Total Organic Carbon ⁵ (ppm) (removal ratio)	2019	TT	NA	1.66	1.29 - 1.90	NO	Naturally present in the environment
Turbidity ⁶ (NTU)	2019	TT	NA	2.529	0.040 - 2.529	NO	Soil runoff
Turbidity ⁶ (Lowest monthly percent of samples meeting limit)	2019	TT = 95% of samples meet the limit	NA	99.76%	NA	NO	Soil runoff

Tap water samples were collected for lead and copper from sample sites throughout the community

Substance (unit of measure)	Year Sampled	AL	MCLG	Amount detected (90th percentile)	Sites above AL/ Total Sites	Violation	Typical Source
Copper (ppm)	2017	1.3	1.3	0.032	0/32	NO	Corrosion of household plumbing fixtures; Erosion of natural deposits
Lead (ppb)	2017	15	0	2	0/32	NO	Corrosion of household plumbing fixtures; Erosion of natural deposits

Secondary Substances

Substance (unit of measure)	Year Sampled	SMCL	MCLG	Amount Detected	Range Low-High	Violation	Typical Source
Aluminum (ppb)	2019	200	N/A	53	ND - 180	NO	Erosion of natural deposits; Residuals from some surface water treatment processes.
Manganese (ppb)	2019	50.0	N/A	81	32 - 299	NO	Leaching from natural deposits

Unregulated Substances

Substance (unit of measure)	Year Sampled	MCL {MRDL}	MCLG {MRDLG}	Amount Detected	Range Low-High	Violation	Typical Source
Sodium (ppm)	2019	100	N/A	70.56	28.9 - 111.0	NO	Naturally occurring; road salt
Perfluorohexanesulfonic Acid (PFHxS) ¹ (ppt)	2019	N/A	N/A	1.51	ND - 4.55	NO	Foam for firefighting
Perfluorooctanesulfonate Acid (PFOS) ⁷ (ppt)	2019	N/A	N/A	4.8	ND - 6.93	NO	Industrial facility where PFAS were produced or used to manufacture fire fighting foam
Perfluorooctanoic Acid (PFOA) ⁷ (ppt)	2019	N/A	N/A	3.75	ND - 5.97	NO	Industrial facility where PFAS were produced or used to manufacture fire fighting foam

Unregulated Contaminant Monitoring Rule - Part 4 (UCMR4)

Substance (unit of measure)	Year Sampled	MCL {MRDL}	MCLG {MRDLG}	Amount Detected	Range Low-High	Violation	Typical Source
Bromide ¹ (ppb)	2019	N/A	N/A	21.1	ND - 32.5	NO	Naturally present in the environment
HAA5 (ppb)	2019	N/A	N/A	22.043	16.24 - 30.25	NO	By- product of drinking water disinfection.
HAA6 Br (ppb)	2019	N/A	N/A	9.373	6.238 - 12.041	NO	By- product of drinking water disinfection.
HAA9 (ppb)	2019	N/A	N/A	30.195	22.478 - 40.540	NO	By- product of drinking water disinfection.
Manganese ¹ (ppb)	2019	N/A	N/A	77.2	33.7 - 109.0	NO	Naturally present in the environment
Total Organic Carbon ¹ (ppb)	2019	N/A	N/A	5,290	3,110.0 - 7,150.0	NO	Naturally present in the environment

¹ Raw untreated surface water sample.

² Although 2 positive samples for *E. coli* were taken, the repeat samples, downstream samples, and upstream samples all tested absent for *E. coli*

³ Routine and repeat samples are total coliform positive and either *E. coli* positive, or system fails to take repeat samples following *E. coli* positive routine sample, or system fails to analyze total coliform positive sample for *E. coli*

⁴ Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

⁵ The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

⁶ Turbidity is a measure of the cloudiness in the water. It is monitored because it is a good measure of the effectiveness of the filtration system. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

⁷ Raw untreated surface water and first entry into the distribution system sampling.