

Beaucatcher



City of Asheville
Department of Water Resources
Administration

P.O. Box 7148
Asheville, NC 28802

Office: 828-259-5955
www.ashevillenc.gov

March 6, 2020

City of Asheville Multi Family Manager/Owner

Dear Manager/Owner:

The City of Asheville Water Resources Department has released its 22nd Annual Water Quality Report, a federally mandated 'report card,' designed to make customers aware of what is in the water they drink. The City of Asheville is pleased to report that the City's drinking water continues to surpass all U. S. Environmental Protection Agency (EPA) Safe Drinking Water Standards.

This informative report provides details about the quality of the water provided to the City's water customers, where it comes from, and how it is treated. It will be mailed to all water customers, along with their utility bills in March-April 2020. Customers may expect an update of this report each year.

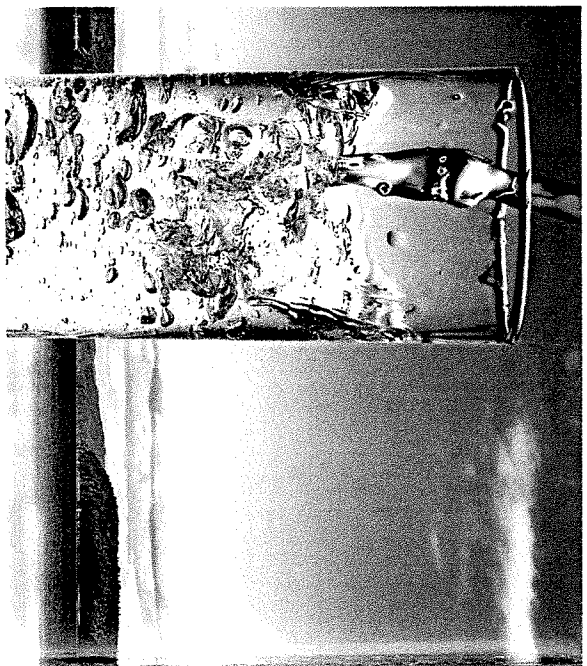
Since most multifamily residents do not receive a water bill directly from the City of Asheville, we are asking for your assistance in passing this information on to your tenants or occupants. I have enclosed a 2019 Water Quality Report that can be posted in a central location for all occupants to see. This report is also posted on our Website at www.ashevillenc.gov/departments/water under the "General Information" section.

If you are not a Multi Family Manager/Owner, then please disregard this letter. If you or your tenants or occupants have questions or need additional copies of the City of Asheville's Annual Water Quality Report for 2019, please call me at 828-259-5972.

Sincerely,

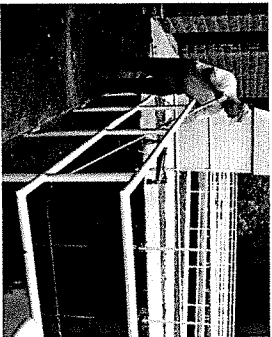
Elise Ayers

Elise Ayers
Budget Revenue Manager
City of Asheville Water Resources Department



Our Commitment To Quality

We are pleased to present to you this year's Annual Drinking Water Quality Report for the City of Asheville's Water Resources Department. This report is a snapshot of last year's water quality. Congress and the EPA have mandated this report and to a large extent its format and content. The EPA wants to be sure every community knows what is in their drinking water. We agree. Water Quality is never taken for granted by our customers or by those of us who work everyday to ensure the best quality of water possible. Our charge is to present this information in a way that is understandable and gives you confidence in the quality of water supplied to your home or place of business.



This Annual Water Quality Report provides details about the quality of your water, where it comes from, how it is treated, and how you can conserve this precious resource. You may expect an update of this report each year.

The City of Asheville's Water Resources Department is required to test for over 150 constituents (substances) to make sure that the water you drink is safe. In 2019, only 8 of these substances were detected and they were well within safe levels – making our drinking water one of the best sources of water in the country. The table included with this report lists these 8 substances.

Customer Input Welcome

We invite our customers to learn more about the City of Asheville and the Water Resources Department. Customers are welcome to attend regular meetings of the Asheville City Council in the City Council Chamber located on the second floor of the City Hall Building at 70 Court Plaza. Meetings of Asheville's City Council are televised live on the Asheville City Channel at the time of the meeting, typically the second and fourth Tuesday of each month at 5:00 p.m. The Asheville City Channel is on Charter Cable channel 193 and on AT&T U-Verse channel 99. The council meetings may be watched live:

<https://www.ashevillenc.gov/service/watch-livestream-of-city-council-meetings/>The public is invited to attend. On-Demand Recordings of current-year City Council meetings are available for viewing online at:

<https://www.ashevillenc.gov/government/city-council-meeting-materials/>. The City of Asheville also posts City Council Meetings to our Youtube Channel at

<https://www.youtube.com/user/CityofAshevillefor easier viewing>. Questions regarding water quality, water bills, or any other questions can be answered by calling the City's Customer Services Division at (828) 251-1122. You can also explore our web page on the internet at <https://www.ashevillenc.gov/department/water/>

ISO 14001: Our Commitment to the Environment

Since 2004, the Water Resources Department has been ISO 14001 registered by NSF, proving that we have implemented practices and procedures to do our part to protect the environment. We are committed to ensuring environmental quality through:

- Continuous Improvement in our product, systems, and processes to maximize customer satisfaction;
- Communication among and between our staff, customers, vendors, contractors, and governing board;
- Compliance with relevant federal, state, and local environmental regulations; and
- Commitment to a clean, healthy environment through prevention of pollution.

The City of Asheville's Water Resources Department

PO Box 7148, Asheville, NC 28802

(828) 251-1122

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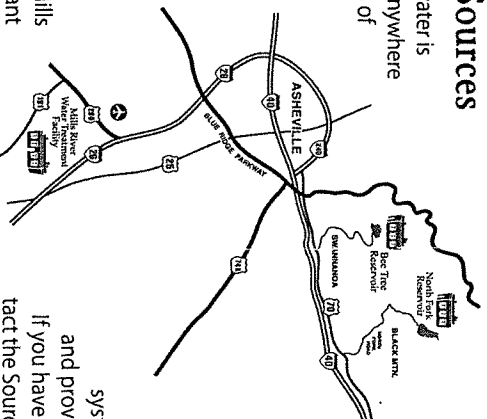


2019 ANNUAL WATER QUALITY REPORT

En Español: Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o lláble con alguien que lo entienda bien.

Quality Begins At Our Sources

It's very easy to see why our drinking water is considered some of the finest available anywhere in the United States. Our primary sources of water are located in eastern Buncombe County where the water flows from pure mountain springs and streams into lakes known as the North Fork and Bee Tree Reservoirs. They are located in Black Mountain and Swannanoa, respectively. These pristine lakes are surrounded by 20,000 acres of highly protected mountain forests owned by the City of Asheville.



Our secondary source of water is the Mills River. The Mills River Water Treatment Plant was put into operation in late 1999. The Mills River Watershed is very different from our watershed in the east; however, it still provides an excellent source of water. The watershed covers 47,440 acres in Henderson and Transylvania Counties, with approximately 75 percent of the watershed being in the Pisgah National Forest. It is a mixture of forest, farmland, and low density development. Although the Mills River is not pristine, it has the advantage of providing our region with a natural resource that has multiple uses, including being an invaluable drinking water source, trout fishery, fish and wildlife habitat, and recreational resource. During extreme drought conditions, water may be taken from the French Broad River.

Source Water Assessment Program (SWAP) Results

North Carolina Department of Environmental Quality, Public Water Supply Section, Source Water Assessment Program (SWAP) conducted an assessment of the drinking water sources across North Carolina. The purpose of the assessment was to determine the susceptibility of each drinking water source to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate, or Lower. The relative susceptibility rating of each source for the City of Asheville is determined by combining the contaminant rating (number and location of PCSs within the watershed) and the inherent vulnerability rating (geologic characteristics of the surface water source and the watershed area). The assessment findings are summarized in the following table.

It is important to understand that a susceptibility rating of Moderate or Higher does not imply poor water quality, only the systems' potential to become contaminated by PCSs in the assessment area. The complete SWAP Assessment report for the City of Asheville's Water Resources Department may be viewed on the Web at: www.ncwater.org/pws/swap. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Center, Raleigh NC 27699-1634, or email request to swap@ncdenr.gov. Please indicate the system name (City of Asheville), PWSID (01-1-1010), and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-707-9098.

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating
North Fork Reservoir	Higher
Mills River	Moderate
Bee Tree Reservoir	Moderate
French Broad River*	Higher

(Found in SWAP Report Table 2, dated August 31, 2017)
*French Broad River Intake is only used during extreme drought conditions.

We Optimize Quality With Careful Treatment

We are proud of the exceptional quality of water that flows through our system to your household or business daily. We treat it very carefully at our state-of-the-art water treatment plants to enhance its quality. The North Fork Water Treatment Plant built in 1978 and later expanded to a current capacity of 31 million gallons per day, or mgd, operates using a direct filtration process. Lake water from the pristine North Fork Reservoir is pre-chlorinated and mixed with aluminum sulfate to coagulate suspended particles that come from the lake. After mixing, the water flows through the filters, which remove coagulated particles. Following filtration, the pH is adjusted, fluoride is added for dental health purposes, corrosion inhibitors zinc ortho-phosphate and sodium bicarbonate are added, and the water is once again chlorinated for further disinfection. The William DeBruh Water Treatment Plant located at Bee Tree

Lake operates using the same process as the North Fork Water Treatment Plant. The current capacity is five mgd. The 7 mgd Mills River Water Treatment Plant was designed to produce drinking water that is comparable to the high quality water that comes from our North Fork Reservoir. The treatment process is more complex than at the North Fork facility, and it includes ozone treatment for disinfection. Water is taken from the Mills River and pumped first to an untreated water storage reservoir where suspended materials are settled out. The settled water is pumped to the preozonation system to begin disinfection; it flows to the rapid mixers where chemicals are added to produce suspended particles; it moves into settling basins where the heavy particles settle out and it travels back to the ozonation system for further disinfection. It then passes through filters containing granular activated carbon, the pH is adjusted, and fluoride is added. Finally, corrosion inhibitors and chlorine are added to enhance water quality in the distribution system.

(continued inside)



REGULATED AT THE CUSTOMER'S TAP

Copper, ppm	1.3	AL = 1.3	Jun - Sept 2018	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	<0.050 at 90th percentile	None of the 50 targeted sampling sites exceeded the Action Level.
Lead, ppb	0	AL = 15	Jun - Sept 2018	Corrosion of household plumbing systems; erosion of natural deposits.	< 3 at 90th percentile	None of the 50 targeted sampling sites exceeded the Action Level. All homes tested were below the detection limit of 3 ppb.

REGULATED IN THE DISTRIBUTION SYSTEM

Total Coliform Bacteria (presence or absence)	0	N/A	5/29/19 & 8/13/19	Naturally occurring in the environment.	2	Two positive samples for 2019
Fecal Coliform or E. Coli (presence or absence)	0	0*	N/A	Human or animal fecal waste	0	No positive samples for 2019

*Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one of those repeats are also E. coli positive

Total Trihalomethanes, ppb	0	80	2/06/19, 5/6/19, 8/6/19, 11/4/19	By-product of drinking water chlorination.	43 (Highest LRAA) Range: (7-65)	B01 - (26 - 65) B02 - (14 - 38) B03 - (7 - 29) B04 - (16 - 60) B05 - (20 - 58) B06 - (14 - 45) B07 - (14 - 43) B08 - (14 - 45)
Total Haloacetic Acid HAA5, ppb	0	60	2/06/19, 5/6/19, 8/6/19, 11/4/19	Total Haloacetic Acid - By-product of drinking water chlorination.	40 (Highest LRAA) Range: (16 - 58)	B01 - (19 - 55) B02 - (19 - 44) B03 - (16 - 44) B04 - (28 - 39) B05 - (17 - 42) B06 - (26 - 58) B07 - (26 - 58) B08 - (20 - 37)
Chlorine, ppm	MRDLG = 4	MRDL = 4	Daily	Water additive used to control microbes.	System Average 1.15 Range (0.05 - 1.92)	Sampled in Distribution

SOURCE WATER MONITORING

Our system monitored for Cryptosporidium in our source water at all three water treatment plants. North Fork and William DeBruhl did not detect any Cryptosporidium. Mills River detected some Cryptosporidium in ranges from 0.0 - 0.200 oocysts/L.

Cryptosporidium is a microbiological pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps.

Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease and it may be spread through other means than drinking water.

This table summarizes results for calendar year 2019.

B01 - Pisgah Elementary	B05 - CTS Exxon Mills Gap Rd
B02 - Fairview Downs	B06 - Chaldeton Subdivision
B03 - Bee Tree Junction	B07 - Town Mountain Rd
B04 - Crowning Way	B08 - Fairview Fire Dept.

2019 PHYSICAL AND MINERAL CHARACTERISTICS

The following constituents analyzed in your water are indicators of the appearance, taste, and mineral content of the drinking water delivered to your tap.

Constituent	Annual Average
pH, standard units	7.62
Alkalinity, mg/l	24.48
Hardness, mg/l	4.87
Sodium, mg/l	13.3

AL

KEY TO UNIT ABBREVIATIONS

AL = Action Level; the concentration of a contaminant that triggers treatment or other requirements that a water system must follow. Action Levels are reported at the 90th percentile for homes at greatest risk.

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.

MRDLG = Maximum Residual Disinfectant Level Goal; the level of a drinking water disinfectant below which there is no known or expected risk to health.

MRDL = Maximum Residual Disinfectant Level

NTU = Nephelometric Turbidity Unit; is a measure of the clarity of water.

ppb = Parts per billion or micrograms per liter.

ppm = Parts per million or milligrams per liter.

ppl = Parts per trillion or nanograms per liter.

RDA = Running Annual Average Treatment Technique; a required process intended to reduce the level of a contaminant in drinking water.

< = Less than.

2019 Accomplishments & Achievements

In September 2019 a new payment system, Utility Express Pay, was launched. This self serve system allows our customers the flexibility of multiple payment options including credit or debit cards, e-check, or bank draft. Customers can set their own payment date and sign up for recurring payments or paperless billing. Account billing and payment history is easily viewed by the customer. More than 11,000 customers now receive their utility bill electronically.

The Special Projects Crew completed the installation and replacement of several large diameter valves on critical transmission mains throughout the system.

The Water Engineering Division completed four major Neighborhood Enhancement Projects. These projects replaced approximately 105,000 Linear Feet (~20 miles) of old and aging water lines of various sizes within existing neighborhoods.

Water Engineering has continued work with external consultants on final design work for four new major water line replacement projects. This next round of projects will replace several miles of existing neighborhood water lines but will also include replacement of larger diameter (12 to 36-inch) transmission mains throughout the system.

The Water Production Division has several projects underway, including upgrades/rehabilitation of the Ozonia ozone system, pump Variable Frequency Drives and tanks at the Mills River plant. SE Diving was hired to perform internal inspections of every storage tank.

Water Productions's Dam Embankment and Auxiliary Spillway Project is 24 months into the 32 month project. The overlay on the principal spillway is complete. Significant progress has been made on the spillway control system (fusagates and chute). The project is expected to be completed in 2020.

The Department continues to contract with industry experts Cavanaugh & Associates to assist in a systematic program to reduce non-revenue water. At the end of 2019, the percentage of water loss was 26.6%. The department was asked to present on this program at several national conferences this year.

As part of its ongoing data quality improvement project, the GIS team began purchasing GPS units at the end of 2017. These units are now in use by staff in the field. Since their deployment, field staff have surveyed approximately 140,000 feet of waterline. In addition, GPS points have been captured for 528 meters, 112 Hydrants, and 378 valves.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo a un idioma que usted entienda bien.

. After treatment, the water travels through over 1,702 miles of water lines and is stored in 35 reservoirs located throughout the distribution system. Each day, our water system delivers an average of 20.12 million gallons of water to over 125,000 people in Asheville, Buncombe County, and Henderson County. The rainfall total for 2019 was 62.69 inches: the highest month was June with 9.70 inches and the highest day was April 19th with 3.71 inches.

Regardless of the source of water or treatment facility processing the water, you can be sure that the product delivered to your tap surpasses all Safe Drinking Water Standards set by the EPA. The employees of the Water Resources Department are committed to treating your water with extraordinary care by perfectly blending science and nature. The result for you is the clear, pure water you receive at your tap.

Lead And Copper

The primary source of lead and copper in tap water is in a customer's home plumbing system. These elements can leach (dissolve) into the water from a building's plumbing through corrosion if the water has been standing in the pipes for

several hours. To prevent corrosion from occurring, the City of Asheville has effectively implemented a system-wide corrosion control treatment. At the treatment plants, sodium hydroxide is added to increase the water's natural pH; sodium bicarbonate is added to increase alkalinity; and zinc ortho-phosphate is added as a corrosion inhibitor. This treatment minimizes corrosion of the pipes. Buildings at risk for lead or copper in the water are those that have lead service lines or that have lead solder in copper pipes. Many homes built before 1986 were built with plumbing systems that contained lead solder in the copper pipes. The Water Resources Department was the first water utility in NC to start installing lead free brass fittings.

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 City of Asheville 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

Our Water Quality Surpasses All Requirements

Out of 150 possible substances tested only 8 were detected - making our drinking water one of the best sources of water in the country. The following regulated substances were detected (within very safe limits) in our "finished" drinking water as analyzed between January 1 and December 31, 2019. "Finished" water is the water that leaves our treatment plant and is distributed throughout the system.

Substance and Unit of Measurement	Ideal Goal-	Highest Level	Sample Date	EPA Definition of Potential Source(s) of Substance	Results	Individual Plant Results
	MCLG	MCL				

REGULATED AT THE TREATMENT PLANT

Fluoride, ppm	4	4	1/21/19	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.	High 0.60 Range: (0.50 - 0.60)	Mills River (MR) = 0.60 North Fork (NF) = 0.50 William DeBruh (WD) = 0.50
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Turbidity, NTU	N/A	TT = 1 NTU Maximum limit for any measurement	N/A	The likely source is soil runoff. Monitoring turbidity (cloudiness of water) ensures the effectiveness of our filtration system.	High 0.22	MR = 0.22 NF = 0.21 WD = 0.20
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	N/A	TT = 95% of samples <0.3 NTU	N/A		100% of samples <0.3 NTU	MR = 100% NF = 100% WD = 100%
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Total Organic Carbon (Source), ppm	N/A	TT	NF, WD, MR Quarterly	Naturally present in the environment.	Average = 0.40 Range: (ND - 1.4)	MR = ND - 1.4 NF = ND - 1.1 WD = ND - 1.1 Compliance Method All #2
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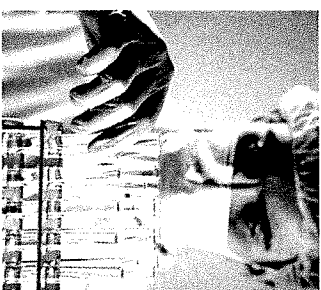
Total Organic Carbon	N/A	TT	NF, WD, MR	Naturally present in the	Average = 0.08	MR = ND NF = ND WD = ND
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30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4791 or this website <http://www.epa.gov/safewater/lead>.

What EPA Wants You To Know

EPA requires us to inform you that 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 under-gone 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 from their health care providers about drinking water. 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 at 800-426-4791.

The EPA also requires us to tell you that 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 may pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water before it is treated include microbial contaminants, inorganic contaminants, pesticides and herbicides, radioactive contaminants, and organic chemical contaminants. The City of Asheville has one of the purest sources of water in the country, thus minimizing any chance of contamination.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. It is important to remember that the presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that your tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants. The Food & Drug Administration established limits for contaminants in bottled water which must provide the same level of protection.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking