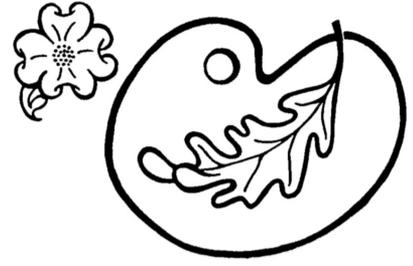


Town of Nashville Utilities

2019 Water Quality Report



Town of Nashville Utilities

Town Council President, Jane Gore
Administration Manager, Phyllis Carr
Utility Manager, Sean Cassiday

Customer Service: 812-988-5526
Billing Office: 812-988-7064

Your water source

The Town of Nashville Utilities wants you, our customers, to be informed of the excellent quality of our water. This report is a summary of the quality of water provided to our customers last year. We are happy to report no violations of a contaminant level or of any other water quality standard.

Included in this report are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. The Town of Nashville Utilities 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. For more information about your water, call our Customer Service at 812-988-5526 and ask for Phyllis Carr.

Water Quality Tables

The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables is from testing done January 1 to December 31, 2018. The state requires us to monitor for certain contaminants less than once per year because the concentration of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality is more than one year old.

What Is a Part Per Million?

The units of measure for contaminants in the table are primarily milligrams per liter (mg/l). One mg/l is the same as one part per million (ppm). Some comparisons for 1 ppm are one penny in \$10,000 or one inch in almost 16 miles.

Special Concerns

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 and CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

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. Town of Nashville Utilities 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>.

We Welcome Your Interest

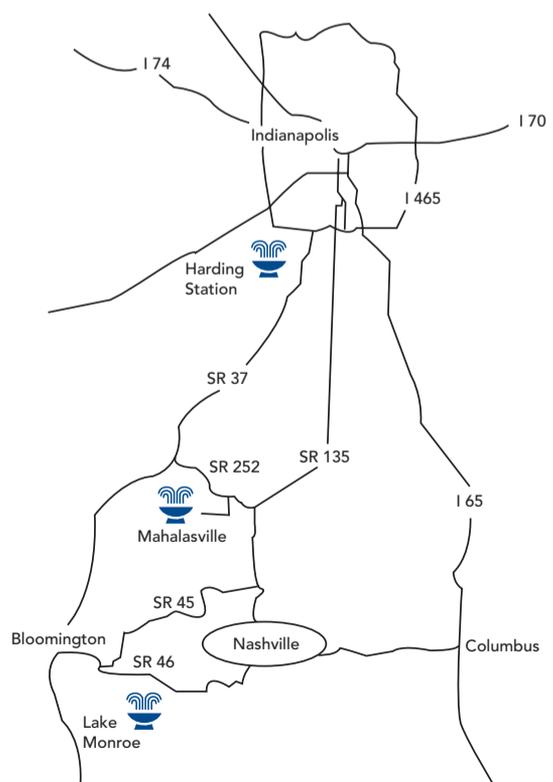
If you are interested in learning more about the water department policy and water quality, contact the office of the Town Administrator at 812-988-5526. If you would like to attend meetings regarding your water system, the Nashville Town Council meets at 6:30 pm the third Thursday of each month at 200 Commercial Street, Nashville, Indiana. Town Council Meetings are open to the public.

Your water source

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 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:

- 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 runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- Organic chemicals, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive materials, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 the 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 at 1-800-426-4791.



TOWN OF NASHVILLE UTILITIES
2019 WATER SOURCES



American Water Works Association
Dedicated to Safe Drinking Water

Brown County Water Utility, Inc. 2018 Treated Drinking Water Quality Data

In 2018 100% of Nashville's delivered water came from this source.

Substance	MCL	Highest Result and Range Detected	Ideal Goals MCLG	Compliance Achieved?	Likely Source of Contamination
Lead and Copper (2014)					
Lead (1) (2) (2017)	15 ppb	90th Percentile system wide 2.5 ppb	0 ppb	Yes	Corrosion of Customer Plumbing
Copper (1) (2) (2017)	1.3 ppm = AL	90th Percentile system wide 0.167 ppm	1.3 ppm	Yes	Corrosion of Customer Plumbing
Regulated Contaminants					
Free Chlorine (ppm)	MRDL = 4	2.01 (0.27-2.01)	MRDLG = 4	Yes	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppm)	60 ppb	RAA = 16.7 (range 9.6 - 23.4)	No goal for total	Yes	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppm)	80 ppb	RAA = 42.7 (range = 23.8 - 56.7)	No goal for total	Yes	By-product of drinking water disinfection
Arsenic (ppb) (3) (2017)	10 ppb	5.1 ppb	0	Yes	Erosion of natural deposits
Barium (ppm) (2017)	2 ppm	0.066 ppm	0	Yes	Erosion of natural deposits
Fluoride (ppm) (2017)	4 ppm	0.6 ppm	4 ppm	Yes	Natural deposits and treatment additive
Nitrate (ppm)	10 ppm	0.2	10 ppm	Yes	Fertilizer, septic tank leachate

(1) Levels detected represent the 90th percentile value as calculated from total samples in test year.

(2) No test results were above AL

(3) While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA standards balances the current understanding of arsenics possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Citizens Energy Group 2018 Treated Drinking Water Quality Data

In addition to producing our own water, Brown County Water Utility, Inc. purchases water from Citizens Energy Group. The following information is provided relative to that supply.

Substances Detected (units)	MCLG (goal)	MCL (limit) / AL	Compliance Achieved	Average Results (Range Detected)	Possible Source Where did it come from?
Arsenic (ppb)	0 ppb	10 ppb	Yes	1.9 (ND - 1.9)	Natural Deposits
Barium (ppm)	2 ppm	2 ppm	Yes	0.29 (0.037 - 0.29)	Natural Deposits
Chromium (ppb)	100 ppb	100 ppb	Yes	3.2 (ND - 3.2)	Natural Deposits
Fluoride (ppm)	4 ppm	4 ppm	Yes	1.2 (0.24-1.2)	Natural Deposits & Treatment additive
Nitrate (ppm)	10 ppm	10 ppm	Yes	4.8 (ND - 4.8)	Fertilizer, septic tank leachate
Chlorine (as Cl2)	4 ppm	4 ppm	Yes	1.4 (0.05-1.4)	Water additive used to control microbes
Sodium (ppm)	unregulated	N/A	Yes	86 (14-86)	Erosion of natural deposits; leaching
Simazine (ppb)	4 ppb	4 ppb	Yes	1.2 (ND-1.2)	Herbicide runoff
Toluene (ppb)	1,000	1,000	Yes	1.5 (ND - 1.5)	Discharge from petroleum refineries
Copper (ppm) (1) (2)	1.3 ppm	1.3 ppm	Yes	0.12 (0 of 24>AL) 90 th Percentile	Corrosion of Customer Plumbing
Lead (ppb) (1) (2)	0 ppb	15 ppb	Yes	7.7 (0 of 24>AL) 90 th Percentile	Corrosion of Customer Plumbing
Total Trihalomethanes	NA	80 ppb	Yes	11	By-product of chlorination treatment
Haloacetic acids (HAA5)	NA	60 ppb	Yes	5.1	By-product of chlorination treatment

(1) Levels detected represent the 90th percentile value as calculated from total samples in last year.

(2) No test results were above AL

City of Bloomington Utilities 2018 Treated Drinking Water Quality Data

Substance	Highest Level Allowed (EPA's MCL*)	Highest Level Detected	Ideal Goals (EPA's MCLG's*)	Violation	Source of Contamination
Microbiological Contaminants					
Heterotrophic Plate Count	Treatment Technique (TT)*	130 CFU/ml	None	No	Natural lake bacteria, wildlife, septic systems
Total Coliform Bacteria	5 percent	1.0 percent	0	No	Naturally present in the environment
Total Organic Carbon (TOC)	minimum 35% removal	41.2% removal average ¹	None	No	Naturally present in the environment
Turbidity	Treatment Technique	0.13 turbidity units ²	None	No	Soil runoff
Radioactive Contaminants					
Gross alpha excluding radon and uranium ³	15 pCi/L*	1.16 pCi/L	No	0	Erosion of natural deposits
Radium-228 ³	5 pCi/L	0.162 pCi/L	No	0	Erosion of natural deposits
Inorganic Contaminants					
Barium	2 ppm*	0.017 ppm	2 ppm	No	Erosion of natural deposits
Copper	TT; action level* = 1.3 ppm	0.025 ppm (90th Percentile)* ⁴	1.3 ppm	Yes ⁵	Corrosion of household plumbing systems:
Chloramines (as Chlorine)	4.0 ppm (MRDL)*	3.2 ppm ⁵	4 ppm (MRDLG)*	No	Water additive to control microbes
Fluoride	4 ppm	1.13 ppm ⁷	4 ppm	No	Water additive which promotes strong teeth
Lead *	TT; action level = 15 ppb	6.2 ppb (90th Percentile) ⁴	0	Yes ⁵	Corrosion of household plumbing systems
Organic Contaminants					
Haloacetic Acids (HAA5)	60 ppb	46.0 ppb (average) ⁹	0	No	By-product of drinking water disinfectant
Total Trihalomethanes (TTHM)	80 ppb	52.8 ppb (average) ⁸	0	No	By-product of drinking water chlorination
Atrazine	3 ppb	0.1 ppb	3 ppb	No	Runoff from herbicide used on row crops

LISTED above are 14 contaminants detected in Bloomington's drinking water during 2018. All are within allowable levels. Not listed are the over 60 primary contaminants for which we tested that were not detected.

Nashville Municipal Utilities 2018 Regulated Contaminants Detected

Lead and Copper								
Substance	Date Sampled	Ideal Goals (EPA's MCLG's*)	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Source of Contamination
Copper	07/07/2017	1.3	1.3	0.258	0	ppm	N	(Erosion of natural deposits; Leaching from wood preservatives); Corrosion of household plumbing systems.
Lead	07/07/2017	0	15	3.9	1	ppb	N	Corrosion of household plumbing systems; (Erosion of natural deposits)
Disinfectants and Disinfection By-Products								
Substance	Collection date	Highest Level Detected	Range of Levels Detected	Ideal Goals (EPA's MCLG's*)	Highest Level Allowed (EPA's MCL*)	Units	Violation	Source of Contamination
Chlorine	2018	1	1 - 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive to control microbes.
Haloacetic Acids (HAA5)	2018	27.2	9.2 - 54.7	No Goal for the Total	60	ppb	N	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2018	45.8	27 - 77.7	No Goal for the Total	80	ppb	N	By-product of drinking water disinfection

Violations Table

Haloacetic Acids (HAA5)			
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), Major	06/01/2018	08/31/2018	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Total Trihalomethanes (TTHM)

Total Trihalomethanes (TTHM)			
Some people who drink water containing trihalomethane acids in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), Major	06/01/2018	08/31/2018	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

ADDITIONAL INFORMATION:

Data list is from 2018 or the most recent testing in accordance with regulations. No samples were above Allowable Limits. Not listed are the numerous other contaminants for which we tested that were not detected. We are proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

In Addition to producing our own water, Brown County Water Utility purchases water from Citizens Energy Group and Jackson County. The following information is provided as required relative to those supplies.

*DEFINITIONS:

90th Percentile - Ninety percent of samples had lower values than the value indicated.

Action level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

CFU/ml - Colony forming units per milliliter.

Colony Forming Unit - An area of visually distinct bacterial growth which may result from a single bacterium or pairs, clusters or chains of bacteria.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water 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 microbial contamination.

pCi/l - Picocuries per liter is a measure of radioactivity in water. A picocurie is 10⁻¹² curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

ppm - parts per million. Equivalent to milligrams per liter (mg/l).

ppb - parts per billion. Equivalent to micrograms per liter (ug/l)

Total Organic Carbon (TOC) - a measurement of natural and man-made organic material in the water. TOC reacts with disinfectants to form disinfection by-products.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

ADDITIONAL INFORMATION:

- Total Organic Carbon (TOC) removal percentages ranged from 30.1% to 48%.
- Turbidity levels ranged from 0.02 to 0.13 with an average of 0.04 Turbidity units. The level of compliance on a monthly basis was 100%.
- Data listed are from 2015 and are the most recent testing done in accordance with regulations.
- One site exceeded the Action Level for Lead. No sites exceeded the Action Level for Copper.
- Violation notation is due to Alkalinity and Hardness levels collected during sampling were not within the range recognized by IDEM for providing corrosion control. This is due to the source water not having enough alkalinity or hardness. CBU continues to evaluate methods to increase alkalinity and hardness in our water treatment process.
- Chloramine levels ranged from 1.18 to 3.2 ppm, with an average of 2.38 ppm.
- Fluoride levels ranged from 0.27 to 1.13 ppm, with an average of 0.72 ppm.
- Total Trihalomethane levels ranged from 31.9 to 90.4 ppb. Some people who drink water containing Trihalomethanes in excess of the MCL over many years could experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer.
- Haloacetic acids (HAA5) levels ranged from 22.0 to 81.0 ppb. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

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. We are responsible for providing high quality drinking water, but we 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 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>.