

Drinking Water Quality Report
Department of Water Works, Greencastle, IN
March 31, 2019

The Greencastle Utility is pleased to present a summary of the drinking water quality that was supplied to you in 2018. This information contains several details including where your water comes from, substances detected in the water, plus additional information for general knowledge.

In accordance with IDEM's primacy commitments to U.S. EPA (40 CFR 142.16(b)(2)(B)) IDEM is required to make determinations concerning whether systems using a ground water source are under the direct influence (GWUDI) of surface water. This analysis is to look at the construction of the well, the distance to above-ground surface water features, the depth of the well, the geology of the area in which the well is located, the bacteriological content of the well's water, and the temperature or turbidity fluctuations (if available).

Where does our water come from?

Our ground water source originates in the alluvial sand and gravel deposits along Big Walnut Creek. These deposits occurred during the last ice age. Our water source is routinely monitored for both chemical and biological substances by the water department staff, by state and private laboratories, and on occasion by private individuals. Should you have questions or comments concerning this report, the Wellhead Program, or your utility, please contact Edwin Phillips, Superintendent, Greencastle Utilities. We want all of our customers to have access to information concerning their water utility. If you would like to learn more, please attend any of our regularly scheduled meetings. Greencastle Board of Public Works and Safety: Scheduled meetings on the 3rd Wednesday of the month at 4:30 p.m. at City Hall, 1 N. Locust St.

Is our water safe?

The water department routinely monitors for constituents in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1st to December 31st, 2018. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It is important to remember that the presence of these small amounts of constituents does not necessarily pose a health risk. Some testing of contaminants is required less often than once a year; therefore, data is provided from the most recent year of testing. In the following tables, you will find many terms and abbreviations you might not be familiar with.

To help you better understand these terms, we have provided the following definitions.

ppm (Parts per Million) is a measure for the concentration equivalent to milligrams per liter.

Ppb (Parts per Billion) is a measure for concentration equivalent to micrograms per liter.

pCi/L (Picocuries per Liter) is a measure for radiation.

MCL (Maximum Contaminant Level) is the highest level of a contaminant that is allowed in drinking water.

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

MRDML (Maximum Residual Disinfectant Level) is the highest level of disinfectant allowed in drinking water.

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

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

AL (Action Level) is the concentration of a contaminant which when exceeded, triggers treatment or other requirements or action which a system must follow.

NTU (Nephelometric Turbidity Unit) is a measure of the clarity (or cloudiness of water).

The following tables show contaminants that were detected in Greencastle's water supply, however, these levels were low and do not pose a health risk to the general population.

Regulated Inorganic Contaminants Detected

Date	Contaminant	MCL	MCLG	Unit of Measure	Result	Min	Max	Violates	Likely Source of Contamination
Valid until 2020	Lead	15 AL	0	ppb	1.5			NO	Corrosion of household plumbing systems; Erosion of natural deposits
Valid until 2020	Copper	1.3 AL	1.3	ppm	1.3			NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
1/08/2018	Arsenic	0.010		mg/l	BDL			NO	Erosion of natural deposits. Runoff from Orchards. Runoff from glass & electronics production wastes
1/08/2018	Nitrate	10		mg/l	.520			NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
1/08/2018	Fluoride Adjusted	2.0		mg/l	.862			NO	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.

All other **Inorganic Chemicals** were below detection level (BDL).

Regulated Volatile Organic Compounds (VOC's) were below detection level (BDL).

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection	Highest Level	Range of	MCLG	MCL	Units	Violation	Likely Source of
Chlorine	2018	1	1 - 1	MRDLG = 4	MRDL =	ppm	N	Water additive used to control microbes.
Gross alpha excluding radon and uranium	02/23/2016	.645	0.645-0.645	0	15	pCi/L	N	Erosion of natural deposits.

Turbidity

	Limit (Treatment)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.25 NTU	N	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff

Information Statement: Turbidity is a measurement of the cloudiness of water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.

Disinfection Byproducts (4 samples of each)

Date	Contaminant	MCL	MCLG	Unit of Measure	Result	Min	Max	Violates	Likely Source of Contamination
2018 Quarterly	Total Haloacetic Acids (HAA5)	60		ppb		7.0	20.3	NO	By Product of drinking water disinfection
2018 Quarterly	Total Trihalomethanes TTHM	80		ppb		10.8	62.6	NO	By Product of drinking water disinfection

Synthetic Organic Compounds (SOC's) were tested quarterly in 2018. All compounds tested were below detection level (BDL).

Detected Special Monitoring & Unregulated Substances				
Substance	Level Detected	Unit Measurement	MCL	Likely source of Contamination
Sodium	1.8	ppm	None	Sodium is listed for the benefit of people who wish to monitor their Sodium consumption

Greencastle's drinking water has an average total hardness of 342 ppm or 20 grains/gallon. This is a common question.

Lead In Drinking Water: 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 Greencastle Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components at your residence. 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 (1-800-426-4791), or at <http://www.epa.gov/safewater/lead>. For more information please contact Edwin Phillips at the Greencastle Water Treatment Facility (765-848-1794).

First of all, MCL's are set at very strict levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. We have learned through our monitoring and testing that some constituents have been detected, however, as you can see from our tables, our system had no violations. Once again, we are happy to report that your drinking water meets or exceeds all Federal and State requirements.

In Addition, all sources of drinking water are subject to potential contamination. 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:

- 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 that 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 Administrations (FDA) regulations establish limits for contaminants in bottled water that 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 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as people 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).

Greencastle water was judged #1 in a taste test at the Alliance of Indiana Rural Water Spring Conference held in French Lick, Indiana.

The Greencastle Utility works 24/7 to provide you with top quality drinking water.

Thank you for taking the time to read our Water Quality Report. We hope we have answered any concerns you might have had. Once again we welcome your comments.