

City of Greenville



Drinking Water
Consumer Confidence Report
For 2017

Introduction

The City of Greenville has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. In 2017, we completed the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) sampling, installed a new river pump, and new well pump.

Source Water Information

The City of Greenville has two sources of water, the Greenville Creek and eight wells located East and South of the treatment plant. Seventy-eight percent of the water treated is from Greenville Creek. During periods of high turbidity in the stream, groundwater from the wells is utilized. The City of Greenville has an endorsed Wellhead Protection Plan and Source Water Assessment Plan.

For the purposes of source water assessments, all surface waters are considered to be susceptible to contamination. By their nature surface waters are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel times from source to the intake. Based on the information compiled for this assessment, the City of Greenville surface water source protection area is most susceptible to contamination from agricultural, residential and commercial sources, and from accidental releases and spills. Ground water is generally less susceptible to contamination than surface water, and the aquifer used by the City of Greenville water system has a degree of protection from an overlying layer of low-permeability sediments. However, combined systems such as Greenville's mix surface water and ground water together before distributing it to the public. In these cases, for the sake of being protective, the susceptibility rating is based on the more susceptible source. Therefore, the overall susceptibility rating for the City of Greenville's water system is high. It is important to note that this assessment is based on available data, and therefore may not reflect current conditions in all cases. Water quality, land uses and other activities that are potential sources of contamination may change with time. While the source water for the City of Greenville Public Water System is considered susceptible to contamination, historically, Greenville has effectively treated this source water to meet drinking water quality standards. Copies of the source water assessment report prepared for the City of Greenville are available at <http://wwwapp.epa.ohio.gov/gis/swpa/OH1900714.pdf> or by contacting Gary J. Evans II, Water Superintendent.

What are sources of contamination to drinking water?

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: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) Organic chemical

contaminants, 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; (E) Radioactive contaminants, 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, USEPA prescribes regulations which 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 Federal Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Who needs to take special precautions?

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

About your drinking water.

The EPA requires regular sampling to ensure drinking water safety. The City of Greenville conducted sampling for bacteria, inorganic, synthetic organic, and volatile organic during 2017. Samples were collected for a total of fifty-five different contaminants most of which were not detected in the City of Greenville water supply. The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

Turbidity

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the samples analyzed each month and shall not exceed 1 NTU at any time. As reported above, the City of Greenville's highest recorded turbidity result for 2017 was 2 NTU and lowest monthly percentage of samples meeting the turbidity limits was 99.9%.

Violations

The City of Greenville had a treatment technique violation during the month of November, 2017. 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. City of Greenville took and continues to take the following steps to correct this violation and prevent future violations from occurring:

The City of Greenville Water Department took bacteriological samples throughout system. The faulty filter was taken offline, and a repair was performed to put filter back in operation. Several critical components are on order to be installed in 2018 on all filters in an effort to prevent this from occurring again.

Lead Educational Information

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. City of Greenville 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Cryptosporidium Information.

City of Greenville monitored for Cryptosporidium in the source water during 2017. Cryptosporidium was detected in two of twelve samples collected from the source water. Cryptosporidium is a microbial 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 of source water and/or finished water indicate the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing a life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Revised Total Coliform Rule (RTCR) Information

All water systems were required to begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the Public Water System (PWS).

License to Operate (LTO) Status Information

In 2017 we had an unconditioned license to operate our water system.

How do I participate in decisions concerning my drinking water?

Public participation and comment are encouraged at regular meetings of Greenville City Council which meets the first and third Tuesday of each month at 7:30pm at 100 Public Square. For more information on your drinking water contact Gary J. Evans II at 548-2415 or the Utility Billing Office at 548-1815.

Table of Detected Contaminants

Listed below is information on those contaminants that were found in the City of Greenville drinking water.

| Contaminants (Units) | MCLG | MCL | Level Found | Range of Detections | Violation | Sample Year | Typical Source of Contaminants |
|-------------------------------------|---|--------------------------------|-----------------------------------|---------------------|--------------|----------------------------------|---|
| Microbiological Contaminants | | | | | | | |
| Turbidity (NTU) | NA | TT | 2 | 0.02-2 | Yes | 2017 | Soil runoff. |
| Turbidity (% meeting standard) | NA | TT | 99.9% | 99.9%-100% | No | 2017 | |
| Inorganic Contaminants | | | | | | | |
| Nitrate (ppm) | 10 | 10 | 4.7 | 0.1-4.7 | No | 2017 | Runoff from fertilizer use; Erosion of natural deposits. |
| Fluoride (ppm) | 4 | 4 | 0.23 | 0.23 | No | 2017 | Erosion of natural deposits discharge from aluminum and fertilizer factories; water additive. |
| Disinfection Byproducts | | | | | | | |
| Total Trihalomethanes TTHM (ppb) | 0 | 80 | 56.0 | 17.2-82.8 | No | 2017 | By-product of drinking water chlorination. |
| Haloacetic Acids HAA5 (ppb) | 0 | 60 | 14.5 | 6.0-17.3 | No | 2017 | By-product of drinking water chlorination. |
| Residual Disinfectants | | | | | | | |
| Total Chlorine (ppm) | MRDLG 4 | MRDL 4 | 1.29 | 1.04-1.57 | No | 2017 | Water additive used to control microbes. |
| Lead and Copper | | | | | | | |
| Contaminants (units) | Action Level (AL) | Individual Results over the AL | 90% of test levels were less than | Violation | Year Sampled | Typical source of Contaminants | |
| Lead (ppb) | 15 | NA | 5.0 | No | 2016 | Corrosion of household plumbing. | |
| | 0 out of 30 samples were found to have lead levels in excess of the lead AL of 15 ppb. | | | | | | |
| Copper (ppm) | 1.3 | NA | 0.050 | No | 2016 | Corrosion of household plumbing. | |
| | 0 out of 30 samples were found to have copper levels in excess of the copper AL of 1.3 ppm. | | | | | | |

| Total Organic Carbon (TOC) | | | | | | |
|----------------------------|---|-------------|-------------------------|-----------|--------------|---------------------------------------|
| MCL | Minimum Ratio of % removal to require % removal | Level Found | Range of Monthly ratios | Violation | Year Sampled | Typical source of Contaminants |
| TT | 1 | 1 | 1-1 | No | 2017 | Naturally present in the environment. |

| Unregulated Contaminants* | | | | | | |
|---------------------------|---------|--------------|--|--|--------------|---|
| Contaminants (Units) | Average | Range | | | Year Sampled | Typical source of Contaminants |
| Chloride (ppm) | 45.5 | 45.5 | | | 2017 | Erosion of natural deposits. |
| Sulfate (ppm) | 89.8 | 89.8 | | | 2017 | Erosion of natural deposits. |
| Sodium (ppm) | 42.8 | 42.8 | | | 2017 | Erosion of natural deposits; leaching. |
| UCMR3 | | | | | | |
| Total Chromium (ppb) | 0.245 | <0.2-0.35 | | | 2014 | As part of an on-going evaluation program the EPA has required us to monitor some additional contaminants/chemicals. Information collected through the monitoring of these contaminants/chemicals will help to ensure that future decisions on drinking water standards are based on sound science. |
| Chromium-6 (ppb) | 0.213 | 0.10-0.28 | | | 2014 | |
| Molybdenum (ppb) | 5.051 | 4.63-5.61 | | | 2014 | |
| Strontium (ppb) | 269.27 | 212.6- 293.6 | | | 2014 | |
| Vanadium (ppb) | 0.362 | 0.28-0.51 | | | 2014 | |

*Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Definitions of some terms contained within this report.

- Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Contaminant level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- 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 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 contaminants.
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- Parts per Million (ppm) or Milligrams per Liter (mg/L) are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.
- Parts per Billion (ppb) or Micrograms per Liter (µg/L) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- The "<" symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.