

# 2016 Annual Drinking Water Quality Report

## City of Gatlinburg Water System

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the effort we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. We are pleased to report that our drinking water is safe and meets all State and Federal requirements. This report shows our water quality and what it means. *Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.*

Our water source is the Gatlinburg Water Department Water Treatment Plant located at 916 River Road in Gatlinburg Tennessee, 37738. The plant has a rated capacity to treat and produce (2) two million gallons of drinking water a day. The treatment plant uses a conventional treatment process to produce safe quality drinking water. The Gatlinburg Water Treatment Plant draws its surface water from the West Prong of the Little Pigeon River. We also purchase water from the City of Pigeon Forge.

Our goal is to protect our water from contaminants. The Tennessee Department of Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the water supplies serving water to this system. Our water was rated as moderately susceptible to potential contamination. A plan is available for your review at the Water Department office, 405 Reagan Drive, Suite #1. The Source Water Assessment Plan can also be viewed online at <https://www.tn.gov/environment/article/wr-wq-source-water-assessment> or TDEC at 1-888-891-TDEC to obtain copies.

If you have any questions about this report or concerning your water quality, please contact Mr. Dale Phelps, Utilities Manager, at (865) 436-4681. We want our valued customers to be informed about their water quality. If you would like to learn more, you are welcome to attend any of the regularly scheduled City Commission meetings typically held at 6:00 p.m. on the first Tuesday after the first of each month, and on the first Tuesday after the fifteenth of each month in the Council Room at Gatlinburg City Hall.

The Gatlinburg Water System, PWSID 0000256, routinely monitors for contaminants in your drinking water according to State and Federal laws. The table in this report shows the results of our monitoring for the period of January 1 to December 31, 2016. All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose 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.

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 Gatlinburg Utility Department 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>.

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:

- *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 stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.*
- *Pesticides and herbicides, from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.*
- *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 stormwater runoff, and septic systems.*
- *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, EPA and the Tennessee Department of Environment and Conservation prescribe 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer, undergoing chemotherapy, persons who have undergone an organ transplant, people with HIV/aids or other immune system disorders, some elderly and infants can be 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 at 1-800-426-4791.

### 2016 Gatlinburg Water Quality Data

Contaminant	MCLG in CCR Units	MCL in CCR Units	Level Found in CCR Units	Number of Samples Exceeding Action Level	Range of Detections	Violations	Date of Sample	Typical Source of Contaminant
<i>Microbiological Contaminants</i>								
Total Coliform Bacteria	0	1 positive	0	0		none	2016	Naturally present in the environment
Turbidity*	n/a	TT	.30 NTU	0	.06 to .30	none	2016	Soil runoff
TOC**	n/a	TT	0.69	0	.53 to .69	none	2016	Precursor for control of disinfection byproducts
<i>Inorganic Contaminants</i>								
Asbestos	0	7 MFL	BDL	0		none	4/20/2011	Decay of asbestos cement pipe, erosion of natural deposits
Copper (ppm)	1.3	AL = 1.3	90%=0.045	0 of 30		none	9/2/2014	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	4	4 ppm	.79 avg 4 qtrs	0	.77 to .81 ppm	none	2016	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (ppb)	0	AL = 15 ppb	90% = 2.5	0 of 30		none	9/2/2014	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate (as nitrogen)	10	10 ppm	ND	0		none	11/2/2016	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion from natural deposits
Sodium	n/a	n/a	10 ppm	0		none	1/5/2016	Naturally present in the environment
Trihalomethanes	0	80 ppb	42 ppb avg	0	10 to 77 ppb	none	4 qtrs in 2016	Byproduct of drinking water disinfection
Total Haloacetic Acids	n/a	60 ppb	34 ppb avg	0	12 to 60 ppb	none	4 qtrs in 2016	Byproduct of drinking water disinfection
Chlorine	MRDL 4.0 ppm	MRDLG 4.0 ppm	2.0 ppm avg	0	0.8 to 2.4 ppm	none	2016	Water additive disinfectant used to control microbes

*About the Data: Most of the data presented in this table is from testing done between January 1 and December 31, 2016. We monitor for some contaminants less than once per year, and for these contaminants the date of the last sample is shown in this table. The terms and abbreviations used in this report may be unfamiliar - we have provided definitions and explanation below.*

\*Turbidity - To comply with the TT, 95% of turbidity samples must be less than 0.3 NTU. Our filter plant met this standard in 99.9% of samples taken during 2016.

\*\*TOC (Total Organic Carbon) - During the calendar year 2016, our system was required to achieve a 35% reduction in TOC. We met the treatment technique for TOC.

\*\*\*Trihalomethanes - While our drinking water meets EPA standards for trihalomethanes, it does contain low levels. Some people who drink water containing trihalomethanes 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 cancer.

Below Detection Limit (BDL): Laboratory analysis indicates the constituent is not present.

Parts per million (PPM) or milligrams per liter (mg/L): One part per million corresponds to one minute in two years, or a single penny in \$10,000.

Parts per billion (ppb) or micrograms per liter: One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10 million dollars.

Million fibers per Liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Although not posing any risk to health, we monitor turbidity as an indication that our filtration system is working properly.

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.

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

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

Maximum Residual Disinfection Level (MRDL): The highest level of a disinfectant allowed in drinking water.

Maximum Residual Disinfection 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 contaminants.