



**Annual Drinking Water Quality Report for 2011
City of Gatlinburg Water System #256**

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 everyday. 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.

Our water source is the Gatlinburg Utility 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 Plant Office, 916 River Road. The Source Water Assessment Plan can also be viewed online at www.tn.gov/environment/dws/dwassess.shtml or TDEC at 1-888-891-TDEC to obtain copies.

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.

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 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 Source Water Assessment report is also available for review at the Gatlinburg Water Plant and the Anna Porter Public Library.

The Gatlinburg Water System 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, 2011. 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 storm water 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, urban storm water 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 storm water 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 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 at 1-800-426-4791.

In the table included in this report you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms we provide the following definitions:

Below Detection Limit (BDL) - Laboratory analysis indicates that 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 \$10,000,000

Million fibers per liter (MFL) - Million fibers per liter is 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. Turbidity does not pose any risk to your health. We monitor turbidity as an indication that our filtration system is functioning 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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level, or (MCL) - The "Maximum Allowed" is 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, or (MCLG) - The "Goal" is the level of a contaminant in drinking water which there is no known or expected risk to health. MCLGs allow for a margin of 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Gatlinburg Drinking Water Quality Data 2011

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
Microbiological Contaminants								
Total Coliform Bacteria	0	1 Positive	0	0		none	2011	Naturally present in the environment
Turbidity*	n/a	TT	.41 NTU	0	0.06 to .41	none	2011	Soil runoff
TOC **	n/a	TT	0.81	0	.52 to 0.81	none	2011	Precursor for control of disinfection by-products
Inorganic Contaminants								
Asbestos	0	7 M FL	BDL	0		none	4-20-11	Decay of asbestos cement pipe, erosion of natural deposits.
Copper (ppm)	1.3	AL=1.3	90%=0.045	0 of 23		none	6-21-11	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	4	4 ppm	1.03 Avg. 4 Qtrs.	0	.94 to 1.10 ppm	none	2011	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 23		none	6-21-11	Corrosion of household plumbing systems; erosion of natural deposits

Nitrate (as Nitrogen)	10	10 ppm	.32	0		none	11-1-11	Run-off from fertilizer use; leaching from septic tanks; sewage; erosion from natural deposits
Sodium	n/a	n/a	11 ppm	0		none	1-12-11	Naturally present in the environment
Trihalomethanes ***	0	80 ppb	38 ppb Avg.	0	13 to 113 ppb	none	4 Qtrs in 2011	By-product of drinking water chlorination
Total Haloacetic Acids	n/a	60 ppb	22 ppb Avg.	0.0	9 to 55 ppb	none	4 Qtrs in 2011	By-product of drinking water chlorination
Chlorine	MRDL 4.0 ppm	MRDLG 4.0 ppm	2.0 ppm Avg.	0	0.8 to 2.3 ppm	none	2011	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, 2011. We monitor for some contaminants less than once per year, and for these contaminants, the date of the last sample is shown in the table.

* **Turbidity** = To comply with the TT, 95% of turbidity samples must be less than 0.3 N.T.U. Our filter plant met this standard in 99.8% of samples taken during 2011.

** **TOC (Total Organic Carbon)** = During calendar year 2011, our system was required to achieve a 35% reduction in TOC (Total Organic Carbon). We met the treatment technique requirement for Total Organic Carbon.

*** **Trihalomethanes** = While our drinking water meets EPA's standard 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 getting cancer.