

Unregulated Contaminants

The City of Gastonia did test for Cryptosporidium during the past year and none were detected.

The City of Gastonia has tested for Radon and none was found to be present in our drinking water.

Additional Contaminants Monitored

The City of Gastonia monitored an additional 97 contaminants that were all below detection limits.

The City of Gastonia conducts over 27,000,000 tests and readings on our drinking water per year. This testing helps us ensure that our water is of the highest quality possible and meets our exceptional standards.

What EPA Wants You To Know

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 Environmental Protection Agency's Safe Drinking Water Hotline: (800-426-4791).

Some persons 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/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 (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 City of Gastonia 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>.

In order to ensure that tap water is safe to drink, EPA 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.

*Center for Disease Control

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Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section and SWAP conducted assessments for all drinking water sources across North Carolina. The purpose of the assessment was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of High, Moderate or Lower.

The relative susceptibility rating of the source for the City of Gastonia was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name:	Mt. Island Lake
Susceptibility Rating:	Higher (March 21, 2009)

The complete SWAP Assessment report for the City of Gastonia may be viewed on the Web at: <http://www.deh.enr.state.nc.us/pws/swap> with the system name of Gastonia, City of. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program—Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634 or email request to swap@ncmail.net. Please indicate your system name, PWSID and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-715-2633. **It is important to understand that a susceptibility rating of "higher" does not imply poor water quality. It refers to the system's potential to become contaminated by PCSs in the assessment area.**

More Facts EPA Wants You To Know

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 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, storm water runoff and residential uses.
- *Organic chemical contaminants* including synthetic and volatile organics, 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.



Department of Public
Works & Utilities
Water Supply & Treatment Division

2009 Annual Drinking Water Quality Report

PWSID #01-36-010

The City of Gastonia Water
Treatment Plant became an ISO
14001 Certified Facility in 2005
and an Environmental Steward in
2009



The City of Gastonia had no violations
for 2009.

How Safe is Our Drinking Water?

We are pleased to present to you this year's Annual Water Quality Report. This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and to providing you with this information because informed customers are our best allies.

For More Information

If you have any questions about this report or your water quality, please contact Lisa Richardson at (704) 854-6686.

You can also visit these websites to learn more about drinking water:
www.cityofgastonia.com
www.epa.gov/safewater/

You may also call about the next opportunity for public participation in decisions about our drinking water.

Water Quality Data Tables

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The following tables list all the drinking water contaminants that we detected in the last round of sampling for the particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 thru December 31, 2009.** The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations 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 a year old.

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

DEFINITIONS

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 a contaminant in drinking water below 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. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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.

DEFINITIONS (continued)

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

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Not Applicable (N/A): Information not applicable/not required for that particular water system or for that particular rule.

Parts per million (ppm) or Milligrams per liter (mg/L): one part per million corresponds to one minute in 2 years, or one penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/L): one part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.

Nephelometric Turbidity Unit (NTU): A measurement of the clarity of the water. Turbidity in >5 NTU is just noticeable to the average person.

Microbiological Contaminants					
Contaminant (units)	MCL Violation	Our Water	MCLG	MCL	Likely Source
Total Coliform Bacteria (Presence or Absence)	NO	0	0	5% of monthly samples positive	Naturally present in the environment
Fecal Coliform or E. coli (Presence or Absence)	NO	0	0	0*	Human and animal fecal waste

*Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive and one is also fecal coliform or E. coli positive.

Turbidity					
Contaminant (units)	MCL Violation	Our Water	MCLG	MCL	Likely Source
Turbidity (NTU)	NO	0.135*	N/A	TT=1	Soil runoff
		100%		TT = percentage of samples <0.3 NTU	

*This sample is the highest of 525,600 turbidities ran on our distribution water. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95 % or more of the monthly samples must be below 0.3 NTU. We met the turbidity standard 100% of the year.

Inorganic Contaminants						
Contaminant (units)	Sample Date	Our Water	MCL Violation	Range	MCL/MCLG	Likely Source
Fluoride (ppm)	7/30/09	1.04	NO	0.94/1.13	4/4	Erosion of natural deposits; Water Additive which supports strong teeth; discharge from fertilizer and aluminum factories

Lead and Copper Contaminants					
Contaminant (units)	Sample Date	Our Water	# of Sites above AL	MCL/MCLG	Likely Source
Copper (ppm) (90th percentile)	6/10/08	0.042	0	AL=1.3/1.3	Corrosion of household plumbing systems; Erosion of natural deposits, leaching from wood preservatives
Lead (ppb) (90th percentile)	6/04/08	<3	0	AL=15/0	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection By-Product Precursors Contaminants						
Contaminant (units)	Sample Date	Our Water (RAA)	MCL/TT Violation	Range (mg/L)	MCL/MCLG	Likely Source
Total Organic Carbon(ppm) (TOC) - Raw	12/08/09	1.89	NO	1.61/2.28	TT/NA	Naturally present in the environment
Total Organic Carbon(ppm) (TOC) - Treated	12/08/09	1.47	NO	1.18/1.92	TT/NA	Naturally present in the environment

Depending on the TOC in our source water, the system MUST have a certain % removal of TOC or must achieve alternative compliance criteria. Our water system uses Alternative Compliance Criteria 2 which means our treated water TOC must be <2.0 mg/L. If we fail to meet that we are in violation of a Treatment Technique.

Disinfection By-Product Contaminants					
Contaminant (units)	Our Water (AVG)	MCL/MRDL Violation	Range	MCL/MCLG	Likely Source
TTHM (ppb) Total Trihalomethanes	60	NO	32-92	80/NA	By-product of drinking water disinfection
HAA5 (ppb) Total Haloacetic Acids	37	NO	13-75	60/NA	By-product of drinking water disinfection
Chlorine (ppm)	1.07	NO	0.42-1.76	MRDL=4/MRDLG=4	Water additive used to control microbes

Our Water Source: The City of Gastonia is supplied by surface water from Mountain Island Lake. The Samuel L. Wilkins Raw Water Pumping Facility is located off Highway 273 on Mountain Island Lake, in northeastern Gaston County near Mt. Holly, N.C.