

**2013 Annual Water Quality Report**  
**(Monitoring Performed January through December 2012)**

**GREENVILLE WATER WORKS**  
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We are pleased to present to you this year's Annual Water Quality Report, which is designed to inform you about the quality water we deliver to you every day. 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.

<b>Number of Customers</b>	Approximately 3130	
<b>Water Sources</b>	6 groundwater wells producing from Ripley Formation	
	Purchased groundwater from Butler County Water Authority	
<b>Water Treatment</b>	Chlorine for disinfection	
<b>Storage Capacity</b>	3 tanks with a capacity of 1.75 million gallons	
<b>Additional Connections</b>	Sell water to Butler County Water Authority	
<b>Board Members</b>	Joby Norman, Chairman	Lionel Ed Rainey, Member
	Bill Lewis, Vice Chairman	James Reeves, Member
	James Lewis, Member	
<b>Superintendent</b>	Bruce Branum	

**Source Water Assessment**

In compliance with the Alabama Department of Environmental Management (ADEM), **Greenville Water Works** has developed a Source Water Assessment plan that will assist in protecting our water sources. This plan provides additional information such as potential sources of contamination. It includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible (low) to contaminating the water source. All of the potential contaminants sited in our study area were ranked as low. The assessment has been performed, public notification has been completed, and the plan has been approved by ADEM. A copy of the report is available in our office for review, or you may purchase a copy upon request for a nominal reproduction fee. Please help us make this effort worthwhile by protecting our source water. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil.

**Monitoring Schedule**

**Greenville Water Works** routinely monitors for constituents in your drinking water according to Federal and State laws. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

<b>Constituents Monitored</b>	<b>Greenville</b>	<b>Butler Co</b>
Inorganic Contaminants	2010	2010
Lead/Copper	2011	2010
Microbiological Contaminants	current	current
Nitrates	2012	2012
Radioactive Contaminants	2011	2010
Synthetic Organic Contaminants (including herbicides and pesticides)	2012	2010
Volatile Organic Contaminants	2011	2010
Disinfection By-products	2012	2012
Unregulated Contaminant Monitoring Rule (UCMR2) contaminants	--	2010

## General Information

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent 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.

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 radioactive material, and it 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 run-off, 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 run-off, 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 prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

Based on a study conducted by ADEM with the approval of the EPA a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for these contaminants was not required.

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 infections. People at risk 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 (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. Your water system 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>.

## Questions?

If you have any questions about this report or concerning your water utility, please contact **Bruce Branum**, at (334) 382-6663. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on **the fourth Tuesday of every month at 11:00 a.m. at City Hall, 119 East Commerce Street.**

*More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).*

As you can see by the table below, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected. We are pleased to report that our drinking water meets federal and state requirements.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS							
Contaminants	Violation Y/N	Greenville	Butler Co	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	--	1.7 ± 1.6	PCi/l	0	15	Erosion of natural deposits
Copper	NO	0.101 * 0 > AL	--	ppm	1.3	AL=1.3	Corrosion of plumbing; erosion of natural deposits; leaching from wood preservatives
Fluoride	NO	0.32-0.58	0.31-0.59	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from factories
Lead	NO	ND ** 1 > AL	--	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	NO	ND-0.50	0.20-0.21	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	5.28-88.3	RAA 44.4 ND-176	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	2.41-9.92	RAA 5.17 ND-15.0	ppb	0	60	By-product of drinking water chlorination
<b>Unregulated Contaminants</b>							
Bromodichloromethane	NO	ND-1.03	ND	ppb	n/a	n/a	Naturally occurring in the environment or from runoff
Chlorodibromomethane	NO	ND-3.28	ND-1.28	ppb	n/a	n/a	Naturally occurring in the environment or from runoff
Bromoform	NO	ND-10.8	ND-2.93	ppb	n/a	n/a	Naturally occurring in the environment or from runoff
<b>Secondary Contaminants</b>							
Chloride	NO	7.26-91.2	57.8-99.8	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Hardness	NO	6.11-29.3	4.09-9.34	ppm	n/a		Naturally occurring in the environment or as a result of treatment with water additives
Iron	NO	0.ND-0.07	ND	ppm	n/a	0.30	Naturally occurring in the environment; erosion of natural deposits; leaching from pipes
pH	NO	8.21-8.42	7.93-8.47	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO	76.1-195	174-216	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	17.3-62.1	30.4-37.8	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	NO	236-488	412-488	ppm	n/a	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff

\* Figure shown is 90<sup>th</sup> percentile and # of sites above action level (1.3 ppm) = 0

\*\* Figure shown is 90<sup>th</sup> percentile and # of sites above Action Level (15.0 ppb) = 1

Definitions
Action Level (AL)- the concentration of a contaminant that, if exceeded, triggers some follow-up action
ADEM - Alabama Department of Environmental Management - Alabama's environmental regulatory agency.
Coliform Absent (ca) - Laboratory analysis indicates coliform bacteria not present.
Disinfection byproducts are formed when disinfectants used in water treatment plants react with natural organic matter present in the source water and produce byproducts.
EPA - Environmental Protection Agency - the nation's environmental regulatory agency.
Initial Distribution System Evaluation (IDSE) - a one-time study conducted by water systems to monitor disinfection byproducts.
Maximum Contaminant Level (MCL)- highest level of contaminant allowed in drinking water.
Maximum Contaminant Level Goal (MCLG)-the level of a contaminant in drinking water below which there is no known or expected risk to health.
Millirems per year (mrem/yr) - measure of radiation absorbed by the body.
Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water.
Not Applicable (NA) Not applicable to water system because not required
Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present at a detectable level.
Not Required (NR) - laboratory analysis not required due to waiver.
Parts per billion (ppb) or Micrograms per liter (µg/l)-corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
Parts per million (ppm) or Milligrams per liter (mg/l)-corresponds to one minute in two years or a single penny in \$10,000.
Parts per quadrillion (ppq) or Picograms per liter (picograms/l)-corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000,000.
Parts per trillion (ppt) or Nanograms per liter (nanograms/l)-corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
Picocuries per liter (pCi/L)-a measure of the radioactivity in water.
Running annual average (RAA)-the required method of calculating compliance on disinfection byproducts, TTHM and HAA5.
Threshold Odor Number (TON) The greatest dilution of a sample with odor-free water that yields a barely detectable odor.
Treatment Technique (TT)-a required process to reduce a contaminant
Variations & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

At the end of this report is a *Table of Primary Drinking Water Contaminants*. These contaminants were *not* detected in your water unless they appear in the *Table of Detected Contaminants*.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
<b>Bacteriological Contaminants</b>			o-Dichlorobenzene	600	ppb
Total Coliform Bacteria	<5%	present or absent	p-Dichlorobenzene	75	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloroethane	5	ppb
Turbidity	TT	NTU	Nitrite	1	ppm
<b>Radiological Contaminants</b>			Total Nitrate and Nitrite	10	ppm
Beta/photon emitters	4	mrem/yr	Selenium	50	ppb
Alpha emitters	15	pCi/l	Thallium	2	ppb
Combined radium	5	pCi/l	<b>Organic Contaminants</b>		
Uranium	30	pCi/l	2,4-D	70	ppb
<b>Inorganic Chemicals</b>			2,4,5-TP(Silvex)	50	ppb
Antimony	6	ppb	Acrylamide	TT	ppm
Arsenic	10	ppb	Alachlor	2	ppb
Asbestos	7	MFL	Benzo(a)pyrene [PAHs]	200	ppt
Barium	2	ppm	Carbofuran	40	ppb
Beryllium	4	ppb	Chlordane	2	ppb
Cadmium	5	ppb	Dalapon	200	ppb
Chromium	100	ppb	Di (2-ethylhexyl)adipate	400	ppb
Copper	AL=1.3	ppm	Di (2-ethylhexyl)phthalate	6	ppb
Cyanide	200	ppb	Dinoseb	7	ppb
Fluoride	4	ppm	Diquat	20	ppb
Lead	AL=15	ppb	Dioxin [2,3,7,8-TCDD]	30	Picograms/l
Mercury	2	ppb	Chloramines	4	ppm
Nitrate	10	ppm	Chlorite	1	ppm
Endothall	100	ppb	Total haloacetic acids	60	ppb
Endrin	2	ppb	1,1-Dichloroethylene	7	ppb
Epichlorohydrin	TT	ppm	cis-1,2-Dichloroethylene	70	ppb
Glyphosate	700	ppb	trans-1,2-Dichloroethylene	100	ppb
Heptachlor	400	Nanograms/l	Dichloromethane	5	ppb
Heptachlor epoxide	200	Nanograms/l	1,2-Dichloropropane	5	ppb
Hexachlorobenzene	1	ppb	Ethylbenzene	700	ppb
Hexachlorocyclopentadiene	50	ppb	Ethylene dibromide	50	ppt
Lindane	200	Nanograms/l	Styrene	100	ppb
Methoxychlor	40	ppb	Tetrachloroethylene	5	ppb
Oxamyl [Vydate]	200	ppb	1,1,1-Trichloroethane	200	ppb
Oxamyl [Vydate]	200	PCBs	1,1,2-Trichloroethane	5	ppb
Pentachlorophenol	1	ppb	Trichloroethylene	5	ppb
Picloram	500	ppb	Total trihalomethanes	80	ppb
Simazine	4	ppb	Toluene	1	ppm
Toxaphene	3	ppb	Vinyl Chloride	2	ppb
Benzene	5	ppb	Xylenes	10	ppm
Carbon tetrachloride	5	ppb	Chlorine	4	ppm
Chlorobenzene	100	ppb	Chlorine Dioxide	800	ppb
Dibromochloropropane	200	ppt	Bromate	10	ppb
<b>UNREGULATED CONTAMINANTS</b>					
1,1 – Dichloropropene	Aldicarb	Chloroform	Metolachlor		
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Chloromethane	Metribuzin		
1,1,2,2-Tetrachloroethane	Aldicarb Sulfoxide	Dibromochloromethane	N - Butylbenzene		
1,1-Dichloroethane	Aldrin	Dibromomethane	Naphthalene		
1,2,3 - Trichlorobenzene	Bromobenzene	Dicamba	N-Propylbenzene		
1,2,3 - Trichloropropane	Bromochloromethane	Dichlorodifluoromethane	O-Chlorotoluene		
1,2,4 - Trimethylbenzene	Bromodichloromethane	Dieldrin	P-Chlorotoluene		
1,3 – Dichloropropane	Bromoform	Hexachlorobutadiene	P-Isopropyltoluene		
1,3 – Dichloropropene	Bromomethane	Isopropylbenzene	Propachlor		
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene		
2,2 – Dichloropropane	Carbaryl	Methomyl	Tert - Butylbenzene		
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorofluoromethane		