

# 2011 ANNUAL WATER QUALITY REPORT

Testing performed January through December 2011



# Guntersville Water Board

# TABLE OF DETECTED DRINKING WATER CONTAMINANTS

Contaminants	Violation Y/N	WTP Detected	Well Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Chlorine	No	1.6-2.6	2.1-2.6	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
Turbidity	No	Highest 0.29 100% <0.5	ND	NTU	n/a	TT	Soil runoff
Total Organic Carbon	No	1.6-3.8	n/a	ppm			Soil runoff
Copper	No	0.202* 0 > AL		ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	0.73	0.83	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	No	0.37	1.38	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Tetrachloroethylene	No	ND	.68	ppb	0	5	Discharge from metal degreasing sites and other factories
TTHM [Total trihalomethanes]	No	Avg. 39.3 6.59-73.8		ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	No	Avg. 32.3 8.92-68.3		ppb	0	60	By-product of drinking water chlorination

## Unregulated Contaminants

Chloroform	No	15.6	2.48	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Bromodichloromethane	No	3.17	ND	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff

## Secondary Contaminants

Chloride	No	18.1	9.14	ppm	n/a	250	Naturally occurring in the environment or as a result of agricultural runoff
Hardness	No	72.9	99.2	ppm	n/a		Naturally occurring in the environment or as a result of treatment with water additives
pH	No	8.01	7.32	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	No	7.14	3.55	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	No	16.2	1.92	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	No	132	132	ppm	n/a	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff

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

*As you can see by the above table, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels. We are pleased to report that our drinking water is safe and meets federal and state requirements. This report shows our water quality and what it means.*

*Guntersville Water Board conducted an Initial Distribution System Evaluation (I.D.S.E.) in 2008 and early 2009 to further study disinfection byproduct levels in our drinking water.*

CONSTITUENT MONITORED	DATE MONITORED
Inorganic Contaminants	2011
Lead/Copper	2010
Microbiological Contaminants	Current
Nitrates	2011
Radioactive Contaminants	2003
Synthetic Organic Contaminants (including pesticides and herbicides)	2010
Volatile Organic Contaminants	2010
Disinfection By-products	2011
UCMR2 (Unregulated Contaminant Monitoring Rule) Contaminants	2010
Cryptosporidium	2009

## Definitions

In this report you may find terms and abbreviations with which you might not be familiar. To help you better understand these terms we've provided the following definitions:

**Action Level** - the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.

**Coliform Absent (ca)** - Laboratory analysis indicates that the contaminant is not present.

**Disinfection byproducts** – are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established include trihalomethanes (THM), haloacetic acids (HAA5), bromate, and chlorite.

**Initial Distribution System Evaluation (IDSE)** - a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

**Maximum Contaminant Level** - (mandatory language) The Maximum Allowed (MCL) 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** - (mandatory language) The Goal (MCLG) is 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.

**Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.

**Nephelometric Turbidity Unit (NTU)** - a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present.

**Not Required (NR)** - laboratory analysis not required due to waiver granted by the Environmental Protection Agency for the State of Alabama.

**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.

**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 quadrillion (ppq) or Picograms per liter (picograms/l)** - one part per quadrillion 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)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.

**Treatment Technique (TT)** - (mandatory language) a required process intended to reduce the level of a contaminant in drinking water.

**Variations & Exemptions (V&E)** - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

# Monitoring Schedule

Guntersville Water Board routinely monitors for constituents in your drinking water according to Federal and State laws. Our report shows that during the past year, the water delivered to your home and business complied with or exceeded all state and federal drinking water regulations. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently; therefore, in these cases the most recent sample data are included. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule. TVA is conducting a herbicide spraying program on Guntersville Lake to help control aquatic weeds. For the year 2011 (see TVA chart below) no contaminants were found at detectable limits. As you can see by the Table of Detected Drinking Water contaminants, 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 is safe and meets federal and state requirements. This report shows our water quality and what it means.

## Standard List of Primary Drinking Water Contaminants

Contaminant	MCL	Unit of Msmt
<b>Bacteriological</b>		
Total Coliform Bacteria	<5%	present or absent
Fecal Coliform and E. Coli	0	present or absent
Turbidity	TT	NTU
<b>Radiological Contaminants</b>		
Beta/photon emitters	4	mrem/yr
Alpha emitters	15	pCi/l
Combined radium	5	pCi/l
Uranium	30	pCi/l
<b>Inorganic Chemicals</b>		
Antimony	6	ppb
Arsenic	10	ppb
Asbestos	7	MFL
Barium	2	ppm
Beryllium	4	ppb
Cadmium	5	ppb
Chromium	100	ppb
Copper	AL=1.3	ppm
Cyanide	200	ppb
Fluoride	4	ppm
Lead	AL=15.0	ppb
Mercury	2	ppb
Nitrate	10	ppm
Endothall	100	ppb
Endrin	2	ppb
Epichlorohydrin	TT	
Glyphosate	700	ppb
Heptachlor	400	Nanograms/l
Heptachlor epoxide	200	Nanograms/l
Hexachlorobenzene	1	ppb
Hexachlorocyclopentadiene	50	ppb
Lindane	200	Nanograms/l
Methoxychlor	40	ppb
Oxamyl [Vydate]	200	ppb
Oxamyl [Vydate]	200	PCBs
Pentachlorophenol	1	ppb
Picloram	500	ppb
Simazine	4	ppb
Toxaphene	3	ppb
Benzene	5	ppb
Carbon tetrachloride	5	ppb
Chlorobenzene	100	ppb
Dibromochloropropane	200	ppt
o-Dichlorobenzene	600	ppb
p-Dichlorobenzene	75	ppb
1,2-Dichloroethane	5	ppb
Nitrite	1	ppm
Total Nitrate and Nitrite	10	ppm
Selenium	50	ppb
Thallium	2	ppb
<b>Organic Contaminants</b>		
2,4-D	70	ppb
2,4,5-TP (Silvex)	50	ppb
Acrylamide	TT	
Alachlor	2	ppb

## Organic Contaminants

Benzo(a)pyrene [PAHs]	200	ppt
Carbofuran	40	ppb
Chlordane	2	ppb
Dalapon	200	ppb
Di (2-ethylhexyl)adipate	400	ppb
Di (2-ethylhexyl)phthalate	6	ppb
Dinoseb	7	ppb
Diquat	20	ppb
Dioxin [2,3,7,8-TCDD]	30	Picograms/l
Chloramines	4	ppm
Chlorite	1	ppm
HAA5 [Total haloacetic acids]	60	ppb
1,1-Dichloroethylene	7	ppb
cis-1,2-Dichloroethylene	70	ppb
trans-1,2-Dichloroethylene	100	ppb
Dichloromethane	5	ppb
1,2-Dichloropropane	5	ppb
Ethylbenzene	700	ppb
Ethylene dibromide	50	ppt
Styrene	100	ppb
Tetrachloroethylene	5	ppb
1,1,1-Trichloroethane	200	ppb
1,1,2-Trichloroethane	5	ppb
Trichloroethylene	5	ppb
TTHM [Total trihalomethanes]	80	ppb
Toluene	1	ppm
Vinyl Chloride	2	ppb
Xylenes	10	ppm
Chlorine	4	ppm
Chlorine Dioxide	800	ppb
Bromate	10	ppb

## Unregulated Contaminants

1,1 - Dichloropropene	Bromochloromethane	Isopropylbenzene
1,1,1,2-Tetrachloroethane	Bromodichloromethane	M-Dichlorobenzene
1,1,2,2-Tetrachloroethane	Bromoform	Methomyl
1,1-Dichloroethane	Bromomethane	MTBE
1,2,3 - Trichlorobenzene	Butachlor	Metolachlor
1,2,3 - Trichloropropane	Carbaryl	Metribuzin
1,2,4 - Trimethylbenzene	Chloroethane	N - Butylbenzene
1,3 - Dichloropropene	Chloroform	Naphthalene
1,3 - Dichloropropene	Chloromethane	N-Propylbenzene
1,3,5 - Trimethylbenzene	Dibromochloromethane	O-Chlorotoluene
2,2 - Dichloropropane	Dibromomethane	P-Chlorotoluene
3-Hydroxycarbofuran	Dicamba	P-Isopropyltoluene
Aldicarb	Dichlorodifluoromethane	Propachlor
Aldicarb Sulfone	Dicamba	Sec - Butylbenzene
Aldicarb Sulfoxide	Dichlorodifluoromethane	Tert - Butylbenzene
Aldrin	Dieldrin	Trichlorfluoromethane
Bromobenzene	Hexachlorobutadiene	

## TVA Herbicide Testing Results

	Date Sampled	Copper
Finished	6/07/2010	<0.50
Finished	6/23/2010	<0.50



## Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), Guntersville Water Board has completed a Source Water Assessment plan that will assist in protecting our water sources. This plan provides additional information such as potential contaminants as high, moderate, or non-susceptible to contamination of the water source. 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 during normal business hours, or you may purchase a copy upon request for a nominal reproduction fee.

## Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. The purpose of the law is to assure that the nation's water supply systems serving the public meet minimum national standards for the protection of public health. The SDWA directed the U.S. Environmental Protection Agency (EPA) to establish national drinking water standards. The 1996 Amendments to the SDWA created a need for Consumer Confidence Reports (Annual Water Quality Reports) to reveal to consumers the detected amounts of contaminants in their drinking water.

## Water Notes

Guntersville relies on surface water from the Tennessee River Brown's Creek embayment on Lake Guntersville at Sunset Treatment Plant and one groundwater well for our drinking water supply. We also purchase water from MUB-Albertville (surface water from Short Creek) to supply to our customers on Sand Mountain. Guntersville Water Board supplies drinking water to the customers of Asbury Water Authority in the Asbury-Martling community.

**Number of Customers:** Approximately 4300  
**Storage Capacity:** 10 tanks (4,950,000 gals)  
**Distribution System:** 120 miles of water mains

We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. For more information regarding this report, or for any questions relating to your drinking water, please call Jack Swann, General Manager, at 256-582-5931.



[www.gvillewater.com](http://www.gvillewater.com)

## Required Consumer Confidence Report (CCR) statement addressing Lead in Drinking Water

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.

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.

This water system also tests our source water for pathogens, such as Cryptosporidium and Giardia. These pathogens can enter the water from animal or human waste. For people who may be immuno-compromised, a guidance document developed jointly by the Environmental Protection Agency and the Center for Disease Control is available online at [www.epa.gov/safewater/crypto.html](http://www.epa.gov/safewater/crypto.html) or from the Safe Drinking Water Hotline at 800-426-4791. This language does not indicate the presence of cryptosporidium in our drinking water. All test results were well within state and federal standards.

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.

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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

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).

## Sunset Water Plant Upgrade

1965 – A GOOD YEAR. Definitely a good year to be in high school. However it's getting to be a few years back. For the Sunset Water Plant it is downright old and antiquated. That's the year (1965) the plant was put on line and she is showing her age. Improvements have been made through the years (last was 1993) but the major infrastructure is still 47 years old and aging. It is time for a major rehab-upgrade – and additional capacity and that is not cheap – perhaps around the \$10 - \$12 million dollar range. We will know that amount when bids are opened soon.

The plant project will involve new flocculation – settling basins, filters and controls, actuators – valves for all. We will be expanding capacity about 2 MGD (million gallons per day). New disinfection treatment will be implemented to improve water quality and meet environmental regulations. A larger more modern and improved lab will help operators make sure the testing of our drinking water is timely and accurate and with a higher treated water quality the goal. A larger emergency power generator will be added- might come in handy for tornados. Our Board and employees are looking forward to this major project to help make our water system better serve you the customer for many years to come.

Fortunately the Board has increased water rates in the past to help pay for much of this project. However rates will need to be adjusted in future years to keep our system functional and updated. The year 1965 is a while back – 2065 will be here before (our children) know it. The Guntersville Water Board wants to be ready!

## Community Participation

The Guntersville Water Board's business office is located at 329 Gunter Avenue in the City Municipal Building. Our business hours are 8:00 a.m. to 4:30 p.m., Monday-Friday. We have monthly Board of Directors meetings that are open to the public the first Monday of each month at 6:00 p.m. in the City Municipal Building. Our telephone numbers are:  
Office (256) 582-5931  
Nights-Weekends-Holidays (256) 506-9000  
Fax (256) 582-6923

[www.gvillewater.com](http://www.gvillewater.com)

## Our Staff

### Board of Directors

Jerry A. Nabors  
Frank J. Richter, Jr.  
Kate White

### Office

Anita Brown  
Meg Smith  
Debbie Sutton  
Jack Swann

### Meter Readers

Jason Carroll  
Allen Walker

### Maintenance

Phillip Bishop  
Jeff Davis  
Caleb Graham  
Josh Hill  
Brian Norrell

### Water Treatment

John Banks  
James Conn  
Mike Esslinger  
Scott Martin  
Mitchell Redington  
Coy Starnes

### Wastewater

Mark Bevill  
Mark Helton  
Jim Matthews  
Jim Murphee  
Jimmy Raines  
Mike Spurgeon



## Bill Payment

For your convenience, you can pay your bill in a variety of ways:

**Bank Draft** – Your payment is automatically withdrawn from your bank account on the 10th of each month.

Please call the office to sign up.

**Online** – You can visit our website at [gvillewater.com](http://gvillewater.com) to pay your bill by debit or credit card. You will need your

account number and balance from your statement. There is a service fee for each transaction.

**Night Deposit** – This is located at the Water Board office entrance at 329 Gunter Avenue. You may also leave your payment at the Marshall County Gas Board.

**By Mail or In Person** –

Guntersville Water and Sewer Board  
329 Gunter Avenue  
Guntersville, AL 35976

[www.gvillewater.com](http://www.gvillewater.com)

## GUNTERSVILLE WATER BOARD

329 Gunter Ave.  
Guntersville, AL 35976

## Continuing Our Commitment

Guntersville Water Board is proud to present to you our Annual Water Quality Report for drinking water monitoring completed from January through December 2011. We are pleased to tell you that our compliance with all state and federal drinking water laws remains exemplary. As always, we are committed to ensuring the quality of your water.

