

2016 ANNUAL WATER QUALITY REPORT

Testing performed January through December 2016



Guntersville Water Board



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.

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 gls)**
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.

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.

Information About Lead

Lead in drinking water is rarely found in source water but 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.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. 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. These recommended actions are very important to the health of your family.

Lead levels in your drinking water are likely to be higher if:

- Your home or water system has lead pipes, or
- Your home has faucets or fittings made of brass which contains some lead, or
- Your home has copper pipes with lead solder and you have naturally soft water, and
- Water often sits in the pipes for several hours.

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.

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).

General Information About 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 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.



TABLE OF DETECTED DRINKING WATER CONTAMINANTS

Contaminants	Violation Y/N	Detected WTP	Detected WELL	MCLG	MCL	Likely Source of Contamination
Chlorine (ppm)	NO	Range 1.9-2.8	Range 1.9-2.6	MRDLG =4	MRDL =4	Water additive used to control microbes
Turbidity (NTU)	NO	Highest 0.11 100% <0.5	Not Required	N/A	TT	Soil runoff
Total Organic Carbon (ppm)	NO	1.61-2.08	N/A	N/A	TT	Soil runoff
Copper (ppm)	NO		0.141* 0 >AL	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm)	NO	0.50	0.63	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from factories
Nitrate (ppm)	NO	0.34	1.37	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Tetrachloroethylene (ppb)	NO	ND-4.80	ND	0	5	Discharge from metal degreasing sites and other factories
TTHM [Total trihalomethanes] (ppb)	NO	HIGHEST LRAA 31.1 Range 9.13-32.4		0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids] (ppb)	NO	HIGHEST LRAA 21.5 Range 14.6-22.4		0	60	By-product of drinking water chlorination

Unregulated Contaminants

Chloroform (ppb)	NO	4.37	2.27	N/A	N/A	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Bromodichloromethane (ppb)	NO	1.68	ND	N/A	N/A	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff

TABLE OF DETECTED DRINKING WATER CONTAMINANTS

Secondary Contaminants	Violation Y/N	Detected WTP	Detected WELL	MCLG	MCL	Likely Source of Contamination
Chloride (ppm)	NO	14.5	9.40	N/A	250	Naturally occurring in the environment or as a result of agricultural runoff
Hardness (ppm)	NO	65.8	105	N/A	N/A	Naturally occurring in the environment or as a result of treatment with water additives
pH (S.U.)	NO	7.51	7.69	N/A	N/A	Naturally occurring in the environment or as a result of treatment with water additives
Sodium (ppm)	NO	5.56	3.45	N/A	N/A	Naturally occurring in the environment
Sulfate (ppm)	NO	11.9	1.68	N/A	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids (ppm)	NO	96.0	140	N/A	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Zinc (ppm)	NO	0.06	ND	N/A	5	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills

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

Unregulated Contaminant Rule 3 (UCMR3) Contaminants Detected 2014

Contaminants	Violation Y/N	Level Detected	Unit Msmt.	Likely Source of Contamination
Chromium	NO	ND-0.20	ppb	Naturally occurring in the environment or as a result of industrial discharge
Strontium	NO	55.0-62.0	ppb	Naturally occurring in the environment or as a result of discharge
Vanadium	NO	ND-0.40	ppb	Naturally occurring in the environment or as a result of runoff from mining or industrial discharge
Chromium, Hexavalent	NO	ND-0.23	ppb	Naturally occurring in the environment or as a result of industrial discharge
Chlorate	NO	ND-790	ppb	Naturally occurring in the environment or byproduct of disinfection
1,4-Dioxane	NO	ND-0.08	ppb	Industrial discharge; leachate from landfills

Monitoring Schedule

Guntersville Water Board routinely monitors for contaminants in your drinking water according to Federal and State laws, using EPA approved methods and a State certified laboratory. The Alabama Department of Environmental Management (ADEM) allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule. All test results were well within state and federal standards.

The following table is a list of *Primary Drinking Water Contaminants*, *Unregulated Contaminants*, and *Secondary Contaminants* for which our water system routinely monitors according to our regulatory schedule. These contaminants were *not* detected in your drinking water unless they are listed in the *Table of Detected Drinking Water Contaminants*.

Standard List of Primary Drinking Water Contaminants

CONTAMINANT	MCL	UNIT OF MSMT
Bacteriological Contaminants		
Total Coliform Bacteria	<5%	present or absent
Fecal Coliform and E. coli	0	present or absent
Fecal Indicators	0	present or absent
Turbidity	TT	NTU
Cryptosporidium	TT	Calculated Organisms/liter
Radiological Contaminants		
Beta/photon emitters	4	mrem/yr
Alpha emitters	15	pCi/l
Combined radium	5	pCi/l
Uranium	30	pCi/l
Inorganic Chemicals		
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	ppb
Mercury	2	ppb
Nitrate	10	ppm
Nitrite	1	ppm
Selenium	.05	ppm
Thallium	.002	ppm
Organic Contaminants		
2,4-D	70	ppb
Acrylamide	TT	TT
Alachlor	2	ppb
Benzene	5	ppb
Benzo(a)pyrene [PAHs]	200	ppt
Carbofuran	40	ppb
Carbon tetrachloride	5	ppb
Chlordane	2	ppb
Chlorobenzene	100	ppb
Dalapon	200	ppb
Dibromochloropropane	200	ppt
o-Dichlorobenzene	600	ppb
p-Dichlorobenzene	75	ppb
1,2-Dichloroethane	5	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
Di (2-ethylhexyl)adipate	400	ppb
Di (2-ethylhexyl)phthalate	6	ppb
Dinoseb	7	ppb
Dioxin [2,3,7,8-TCDD]	30	ppq
Diquat	20	ppb
Endothall	100	ppb
Endrin	2	ppb
Epichlorohydrin	TT	TT
Ethylbenzene	700	ppb
Ethylene dibromide	50	ppt

CONTAMINANT	MCL	UNIT OF MSMT
Glyphosate	700	ppb
Heptachlor	400	ppt
Heptachlor epoxide	200	ppt
Hexachlorobenzene	1	ppb
Hexachlorocyclopentadiene	50	ppb
Lindane	200	ppt
Methoxychlor	40	ppb
Oxamyl [Vydate]	200	ppb
Polychlorinated biphenyls	0.5	ppb
Pentachlorophenol	1	ppb
Picloram	500	ppb
Simazine	4	ppb
Styrene	100	ppb
Tetrachloroethylene	5	ppb
Toluene	1	ppm
Toxaphene	3	ppb
2,4,5-TP(Silvex)	50	ppb
1,2,4-Trichlorobenzene	.07	ppm
1,1,1-Trichloroethane	200	ppb
1,1,2-Trichloroethane	5	ppb
Trichloroethylene	5	ppb
Vinyl Chloride	2	ppb
Xylenes	10	ppm
Disinfectants & Disinfection Byproducts		
Chlorine	4	ppm
Chlorine Dioxide	800	ppb
Chloramines	4	ppm
Bromate	10	ppb
Chlorite	1	ppm
HAA5 [Total haloacetic acids]	60	ppb
TTHM [Total trihalomethanes]	80	ppb

UNREGULATED CONTAMINANTS

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

SECONDARY CONTAMINANTS

Alkalinity, Total (as CA, Co ₃)	Copper	Magnesium	Silver
Aluminum	Corrosivity	Manganese	Sodium
Calcium, as Ca	Foaming agents (MBAS)	Odor	Sulfate
Chloride	Hardness	Nickel	Total Dissolved Solids
Color	Iron	pH	Zinc

TVA Herbicide Results – 2016

CONTAMINANT	DATE SAMPELED	RESULT
Copper	6-03-16	0.023 ppm
Copper	6-29-16	< 0.050 ppm
Copper	8-10-16	0.017 ppm

As you can see by the 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	2016
Lead/Copper	2016
Microbiological Contaminants	Current
Nitrates	2016
Radioactive Contaminants	2012
Synthetic Organic Contaminants (including pesticides and herbicides)	2016
Volatile Organic Contaminants	2016
Disinfection By-products	2016
UCMR3 (Unregulated Contaminant Monitoring Rule) Contaminants	2014
Cryptosporidium	2016

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 (TTHM), 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 (µg/L) – 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.

GUNTERSVILLE WATER BOARD
705 Blount Avenue
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 2016. 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.



Community Participation

The Guntersville Water Board's business office is located at 705 Blount Avenue. 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 5:00 p.m.

Our telephone numbers are:

Office(256) 582-5931
Nights - Weekends - Holidays(256) 506-9000
Fax(256) 582-6923

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
Stefan Henderson

Maintenance

Phillip Bishop
Josh Hill
Brian Norrell
Corey Thompson

Water Treatment

John Banks
James Conn
Jeff Davis
Caleb Graham
Scott Martin
Mitchell Redington
Coy Starnes
Allen Walker

Wastewater

Mark Bevill
Derek Chandler
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 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 at 705 Blount Avenue. You may also leave your payment at the Marshall County Gas District.

By Mail or In Person –
Guntersville Water Board
705 Blount Avenue
Guntersville, AL 35976-1505

www.gvillewater.com