

**2016 Annual Water Quality Report
(Monitoring Performed January through December 2015)**

**MONTEVALLO WATER WORKS
AND SEWER BOARD**

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We are pleased to present to you this year's Annual Water Quality Report. Our constant goal is to provide you with a safe and dependable supply of drinking water. We are committed to ensuring the quality of your water.

Water Sources	Two groundwater wells producing from the Cambrian-Ordovician aquifer	
	One spring producing from the Cambrian Brierfield dolomite aquifer	
	Purchased groundwater from Chilton County Water Authority	
Number of Customers	Approximately 3200	
Water Treatment	Chlorination for disinfection	
Storage Capacity	Five tanks with a total capacity of 4,700,000 gallons	
Additional Connections	Provide water to University of Montevallo	
	Interconnected with Alabaster Water, Calera Water, and Chilton County	
Board Members	Roger Wheeler, Chairman	Russell Nix, Member
	Terry Arnold, Member	Denise Woodham, Member
	Brad Davis, Member	
Board Meetings	Second Wednesday of each month at 9:00 a.m. at the Montevallo Water Office	

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), **The Montevallo Water Works and Sewer Board** has developed a Source Water Assessment plan that assists in protecting our water sources. This plan provides additional information such as potential sources of contamination. The report includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible (low) to contaminating the water source. A copy of the report is available in our office for review during normal business hours, or you may obtain a copy for a nominal 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

The Montevallo Water Works and Sewer Board 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.

Constituents Monitored	Montevallo	Chilton
Inorganic Contaminants	2013	2013
Lead/Copper	2013	2014
Microbiological Contaminants	current	current
Nitrates	2015	2015
Radioactive Contaminants	2010	2010
Synthetic Organic Contaminants (including herbicides and pesticides)	2015	2013
Volatile Organic Contaminants	2015	2014
Disinfection By-products	2015	2015
Unregulated Contaminants Monitoring Rule 3 (UCMR3) Contaminants	NR	2014

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.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive 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). 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.

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 more likely to cause leaching of lead from plumbing materials. 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.

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.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS							
Contaminants	Violation Y/N	Detected Montevallo	Detected Chilton	Unit Msmt.	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	1.4 ± 0.7	1.6 ± 0.5	PCi/l	0	15	Erosion of natural deposits
Copper	NO	0.208 * 0 > AL	1.00	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from preservatives
Barium	NO	ND	ND-0.14	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (as Nitrogen)	NO	0.73-1.40	ND-0.60	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Tetrachloroethylene	NO	ND-1.04	ND	ppb	0	5	Leaching from PVC pipes; discharge from factories and dry cleaners
TTHM [Total trihalomethanes]	NO	16.4-20.7	ND-19.1	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	8.88-9.06	ND-6.78	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants							
Chloroform	NO	ND-10.3	ND-0.56	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Bromodichloromethane	NO	ND-9.67	ND	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Chlorodibromomethane	NO	ND-9.55	ND	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Bromoform	NO	ND-0.79	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	4.85-6.95	3.19-10.0	ppm	n/a	250	Naturally occurring in the environment or as a result of agricultural runoff
Hardness	NO	248-305	51.3-136	ppm	n/a		Naturally occurring in the environment or as a result of treatment with water additives
Manganese	NO	ND	ND-0.01	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO	8.08-8.25	7.85-8.16	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO	1.75-3.96	2.35-5.26	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	7.45-15.9	5.08-12.3	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	NO	256-300	80.0-176	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

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

At the end of this report a list of *Primary Drinking Water Contaminants* and a list of *Unregulated Contaminants* for which our water system routinely monitors. 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	Contaminant	MCL	Unit of Msmt
Bacteriological Contaminants			trans-1,2-Dichloroethylene	100	ppb
Total Coliform Bacteria	<5%	present or absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloropropane	5	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb
Cryptosporidium	TT	Calculated organisms/liter	Di (2-ethylhexyl)phthalate	6	ppb
Radiological Contaminants			Dinoseb	7	ppb
Beta/Photon emitters	4	mrem/yr	Dioxin [2,3,7,8-TCDD]	30	ppq
Alpha emitters	15	pCi/l	Diquat	20	ppb
Combined radium	5	pCi/l	Endothall	100	ppb
Uranium	30	pCi/l	Endrin	2	ppb
Inorganic Chemicals			Epichlorohydrin	TT	TT
Antimony	6	ppb	Ethylbenzene	700	ppb
Arsenic	10	ppb	Ethylene dibromide	50	ppt
Asbestos	7	MFL	Glyphosate	700	ppb
Barium	2	ppm	Heptachlor	400	ppt
Beryllium	4	ppb	Heptachlor epoxide	200	ppt
Cadmium	5	ppb	Hexachlorobenzene	1	ppb
Chromium	100	ppb	Hexachlorocyclopentadiene	50	ppb
Copper	AL=1.3	ppm	Lindane	200	ppt
Cyanide	200	ppb	Methoxychlor	40	ppb
Fluoride	4	ppm	Oxamyl [Vydate]	200	ppb
Lead	AL=15	ppb	Polychlorinated biphenyls (PCBs)	0.5	ppb
Mercury	2	ppb	Pentachlorophenol	1	ppb
Nitrate	10	ppm	Picloram	500	ppb
Nitrite	1	ppm	Simazine	4	ppb
Selenium	.05	ppm	Styrene	100	ppb
Thallium	.002	ppm	Tetrachloroethylene	5	ppb
Organic Contaminants			Toluene	1	ppm
2,4-D	70	ppb	Toxaphene	3	ppb
Acrylamide	TT	TT	2,4,5-TP(Silvex)	50	ppb
Alachlor	2	ppb	1,2,4-Trichlorobenzene	.07	ppm
Benzene	5	ppb	1,1,1-Trichloroethane	200	ppb
Benzo(a)pyrene [PAHs]	200	ppt	1,1,2-Trichloroethane	5	ppb
Carbofuran	40	ppb	Trichloroethylene	5	ppb
Carbon tetrachloride	5	ppb	Vinyl Chloride	2	ppb
Chlordane	2	ppb	Xylenes	10	ppm
Chlorobenzene	100	ppb	Disinfectants & Disinfection Byproducts		
Dalapon	200	ppb	Chlorine	4	ppm
Dibromochloropropane	200	ppt	Chlorine Dioxide	800	ppb
o-Dichlorobenzene	600	ppb	Chloramines	4	ppm
p-Dichlorobenzene	75	ppb	Bromate	10	ppb
1,2-Dichloroethane	5	ppb	Chlorite	1	ppm
1,1-Dichloroethylene	7	ppb	HAA5 [Total haloacetic acids]	60	ppb
cis-1,2-Dichloroethylene	70	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		

Questions?

If you have any questions about this report or concerning your water utility, please contact **Michael Harmon, Manager**. 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 **second Wednesday of each month at 9:00 a.m. at the Montevallo Water Works and Sewer Board office, 613 Valley Street. To report water outage or leaks after hours, on weekends, or holidays, please call the Montevallo Water Department at 205-665-9045.**

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).