

2018 Annual Drinking Water Quality Report
 (Testing Performed January through December 2017)

THE WATER WORKS & SEWER BOARD OF THE CITY OF SELMA
 1706 Selma Ave.
 Selma, AL 36701
 Phone 334-872-6205 or 334-874-8857
 Fax 334-872-5393

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services 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.

Water Sources	Seven (7) groundwater wells producing from the Coker, Eutaw, and Gordo aquifers
Number of Customers	Approximately 7900
Water Treatment	Chlorination, flocculation, pressure and rapid sand filtration, fluoridation, add lime for pH adjustment and potassium permanganate for iron and manganese removal
Storage Capacity	4,400,000 gallons
Additional Connections	N. Dallas Co. WW for contingency purposes: did not sell to them in 2013
Superintendent	Mayor Dario Melton
Board Members	Robert Allen, Chairman
	Milli Vick, Vice Chairman
	Roderick West, Member
	Michael Johnson, Member
	James Warr, Member

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), **The Water Works & Sewer Board of the City of Selma** 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 to contaminating the water source. All of the potential contaminants sited in our study area were rated as low or moderately susceptible to contaminating the water source. 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 during normal business hours, 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.

Monitoring Schedule

The Water Works & Sewer Board of the City of Selma *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.

Constituent Monitored	Date Monitored
Inorganic Contaminants	2016
Lead/Copper	2017
Microbiological Contaminants	current
Nitrates	2017
Radioactive Contaminants	2010
Synthetic Organic Contaminants (including pesticides and herbicides)	2017
Volatile Organic Contaminants	2015
Disinfection By-products	2017
UMCR3 (Unregulated Contaminant Monitoring Rule)	2013

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.

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.

Questions?

If you have any questions about this report or concerning your water utility, please contact Robert Bridges. 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 third Monday of each month at 9:30 a.m. at the main office, 1600 Selma Avenue.

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).

We are pleased to announce that our system had no violations. We have learned through our monitoring and testing that some constituents have been detected. This report shows our water quality and what it means.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS						
Contaminants	Violation Y/N	Level Detected	Unit Mamt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	4.9 ± 0.8	PCI/l	0	15	Erosion of natural deposits
Barium	NO	0.06-0.47	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	NO	0.058 ** 0>AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	NO	ND-0.84	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
TTHM [Total trihalomethanes]	NO	ND-18.2	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	ND-1.52	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants						
Chloroform	NO	ND-1.20	ppb	70	none	Naturally occurring in the environment, industrial discharge, runoff
Bromodichloromethane	NO	ND-0.64	ppb	0	none	Naturally occurring in the environment, industrial discharge, runoff
Chlorodibromomethane	NO	ND-0.53	ppb	60	none	Naturally occurring in the environment, industrial discharge, runoff
Secondary Contaminants						
Chloride	NO	3.90-14.0	ppm	n/a	250	Naturally occurring in the environment, industrial discharge, runoff
Color	NO	ND-20	color units	none	15	Naturally occurring in the environment or from water additives
Hardness	NO	71.2-107	ppm	n/a		Naturally occurring in the environment or from water additives
Iron	NO	ND-0.42	ppm	none	0.30	Naturally occurring in the environment; erosion of natural deposits; leaching from pipes
Manganese	NO	ND-0.03	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO	7.78-7.95	S.U.	n/a	n/a	Naturally occurring in the environment or from water additives
Sodium	NO	2.43-8.10	ppm	NA	none	Naturally occurring in the environment
Sulfate	NO	4.66-9.51	ppm	n/a	250	Naturally occurring in the environment, industrial discharge, runoff
Total Dissolved Solids	NO	104-176	ppm	n/a	500	Naturally occurring in the environment, industrial discharge, runoff

* Figure shown is 90th percentile and number of sites above Action Level (AL) = 0

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.
 LRAA - Locational Running Annual Average
 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
 Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Unregulated Contaminant Rule 3 (UCMR3) Contaminants Detected 2013

Contaminants	Violation Y/N	Level Detected	Unit Msmt.	Likely Source of Contamination
Chromium	NO	ND-1.70	ppb	Naturally occurring in the environment or as a result of industrial discharge
Strontium	NO	370-1300	ppb	Naturally occurring in the environment or as a result of discharge
Vanadium	NO	ND-0.02	ppb	Naturally occurring in the environment or from mining or industrial discharge
Chromium, Hexavalent	NO	ND-0.10	ppb	Naturally occurring in the environment or as a result of industrial discharge
1,1-Dichloroethane	NO	ND-0.03	ppb	Industrial discharge; leachate from landfills

The following is 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			o-Dichlorobenzene			
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	
Radiological Contaminants			Total Nitrate and Nitrite			
Beta/positron emitters	4	mrem/yr	Selenium	50	ppb	
Alpha emitters	15	pCi/l	Thallium	2	ppb	
Combined radium	5	pCi/l	Organic Contaminants			
Uranium	30	pCi/l	2,4-D	70	ppb	
Inorganic Chemicals			2,4,5-TP(Silvex)			
Antimony	8	ppb	Acrylamide	TT		
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	Datapon	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	
Endothal	100	ppb	HAA5 [Total haloacetic]	60	ppb	
Endrin	2	ppb	1,1-Dichloroethylene	7	ppb	
Epichlorohydrin	TT		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	TTHM [Total]	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	
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 - Dichloropropene	Bromofom	Hexachlorobutadiene	P-Isopropyltoluene			
1,3 - Dichloropropene	Bromomethane	Isopropylbenzene	Propachlor			
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene			
2,2 - Dichloropropane	Carbaryl	Methomyl	Ter - Butylbenzene			
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorofluoromethane			