

2022 Annual Water Quality Report
(Testing Performed January - December 2021)

THE WATER WORKS AND SEWER BOARD OF THE CITY OF DEMOPOLIS

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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. We are committed to ensuring the quality of your water.

Water Sources	Five (5) groundwater wells producing from the Eutaw aquifer	
Interconnections	Sell to Myrtlewood Water System for the "Salt Well" area	
Water Treatment	Chlorination	
Storage Capacity	Six tanks with a capacity of 2.1 million gallons	
Number of Customers	Approximately 3500	
Water Board	Jay Reynolds, Chairman	Charles Jones, Jr., Member
	Willard Williams, Vice Chairman	Mayor Woody Collins, Mayor
	Chuck Smith, Member	Justina Allgood, Treasurer
Water Works Manager	Brooks McCants	

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), **Demopolis Water Works and Sewer Board** 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. Of the 25 potential contaminants sited in our assessment areas, only 3 were ranked as high. The others were ranked medium or non-susceptible. 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. 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 Water Works and Sewer Board of the City of Demopolis 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	Date Monitored
Inorganic Contaminants	2019
Lead/Copper	2019
Microbiological Contaminants	current
Nitrates	2021
Radioactive Contaminants	2019
Synthetic Organic Contaminants (including herbicides and pesticides)	2021 (Partial)
Volatile Organic Contaminants	2021
Disinfection By-products	2021
DSE Disinfection By-products	2019
Unregulated Contaminants Monitoring Rule 4 (UCMR4) Contaminants	2019

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 levels 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 on Lead

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.

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. The two actions recommended above are very important to the health of your family. They will probably be effective in reducing lead levels because most of the lead in household water usually comes from the plumbing in your house, not from the local water supply. 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 Brooks McCants. 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 5:15 pm. at Demopolis Water Works' main office located at 103 E Capitol 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).

We are proud that your drinking water meets or exceeds all federal and state requirements. 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 Msmt	MCLG	MCL	Likely Source of Contamination
Barium	NO	ND-0.01	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Combined radium	NO	2.4 (Avg. 0.48)	PCi/l	0	5	Erosion of natural deposits
Copper	NO	0.120 0 > AL *	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	NO	0.68-1.41	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	NO	ND 1 > AL **	ppm	0	AL=0.015	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	NO	ND-0.36	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	LRAA Range 16.0-22.7	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	LRAA Range 3.63-5.27	ppb	0	60	By-product of drinking water chlorination
Secondary Contaminants						
Chloride	NO	ND-203	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Hardness	NO	ND-7.70	ppm	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Manganese	NO	ND-0.01	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO	8.00-8.55	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO	128-262	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	ND-2.65	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	NO	224-504	ppm	n/a	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
DSE Disinfection Byproducts						
TTHM [Total trihalomethanes]	NO	Range ND-29.7	ppb	n/a	n/a	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	Range ND-7.70	ppb	n/a	n/a	By-product of drinking water chlorination

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

** Figure shown is 90th percentile and # of sites above Action Level (0.015 ppm) = 1 (Note: Site was re-sampled and had no detection of Lead).

Unregulated Contaminant Rule 4 (UCMR4) Contaminants

Every five years the EPA issues a new list of unregulated contaminants to be monitored by some public water systems (PWSs). The monitoring results may provide a basis for future regulatory actions to protect public health. The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) required PWSs serving more than 10,000 people to monitor for 30 unregulated contaminants over a three-year span, with each PWS assigned a monitoring period. The following table shows the UCMR4 contaminants for which we tested and the results of our monitoring.

Unregulated Contaminant Rule 4 (UCMR4) Contaminants					
Contaminants	Unit Msmt	Level Detected	Contaminant	Unit Msmt	Level Detected
Germanium	ppb	ND-0.46	Tribufos	ppb	ND
Manganese	ppb	3.3-48.9	1-butanol	ppb	ND
Alpha-hexachlorocyclohexane	ppb	ND	2-methoxyethanol	ppb	ND
Chlorpyrifos	ppb	ND	2-propen-1-ol	ppb	ND
Dimethipin	ppb	ND	Butylated hydroxyanisole	ppb	ND
Ethoprop	ppb	ND	O-toluidine	ppb	ND
Oxyfluorfen	ppb	ND	Quinoline	ppb	ND
Profenofos	ppb	ND	Total organic carbon (TOC)	ppb	ND
Tebuconazole	ppb	ND	Bromide	ppb	560-1790
Total permethrin (cis- & trans-)	ppb	ND			
Haloacetic Acids					
HAA9	ppb	7.0-23.6			
HAA6Br	ppb	7.0-23.1			
HAA5	ppb	2.9-14.3			

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.

Cryptosporidium - a microscopic parasite that can cause disease, mainly diarrhea, if swallowed.

Disinfection byproducts (DBPs)- 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.

Distribution System Evaluation (DSE)-a four-quarter study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs).

Locational Running Annual Average (LRAA)-yearly average of all the DPB results at each specific sampling site in the distribution system. The highest distribution site LRAA is reported in the Table of Detected Contaminants.

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.

Maximum Residual Disinfectant Level (MRDL)-the highest level of a disinfectant allowed in drinking water

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-Detect (ND)- laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.

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.

RAA—Running annual average

Standard Units (S.U.)-pH of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas. Water with less than 6.5 could be acidic, soft, and corrosive. A pH greater than 8.5 could indicate that the water is hard.

Treatment Technique (TT)- 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.

Below is a table of contaminants for which the Environmental Protection Agency and the Alabama Department of Environmental Management require testing where applicable. These contaminants were not detected in your drinking water unless they are also listed in the Detected Drinking Water Contaminants table elsewhere in this report.

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/absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present/absent	1,2-Dichloropropane	5	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb
Cryptosporidium	TT	Calc.organisms/l	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	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
1,2-Dichlorobenzene	1000	ppb	Chloramines	4	ppm
1,4-Dichlorobenzene (para)	75	ppb	Bromate	10	ppb
o-Dichlorobenzene	600	ppb	Chlorite	1	ppm
1,2-Dichloroethane	5	ppb	HAA5 [Total haloacetic acids]	60	ppb
1,1-Dichloroethylene	7	ppb	TTHM [Total trihalomethanes]	80	ppb
cis-1,2-Dichloroethylene	70	ppb			
LIST OF SECONDARY CONTAMINANTS					
Alkalinity, Total (as CA, CO ₃)	Copper	Manganese	Specific Conductance		
Aluminum	Corrosivity	Odor	Sulfate		
Calcium, as Ca	Foaming agents (MBAS)	Nickel	Total Dissolved Solids		
Carbon Dioxide	Hardness	pH	Zinc		
Chloride	Iron	Silver			
Color	Magnesium	Sodium			
LIST OF UNREGULATED CONTAMINANTS					
Aldicarb	Chloroethane	Hexachlorobutadiene	Propachlor		
Aldicarb Sulfone	Chloroform	3-Hydroxycarbofuran	N-Propylbenzene		
Aldicarb Sulfoxide	Chloromethane	Isopropylbenzene	Propachlor		
Aldrin	O-Chlorotoluene	p-Isopropyltoluene	1,1,1,2-Tetrachloroethane		
Bromoacetic Acid	P-Chlorotoluene	M-Dichlorobenzene	1,1,2,2-Tetrachloroethane		
Bromobenzene	Dibromochloromethane	Methomyl	Tetrachloroethene		
Bromochloromethane	Dibromomethane	Methomyl	Trichloroacetic Acid		
Bromodichloromethane	1,1-Dichloroethane	Methylene chloride	1,2,3-Trichlorobenzene		
Bromoform	1,3-Dichloropropane	Methyl tert-butyl ether	Trichloroethene		
Bromomethane	2,2-Dichloropropane	Metolachlor	Trichlorofluoromethane		
Butachlor	1,1-Dichloropropene	Metribuzin	1,2,3-Trichloropropane		
N-Butylbenzene	1,3-Dichloropropene	MTBE	1,2,4-Trimethylbenzene		
Sec-Butylbenzene	Dicamba	Naphthalene	1,3,5-Trimethylbenzene		
Tert - Butylbenzene	Dichlorodifluoromethane	1-Naphthol			
Carbaryl	Dieldrin	Paraquat			