

V.A.W. Water System, Inc.

2022 Annual Water Quality Report

To better communicate with you -our customer- we have prepared our annual Consumer Confidence Report as authorized by the Environmental Protection Agency through amendments to the Safe Drinking Water Act. This report is designed to inform you of the good quality water and system services provided to you from January 1, 2022 thru December 31, 2022. V.A.W. Water System had **NO VIOLATIONS** of the Alabama Safe Drinking Water Law during 2022, and we expect to have no violations in the upcoming year. We are committed to ensuring the quality of your water.

ADDITIONAL INFORMATION

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap 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, in some cases radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- A) **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- B) **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or the result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- C) **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- D) **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.
- E) **Radioactive contaminants**, which can be naturally occurring or 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 number of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. People, who are immune-compromised, such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or individuals with other immune system disorders. Particularly the elderly as well as infants can be at risk from infection. People at risk should seek advice about drinking water from their health care provider. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline, 1-800-426-4791.

LEAD STATEMENT

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. V.A.W. 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 Drink Water Hotline or at <http://www.epa.gov/safewater/lead>.

DIOXIN & ASBESTOS MONITORING STATEMENT

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 is not required.

WATER SOURCE

The V.A.W. Water System currently has two water sources. 1) Water purchased from the City of Cullman, who own and operate a Water Treatment Plant which is governed by the City of Cullman Utilities Board. The water supply is drawn from Lake Catoma which is owned by the City. The City of Cullman Treatment Plant has a total treatment capacity of 24 MGD and is the conventional surface treatment process. 2) Water purchased from the West Morgan East Lawrence Water and Sewer Authority (WM-EL). This source is surface water from the Wheeler Lake Reservoir on the Tennessee River, which is processed at Robert Milton Hames Water Treatment Plant, located at Lock A, near Hillsboro in Lawrence County. WM-EL also has connections with Decatur Utilities for an emergency supply if needed. **TREATMENT TECHNIQUES** - At times it is necessary for V.A.W. Certified Operators to add additional chlorine to the water purchased from WM-EL and City of Cullman. This is done to stay within ADEM guidelines. Both of V.A.W.'s water sources have completed a "source water protection plan" as required by EPA. This plan provides information about potential sources of contamination in our source water area and is available at their respective offices.

BOARD MEMBERS / BOARD MEETINGS

The regular scheduled Board Meetings are held on the third Thursday of each month at 6:00 p.m. Meeting changes will be posted as soon as received. All members are welcome and encouraged to attend. Current Board Members: Jay Hollaway-Chairman, Gene Jordan -Vice Chairman, Blake Overton - Sec/Treas, Rick Welch, and Timmy Calvert.

CONTACTS

For information concerning this report or water quality, please contact Shawn Whittle, at 256-734-2413. For information about our office or daily operations, please contact Donna Gossett, 256-734-2413. Business hours are Monday-Friday, 7:30 a.m. until 4:00 p.m. We are located at 11802 Alabama Highway 157 West, at West Point (256) 734-2413. V.A.W. Water System, Inc. is a proud member of the American Water Works Association, Alabama Rural Water Association, Alabama Water and Pollution Control Association and Alabama One Call. V.A.W. is also a proud sponsor of the Cullman County Water Festival.

LEGEND AND DEFINITIONS

90th Percentile -90%=or less than chart

MCLG (Maximum Contaminant Level Goal) - 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.

MCL (Maximum Contaminant Level) - 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.

MFL - million fibers per liter

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

There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

AL (Action Level) - The concentration of a contaminant that triggers treatment or other requirements a water system shall follow.

mrem/yr-millirems per year

ND - not detected

NR - not required

NTU - nephelometric turbidity unit

pCi/- picocuries per liter

Umhos - expressed microminos per centimeter

ppb - parts per billion

ppm- parts per million

ppt- parts per trillion

Table of Detected Contaminants Jar Jan 1 to Dec 31 2022

Contaminant	MCLG	MCL	Cullman Range	Cullman Detected	WM-EL Range	WM-EL Detected	Likely Source
Bacteriological (Turbidity is a measure of cloudiness of water, it is a good indicator of the effectiveness of filtration systems.)							
Turbidity (2021)	0	TT	-	0.10 NTU	.011-.025	.025NTU	Soil Runoff
Radiological							
Beta/ photon emitters	0	4	-	ND	-	-	Erosion of natural deposits
Combined Radium 226&228 (2020)	0	5	-	0.0926pci/l	-	-	Erosion of natural deposits
Gross Beta in Liquids	0	15	-	ND	-	-	Naturally occurring radioactive elements
Inorganic Chemicals							
Barium	2	2	-	0.03 ppm	-	-	Discharge of drilling wastes;discharge from metals refineries;erosion of natural deposits.
Fluoride	0.7	4	ND-0.50	0.50ppm	-	-	Erosion of natural deposits;water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Total Nitrate & Nitrite Nitrate , As N	1 10	10 10	0.90-0.90 1.1-1.1	0.90ppm 1.1ppm	- N/A	- .518ppm	Runoff from fertilizer use;leaching from septic tanks,sewage; erosion of natural deposits
Organic Chemicals							
Total Organic Carbon	n/a	TT	1.35-2.37	1.73ppm	0-.26	.13ppm	Naturally present in the environment
Chlorine	MRDLG=4	MRDLG=4	1.60-2.50	2.1ppm	1.44-2.47	1.75ppm	Water additive used to control microbes
Chlorite	n/a	1	-	-	0-.09	.09ppm	Water additive used to control microbes
Chlorine Dioxide	n/a	800	-	12.3ppb	0-.03	.03ppm	Water additive used to control microbes
TTHM	0	80.0	13-79.4	38.84ppb	0-11	3.0ppb	By-product of drinking water chlorination
Haloacetic Acids HAA5	0	60	11-52.8	27.23ppb	0-1.6	.4ppb	By-product of drinking water chlorination
Non-Compliance Microbiological (LT2ESWTR)							
Cryptosporidium	0	TT	ND-ND	0.0 oocysts/L	0-3	3	Wildlife and / or human activity
E. coli (Raw)	0	TT	ND	4mL	ND	0	Wildlife and / or human activity
Giardia	0	TT	-	0.10cysts/L	0-5	5	Wildlife and / or human activity
Inorganic Chemicals							
Copper (Tested for every 3 years.)	1.3	AL=1.3ppm	30 samples taken, 0 above action level	0.174 Within 90th Percentile	No. of sites above action level -0-	.041ppm	Corrosion of household plumbing systems;erosion of natural deposits; leaching from wood preservatives.
Lead (Tested for every 3 years.)	0	AL=15ppb	30 samples taken, 0 above action level	1.37 Within 90th Percentile	No. of sites above action level -0-	NDppb	Corrosion of household plumbing systems; erosion of natural deposits
V.A.W. Results	MCLG	MCL	V.A.W. 30 Sites	V.A.W. Detected	Last tested in 2022 by V. A. W . Certified Operators (Test every 3 years)		
Copper	1.3	AL=1.3ppm	Sites above action level, 0	0.014793 Within 90th Percentile			
Lead	0	AL=15 ppb	Sites above action level, 0	ND Within 90th Percentile			
Organic Chemicals							
Cullman 2022							
HAA5s	0	60	11-52.8	28.72ppb	0-1.6	.4ppb	By-product of drinking water chlorination
TTHM	0	80	13-79.4	38.84ppb	0-11	3.0ppb	By-product of drinking water chlorination
V.A.W. Results							
V.A.W. Range 2022							
HAA5s	0	60	0.00 - 44.5	7.4 ppb	2007 IDSE Range 9.2-56.0 By-product of drinking water chlorination		
TTHM	0	80	0.00 -53.2	10.9 ppb	2007 IDSE Range 59.2-120.0 By-product of drinking water chlorination		

MCL's are set at very stringent levels. To understand the possible health effects 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. Total Coliform: The total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found special followup test are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio.

Primary Contaminants

2022

Contaminant	MCL	Cullman	WM-EL	Contaminant	MCL	Cullman	WM-EL
Bacteriological				Fluoride	4ppm	0.5	ND
Tlt Coliform Bacteria*	<5%	ND	ND	Lead (2022)	AL=15	1.37	ND
Turbidity	TT	0.10	ND	Mercury	2ppb	ND	ND
Fecal Coliform & <i>E. coli</i>	TT	ND	ND	Nitrate	10ppm	1.1	ND
Fecal Indicators	NONE	ND	-	Nitrite	1ppm	ND	ND
Radiological				Total Nitrate & Nitrite	10	0.55	ND
Beta/photom emitters (mrem/yr)	4	ND	-	Selenium	50ppb	ND	ND
Alpha emitters(pci/l)	15	ND	ND	Thallium	2ppb	ND	ND
Gross Beta in Liq. (pci/L)	15	-	-				
Combined radium (pci/l)	5	0.66	ND				
Uranium (pci/l)	30	ND	-				
Inorganic				Organic Chemicals			
Antimony	6 ppb	ND	ND	Acrylamide	TT	ND	ND
Arsenic	10 ppb	ND	ND	Alachlor	2ppb	ND	ND
Asbestos (MFL)	7	ND	Waived	Atrazine	3ppb	ND	ND
Barium	2 ppm	0.03	ND	Benzene	5ppb	ND	ND
Beryllium	4 ppb	ND	ND	Benzo(a)pyrene[PHAs]	200ppt	ND	ND
Bromate (ppb)	10ppb	ND	-	Carbofuran	40ppb	ND	ND
Cadmium	5 ppb	ND	ND	Carbon Tetrachloride	5ppb	ND	ND
Chromium	100 ppb	ND	ND	Chlordane	2ppb	ND	ND
Chloramines	4ppm	ND	ND	Chlorobenzene	100ppb	ND	-
Chlorine	4ppm	2.1	1.75	2,4-D	70	ND	ND
Chlorine Dioxide	800ppb	12.3	0.03	Dalapon	200ppb	ND	ND
Chlorite	1ppm	ND	0.09	Dibromochloropropane	200 ppt	ND	ND
Chromium	100ppb	ND	ND	0-Dichlorobenzene	600 ppb	ND	ND
Copper (ppm) (2022)	AL=1.3	0.174	0.041	p-Dichlorobenzene	75 ppb	ND	ND
Cyanide	200ppb	ND	ND	1,2-Dichloroethane	5ppb	ND	ND
Endothall	100ppb	ND	ND	1,1-Dichloroethylene	7 ppb	ND	ND
Endrin	2ppb	ND	ND	Cis-1,2-Dichloroethylene	70ppb	ND	ND
Epichlorohydrin	TT	ND	ND	trans-1,2-Dichloroethylene	100ppb	ND	ND
Ethylbenzene	700ppb	ND	ND	Dichloromethane	5ppb	ND	ND
Ethylene dibromide	50ppt	ND	ND	1,2-dichloropropane	5 ppb	ND	ND
Glyphosate	700ppb	ND	ND	Di(2-ethylhexyl)adipate	400ppb	ND	ND
Haloacetic Acids (HAA5)	60ppb	28.72	0.4	Di(2-ethylhexyl)phtlates	6ppb	ND	ND
Heptachlor	400ppt	ND	ND	Dinoseb	7ppb	ND	ND
Heptachlor epoxide	200ppt	ND	ND	Dioxin(2,3,7,8-TCDD)	30ppq	ND	ND
Hexachlorobenzene	1ppb	ND	ND	Diquat	20ppb	ND	ND
Hexachlorocyclopentadiene	50ppm	ND	ND	1,2,4-Trichlorobenzene	70 ppb	ND	ND
Lindane	200ppt	ND	ND	1,1,1-Trichloroethane	200 ppb	ND	ND
Methoxychlor	40ppb	ND	ND	1,1,2-Trichloroethane	5 ppb	ND	ND
Oxamyl [Vydate]	200ppb	ND	ND	Trichloroethylene	5 ppb	ND	ND
Pentachlorophenol	1ppb	ND	ND	Vinyl Chloride	2ppb	ND	ND
Picloram	500ppb	ND	ND	Xylenes	10ppm	ND	ND
PCBs	500ppt	ND	ND	Uranium	30pCi/L	-	ND
Simazine	4ppb	ND	ND	Legionella	TT	-	ND
Styrene	100ppb	ND	ND	Giardia Lambliia	TT	-	ND
Tetrachloroethylene	5ppb	ND	ND	Viruses (enteric)	TT	-	ND
Toluene	1ppm	ND	ND	Heterotrophic plate count	TT	-	ND
TOC	TT	1.73	0.13				
TTHM	80ppb	38.84	3.0				
Toxaphene	3ppb	ND	ND				
2,4,5,-TP (Silvex)	50ppb	ND	ND				

Secondary Contaminants 2022

Contaminant	MCL	Cullman	WM-EL
Aluminum	0.2ppm	0.034	0.028
Chloride	250ppm	11.60	2.44
Iron	0.3ppm	ND	0.011
Manganese	0.05ppm	ND	0.003
Odor	3 T.O.N	ND	ND
Sulfate	250ppm	5.30	ND
Total Dissolved Solids	500ppm	54	11
Zinc	5ppm	ND	ND

Special Contaminants 2022

Contaminant	MCL	Cullman	WM-EL
Calcium	n/a ppm	9.40	3.2
Carbon Dioxide	n/a ppm	12.30	7.2
Magnesium	n/a ppm	1.60	ND
pH	n/a SU	7.00	7.71
Sodium	n/a ppm	5.8	2.1
Specific Conductance	<500uhmos	24	9.9
Total Alkalinity	n/a ppm	24	11.9
Total Hardness(asCaCO3)	n/a ppm	30.3	8.1
Langelier Index	n/a	-	-2.72
Color	n/a	-	ND

Copper	n/a	-	ND
Corrosivity	n/a	-	ND
Nickel	n/a	-	ND
Foaming Agents	n/a	-	ND
MBAS	n/a	-	ND
Silver	n/a	-	ND

Long Term 2 Enhanced Surface Water Treatment Rule

Cryptosporidium	TT	-	3
Giardia	TT	-	5

DEFINITIONS

Primary Standards - Used as guides to protect public health.

Primary standards include maximum contaminant levels, maximum contaminant level goals, action levels, and treatment techniques.

Secondary Standards - Guidelines to assure good aesthetic quality of water. Secondary standards apply to contaminants that affect the taste, odor or color of water, stain sinks or bathtubs, or interfere with treatment processes.

Unregulated Contaminants 2022

Contaminant	Cullman Range	Cullman Detected	WM-EL Range	WM-EL Detected	Contaminant	Cullman Range	Cullman Detected	WM-EL Range	WM-EL Detected
1,1-Dichloropropene	0.0-0.0	-	0.0-0.0	ND	Chloroethane	0.0-0.0	-	0.0-0.0	ND
1,1,1,2-Tetrachloroethane	0.0-0.0	-	0.0-0.0	ND	Bromodichloromethane(ppb)	3.4-6.6	4.87	0-1.2	0.02
1,1,2,2-Tetrachloroethane	0.0-0.0	-	0.0-0.0	ND	Dibromochloromethane(ppm)	ND-0.9	0.6	0.0-0.0	ND
1,3,5-Trimethylbenzene	0.0-0.0	-	0.0-0.0	ND	Chloroform (ppb)	9.9-50	26.74	0-9.8	2.5
1,2,3-Trichlorobenzene	0.0-0.0	-	0.0-0.0	ND	Dichloroacetic acid	0.0-0.0	-	0-1.2	0.3
2,2-Dichloropropane	0.0-0.0	-	0.0-0.0	ND	PFOA (ppt)	0.0-0.0	-	0-4	4
Dichlorodifluoromethane	0.0-0.0	-	0.0-0.0	ND	Total Organic Carbon	0.0-0.0	-	0-1.07	0.23
Dibromochloromethane	0.0-0.0	-	0.0-0.0	ND					
3-Hydroxycarbofuran	0.0-0.0	-	0.0-0.0	ND					
1,3-Dichloropropene	0.0-0.0	-	0.0-0.0	ND					
1,3-Dichloropropane	0.0-0.0	-	0.0-0.0	ND					
1,2,3-Trichloropropane	0.0-0.0	-	0.0-0.0	ND					
Trichlorofluoromethane	0.0-0.0	-	0.0-0.0	ND	Unregulated Contaminant Monitoring Rule (UCMR 4)				
Bromochloromethane	0.0-0.0	-	0.0-0.0	ND	The fourth unregulated contaminant monitoring rule requires some systems to				
Bromodichloromethane	0.0-0.0	-	0.0-0.0	ND	monitor for 30 unregulated contaminants during 2018-2020. The table below				
Hexachlorobutadiene	0.0-0.0	-	0.0-0.0	ND	shows the results of the detected contaminants.				
Tert-Butylbenzene	0.0-0.0	-	0.0-0.0	ND	Contaminant	Range	Detected ppb		
1,2,4-Trimethylbenzene	0.0-0.0	-	0.0-0.0	ND					
Bromobenzene	0.0-0.0	-	0.0-0.0	ND					
Aldicarb Sulfone	0.0-0.0	-	0.0-0.0	ND	Bromochloroacetic acid	2.21 -3.39	2.7875		
Aldicarb Sulfoxide	0.0-0.0	-	0.0-0.0	ND	Bromodichloroacetic acid	0.748-2.16	1.540875		
Dibromomethane	0.0-0.0	-	0.0-0.0	ND	Chlorodibromoacetic acid	0.433-2.65	1.149		
Isopropylbenzene	0.0-0.0	-	0.0-0.0	ND	Dibromoacetic acid	0.982-2.40	1.38025		
Sec-Butylbenzene	0.0-0.0	-	0.0-0.0	ND	Dichloroacetic acid	2.21-4.69	3.58125		
Bromomethane	0.0-0.0	-	0.0-0.0	ND	Monobromoacetic acid	0.394-0.552	0.335875		
P-Chlorotoluene	0.0-0.0	-	0.0-0.0	ND	Monochloroacetic acid	-	-		
O-Chlorotoluene	0.0-0.0	-	0.0-0.0	ND	Tribromoacetic acid	0.0-2.17	0.27125		
N-Butylbenzene	0.0-0.0	-	0.0-0.0	ND	Trichloroacetic acid	0.917-2.79	1.582125		
N-Propylbenzene	0.0-0.0	-	0.0-0.0	ND	Manganese	0.696-37.5	9.33875		
1,1-Dichloroethane	0.0-0.0	-	0.0-0.0	ND					
Chloromethane	0.0-0.0	-	0.0-0.0	ND					
1,1-Dichloroethane	0.0-0.0	-	0.0-0.0	ND					
M-Dichlorobenzene	0.0-0.0	-	0.0-0.0	ND					
P-Isopropyltoluene	0.0-0.0	-	0.0-0.0	ND					
Aldicarb	0.0-0.0	-	0.0-0.0	ND					
Aldrin	0.0-0.0	-	0.0-0.0	ND					
Bromoform	0.0-0.0	-	0.0-0.0	ND					
Butachlor	0.0-0.0	-	0.0-0.0	ND					
Carbaryl	0.0-0.0	-	0.0-0.0	ND					
Chloroform	0.0-0.0	-	0.0-0.0	ND					
Dieldrin	0.0-0.0	-	0.0-0.0	ND					
Dicamba	0.0-0.0	-	0.0-0.0	ND					
Methomyl	0.0-0.0	-	0.0-0.0	ND					
MTBE	0.0-0.0	-	0.0-0.0	ND					
Metribuzin	0.0-0.0	-	0.0-0.0	ND					
Propachlor	0.0-0.0	-	0.0-0.0	ND					
Metolachlor	0.0-0.0	-	0.0-0.0	ND					
Naphthalene	0.0-0.0	-	0.0-0.0	ND					

Unregulated Contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.