General 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 water poses a health risk. Maximum Contaminant Levels (MCLs - defined in the 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.

Lead in Drinking Water

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. 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.

Water Conservation

Due to recent increased precipitation and your cooperative efforts, we have been able to successfully avoid a critical water supply shortage; however, our long term precipitation deficit continues and calls for ongoing vigilance in the protection of our water resources. We encourage you to continue to use water wisely and conscientiously in the common interest of all our citizens.

Definitions

Action Level - the concentration of a contaminant that, if exceeded, triggers some follow-up action
ADEM - Alabama Department of Environmental Management - Alabama's environmental regulatory agency
AWPCA - Alabama Water Pollution Control Association
Disinfection byproducts - produced when disinfectants used in water treatment react with natural organic matter present in the source water
Distribution System Evaluation (DSE) - a one-year study conducted by water systems to monitor disinfection byproducts.
EPA - the United States Environmental Protection Agency.
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.
Minimum Reporting Limit (MRL) – either not detected or is smallest measured concentration that can be measured by using a given analytical method
Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water.
Not Applicable (NA) - Not applicable to water system because not required.
Non-Detect (ND) - laboratory analysis indicates that the contaminant is not present at a detectable level; less than the MRL.
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.
Treatment Technique (TT) - a required process to reduce a contaminant.
UCMR – Unregulated Contaminant Monitoring Rule.
Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Tips on Becoming Water-Wise

Verify that your home is leak free. Read your water meter before and after a two hour period when no water is being used. If the meter does not read exactly the same, there is a leak.

- Repair dripping faucets by replacing washers. A drip at the rate of one drop per second could waste 2,700 gallons per year.
- Check for toilet leaks by adding food coloring to the tank. If there is a leak, color will appear in the bowl within 30 minutes. Replace worn out, corroded, or bent parts.
- Replace the toilet handle if it frequently sticks in the flush position.
- Operate dishwashers and clothes washers only when they are fully loaded and set the water level appropriate to the size of the load.
- Store drinking water in the refrigerator instead of running the water until it is cool.
- Don't allow water to run needlessly while you are shaving or brushing your teeth.
- Adjust sprinklers so that you are not watering sidewalks and driveways as well as your lawn.
- Only water your lawn during the cool part of the day to minimize evaporation.

CITIZENS' WATER SERVICE, INC.
P. O. Box 670
Vance, AL 35490

2023 Annual Water Quality Report

(Testing Performed January through December 2022)

CITIZENS' WATER SERVICE, INC.
P. O. Box 670
Vance, AL 35490
(16773 Highway 11 North)
Phone 205-556-2224
Fax 205-556-2264
Office hours: Monday – Thursday, 7:30 a.m. – 5:00 p.m.

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and Alabama Department of Environmental Management (ADEM) drinking water health standards. We diligently safeguard your water supplies, and once again we are proud to report that our system has not violated any water quality standard. We are pleased to present to you this year's Annual Water Quality Report.

Water Sources	Two groundwater wells producing from the Fort Payne Chert and the Knox Formation (Purchased water from City of Tuscaloosa serves the Keenes Mill area)
Water Treatment	Chlorination for disinfection and poly-orthophosphate for corrosion control
Storage Capacity	Seven storage tanks with a total capacity of 2.1 million gallons
# of Customers	Approximately 4000
Board of Directors	Kenny Herring, President Jeff Huguley, Vice President Steve McPherson, Director Jana Gennery, Director Billy Hubbard, Director
General Manager	Heath Plowman

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), Citizens' Water Service, Inc. has developed a Source Water Assessment plan that will assist in protecting our water sources. 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 regular business hours, or you may purchase a copy upon request for a nominal reproduction fee.

Citizens' Water Service, Inc. routinely completes a water storage facility inspection plan and utilizes a Bacteriological Monitoring Plan. The required chlorine residual is maintained throughout our distribution system to protect your drinking water from possible outside contaminants. We have also established a Cross-Connection Policy to insure safe drinking water for our customers. Please help us make these efforts 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. We ask that all our customers help us protect our valuable water sources, which are the heart of our community, our way of life, and our children's futures.

Questions

If you have any questions about this report or concerning your water utility, please contact Heath Plowman, Manager, at 205-556-2224. 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 first Thursday of each month at 6:00 p.m. at the water office. 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).

Monitoring Schedule and Results

Citizens' Water Service, Inc. routinely monitors for contaminants in your drinking water according to Federal and State laws, using EPA approved methods and a State certified laboratory. 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 in accordance with the regulatory schedule.

Constituent Monitored	Date Monitored
Inorganic Contaminants	2022
Lead/Copper	2022
Microbiological Contaminants	current
Nitrates	2022
Radioactive Contaminants	2020
Synthetic Organic Contaminants	2020

Constituent Monitored	Date Monitored
Volatile Organic Contaminants	2022
Disinfection By-products	2022
DSE Disinfection Byproducts	2017
UCMR4 Contaminants	2020
PFAS Contaminants	2020

TABLE OF DETECTED DRINKING WATER CONTAMINANTS

Contaminants	Violation Y/N	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Total coliform bacteria	NO	1 *	Present/ Absent	0	5% of monthly samples	Naturally present in the environment; used as an indicator that other bacteria may be present
Barium	NO	0.019	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	NO	0.100 ** 0 > AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Nitrate (as Nitrogen)	NO	0.52-0.55	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	LRAA Range 26.5-33.8	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	LRAA Range 29.5-31.3	ppb	0	60	By-product of drinking water chlorination
Secondary Contaminants						
Chloride	NO	2.0	ppm	n/a	250	Naturally occurring in the environment or from runoff
Hardness	NO	147	ppm	n/a	n/a	Naturally occurring; treatment with water additives
pH	NO	7.7	S.U.	n/a	n/a	Naturally occurring; treatment with water additives
Sulfate	NO	3.1	ppm	n/a	250	Naturally occurring in the environment or from runoff
Total Dissolved Solids	NO	165	ppm	n/a	500	Naturally occurring in the environment or from runoff

* One positive coliform sample occurred in November 2022. All repeat samples were negative.
** Figure shown is 90th percentile and # of sites above action level (1.3 ppm) = 0

Fourth Unregulated Contaminant Monitoring Rule (UCMR4) Contaminants

Contaminants	Unit Msmt	Level Detected	Contaminants	Unit Msmt	Level Detected	Contaminants	Unit Msmt	Level Detected
Entry Point Samples								
Germanium	ppb	ND	Oxyfluorfen	ppb	ND	2-methoxyethanol	ppb	ND
Manganese	ppb	ND-5.0	Profenofos	ppb	ND	2-propen-1-ol	ppb	ND
Alpha-hexachlorocyclohexane	ppb	ND	Tebuconazole	ppb	ND	Butylated hydroxyanisole	ppb	ND
Chlorpyrifos	ppb	ND	Total permethrin (cis- & trans-)	ppb	ND	O-toluidine	ppb	ND
Dimethipin	ppb	ND	Tribufos	ppb	ND	Quinoline	ppb	ND
Ethoprop	ppb	ND	1-butanol	ppb	ND			

Distribution Samples			Cyanotoxins		
HAA5	ppb	25.2-45.3	Anatoxin-A	ppb	ND
HAA6Br	ppb	4.1-6.5	Cylindrospermopsin	ppb	ND
HAA9	ppb	20.5-42.8	Total Microcystins	ppb	ND
Total organic carbon (TOC)	ppb	ND			
Bromide	ppb	ND			

PFAS: Below is a list of per- and polyfluoroalkyl substances (PFAS) for which our water sources were monitored as required in 2020 and the results of that monitoring. *PFAS was not detected in our drinking water.*

PFAS Contaminants			
Contaminant	Level Detected (in ppb)	Contaminant	Level Detected (in ppb)
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	ND	Perfluoroheptanoic acid	ND
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	ND	Perfluorohexanesulfonic acid	ND
4,8-dioxa-3H-perfluorononanoic acid	ND	Perfluorononanoic acid	ND
Hexafluoropropylene oxide dimer acidA	ND	Perfluorooctanesulfonic acid	ND
N-ethylperfluorooctanesulfonamidoacetic acid	ND	Perfluorooctanoic acid	ND
N-methylperfluorooctanesulfonamidoacetic acid	ND	Perfluorotetradecanoic acid	ND
Perfluorobutanesulfonic acid	ND	Perfluorotridecanoic acid	ND
Perfluorodecanoic acid	ND	Perfluoroundecanoic acid	ND
Perfluorohexanoic acid	ND	Total PFAS	ND
Perfluorododecanoic acid	ND		

Below is a table of contaminants for which the Environmental Protection Agency and the Alabama Department of Environmental Management require testing. 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 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	Isoprpylbenzene	Propachlor
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene
2,2 – Dichloropropane	Carbaryl	Methomyl	Tert - Butylbenzene
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorfluoromethane

LIST OF 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