

ANNUAL DRINKING WATER QUALITY REPORT

WASHINGTON COUNTY WATER AUTHORITY

January-December 2022

We're pleased to present you with our Annual Drinking Water Quality Report. The report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the continual efforts made to protect our water resources and improve the water treatment process. We are committed to ensuring the quality of your water. Our water system is broken into a few distinct distribution areas. This report will detail results from all distribution areas.

The source of water for both the Koenton and Red Creek distribution areas is groundwater drawn from two (2) individual wells, one in each area, that serve approximately 600 customers over 70 square miles of northern Washington County. These wells draw water from the Dunbar Aquifer of the Oligocene Vicksburg Group. Chlorine is added to the water as disinfectant and the required residual is maintained to protect your drinking water from any possible outside contaminants and Aqua-Mag is added to help control corrosion in the distribution system. The Koenton Well is located approximately 1.5 miles east of Alabama Highway #17 on the north side of Washington County Road #34. The Red Creek Well is located approximately 4.0 miles west of Alabama Highway #17 on the south side of Washington County Road #34.

The Washington County Water Authority (Sunflower Distribution Area) produces groundwater from our new Well #3, which draws water from the Miocene Aquifer. The groundwater supplied to our customers requires no specialized treatment, however, chlorine is added to the water as disinfectant and Aqua-Mag is added to help control corrosion in the distribution system. The required chlorine residual is maintained to protect your drinking water from any possible outside contaminants within the distribution system. To help protect our water source we have completed a Source Water Assessment Plan, which is required by the Alabama Department of Environmental Management and the United States Environmental Protection Agency. Also, we have a Well Head Protection Plan. A copy may be reviewed at the water system office. It provides more information such as potential sources of contamination. We are pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact Ralph Morris at (251) 847-6654 or you may wish to attend our regularly scheduled meetings held on the fourth Monday of each month beginning at 3:00 PM at the office of the Washington County Water Authority, 45 Court Street, Chatom, Alabama. **Washington County Water Authority recently absorbed Wagarville Water and in this 2021 CCR Wagarville had no results to present to be in the detected columns.**

BOARD MEMBERS

◆ Thomas C. Johnson, Chairman
◆ Tena F. Dillard, Vice-Chairman
◆ Dan Pearce, Secretary/Treasurer

Plain Language Definitions:

- Not Required (NR) – Laboratory analysis not required due to waiver granted by the Environmental Protection Agency for the State of Alabama.
- 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 billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- 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.
- 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 one penny in \$10,000,000,000,000.
- Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
- Millirems per year (mrem/yr) - measure of radiation absorbed by the body.
- Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
- Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- Threshold Odor Number (T.O.N.) - The greatest dilution of a sample with odor-free water that still yields a just-detectable odor.
- Maximum Contaminant Level (MCL) - The "Maximum Allowed" 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 (MCLG) - The "Goal" 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 Goal (MRDLG) - 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.
- Maximum Residual Disinfectant Level (MRDL) - 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.

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 run-off, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
- Explanation of reasons for variance/exemptions:
- 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.

Table of Primary Contaminants

At high levels some primary contaminants are known to pose a health risk to humans. This table provides a quick glance of any primary contaminant detections.

CONTAMINANT	MCL	Sunflower	Koenton - Red Creek	CONTAMINANT	MCL	Sunflower	Koenton - Red Creek
Bacteriological							
Total Coliform Bacteria	<5%	ND	ND	Salmonella	50	ND	ND
Turbidity	TT	0.32	1.20	Thalassiosira	2	ND	0.00
Organic Chemicals							
Fecal Coliform & E. coli	0	ND	ND	Acrylamide	TT	ND	0.00
Radiochemical							
Beta photon emitters (mrem/yr)	4	ND	ND	Alachlor	2	ND	0.00
Alpha emitters (pCi/l)	15	37/-11	0.33	Atrazine	3	ND	0.00
Combined radium (pCi/l)	5	0.1/-0.5	0.50	Benazepip	5	ND	0.00
Uranium (pCi/l)	30	ND	ND	Carbofuzate	40	ND	0.00
Inorganic							
Antimony (ppb)	6	ND	0.00	Carbofuzate	5	ND	0.00
Arsenic (ppb)	10	ND	0.00	Chlordane	2	ND	0.00
Asbestos (MFL)	7	ND	0.00	Chlorobenzene	100	ND	0.00
Barium (ppm)	2	0.07	0.00	Chlordane	70	ND	0.00
Beryllium (ppb)	4	ND	0.00	Dibromochloropropane	200	ND	0.00
Bismuth (ppb)	10	ND	0.00	Dibromochloropropane	200	ND	0.00
Cadmium (ppb)	5	ND	0.00	Dichlorobenzene	600	ND	0.00
Chloramines (ppm)	4	ND	0.00	Dichlorobenzene	75	ND	0.00
Chlorine (ppm)	4	1.38	1.86	Dichloroethane	5	ND	0.00
Chlorine dioxide (ppb)	800	ND	0.00	Dichloroethylene	7	ND	0.00
Chlorite (ppm)	1	ND	0.00	Dichloroethylene	70	ND	0.00
Chromium (ppb)	100	ND	0.00	Dibromochloropropane	100	ND	0.00
Copper (ppm)	AL=1.3	0.20	0.20	Dibromochloropropane	5	ND	0.00
Cyanide (ppb)	200	ND	0.00	Dibromochloropropane	5	ND	0.00
Fluoride (ppm)	4	ND	0.27	Dibromochloropropane	400	ND	0.00
Lead (ppb)	AL=15	0.01	0.00	Dibromochloropropane	6	ND	0.00
Mercury (ppb)	2	ND	0.00	Dibromochloropropane	7	ND	0.00
Nitrate (ppm)	10	ND	0.20	Dibromochloropropane	20	ND	0.00
Nitrite (ppm)	1	ND	0.00	Dibromochloropropane	100	ND	0.00
Total Nitrate & Nitrite	10	ND	0.20	Dibromochloropropane	2	ND	0.00

Table of Secondary and Unregulated Contaminants

Secondary Drinking Water Standards are guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. ADEM has Secondary Drinking Water Standards established in state regulations applicable to water systems required to monitor for the various contaminants. **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.

CONTAMINANT	MCL	Sunflower	Koenton - Red Creek	CONTAMINANT	MCL	Sunflower	Koenton - Red Creek
Secondary 2018 - 2019							
Aluminum	0.2	0.52	0.90	Foaming Agents	0.5	ND	0.00
Chloride	250	5.80	6.26	Iron	0.3	0.07	0.38
Color (PCU)	15	5.00	5.00	Magnesium	75	4.50	0.00
Copper	1	ND	0.00	Odor (T.O.N.)	5	1.00	0.00
Special 2018 - 2019							
Calcium	N/A	47.70	0.00	pH (SI)	N/A	7.80	8.28
Carbon Dioxide	N/A	54	0.00	Sodium	N/A	12.50	48.00
Manganese	0.05	0.01	0.00	Specific Conductance (umhos)	<500	306.00	233.00
Unregulated 2019							
1,1-Dichloroethane	N/A	ND	0.00	Bromobenzene	N/A	ND	0.00
1,1,2,2-Tetrachloroethane	N/A	ND	0.00	Bromochloroethane	N/A	ND	0.00
1,1-Dichloroethane	N/A	ND	0.00	Bromochloroethane	N/A	0.00	5.40
1,2,3-Trichlorobenzene	N/A	ND	0.00	Bromofom	N/A	ND	0.00
1,2,3-Trichloropropane	N/A	ND	0.00	Bromomethane	N/A	ND	0.00
1,2,4-Trimethylbenzene	N/A	ND	0.00	Butachlor	N/A	ND	0.00
1,2,4-Trichlorobenzene	N/A	ND	0.00	Carbaryl	N/A	ND	0.00
1,3-Dichloropropane	N/A	ND	0.00	Chloroethane	N/A	ND	0.00
1,3-Dichloropropane	N/A	ND	0.00	Chlorobromomethane	N/A	ND	0.00
1,3,5-Trimethylbenzene	N/A	ND	0.00	Chloroform	N/A	0.00	23.00
2,2-Dichloropropane	N/A	ND	0.00	Chloromethane	N/A	ND	0.00
2-Hydroxyacetophenone	N/A	ND	0.00	Dibromochloroethane	N/A	ND	1.40
Aldicarb	N/A	ND	0.00	Dibromomethane	N/A	ND	0.00
Aldicarb Sulfone	N/A	ND	0.00	Dichlorodifluoromethane	N/A	ND	0.00
Aldicarb Sulfonate	N/A	ND	0.00	Dieldrin	N/A	ND	0.00
Aldrin	N/A	ND	0.00	Fluorotrichloroethane	N/A	ND	0.00

PFAS Compounds					
CONTAMINANT	RESULTS	UNITS	CONTAMINANT	RESULTS	UNITS
11C:PF3OUIS	Cu	ug/L	Perfluorooctanoic Acid	ND	ug/L
9C:PF3ONS	ND	ug/L	Perfluorotetradecanoic Acid	ND	ug/L
ADONA	ND	ug/L	Perfluorododecanoic Acid	ND	ug/L
HFPO-DA	ND	ug/L	Perfluorooctanoic Acid	ND	ug/L
NHFOAA	ND	ug/L	Perfluorobutanesulfonic Acid	ND	ug/L
NMFOAA	ND	ug/L	Perfluorooctanoic Acid	ND	ug/L
Perfluorobutanesulfonic Acid	ND	ug/L	Perfluorooctanoic Acid	ND	ug/L

GENERAL INFORMATION

Reporting NON-Compliance Notice

WASHINGTON COUNTY WATER & FPA Incurred a reporting violation by failing to submit the Disinfection By-Products by July 10, 2022.

June 20, 2022 Third Quarter.

We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

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 follow-up tests 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. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

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. The Washington County Water Authority 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 <http://www.epa.gov/safewater/lead>.

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 individuals with other immune system disorders, some elderly, and infants, can be particularly at risk from infections. Those at risk should seek advice about drinking water from the health care providers.

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).

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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two 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.

We at the Washington County Water Authority work around the clock to provide top quality water to every tap. 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 water sources, which are the heart of our community, our way of life and our children's future.

For more information, contact: Mr. Ralph Morris, Water Operator

Washington County Water Authority

45 Court Street, Chatom, AL 36518

Telephone: 251-847-6654 • Fax: 251-847-2875

Email – wcvwater@gmail.com

8:00 a.m. – 12:30 p.m. 1:00 p.m. – 4:30 p.m. Monday thru Friday

In addition to the primary drinking water contaminants, the utility monitors regularly for the following unregulated and secondary contaminants as regulated by the Alabama Department of Environmental Management. The requirement of this additional monitoring and reporting will further insure the safety of your drinking water and will keep you, as a utility customer, more informed. The Washington County Water Authority routinely monitors for contaminants in your drinking water according to Federal and State laws. Unless otherwise noted, the data presented in the following tables show the results of our monitoring period of January 1st to December 31st, 2022.

The table below lists all of the drinking water contaminants that were detected.

Table of Detected Drinking Water Contaminants 2022									
CONTAMINANT	MCLG	MCL	Range	Sunflower	Koenton - Red Creek	Amount Detected	Likely Source of Contamination		
Bacteriological Contaminants									
Total Coliform Bacteria	0	<5%		ND	ND	Present or Absent	Naturally present in the environment		
Turbidity	0	TT		0.35	0.36	NTU	Soil runoff		
Fecal Coliform & E. coli	0	0		ND	ND	Present or Absent	Human and animal fecal waste		
Radiochemical Contaminants									
Beta particle and photon	0	4		ND	ND	mrem/yr	Decay of natural and man-made deposits		
Alpha emitters	0	15		.339/-1.09	0.33	pCi/L	Erosion of natural deposits		
Combined Radium 226 & 228	0	5		0.165/-0.313	0.50	pCi/L	Erosion of natural deposits		
Uranium	0	30		ND	ND	pCi/L	Erosion of natural deposits		
Inorganic Contaminants									
Chlorine	MRDLG4	MRDL4	1.32 - 1.77	1.32	1.77	ppm	Water additive used to control microbes; Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives		
Copper	1.3	10 Sites AL=1.3	No. of Sites above action level 0	0.20	0.20	ppm	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories		
Fluoride	4	4	ND	0.27	0.27	ppm	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories		
Organic Contaminants									
Halocetic Acids (HAA5)	0	60	4.80 - 39.00	4.80	39.00	ppb	By-product of drinking water chlorination		
Total trihalomethanes (TTHM)	0	80	5.10 - 31.00	5.10	31.00	ppb	By-product of drinking water chlorination		
Secondary Contaminants									
Aluminum	N/A	0.2	0.00 - 0.52	0.52	0.00	ppm	Erosion of natural deposits or as a result of treatment with water additives		
Chloride	N/A	250	5.00 - 11.80	5.00	11.80	ppm	Naturally occurring in the environment or as a result of agricultural runoff		
Color	N/A	15	5.00 - 10.00	5.00	10.00	PCU	Naturally occurring in the environment or as a result of treatment with water additives		
Copper	N/A	1	ND - 0.00	0.00	0.00	ppm	Erosion of natural deposits; leaching from pipes		
Iron	N/A	0.3	0.08 - 0.16	0.08	0.16	ppm	Erosion of natural deposits		
Magnesium	N/A	0.05	ND - 4.40	4.40	ND	ppm	Erosion of natural deposits		
Odor	N/A	3	ND - 1.00	1.00	ND	T.O.N.	Naturally occurring in the environment or as a result of treatment with water additives		
Sulfate	N/A	250	9.10 - 13.90	13.90	9.10	ppm	Naturally occurring in the environment		
Total Dissolved Solids	N/A	500	181.00 - 207.00	181.00	207.00	ppm	Erosion of natural deposits		
Special Contaminants									
Calcium	N/A	N/A	ND - 48.90	48.90	ND	ppm	Erosion of natural deposits		
Carbon Dioxide	N/A	N/A	ND - 5.40	5.40	ND	ppm	Erosion of natural deposits		
Manganese	N/A	N/A	ND - 0.02	0.02	ND	ppm	Erosion of natural deposits		
pH	N/A	N/A	7.20 - 8.60	7.20	8.60	SU	Naturally occurring in the environment or as a result of treatment with water additives		
Sodium	N/A	N/A	12.10 - 48.00	12.10	48.00	ppm	Naturally occurring in the environment		
Specific Conductance	N/A	<500	246.00 - 310.00	310.00	246.00	umhos	Naturally occurring in the environment or as a result of treatment with water additives		