

**2023 Annual Water Quality Report**  
**(Covering period January - December 2022)**

**SOUTH ALABAMA UTILITIES**

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A copy of the annual CCR Report is on our website at [www.southalabamauutilities.net](http://www.southalabamauutilities.net).

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 are pleased to report that our drinking water meets federal and state requirements.

<b>Water Sources</b>	19 groundwater wells producing from the Pliocene-Miocene aquifer:	
	Well 1 -Jail Well	Well 13 -Eliza Jordan Well #2
	Well 2 -U.S. Highway 45 Well	Well 14 -Fairford Well
	Well 3 -Willie Street Well	Well 15 -Calvert Well
	Well 4 -5 <sup>th</sup> Street Well	Well 16 -Georgetown Well
	Well 5 -Lott Road Well	Well 17A -Scott Plantation Well (deep)
	Well 6 -Snow Road Well (inactive)	Well 17B -Scott Plantation Well (shallow)
	Well 7 -Johnson Road Well	Well 18 -Coy Smith well
	Well 8 -Wilmer Town Hall Well	Well 19 -Airport Well
	Well 11 -Eliza Jordan Well #1	Well 20 -Calvert 43 well
	Well 12 -Mary Montgomery Well	
<b>Number of Customers</b>	Approximately 20,000	
<b>Water Treatment</b>	Chlorination, corrosion control, and pH treatment	
<b>Storage Capacity</b>	13 active storage tanks, for a combined capacity of 8,648,000 gallons	
<b>Additional Connections</b>	Turnerville Water, McIntosh Water, and Kushla Water for emergency purposes only	
<b>Board Members</b>	Marcus Hobbs, Chairman	Jason Stringer, Director and Mayor
	Al McDonald, Vice-Chairman	Jeff Smith, Director
	Larry Yonge, Secretary-Treasurer	
<b>General Manager</b>	Donnie Cunningham	

**Source Water Assessment**

In compliance with the Alabama Department of Environmental Management (ADEM), South Alabama Utilities developed a Source Water Assessment to assist in protecting our water sources. This plan includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. Over 75% percent of the potential contaminants sited in our assessment areas were ranked as non-susceptible and medium risk. The report was approved by ADEM. A copy of the report is available in our office for review, 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.

**Questions?**

If you have any questions about this report or concerning your water utility, call:

Citronelle, Fairford, & Calvert areas	Phillip Weaver	251-866-2365, ext 125
Semmes, Fairview, Wilmer, and West Mobile areas	Kevin Evans	251-649-4317, ext 215

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 second and fourth Wednesday of each month at South Alabama Utilities office located at 8100 Joy Street, Citronelle, AL at 1:00 P.M. A board meeting schedule is also available on [www.southalabamauutilities.net](http://www.southalabamauutilities.net) to check for holiday dates and times.

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).

## 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. 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. 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 about 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](http://www.epa.gov/safewater/lead).

### Monitoring Schedule and Results

We routinely monitor your drinking water for contaminants 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	2022
Lead/Copper	2020
Microbiological Contaminants	current
Nitrates	2022
Radioactive Contaminants	2022
Synthetic Organic Contaminants (including pesticides and herbicides)	2022
Volatile Organic Contaminants	2022
Disinfection By-products	2022
Unregulated Contaminant Monitoring Rule 4 (UCMR4)	2019
PFAS Contaminants	2022

South Alabama Utilities *routinely* monitors for constituents in your drinking water according to Federal and State laws. As you can see by the Table of Detected Drinking Water Contaminants, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected. We are pleased to report that our drinking water meets or exceeds federal and state requirements.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS						
Contaminants	Violation Y/N	Level Detected	Unit Msmt.	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	Total 3.10	PCi/l	0	15	Erosion of natural deposits
Radium-228	NO	Total 2.01	PCi/l	0	5	Erosion of natural deposits
Barium	NO	ND-0.05	ppm	2	2	Drilling & refinery discharge; erosion
Copper	NO	0.330 *	ppm	1.3	AL=1.3	Household plumbing corrosion; erosion; leaching of wood preservatives
Fluoride	NO	ND-0.33	ppm	4	4	Erosion; additive for teeth; factory discharge
Nitrate (as Nitrogen)	NO	ND-0.69	ppm	10	10	Fertilizer runoff; septic & sewage leaching; erosion
TTHM [Total trihalomethanes]	NO	Annual 10.0-40.0	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	Annual 7.00-24.0	ppb	0	60	By-product of drinking water chlorination
<b>Unregulated Contaminants</b>						
Chloroform	NO	ND-21.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff
Bromodichloromethane	NO	ND-12.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff
Chlorodibromomethane	NO	ND-13.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff
Bromoform	NO	ND-17.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff
<b>Secondary Contaminants</b>						
Aluminum	NO	ND-0.14	ppm	n/a	0.2	Erosion; treatment with water additives
Chloride	NO	5.2-30.4	ppm	n/a	250	Naturally occurring or from discharge or runoff
Color	NO	ND-20	color units	n/a	15	Naturally occurring or from water additives
Hardness	NO	ND-12.0	ppm	n/a	n/a	Naturally occurring or from water additives
Iron	NO	ND-0.71	ppm	n/a	0.30	Naturally; erosion; leaching from pipes
Manganese	NO	ND-0.05	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO	7.0-8.5	S.U.	n/a	n/a	Naturally occurring or from water additives
Sodium	NO	8.9-84.6	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	ND-9.1	ppm	n/a	250	Naturally occurring or from discharge or runoff
Total Dissolved Solids	NO	98-532	ppm	n/a	500	Naturally occurring or from discharge or runoff
Zinc	NO	ND-0.18	ppm	n/a	5	Erosion; refinery & factory discharge; landfill runoff

\* Figure shown is 90<sup>th</sup> percentile and number of sampled sites above action level (1.3 ppm) = 0

#### UCMR4

The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) requires some systems to monitor for 30 unregulated contaminants during January 2018 through December 2020 on an assigned schedule. The table below shows the contaminants we were required to monitor and the results of our monitoring in 2019.

UCMR 4 Contaminants					
Contaminants	Unit Msmt	Level Detected	Contaminants	Unit Msmt	Level Detected
Germanium	ppb	ND-0.81	Total permethrin (cis- & trans-)	ppb	ND
Manganese	ppb	ND-42.4	Tribufos	ppb	ND
Alpha-hexachlorocyclohexane	ppb	ND	1-butanol	ppb	ND
Chlorpyrifos	ppb	ND	2-methoxyethanol	ppb	ND
Dimethipin	ppb	ND	2-propen-1-ol	ppb	ND
Ethoprop	ppb	ND	Butylated hydroxyanisole	ppb	ND
Oxyfluorfen	ppb	ND	O-toluidine	ppb	ND
Profenofos	ppb	ND	Quinoline	ppb	ND
Tebuconazole	ppb	ND			
<b>Distribution Samples</b>					
HAA5	ppb	15.8-27.7	Total organic carbon (TOC)	ppb	ND-8620
HAA6Br	ppb	7.70-12.4	Bromide	ppb	ND-303
HAA9	ppb	12.5-39.1			

## PFAS Contaminants

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that were used in the manufacture of nonstick cookware, stain-resistant carpet and textiles, firefighting foams, food wrappers, and other industrial and consumer applications. The U.S. Environmental Protection Agency (EPA) has not yet established primary drinking water MCLs for PFAS substances. Below is a list of PFAS contaminants for which our system monitored in 2022 and the results of that monitoring. For more information on PFAS contaminants, please refer to <https://www.epa.gov/pfas>.

PFAS Contaminants					
Contaminant	Unit Msmt	Level Detected	Contaminant	Unit Msmt	Level Detected
11CI-PF3OUdS (11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid)	ppb	ND	Perfluoroheptanoic acid	ppb	ND
9CI-PF3ONS (9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid)	ppb	ND	Perfluorohexanesulfonic acid	ppb	ND
ADONA (4,8-dioxa-3H-perfluorononanoic acid)	ppb	ND	Perfluorononanoic acid	ppb	ND
HFPO-DA (Hexafluoropropylene oxide dimer acidA)	ppb	ND	Perfluoroctanesulfonic acid	ppb	ND
NEtFOSAA (N-ethylperfluoroctanesulfonamidoacetic acid)	ppb	ND	Perfluoroctanoic acid	ppb	ND
NMeFOSAA (N-methylperfluoroctanesulfonamidoacetic acid0	ppb	ND	Perfluorotetradecanoic acid	ppb	ND
Perfluorobutanesulfonic acid	ppb	ND-0.0026	Perfluorotridecanoic acid	ppb	ND
Perfluorodecanoic acid	ppb	ND	Perfluoroundecanoic acid	ppb	ND
Perfluorohexanoic acid	ppb	ND	Total PFAS	ppb	ND-0.0026
Perfluorododecanoic acid	ppb	ND			

## Non-compliances 2022

**Three reporting non-compliances:** South Alabama Utilities incurred three reporting non-compliances during 2022.

- PFAS – Resulted from a failure to submit the January – June 2022 results on all wells by July 10, 2022
- Radiological (RADs) - Resulted from a failure to submit the April - June 2022 results for Well 5 to ADEM by July 10, 2022.
- Radiological (RADs) - Resulted from a failure to submit the October - December 2022 results for Well 5 by January 10, 2023.

The ADEM Admin. Code states, "the supplier of water shall report to the Department the results of any test, measurement or analysis within the first 10 days following the month in which the result is received or the first 10 days following the end of the required monitoring period as stipulated by the Department, whichever is shortest." We did monitor for the contaminants during the correct time frame and results were in compliance; however, the results were reported to ADEM late due to lab error.

**One monitoring non-compliance:** South Alabama Utilities incurred a monitoring non-compliance in 2022. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether your drinking water meets health standards. During the April – June 2022 monitoring period we did not complete all monitoring for Volatile Organic Chemicals (VOC) from Well 1 (Jail) treatment plant and therefore cannot be sure of the quality of your drinking water during that time.

This notice is required by strict interpretation of ADEM's regulations. It should be noted, however, that the sampling/monitoring that was not performed and caused the non-compliance was for a water supply well which was *out of service* due to mechanical failure of the pumping equipment. The well was inoperable and unable to pump water. The failure occurred and the well was out of service beginning April 6, 2022 and remains so as of the date of this notice. Sampling and testing for VOC's was scheduled for later in the quarter but could not be performed due to the inoperable condition of the well. As soon as the well comes back on line sampling will be performed as directed by ADEM.

Please share the information about these non-compliances with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. If you have any questions about these violations or our monitoring requirements, please contact Phillip Weaver at our water office at 8100 Joy Street or by phone at 251-866-2365.

## **Definitions**

Action Level- the concentration of a contaminant that, if exceeded, triggers treatment or other requirements for a water system.

Coliform Absent (ca)- Laboratory analysis indicates that the contaminant is not present.

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. Disinfection byproducts for which regulations have been established include trihalomethanes (TTHM), haloacetic acids (HAA5), bromate, and chlorite.

Distribution System Evaluation (DSE)-four quarter study to identify distribution system locations with high concentrations of DBPs.

Locational Running Annual Average (LRAA)-yearly average of all the DPB results at each specific sampling site in the distribution system. Reported as a range from lowest to highest in the Table of Detected Contaminants.

Maximum Contaminant Level- 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- The Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health.

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.

Not Reported (NR)-laboratory analysis, usually Secondary Contaminants, not reported by water system. EPA recommends secondary standards to water systems but does not require systems to comply.

Parts per billion (ppb) or Micrograms per liter ( $\mu\text{g/l}$ )-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 ( $\text{mg/l}$ )-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.

Standard Units (S.U.)-pH of water measures the water's balances of acids and bases.

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.

Below is a *Table of Primary Drinking Water Contaminants*. These contaminants were *not* detected in your water unless they appear in the *Table of Detected Contaminants*.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
<b>Bacteriological Contaminants</b>			trans-1,2-Dichloroethylene	100	ppb
Total Coliform Bacteria	<5%	present or absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloropropane	5	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb
Cryptosporidium	TT	Calculated organisms/liter	Di (2-ethylhexyl)phthalate	6	ppb
<b>Radiological Contaminants</b>			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
<b>Inorganic Chemicals</b>			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 (PCBs)	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
<b>Organic Contaminants</b>			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
o-Dichlorobenzene	600	ppb	Chloramines	4	ppm
p-Dichlorobenzene	75	ppb	Bromate	10	ppb
1,2-Dichloroethane	5	ppb	Chlorite	1	ppm
1,1-Dichloroethylene	7	ppb	HAA5 [Total haloacetic acids]	60	ppb
cis-1,2-Dichloroethylene	70	ppb	TTTHM [Total trihalomethanes]	80	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	Bromo-chloromethane	Dichlorodifluoromethane	O-Chlorotoluene		
1,2,4 - Trimethylbenzene	Bromodichloromethane	Dieldrin	P-Chlorotoluene		
1,3 - Dichloropropane	Bromoform	Hexachlorobutadiene	P-Isopropyltoluene		
1,3 - Dichloropropene	Bromomethane	Isopropylbenzene	Propachlor		
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene		
2,2 - Dichloropropane	Carbaryl	Methomyl	Tert - Butylbenzene		
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorofluoromethane		