2024 Annual Water Quality Report

(Covering period January - December 2023)

SOUTH ALABAMA UTILITIES

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A copy of the annual CCR Report is on our website at www.southalabamautilities.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.

	19 groundwater wells producing from the Pliocene-Miocene	aquifer:			
	WL001 - Well 2 (U.S. HWY. 45)	WL020 - Scott Plantation Deep Well			
	WL002 - Well 1 (Jail)	WL021 - Scott Plantation Shallow Well			
	WL003 - Well 3 (Willie ST.)	WL022 - Coy Smith Well			
	WL004 - Well 4 (5 th Street)	WL023 - Airport Blvd Well			
Water Sources	WL009 - Well 7 Johnson Road (Semmes)	WL024 - Georgetown Well			
	WL013 - Well 8 Wilmer Town Hall	WL025 - Calvert/TK Well			
	WL014 - Well 11 Eliza Jordan Well #1 (Semmes)	WL026 - MGM Well 3			
	WL015 - Well 12 Mary Montgomery Well 1	WL027 - MGM Well 2			
	WL016 - Well 13 Eliza Jordan #2 (Semmes)	WL029 - MCB Well 1			
	WL019 - Well 14 Fairford	WL030 - MCB Well 2			
Number of Customers Approximately 20,000					
Water Treatment	Chlorination, corrosion control, and pH treatment				
Storage Capacity	15 active storage tanks, for a combined capacity of 8,648,00	00 gallons			
Additional Connections	itional Connections Turnerville Water, McIntosh Water, and Kushla Water for emergency purposes only				
	Marcus Hobbs, Chairman	Jason Stringer, Director and Mayor			
Board Members	Al McDonald, Vice-Chairman	Jeff Smith, Director			
	Larry Yonge, Secretary-Treasurer				
General Manager	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.

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.southalabamautilities.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 <u>www.epa.gov/safewater/lead</u>.

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	2023
Lead/Copper	2023
Microbiological Contaminants	current
Nitrates	2023
Radioactive Contaminants	2023
Synthetic Organic Contaminants (including pesticides and herbicides)	2023
Volatile Organic Contaminants	2023
Disinfection By-products	2023
Unregulated Contaminant Monitoring Rule 5 (UCMR5)	2023
PFAS Contaminants	2023

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 MCL 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 10.1 (Qtrly Avg 2.51)	PCi/l	0	15	Erosion of natural deposits		
Radium-228	NO	Total 3.93 (Qtrly Avg 0.98)	PCi/l	0	5	Erosion of natural deposits		
Barium	NO	ND-0.03	ppm	2	2	Drilling & refinery discharge; erosion		
Copper	NO	0.330 *	ppm	1.3		Household plumbing corrosion; erosion; wood preservative leaching		
Fluoride	NO	ND-0.85	ppm	4	4	Erosion; additive for teeth; factory discharge		
Lead	NO	0.0011 *	ppm	0	AL=0.015	Household plumbing corrosion; erosion		
Nitrate (as Nitrogen)	NO	ND-0.72	ppm	10	10	Fertilizer runoff; septic & sewage leaching; erosion		
TTHM [Total trihalomethanes]	NO	Annual 43.0-46.0	ppb	0	80	By-product of drinking water chlorination		
HAA5 [Total haloacetic acids]	NO	Annual 29.0-31.0	ppb	0	60	By-product of drinking water chlorination		
Unregulated Contaminants								
Chloroform	NO	ND-24.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff		
Bromodichloromethane	NO	ND-14.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff		
Chlorodibromomethane	NO	ND-29.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff		
Bromoform	NO	ND-33.0	ppb	n/a	n/a	Naturally occurring or from discharge or runoff		
Secondary Contaminants								
Aluminum	NO	ND-0.02	ppm	n/a	0.2	Erosion; treatment with water additives		
Chloride	NO	5.80-175	ppm	n/a	250	Naturally occurring or from discharge or runoff		
Color	NO	ND-5.00	color units	n/a	15	Naturally occurring or from water additives		
Hardness	NO	ND-4.60	ppm	n/a		Naturally occurring or from water additives		
Iron	NO	ND-0.44	ppm	n/a		Naturally; erosion; leaching from pipes		
Manganese	NO	ND-0.01	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes		
рН	NO	7.7-8.5	S.U.	n/a	n/a	Naturally occurring or from water additives		
Sodium	NO	6.30-187	ppm	n/a	n/a	Naturally occurring in the environment		
Sulfate	NO	ND-6.1	ppm	n/a	250	Naturally occurring or from discharge or runoff		
Total Dissolved Solids	NO	32.0-496	ppm	n/a	500	Naturally occurring or from discharge or runoff		

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

UCMR5

The Fifth Unregulated Contaminant Monitoring Rule (UCMR5) requires monitoring by certain water systems for 30 unregulated contaminants during 2022 - 2026 on assigned schedules. UCMR 5 specifies monitoring for 29 PFAS and one metal (lithium). The table below contains the detected results of monitoring during our schedule in 2023. For more information, including the full list of UCMR 5 contaminants we monitored, see <u>https://www.epa.gov/dwucmr</u>.

Detected UCMR5 Contaminants (ppb)						
Contaminants	Range of Detections	Average of Detections				
Lithium	ND-15.5	2.82				
6:2 FTS	ND-0.0054	0.0007				
Perfluorobutanesulfonic acid	ND-0.0027	0.0003				
Perfluoroheptanoic acid	ND-0.0010	0.00003				
Perfluorohexanoic acid	ND-0.0015	0.0001				
Perfluorooctanesulfonic acid	ND-0.0039	0.0003				
Perfluorooctanoic acid	ND-0.0017	0.00006				
PFBA	ND-0.0170	0.0018				
PFPeA	ND-0.0016	0.00006				

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 and results of monitoring our wells in 2022 and our new MGM wells in 2023. For more information on PFAS contaminants, please refer to <u>https://www.epa.gov/pfas</u>.

PFAS Contaminants							
Contaminant		Level Detected		Contaminant	Unit Msmt	Level Detected	
11CI-PF3OUdS (11-chloroeicosafluoro-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		Perfluorooctanesulfonic acid	ppb	ND	
NEtFOSAA (N-ethylperfluorooctanesulfonamidoacetic acid)	ppb	ND		Perfluorooctanoic acid	ppb	ND	
NMeFOSAA (N-methylperfluorooctanesulfonamidoacetic 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					

Three Monitoring Violations 2023

South Alabama Utilities is 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 July – September 2023 monitoring period we did not complete all monitoring on our Mary Montgomery Wells 2 and 3; therefore, we cannot be sure of the quality of your drinking water during that time. The three contaminant groups that we failed to sample during the correct time were:

- 1. Radiologicals (RAD)
- 2. Volatile Organic Compounds (VOC)
- 3. Secondary Organic Compounds (SOC)

When we became aware of these monitoring violations, we immediately scheduled with the independent laboratory that does this sampling. The required monitoring was then completed, and all results were in compliance. 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.

Please share the information about these violations 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.

Definitions

<u>Action Level</u>- the concentration of a contaminant that, if exceeded, triggers treatment or other requirements for a water system. <u>Coliform Absent</u> (ca)- Laboratory analysis indicates that the contaminant is not present.

<u>Disinfection byproducts</u> (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.

<u>Distribution System Evaluation</u> (IDSE)-four quarter study to identify distribution system locations with high concentrations of DBPs. <u>Locational Running Annual Average</u> (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.

<u>Nephelometric Turbidity Unit</u> (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 (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/I)-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 \$10,000,000,000,000.

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*.

STANDAR	DLISTOF	PRIMARY DRIN	KING WATER CONTAMINAN	rs		
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt	
Bacteriological Contaminants			trans-1,2-Dichloroethylene	100	ppb	
Total Coliform Bacteria	<5%	present or absent	Dichloromethane	5	ppb	
ecal Coliform and E. coli	0	present or absent	1,2-Dichloropropane	5	ppb	
Furbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb	
Cryptosporidium	тт	Calculated organisms/liter	Di (2-ethylhexyl)phthalate	6	ppb	
Radiological Contaminants		organiomonitor	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	
Jranium	30	pCi/l	Endrin	2	ppb	
norganic 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	
ead	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	
Fhallium	.002	ppm	Tetrachloroethylene	5	ppb	
Drganic Contaminants		ppm	Toluene	1	ppm	
2,4-D	70	pph	Toxaphene	3	pphi	
	π	ppb TT		50		
Acrylamide Alachlor	2		2,4,5-TP(Silvex)	.07	ppb	
		ppb	1,2,4-Trichlorobenzene		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 Bypro	ducts		
Dalapon	200	ppb	Chlorine	4	ppm	
Dibromochloropropane	200	ppt	Chlorine Dioxide	800	ppb	
D-Dichlorobenzene	600	ppb	Chloramines	4	ppm	
p-Dichlorobenzene	75	ppb	Bromate	10	ppth	
1.2-Dichloroethane	5	ppb	Chlorite	1	ppm	
1,1-Dichloroethylene	7		HAA5 [Total haloacetic acids]	60		
		ppb		-	ppb	
cis-1,2-Dichloroethylene	70 UNF	ppb REGULATED CO	TTHM [Total trihalomethanes]	80	ppb	
I,1 – Dichloropropene	Aldicart		Chloroform	Metola	chlor	
		o Sulfone	Chloromethane		Metolachlor Metribuzin	
I,1,1,2-Tetrachloroethane		o Sulfoxide	Dibromochloromethane	N - Butylbenzene		
,1-Dichloroethane	Aldrin		Dibromomethane			
1,2,3 - Trichlorobenzene		enzene	Dicamba		Naphthalene N-Propylbenzene	
1,2,3 - Trichloropenzene						
		hloromethane	Dichlorodifluoromethane	O-Chlorotoluene P-Chlorotoluene		
1,2,4 - Trimethylbenzene		lichloromethane	Dieldrin			
1,3 – Dichloropropane	Bromof		Hexachlorobutadiene	-	ropyltoluene	
1,3 – Dichloropropene		nethane	Isoprpylbenzene	Propa		
1,3,5 - Trimethylbenzene	Butachl	or	M-Dichlorobenzene	Sec - I	Butylbenzene	
2,2 – Dichloropropane	Carbary	/I	Methomyl	Tert - Butylbenzene		
3-Hydroxycarbofuran	Chloroe	thane	MTBE	Trichlo	orfluoromethane	