The City of Tuscaloosa is pleased to provide this Annual Water Quality Report to you. This report provides information on the sources of our water, the results of our tests, and important information about water and health.

The sources of drinking water (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 runoff, 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.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. 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.

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.

#### THE SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. Amended in 1996, the SDWA added provisions for consumer involvement and right-to-know. The Consumer Confidence Report or Annual Water Quality Report is the centerpiece of public right-to-know in the SDWA. This report provides consumers the detected amounts of contaminants, sources of contamination, and plain language definitions

The amendments recognized that 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 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.

EPA/CDC guidelines on means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the <u>Safe Drinking Water Hotline 1-800-426-4791</u>.

#### STATEMENTS ON LEAD IN WATER

The City of Tuscaloosa is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. Lead is rarely found in source water. It is primarily from corrosion of materials that were used in older plumbing, solder that connects pipes, or from pipes connecting a house to the main water pipe in the street. Lead is no longer used in manufacturing these products, but older plumbing components still remain in some older homes. When water sits for several hours in these older pipes lead can leach into the water.

Elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. The EPA and the CDC make the following recommendations:

- Never use warm tap water to mix baby formula. Use only water from the cold tap for drinking and cooking.
- Before using any tap water for drinking or cooking, flush your water system by running the tap on COLD for 1–2 minutes. Flushing can minimize the potential for lead exposure.
- Periodically remove the aerator on the tip of the faucet and wash out any debris such as metal particles.
- Boiling water will NOT reduce lead in water.

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 your family's exposure is available from the <a href="Safe Drinking Water Hotline 1-800-426-4791">Safe Drinking Water Hotline 1-800-426-4791</a>, or at the EPA's website <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.

#### **PLAIN LANGUAGE DEFINITIONS**

To help you better understand the terms use in this report, please note the following abbreviations and definitions:

AL - Action Level; the level of a contaminant that, if exceeded, triggers treatment or other requirements.

ca - coliform absent

cfu - colony forming units

**DBP** - disinfection byproducts

MCL- maximum contaminant level

MCLG - maximum contaminant level goal

MRDLG -maximum residual disinfectant level goal

MFL - million fibers per liter; longer than 10 micrometers

MRDL - maximum residual disinfectant level

mg/l - milligrams per liter; equivalent to parts per million

mrem/yr - millirems per year; a measure of radiation

NTU - nephelometric turbidity unit; turbidity units

NA - not applicable

ND - not detected

ppb - parts per billion; equal to micrograms per liter

**ppm** - parts per million; equal to mg/L (milligrams per liter)

ppq - parts per quadrillion

picograms/I - picograms per liter

pCi/L- picocuries per liter; a measure of radiation

ppt - parts per trillion; equal to ng/L or nanograms per liter

**S.U.** - standard units; a measure the water's pH

TT - treatment technique; process to reduce contaminant

μg/L - micrograms per liter; equal to parts per billion

**V&E** - variances & exemptions

# The City of Tuscaloosa's Mayor and Council

Walt Maddox, Mayor Matthew Wilson, District 1 Raevan Howard, District 2 Norman Crow, District 3 Lee Busby, District 4 Kip Tyner, District 5 John Faile, District 6 Cassius Lanier, District 7

The Tuscaloosa City Council meets every Tuesday at 6:00 p.m. in the Council Chambers on the second floor of Tuscaloosa City Hall, 2201 University Boulevard. The Tuscaloosa News publishes the agenda for each meeting, and The City of Tuscaloosa posts the agenda on the website <a href="https://www.tuscaloosa.com">www.tuscaloosa.com</a>. You may contact the City Clerk for more information at (205) 248-5011.

## AWARD-WINNING WATER TREATMENT PLANTS

In 2022, the Jerry Plott Plant received the Best Operated Plant Award for plants producing 10.1 – 20 MGD from the Alabama Water Pollution Control Association.

In 2020, the City of Tuscaloosa was awarded the Water Fluoridation Quality Award by the CDC. This is awarded to water treatment plans that achieved optimal fluoridation levels for all 12 months of the year.

In 2019, the Alabama Department of Environmental Management, (ADEM), recognized the Ed Love Water Filtration Plant for achieving optimized performance goals. To win this award, plants must exceed the US EPA requirements by a factor of three or more for the entire year.

Please join us in thanking the staff of the City of Tuscaloosa Water Treatment Plants for their dedication to ensure that customers receive the best possible water quality.

#### IMPORTANT CONTACT INFORMATION

#### Water Billing Office Turn On/Turn Off

Office Hours: Mon. – Fri. 7:00 a.m. – 5:00 p.m. 205- 248-5500

Drive Thru: Mon. - Fri. 7:00 a.m. - 5:00 p.m.

#### Lakes Division

Office Hours: Mon. – Fri. 7:00 a.m. – 3:30 p.m. 205- 349-0279

#### Tuscaloosa 311 Call Center

Operational Hours: Mon. – Fri. 7:00 a.m. – 7:00 p.m. Dial 311 Within City Limits or Call 205-248-5311

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline 800-426-4791 or by visiting EPA's website www.epa.gov/safewater.



Kimberly Michael Executive Director

### 2023 ANNUAL WATER QUALITY REPORT

Testing Performed January - December 2022



Ed Love Water Filtration Plant 1125 Jack Warner Parkway North East Tuscaloosa, Alabama 35404-1056 Telephone 205-248-5630



Jerry Plott Water Filtration Plant 2101 New Watermelon Road Tuscaloosa, Alabama 35406 Telephone 205-248-5600

www.tuscaloosa.com/city-services/water/water-treatment

For Additional Information Contact: Ethan Hicks, Process Assets Director

AWQR-2023

#### THE SOURCE OF OUR DRINKING WATER

Lake Tuscaloosa is our primary source for drinking water. It is a 5,885-acre impoundment of North River and several other creeks. It holds over 40 billion gallons of excellent quality water.



Our Great Lake!

The City of Tuscaloosa developed a Source Water Assessment that assists in protecting our water sources. This plan provides information such as potential sources of contamination. It classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. For further information regarding the Source Water Assessment, please call or come by our Business Office at 2230 6th Street.

### IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

<u>Tuscalcosa Water and Sewer Department</u> Has Levels of Disinfection Byproducts (DBPs)

Above Drinking Water Standards

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We are required to monitor your drinking water for the presence of disinfection byproducts (DBPs) on a quarterly basis. The DBPs test results from the last four (4) quarters that ended with 01/2022 testing show that our system exceeds the standards, or maximum contaminant level (MCL) for haloacetic acids (HAAS), MCL for HAA5 is calculated based on locational running annual averages (LRAA) of samples collected from the last four (4) quarters. The LRAA of HAA5 at 13534 Deerlick Road is at 0.061 mg/L. The quarter is January-March 2022.

This value exceeds the respective MCLs for HAA5 of 0.060 mg/L. The MCL for HAA5 is also known as 60 ppb (parts per billion)

#### What should I do?

At this time, no alternative source of water is necessary. However, if you have any specific health concerns, consult your doctor.

#### What does this mean?

This is not an emergency. If it had been, you would have been notified immediately. Some people who drink water containing HAA5 in excess of the MCL over many years may have an increased risk of getting cancer. Persons may also experience problems with their liver, kidneys or central nervous system.

#### What Happened? What is being done?

When disinfectants are used in the treatment of drinking water, disinfectants react with naturally occurring organic and inorganic matter present in water to form DBPs. We are taking/ have taken the following corrective actions: Our water system has a flushing program that is designed to lower the levels of Total Trihalomethanes and Haloacetic Acids. We are also continually performing testing to change treatment as necessary and reduce the occurrence of hipher levels of these disinfection byornoducts.

If you have any questions, please contact Kimberly Michael at 205-248-5600, or 2101 New Watermelon Road; Tuscaloosa, Al. 35406; Email: kmichael@tuscaloosa.com

Please share this information 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.

#### **OUR WATER TREATMENT PROCESSES**

The Ed Love Water Filtration Plant and the Jerry Plott Water Filtration Plant supply water to nearly 200,000 customers in the metropolitan Tuscaloosa area. These facilities operate 24-hours a day, 365 days a year. Ed Love Plant has the capacity to treat 45.7 million gallons/day.

The Jerry Plott Water Filtration Plant can treat 14 million gallons/day. Each plant utilizes the basic five steps of treatment: coagulation, flocculation, sedimentation, filtration, and chlorination. The speed of treatment and the chemicals used to accomplish the five steps differ somewhat for each plant. The biggest difference in the two plants is in the filtration step.

The Ed Love Water Treatment Plant utilizes conventional filtration consisting of two layers of filter media. An 18-inch layer of anthracite coal sits on top of the filter and helps trap organic material and dirt. The second layer of 12 inches of torpedo sand traps dirt and protozoans. The sand is similar to the sand found on many beaches around the world. What makes this sand special is its high degree of uniformity, which allows the sand to pack together tightly, increasing the filter's effectiveness. Water filters by gravity.

The Jerry Plott facility utilizes pressure to squeeze water through membranes made of Polyvinylidene Fluoride, PVDF. This lightweight plastic polymer is formed into long hollow tubes. The hollow tubes have an appearance reminiscent of spaghetti. The water molecules pass though the filter and collect in the hollow center of the fibers. Dirt, pathogens, organic material, and bacteria are left on the outside of the fibers. After filtration, the water receives a dose of chlorine in the form of sodium hypochlorite. This chemical is commonly known as bleach. The water goes to a storage tank called a clear well. This tank gives the chlorine time to disinfect the water before it is pumped to the distribution system, and our customers. Facilities in our distribution include:

Water Mains in service, 4" and larger	710.13 Miles
Water storage tanks	13
Water storage capacity	25.4 Million Gal.
Water booster pump stations	10
Public fire hydrants	3847

### UNREGULATED CONTAMINANT MONITORING RULE NUMBER 4 (UCMR4)

The UCMR4 required water systems serving more than 10,000 people to monitor unregulated contaminants over a three-year span. The City of Tuscaloosa performed monitoring for the contaminants below in 2018 and 2020. UCMR4 contaminants were not detected in our drinking water.

Germanium	Ethoprop
Manganese	Oxyfluorfen
Alpha-hexachlorocyclohexane	Anatoxin-a
Chlorpyifos	Cylindrospemopsin
Dimethipin	Total Microcystins

#### **PFAS CONTAMINANTS**

Per- and polyfluoroalkyl substances (PFAS) are a group of manmade chemicals that were used in the manufacture of nonstick cookware, stain-resistant carpet and textiles, food wrappers, and other industrial and consumer applications. The City of Tuscaloosa monitored both water treatment plants for PFAS contaminants on March 30, 2021. PFAS contaminants were not detected in our drinking water.

#### **DETECTED DRINKING WATER CONTAMINANTS**

We routinely monitor for constituents in your drinking water according to Federal and State laws We work diligently to provide a high-quality, cost-effective drinking water supply.

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.

# WATER QUALITY REPORT PRIMARY DRINKING WATER PARAMETERS WATER SOURCE LAKE TUSCALOOSA

			*********	0001102 2 1	12 1000/120	00,1	
			DETE	CTED CON	TAMINA	NTS	
	A			MICROBIOL urpass Feder	OGICAL		ulations
Period Covered: 12 Months Ending December, 2022	Units	MCL	MCLG	Highest Level in Distribution System	Range of detections	Violation (Yes/ No)	Major Sources in Drinking Water
	Preser	nce of total	more	.,			,
		bacteria in of the 150		Coliform Present in 1.50 % of			
Tatal Oalliana Bastada	require	d monthly	٥	samples in one	Not detected -	L	Notes to the section of
Total Coliform Bacteria		mples 2022 R of	·	month mples was pos	1.50 % itive for Total i	No	Naturally present in the environment
Total Organic Carbon	mg/L	TT T	N/A	3.2	0.8-3.2	No	Naturally present in the environment
Total Organic Carbon	IIIg/L	-"	INVA	3.2	0.0-3.2	140	Soil Runoff -Turbidity can interfere with
Turbidity	NTU	0.3	N/A	1.517	0.003-1.517	No	disinfection
Chlorine as Cl <sub>2</sub>	mg/L	4	4	2.7	0.2 - 2.7	No	Water additive used to control microbes
Chlorine Dioxide as CIO <sub>2</sub>	mg/L	0.8	0.8	0.77	0.12 - 0.77	No	Water additive used to control microbes
Chlorite as CIO <sub>2</sub>	mg/L	1	1	0.82	0.820	No	Water additive used to control microbes
	Α.	II requite a		RADIOLO urpass Feder		latar Da	rulations
	A	i results i	neet or s	urpass reden	-0.018+/-0.534-	alei Ke	guiations
Gross Alpha	pCi/L	15	0	0.268+/-1.140	0.268+/-1.14	No	Erosion of natural deposits
	Α.	Il requite r		NORGANIC C urpass Feder		latar Da	rulations
	, A	i results i	lieet or s	urpass reuer	ai Dillikiliy w	alei Ke	Erosion of natural deposits; Drilling wastes an
Barium as Ba	mg/L	2	2	0.026	0.019-0.026	No	metal refinery discharges.
							Erosion of natural deposits; Water additi
Fluoride as F	mg/L	4	4	0.00	0.00-1.09	No	which promotes strong teeth; Discharge from fertilizers and aluminum factories
i labilac as i	IIIg/L	-	-	0.00	0.00 1.00	110	Fertilizer runoff; Septic and sewage leaching;
Nitrate as NO3 '-N	mg/L	10	10	0.36	0.23-0.36	No	Erosion of natural deposits
Sulfate as SO <sub>4</sub>	mg/L	50	50	13.7	13.1-13.7	No	Erosion of natural deposits.
	٨	Il roculte r		INFECTION B urpass Feder			rulatione
	_^	i results i	licet of s	Average Level in	ar Dillikilig Vi	alei ive	guiations
Period Covered: 12 Months Ending December, 2022	11-14-		MOI 0	Distribution System	Range of detections	Violation (Yes/ No)	Major Sources in Drinking Water
Haloacetic Acids	Units	MCL	MCLG	33.3	0.0-57.0	Yes	
	µg/L ichloroac	60 etic Monol	N/A romoace				By-product of drinking water chlorination Acids annual average MCL =/< 60 µg/L
Total Trihalomethanes	µg/L	80	N/A	43.0	0.0-76.0	No	By-product of drinking water chlorination
							annual average MCL =/< 80 µg/L.
1110 0011 01 01101		LE	AD AND	COPPER PR	IMARY MONI	TORING	
	A	ll results r	neet or s	urpass Feder	al Drinking W	ater Re	gulations
Period Covered: 12 Months				Highest Level in Distribution	Range of	Violation	
Ending December, 2022	Units	MCL	MCLG	System	detections	(Yes/ No)	Major Sources in Drinking Water
Lead as Pb	mg/L	AL=0.015	0	0.0088	<0.001-0.009	No	Corrosion of household plumbing system; Erosion of natural deposits
	Ť		<u> </u>				Corrosion of household plumbing, Erosion of natura
Copper as Cu	mg/L There we	AL=1.3	1.3	0.87	0.0041-0.87	No no holow	deposits; Wood preservatives= leaching. the action level.
	THEIC W	CIC IIO VION	200113, 111	ORGANIC CH		C DCIOM	tile action level.
		Il requite r		EGULATED Courpass Feder			rulations
	A	results i	ncet of S	Highest Level in	ar emining w	ater Ke	guiations-
Period Covered: 12 Months	l			Distribution	Range of	Viola-tion	
Ending December, 2022 Bromodichloromethane	Units µg/L	MCL N/A	MCLG N/A	System 0.42	detections <1.0-0.43	(Yes/ No)	Major Sources in Drinking Water  By-Product of chlorination
Chloroform	µg/L µg/L	N/A N/A	N/A N/A	0.43 1.10	<1.0-0.43	No	By-Product of chlorination
Dibromochloromethane	µg/L	N/A	N/A	<1.00	<1.00-<1.00	No	By-Product of chlorination
	1 22.5	10/5	19073	11.00			-,

#### PRIMARY DRINKING WATER CONTAMINANTS

Below is a list of *Primary Drinking Water Contaminants* for which our water system routinely monitors. The Alabama Department of Environmental Management (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 which was in accordance with the regulatory schedule.

#### WATER QUALITY REPORT

TABLE OF PRIMARY DRINKING WATER PARAMETERS MONITORING PERIOD ENDING DECEMBER 2022
WATER SOURCE LAKE TUSCALOOSA

			LAIL TOUGHLO
MICROB	IOLOGICAL	Highest	
		Level	
Analyte	MCL	Detected	Analy
Total Coliform Bacteria	<5%	1.50%	Beta / Photon I
Turbidity	<0.3 NTU	1.517	Alpha Emitters
INORGANIC	CHEMICALS		Combined Rad
Antimony as Sb	6 ppb	ND	Uranium
Arsenic as As	10 ppb		
Asbestos*	7 MLF	N/A	Endrin
Barium as Ba	2 ppm	0.026	Epichlorohydrir
Beryllium as Be	4 ppb	ND	Glyphosate
Cadmium as Cd	5 ppb	ND	Heptachlor
Chromium as Cr	100 ppb	ND	Heptachlor epo
Copper as Cu	AL=1.3ppm	0.87	Hexachlorober
Cyanide as Cn	200 ppb	ND	Hexachlorocyclo
Fluoride as F -	4 ppm	1.09	Lindane
Lead as Pb	AL=15 ppb	8.8	Methoxychlor
Mercury as Hg	2 ppb	ND	Oxamyl (Vydat
Nitrate as NO3 <sup>-</sup> -N	10 ppm	0.36	PCB's
Nitrite as NO2 <sup>-</sup> -N	1 ppm	ND	Pentachloroph
Selenium as Se	50 ppb	ND	Picloram
Thallium as Tl	2 ppb	ND	Simazine
DISINFECTION	N BY-PRODUCTS		Toxaphene
Chlorine	4 ppm	2.9	Benzene
Chloramines	4 ppm	N/A	Carbon tetrach
Chlorite	1 ppm	0.820	Chlorobenzene
Chlorine Dioxide	800 ppb	770	Dibromochloropr
Bromate	10 ppb	N/A	o-Dichlorobenz
Total Organic Carbon	TT	3.2	p-Dichlorobenz
Total Trihalomathanes	80 ppb	76	1,2-Dichloroeth
Haloacetic Acids	60 ppb	57	1,1-Dichloroeth
ORGANIC	CHEMICALS		cis-1,2-Dichloroe
2,4-D	70 ppb	ND	trans-1,2-Dichloroe
2,4,5-TP(Silvex)	50 ppb	ND	Dichlorometha
Acrylamide	TT	ND	1,2-Dichloropro
Alachlor	2 ppb	ND	Ethylbenzene
Atrazine	3 ppb	ND	Ethylene dibro
Benzo(A)pyrene	200 ppb	ND	Styrene
Carbofuran	40 ppb	ND	Tetrachloroeth
Chlordane	2 ppb		1,2,4-Trichlorobe
Dalapon	200 ppb	ND	1,1,1-Trichloroet
Di(2-ethylhexyl)adipate	400 ppb	ND	1,1,2-Trichloroet
Di(2-ethylhexyl)phthalates	6 ppb	ND	Trichloroethyle
Dinoseb	7 ppb	ND	Toluene
Diquat	20 ppb		Vinyl Chloride
Dioxin[2,3,7,8-TCDD] *	30 ppq	ND	Xylenes
Endothall	100 ppb	ND	

RADIOL	.OGICAL		
Analyte	MCL	Highest Le	
Beta / Photon Emitters	4 mrem / yr	N/A	
Alpha Emitters	15 pCi/L	0.268+/-1.	
Combined Radium	5 pCi/L	N/A	
Uranium	30 ppb	N/A	
ORGANIC (	CHEMICALS		
Endrin	2 ppb	ND	
Epichlorohydrin	TT	ND	
Glyphosate	700 ppb	ND	
Heptachlor	400 ppb	ND	
Heptachlor epoxide	200 ppt	ND	
Hexachlorobenzene	1 ppb	ND	
Hexachlorocyclopentadiene	50 ppb	ND	
Lindane	200 ppt		
Methoxychlor	40 ppb		
Oxamyl (Vydate)	200 ppb	ND	
PCB's	500 ppt	ND	
Pentachlorophenol	1 ppb	ND	
Picloram	500 ppb	ND	
Simazine	4 ppb	ND	
Toxaphene	3 ppb	ND	
Benzene	5 ppb	ND	
Carbon tetrachloride	5 ppb	ND	
Chlorobenzene	100 ppb	ND	
Dibromochloropropane	0.2 ppb	ND	
o-Dichlorobenzene	600 ppb	ND	
p-Dichlorobenzene	75 ppb	ND	
1,2-Dichloroethane	5 ppb	ND	
1,1-Dichloroethylene	7 ppb	ND	
cis-1,2-Dichloroethylene	70 ppb	ND	
trans-1,2-Dichloroethylene	100 ppb		
Dichloromethane	5 ppb	ND	
1,2-Dichloropropane	5 ppb		
Ethylbenzene	700 ppb	ND	
Ethylene dibromide	50 ppt		
Styrene	100 ppb	ND	
Tetrachloroethylene	5 ppb	ND	
1,2,4-Trichlorobenzene	70 ppb	ND	
1,1,1-Trichloroethane	200 ppb	ND	
1,1,2-Trichloroethane	5 ppb	ND	
Trichloroethylene	5 ppb	ND	
Toluene	1 ppm		
Vinyl Chloride	2 ppb	ND	
Xvlenes	10 ppm	ND	