JERRY PLOTT AND ED LOVE WATER PLANTS RECEIVE THE OPTIMIZATION AWARD

In October 2018, the Alabama Department of Environmental Management, (ADEM), recognized the Jerry Plott and Ed Love Water Filtration Plants for achieving optimized performance goals. To win this award, the 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.

Cory Sexton receives the 2018 Optimization Award from Laura Taylor of ADEM

EPA STATEMENTS FOR LEAD AND WATER CONTAMINATES

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 City of Tuscaloosa is responsible for providing high quality drinking water, but cannot control the variety of materials used in the 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 with 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.

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. The City of Tuscaloosa has published the required Source Water Assessment data. The data may be viewed in the Business Office at 2230 6th Street.

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. At each plant, water goes though 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 comes from the filtration step.

The Ed Love facility uses filters 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. The uniformity allows the sand to pack together tightly and that makes for a good filter. Water filters by gravity.

At the Jerry Plott facility, water, under pressure, squeezes though 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.

Grade IV operator Keith Kelly stands next to filter rack #5 at the Jerry Plott Plant

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.

Water Mains in Service, 4” and larger……..692 Miles
Water Storage Tanks……..……13 Tanks
Water Booster Pump Stations.....……..10 Stations
Water Storage Capacity……..……25.4 Million Gallons
Ed Love Treatment Capacity……..45.7 Million Gallons/Day
Jerry Plott Treatment Capacity.....…14 Million Gallons/Day
Public Fire Hydrants……....3581 Hydrants

The City of Tuscaloosa's Mayor and Council

Walt Maddox,	**Mayor**	**Phyllis W. Odom,**	**District 1**
Raevan Howard,	**District 2**	**Cynthia Lee Almond,**	**District 3**
Matthew Calderone,	**District 4**	**Kip Tyner,**	**District 5**
Eddie Pugh,	**District 6**	**Sonya McKinstry,**	**District 7**

The Tuscaloosa City Council meets every Tuesday at 6 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 www.tuscaloosa.com. You may contact the City Clerk for more information at 205 248-5010.

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

Distribution Division Line Breaks/Leaks
Office Hours: Mon. – Fri. 7:00 a.m. – 3:30 p.m. 205- 248-5950

Tuscaloosa 311 Call Center
Operational Hours: Mon. – Fri. 7:00 a.m. – 7:00 p.m. Dial 311

Calling 311 connects you to all nonemergency City Services.

MONITORING NON-COMPLIANCE NOTICE

TUSCALOOSA WATER AND SEWER IS REQUIRED TO MONITOR YOUR DRINKING WATER FOR SPECIFIC CONTAMINANTS ON A REGULAR BASIS. RESULTS OF REGULAR MONITORING ARE AN INDICATOR OF WHETHER OR NOT YOUR DRINKING WATER MEETS HEALTH STANDARDS. DURING JULY 10, 2018, WE DID NOT COMPLETE ALL REQUIRED MONITORING FOR TURBIDITY AND THEREFORE CANNOT BE SURE OF THE QUALITY OF YOUR DRINKING WATER DURING THAT TIME.

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.

TUSCALOOSA'S LEAD AND COPPER PROGRAM

Since 1991, the City of Tuscaloosa has annually tested homes for the presence of lead and copper. This year, the City expanded testing to 107 homes. The City has always maintained compliance with this regulation, and this year was no different. None of the samples had any detectable lead. We would like to thank the 107 participants for their support of this EPA law and program.

City of TUSCALOOSA
INFRASTRUCTURE & PUBLIC SERVICES

Tera Tubbs
Executive Director

2019 ANNUAL WATER QUALITY REPORT

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

Ed Love Water Filtration Plant
1125 Jack Warner Parkway North East
Tuscaloosa, Alabama 35404-1056
Telephone 205-248-5630 Fax 205-349-0213

For Additional Information, Contact
Kimberly Michael
Process Assets Manager
Water & Sewer Process Assets

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 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 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.

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.

PLAIN LANGUAGE DEFINITIONS

Maximum Contaminant Level Goal or MCLG: 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 Contaminant Level or MCL: 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 Residual Disinfectant Level Goal or 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 or 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.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

Action Level or AL: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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.

UNREGULATED CONTAMINATE MONITORING RULE NUMBER 4

The Unregulated Contaminate Monitoring Rule (UCMR) was enacted by congress to give the U.S. EPA a way to look at new contaminates. Every six years, water systems from around the county participate in a series of sampling events. The results are analyzed and contaminates found in sufficient concentrations are added to the SDWA for continued monitoring. The inserted chart contains the UCMR 4 results for sampling in 2018 for the City of Tuscaloosa.

UCMR 4 CHEMICALS		
Germanium	0.3 ppb	ND
Manganese	0.4 ppb	ND
Alpha-hexachlorocyclohexane	0.01 ppb	ND
Chlorpyifos	0.03 ppb	ND
Dimethipin	0.2 ppb	ND
Ethoprop	003 ppb	ND
Oxyfluorfen	0.05 ppb	ND

WATER PLANT PERSONNEL

The City of Tuscaloosa's water plants are staffed by 16 grade IV operators. To qualify for a grade IV license, one must spend 18 months working at a water facility and pass an exam. The pass rate for the exam is currently around 15%. These professionals provide award-winning water 24 hours a day, seven days a week, including all holidays. Supporting the operations of the plants are three maintenance technicians and an electronics technician. These employees are highly skilled and essential for the smooth operation of the facilities. There are many other people that support the production of the water, including chemists, biologists, management personnel and assistants. Working together makes the production of quality drinking water possible.

Maintenance workers at the Ed Love Plant repair a surface wash agitator

In the following tables, you may find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the following definitions:

ppm - parts per million and is equal to mg/L or milligrams per liter
ppb - parts per billion and is equal to µg/L or micrograms per liter
ppt - parts per trillion and is equal to ng/L or nanograms per liter
pCi/L - picocuries per liter, a measure of radiation
ntu - Nephelometric Turbidity Units
cfu - Colony Forming Units
MFL - million fibers per liter longer than 10 micrometers
N/A - not applicable
ND - not detected

WATER QUALITY REPORT

PRIMARY DRINKING WATER PARAMETERS
WATER SOURCE LAKE TUSCALOOSA

DETECTED CONTAMINANTS

MICROBIOLOGICAL
All results meet or surpass Federal Drinking Water Regulations

Period Covered: 12 Months Ending December, 2018	Units	MCL	MCLG	Highest Level in Distribution System	Range of detections	Viola-tion (Yes/ No)	Major Sources in Drinking Water
Total Coliform Bacteria	Presence of total coliform bacteria in <5% of the 120 required monthly samples		0	Coliform Present in 1.00 % of samples in one month	Not detected - 1.00 %	No	Naturally present in the environment
In 2018, 7 of 2450 samples were positive for Total Coliform or only 0.29.%							
Total Organic Carbon	mg/L	TT	N/A	2.0	1.4 - 2.0	No	Naturally present in the environment
Turbidity	NTU	0.3	N/A	0.094	0.009-0.094	No	Soil Runoff -Turbidity can interfere with disinfection
Chlorine as Cl_2	mg/L	4	4	2.5	0.2 - 2.5	No	Water additive used to control microbes
Chlorine Dioxide as ClO_2	mg/L	0.8	0.8	0.20	0.06 - 0.20	No	Water additive used to control microbes
Chlorite as ClO_2^-	mg/L	1	1	0.613	0.174 - 0.613	No	Water additive used to control microbes

RADIOLOGICAL
All results meet or surpass Federal Drinking Water Regulations

Gross Alpha	pCi/L	15	0	0.5+/-0.9	0.0+/-0.4 - 0.5+/-0.9	No	Erosion of natural deposits

INORGANIC CHEMICALS
All results meet or surpass Federal Drinking Water Regulations

Fluoride as F^-	mg/L	4	4	0.84	0.07- 0.84	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizers and aluminum factories
Nitrate as $NO3^-$-N	mg/L	10	10	0.30	0.22 -0.30	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sulfate as SO_4	mg/L	50	50	30.9	7.26 - 30.9	No	Erosion of natural deposits.

DISINFECTION BY-PRODUCTS
All results meet or surpass Federal Drinking Water Regulations

Period Covered: 12 Months Ending December, 2018	Units	MCL	MCLG	Average Level in Distribution System	Range of detections	Viola-tion (Yes/ No)	Major Sources in Drinking Water
Haloacetic Acids	µg/L	60	N/A	51.9	12.3 - 51.9	No	By-product of drinking water chlorination
The sum of Dibromoacetic, Dichloroacetic, Monobromoacetic, Monochloroacetic, & Trichloroacetic Acids annual average MCL equal to or less than 60 µg/L.							
Total Trihalomethanes	µg/L	80	N/A	73.8	20.9 - 73.8	No	By-product of drinking water chlorination
The sum of Chloroform, Bromodichloromethane, Dibromochloromethane & Bromoform annual average MCL equal to or less than 80 µg/L.							

LEAD AND COPPER PRIMARY MONITORING
All results meet or surpass Federal Drinking Water Regulations

Period Covered: 12 Months Ending December, 2018	Units	MCL	MCLG	Highest Level in Distribution System	Range of detections	Viola-tion (Yes/ No)	Major Sources in Drinking Water
Lead as Pb	mg/L	AL= 0.015	0	<0.005	<0.005 - <0.005	No	Corrosion of household plumbing system; Erosion of natural deposits
Copper as Cu	mg/L	AL= 1.3	1.3	0.958	<0.010 - 0.958	No	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives
There were no violations, more than 90% of samples were below the action level. No lead and no copper results were above the action level.							

ORGANIC CHEMICALS
UNREGULATED CONTAMINANTS
All results meet or surpass Federal Drinking Water Regulations

Period Covered: 12 Months Ending December, 2018	Units	MCL	MCLG	Highest Level in Distribution System	Range of detections	Viola-tion (Yes/ No)	Major Sources in Drinking Water
Bromodichloro-methane	µg/L	N/A	N/A	2.93	2.49 - 2.93	No	By-Product of drinking water chlorination
Chloroform	µg/L	N/A	N/A	5.19	2.68 - 5.19	No	By-Product of drinking water chlorination
Dibromochloro-methane	µg/L	N/A	N/A	1.45	<0.50 - 1.45	No	By-Product of drinking water chlorination

WATER QUALITY REPORT

TABLE OF PRIMARY DRINKING WATER PARAMETERS MONITORING PERIOD ENDING DECEMBER 2018
WATER SOURCE LAKE TUSCALOOSA

MICROBIOLOGICAL

Analyte	MCL	Highest Level Detected
Total Coliform Bacteria	<5%	1.00%
Turbidity	<0.3 NTU	0.094

INORGANIC CHEMICALS

Antimony as Sb	6 ppb	ND
Arsenic as As	10 ppb	ND
Asbestos*	7 MLF	N/A
Barium as Ba	2 ppm	ND
Beryllium as Be	4 ppb	ND
Cadmium as Cd	5 ppb	ND
Chromium as Cr	100 ppb	ND
Copper as Cu	AL=1.3ppm	0.958
Cyanide as Cn	200 ppb	ND
Fluoride as F^-	4 ppm	0.84
Lead as Pb	AL=15 ppb	ND
Mercury as Hg	2 ppb	ND
Nitrate as $NO3^-$-N	10 ppm	0.30
Nitrite as $NO2^-$-N	1 ppm	ND
Selenium as Se	50 ppb	ND
Thallium as Tl	2 ppb	ND

DISINFECTION BY-PRODUCTS

Chlorine	4 ppm	2.6
Chlorite	1 ppm	0.613
Chlorine Dioxide	800 ppb	0.20
Total Organic Carbon	TT	2.0
Total Trihalomathanes	80 ppb	73.8
Haloacetic Acids	60 ppb	51.9

ORGANIC CHEMICALS

2,4-D	70 ppb	ND
2,4,5-TP(Silvex)	50 ppb	ND
Acrylamide	TT	ND
Alachlor	2 ppb	ND
Atrazine	3 ppb	ND
Benzo(A)pyrene	200 ppb	ND
Carbofuran	40 ppb	ND
Chlordane	2 ppb	ND
Dalapon	200 ppb	ND
Di(2-ethylhexyl)adipate	400 ppb	ND
Di(2-ethylhexyl)phthalates	6 ppb	ND
Dinoseb	7 ppb	ND
Diquat	20 ppb	ND
Dioxin[2,3,7,8-TCDD] *	30 ppq	ND
Endothall	100 ppb	ND

UCMR 4 CHEMICALS

Germanium	0.3 ppb	ND
Manganese	0.4 ppb	ND
Alpha-hexachlorocyclohexane	0.01 ppb	ND
Chlorpyifos	0.03 ppb	ND
Dimethipin	0.2 ppb	ND
Ethoprop	003 ppb	ND
Oxyfluorfen	0.05 ppb	ND

RADIOLOGICAL

Analyte	MCL	Highest Level Detected
Alpha Emitters	15 pCi/L	0.5+/-0.9
Radium 228	N/A	0.2+/-0.4

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	ND
Methoxychlor	40 ppb	ND
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	ND
Dichloromethane	5 ppb	ND
1,2-Dichloropropane	5 ppb	ND
Ethylbenzene	700 ppb	ND
Ethylene dibromide	50 ppt	ND
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	ND
Vinyl Chloride	2 ppb	ND
Xylenes	10 ppm	ND