

## JERRY PLOTT WATER PLANT RECEIVES OPTIMIZATION AWARD

In October 2017, the Alabama Department of Environmental Management recognized the City of Tuscaloosa's Jerry Plott Water Filtration Plant for achieving an optimized level of performance. To win this award, the plant must exceed the established requirements of the United States Environmental Protection Agency by a factor of three or more for the entire year. This was the fourth consecutive year the plant has received this award. Please join us in thanking the staff of the City of Tuscaloosa Water Treatment Plants for their dedication to ensure that our customers receive the best possible water quality.



Anissa Merriweather and Heath Plowman receive the 2017 Optimization Award

## THE COST OF DRINKING WATER

The price of a bottle of water has hidden factors that are often not considered when adding up the cost of the product. Consumers may not think about environmental factors when they purchase water, but there are many: oil and water to make the bottle; fuel to transport the water; and a place for the bottle to decompose over the next 400 to 1,000 years. The EPA estimates that only 10-27% of drink bottles are recycled. The remainder end up in landfills or worse, the open environment. The City provides recycling for plastics in many neighborhoods either at recycling trailers or through curbside pickup. Drinking tap water helps reduce the need for plastic bottles that wind



up impacting our environment, but there is another benefit, as well. Instead of paying \$10 per gallon for bottled water, the City of Tuscaloosa consumers can get fresh clean tap water for just under **3¢ per gallon. That's 748 gallons for only \$2.16!**

## 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 and holds over 40 billion gallons of excellent quality water. Lake Nicol and Harris Lake are our alternate sources of water. Currently, Harris Lake is used for industrial 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

Two water filtration facilities supply water to nearly 200,000 customers in the metropolitan Tuscaloosa area 24-hours a day, 365 days a year: The Ed Love Water Filtration Plant and the Jerry Plott Water Filtration Plant.

The Ed Love facility uses conventional technology to treat water. The process begins with raw water receiving a dose of chlorine dioxide and then entering a flash mixer where the addition of aluminum sulfate and lime rapidly begins coagulation. On rare occasions, sodium permanganate is added to aid in the removal of iron and manganese, and control taste and odor. The water then travels through four flocculators and four settling basins.

The water moves through filters layered with anthracite coal and "torpedo" sand, which is special for filtration because of its uniformity. Lime addition balances the pH and aids with corrosion control, and sodium hypochlorite disinfects the filtered water. Zinc polyphosphate dosing controls corrosion. The Ed Love facility also adds fluoride to aid in the prevention of tooth decay. After this process is completed, the finished water is pumped into the water distribution system.

While the same basic treatment is used at the Jerry Plott facility, the chemicals and technique vary. Coagulation starts in a flash mixer with poly aluminum chloride. As the water passes through one of two flocculators, it enters one of two settling basins. Settling is accelerated with a series of settling plates.

The settled water is then pumped to seven membrane filter racks. Using pressure, the water is squeezed through the pores of the membranes while impurities are left behind. Sodium hydroxide is added for pH control, as well as sodium hypochlorite, fluoride, and zinc phosphate. The finished water then goes to the water distribution system. These steps ensure that water produced at both plants is similar.

Thirty-four full-time employees, responsible for producing water that meets all state and federal drinking water standards, maintain the Ed Love Water Filtration Plant and the Jerry Plott Water Filtration Plant, which have been serving the West Alabama area since 1976 and 2008 respectively.

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. Odum,	Dist. 1
Raeven Howard,	Dist. 2	Cynthia Lee Almond,	Dist. 3
Matthew Calderone,	Dist. 4	Kip Tyner,	Dist. 5
Eddie Pugh,	Dist. 6	Sonya McKinstry,	Dist. 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](http://www.tuscaloosa.com). You may contact the City Clerk for more information at 205 248-5010.

## IMPORTANT CONTACT INFORMATION

### Tuscaloosa 311 Call Center

Operational Hours: Mon. – Fri. 7 a.m. – 7 p.m. Dial 311

Calling 311 connects you to all nonemergency City Services. Make one Call to City Hall.

### Water Billing Office Turn On/Turn Off

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

### Lakes Division

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

### Distribution Division Line Breaks/Leaks

Office Hours: Mon. – Fri. 7 a.m. – 3:30 p.m. 205- 248-5950

## PARTICIPATE IN PROTECT OUR WATER SOURCE

During Lake Cleanup days in 2017, over 96 registered volunteers and 16 boats removed over 3,520 lbs. of trash. Most of that waste consisted of plastic. The average plastic drink bottle takes 450 years to degrade. Even though the City will not host an official Lake Cleanup Day in 2018, every day someone removes trash from Lake Tuscaloosa, it is Lake Cleanup Day. For information on upcoming events, email or call Dana Willingham at [dwillingham@tuscaloosa.com](mailto:dwillingham@tuscaloosa.com) or 205-349-0279.

## Plastic pollution by numbers

-  Thrown away: **35 billion** plastic water bottles a year in the US
-  Approximately **500 billion** plastic bags used annually worldwide
-  Over **40 percent** of plastic usage is in packaging
-  Plastics are estimated to account for **8 percent** of world's oil production
-  Over **250 species** known to have ingested or become tangled in plastic
-  A 2002 UN study estimated **\$7 trillion** a year of economic risk from plastic pollution  
Source: Plastic Ocean



**Tera Tubbs**  
Executive Director

## 2018 ANNUAL WATER QUALITY REPORT



**Jerry Plott Water Filtration Plant**  
2101 New Watermelon Road  
Tuscaloosa, Alabama 35406-4617  
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:  
**Stephen Daly, Deputy Director,**  
Water & Sewer Process Assets

## THE SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. The purpose of the law is to ensure that the nation's water supply systems that serve the public meet minimum national standards for the protection of public health.

The SDWA directed the U.S. Environmental Protection Agency (EPA) to establish national drinking water standards. 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the [EPA Safe Drinking Water Hotline 800-426-4791](tel:8004264791) or by visiting [EPA's website www.epa.gov/safewater](http://www.epa.gov/safewater).

Amended in 1996, the SDWA contains 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](tel:18004264791).

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.

## PLAIN LANGUAGE DEFINITIONS continued

- 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.

## EPA LEAD AND COPPER STATEMENT

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](tel:8004264791) or at <http://www.epa.gov/safewater/lead>.

## TUSCALOOSA'S LEAD AND COPPER PROGRAM

Since 1991, the City of Tuscaloosa has tested 57 homes annually for the presence of lead and copper. Because of the civic engagement of these citizens, this program continues to be very successful. The City has always maintained compliance with this regulation. We would like to applaud those 57 participants for their support of this endeavor.

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, 2017	Units	MCL	MCLG	Highest Level in Distribution System	Range of Detections	Violation (Yes / No)
Total Coliform Bacteria	Presence of total coliform bacteria in <5% of the 120 required monthly samples	0	0	Coliform Present in 1.00 % of samples in one month	Not detected - 1.00 %	No
In 2017, 5 of 2503 samples were positive for Total Coliform, or only 0.20%.						
Total Organic Carbon	mg/L	TT	N/A	2.2	1.4 - 2.2	No
Turbidity	NTU	0.3	N/A	0.131	0.011-0.131	No
Chlorine as Cl <sub>2</sub>	mg/L	4	4	2.8	0.2 - 2.8	No
Chlorine Dioxide as ClO <sub>2</sub>	mg/L	0.8	0.8	0.16	0.0 - 0.16	No
Chlorite as ClO <sub>2</sub> <sup>-</sup>	mg/L	1	1	0.685	0.214 - 0.685	No
RADIOLOGICAL						
All results meet or surpass Federal Drinking Water Regulations						
Gross Alpha	pCi/L	15	0	1.5+/-1.2	0.0+/-0.5 - 1.5+/-1.2	No
INORGANIC CHEMICALS						
All results meet or surpass Federal Drinking Water Regulations						
Fluoride as F <sup>-</sup>	mg/L	4	4	0.89	0.31 - 0.89	No
Nitrate as NO <sub>3</sub> <sup>-</sup> -N	mg/L	10	10	0.26	0.23 - 0.26	No
Sulfate as SO <sub>4</sub> <sup>-2</sup>	mg/L	50	50	29.1	13.0 - 29.1	No
DISINFECTION BY-PRODUCTS						
All results meet or surpass Federal Drinking Water Regulations						
Period Covered: 12 Months Ending December, 2017	Units	MCL	MCLG	Average Level in Distribution System	Range of Detections	Violation (Yes / No)
Haloacetic Acids	µg/L	60	N/A	42.4	13.1 - 42.4	No
The sum of Dibromoacetic, Dichloroacetic, Monobromoacetic, Monochloroacetic, and Trichloroacetic Acids annual average MCL is equal to or less than 60 µg/L.						
Total Trihalomethanes	µg/L	80	N/A	72.5	20.4 - 72.5	No
The sum of Chloroform, Bromodichloromethane, Dibromochloromethane and Bromoform annual average MCL is 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, 2017	Units	MCL	MCLG	Highest Level in Distribution System	Range of Detections	Violation (Yes / No)
Lead as Pb	mg/L	AL=0.015	0	<0.005	<0.005 - <0.005	No
Copper as Cu	mg/L	AL=1.3	1.3	0.389	<0.050 - 0.389	No
There were no violations. More than 90% of the 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, 2017	Units	MCL	MCLG	Highest Level in Distribution System	Range of Detections	Violation (Yes / No)
Bromodichloromethane	µg/L	N/A	N/A	4.13	0.367-4.13	No
Chloroform	µg/L	N/A	N/A	7.03	4.84 - 7.03	No
Dibromochloromethane	µg/L	N/A	N/A	1.69	1.05 - 1.69	No

WATER QUALITY REPORT				
TABLE OF PRIMARY DRINKING WATER PARAMETERS: MONITORING PERIOD ENDING DECEMBER, 2017				
WATER SOURCE LAKE TUSCALOOSA				
MICROBIOLOGICAL			RADIOLOGICAL	
Analyte	MCL	Highest Level Detected	Analyte	Highest Level Detected
Total Coliform Bacteria	<5%	1.00%	Beta / Photon Emitters	4 mrem / yr
Turbidity	<0.3 NTU	0.131	Alpha Emitters	15 pCi/L
INORGANIC CHEMICALS				
Antimony as Sb	6 ppb	ND	Combined Radium	5 pCi/L
Arsenic as As	10 ppb	ND	Uranium	30 ppb
ORGANIC CHEMICALS				
Asbestos*	7 MLF	N/A	Endrin	2 ppb
Barium as Ba	2 ppm	ND	Epichlorohydrin	TT
Beryllium as Be	4 ppb	ND	Glyphosate	700 ppb
Cadmium as Cd	5 ppb	ND	Heptachlor	400 ppb
Chromium as Cr	100 ppb	ND	Heptachlor epoxide	200 ppt
Copper as Cu	AL=1.3 ppm	ND	Hexachlorobenzene	1 ppb
Cyanide as Cn	200 ppb	ND	Hexachlorocyclopentadiene	50 ppb
Fluoride as F <sup>-</sup>	4 ppm	0.74	Lindane	200 ppt
Lead as Pb	AL=15 ppb	ND	Methoxychlor	40 ppb
Mercury as Hg	2 ppb	ND	Oxamyl (Vydate)	200 ppb
Nitrate as NO <sub>3</sub> <sup>-</sup> -N	10 ppm	0.26	PCB's	500 ppt
Nitrite as NO <sub>2</sub> <sup>-</sup> -N	1 ppm	ND	Pentachlorophenol	1 ppb
Selenium as Se	50 ppb	ND	Picloram	500 ppb
Thallium as Tl	2 ppb	ND	Simazine	4 ppb
DISINFECTION BY-PRODUCTS				
Chlorine	4 ppm	2.8	Toxaphene	3 ppb
Chloramines	4 ppm	N/A	Benzene	5 ppb
Chlorite	1 ppm	0.685	Carbon tetrachloride	5 ppb
Chlorine Dioxide	800 ppb	0.16	Chlorobenzene	100 ppb
Bromate	10 ppb	N/A	Dibromochloropropane	0.2 ppb
Total Organic Carbon	TT	2.2	o-Dichlorobenzene	600 ppb
Total Trihalomethanes	80 ppb	72.5	p-Dichlorobenzene	75 ppb
Haloacetic Acids	60 ppb	42.4	1,2-Dichloroethane	5 ppb
ORGANIC CHEMICALS				
2,4-D	70 ppb	ND	1,1-Dichloroethylene	7 ppb
2,4,5-TP(Silvex)	50 ppb	ND	cis-1,2-Dichloroethylene	70 ppb
Acrylamide	TT	ND	trans-1,2-Dichloroethylene	100 ppb
Alachlor	2 ppb	ND	Dichloromethane	5 ppb
Atrazine	3 ppb	ND	1,2-Dichloropropane	5 ppb
Benzo(A)pyrene	200 ppb	ND	Ethylbenzene	700 ppb
Carbofuran	40 ppb	ND	Ethylene dibromide	50 ppt
Chlordane	2 ppb	ND	Styrene	100 ppb
Dalapon	200 ppb	ND	Tetrachloroethylene	5 ppb
Di(2-ethylhexyl)adipate	400 ppb	ND	1,2,4-Trichlorobenzene	70 ppb
Di(2-ethylhexyl)phthalates	6 ppb	ND	Dalapon	200 ppb
Dinoseb	7 ppb	ND	Di(2-ethylhexyl)phthalates	6 ppb
Diquat	20 ppb	ND	Dinoseb	7 ppb
Dioxin[2,3,7,8-TCDD] *	30 ppt	ND	Diquat	20 ppb
Endothall	100 ppb	ND	Dioxin[2,3,7,8-TCDD] *	30 ppt
			Xylenes	10 ppm

\*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.