

## WHO'S NEW, 2013 IN REVIEW

The City of Tuscaloosa said farewell to Perry Acklin upon his retirement as Water Plant Manager. Perry served for over 15 years and oversaw many projects important to the operation of the Water Department. One of these projects was the completion of the Jerry Plott Water Plant. The plant helped relieve the water constrictions felt by the northern part of our distribution system.

The Water Department welcomes two new employees to help accomplish our future goals. Stephen Daly joins us as the Deputy Director of the Water and Sewer Department. Originally from Tuscaloosa, Stephen received his degree in mechanical engineering in 1983 and earned his MBA in 1987 from The University of Alabama. He has most recently been working in the textile industry in South Carolina.

Andrew Burroughs left ADEM to become Process Assets Manager for the Water and Sewer Department. Andrew graduated from The University of Alabama in 2010 with a chemical engineering degree. For three years Andrew worked as a district engineer in the Storm Water Management Branch. He brings integral knowledge of the state's regulations and processes to the City.

We welcome Andrew and Stephen to our Team.

## WHAT IS THE SOURCE OF OUR DRINKING WATER?

Lake Tuscaloosa is Tuscaloosa's primary surface water supply source for drinking water. Lake Tuscaloosa is a 5,885-acre impoundment of North River and several major creeks. This beautiful man-made lake holds more than 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 completed the required Source Water Assessment and has published the data. A copy of the data may be viewed at the City of Tuscaloosa Water & Sewer Department's Office at 2230 6th Street.

Lake Tuscaloosa's watershed is comprised of a large portion of three counties. Every activity in the watershed has an impact on the quality of our drinking water.

## WHAT CAN I DO TO PROTECT OUR SOURCE OF DRINKING WATER?

The Lakes Division is hosting the Third Annual Watershed Festival on Friday April 5, 2014 and the sixth annual Lake Cleanup Day on Saturday April 6, 2014. The public is invited to participate in these events. For more information, call 205-349-0279 or email [dwillingham@tuscaloosa.com](mailto:dwillingham@tuscaloosa.com).

## WHAT TREATMENT TECHNIQUES ARE USED TO TREAT MY WATER?

The City of Tuscaloosa operates two water treatment plants. These are the Ed Love Water Plant, and the Jerry Plott Water Treatment Plant. The Ed Love Water Plant was named for former superintendent Ed E. Love. The Jerry Plott Plant was named after former City Councilman Jerry Plott. Both plants treat water from a common intake structure at Lake Tuscaloosa.

The Ed Love facility is a conventional treatment plant. Raw water enters a flash mixer where aluminum sulfate and lime are added for coagulation. Sodium permanganate is added when necessary for removal of iron and manganese for taste and odor control. The water then travels through four flocculators and four settling basins.

The water is then gravity filtered through multi-media filters. Lime is added for pH adjustment and corrosion control. Sodium hypochlorite is added for disinfection. Fluoride is added for the prevention of tooth decay, and orthopolyphosphate is added for corrosion control. The finished water is pumped into the system.

The Jerry Plott Water Plant uses the same basic treatment as the Ed Love Plant, but with some different chemicals and techniques. Coagulation starts in a flash mixer with poly aluminum chloride. As the water passes through one of two flocculators, it enters a settling basin. The plant has two basins. Settling is accelerated with a series of settling plates.

The settled water is pumped under pressure to a bank of seven membrane filters. The water is squeezed through the pores of the membranes while impurities are left behind. Sodium hydroxide is added for pH control. Fluoride and orthopolyphosphate are also added. The finished water then goes to the distribution system. The water produced at these two plants is very similar.

The plants are maintained by 36 full-time employees. These employees are responsible for the highest quality water possible for more than 200,000 consumers. The plants are operated 24 hours a day, 365 days a year.

The City's most valuable asset is its abundant supply of excellent quality water! Because of this excellent quality, numerous industries and businesses have selected Tuscaloosa as their home.

Water Mains in Service, 4" and larger.....535 Miles  
Water Storage Tanks.....13 Tanks  
Water Booster Pump Stations.....8 Stations  
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.....3,358 Hydrants

## WATER AND SEWER DEPARTMENT

**Jimmy W. Junkin, Director**  
Post Office Box 2090  
Tuscaloosa, AL 35403-2090

The Tuscaloosa City Council meetings are held every Tuesday at 6:00 p.m. in the Council Chambers on the second floor of Tuscaloosa City Hall, 2201 University Boulevard. The agenda for each meeting is published in the Tuscaloosa News and on the City of Tuscaloosa website at [www.tuscaloosa.com](http://www.tuscaloosa.com), or you may contact the City Clerk at (205) 248-5010 for more information.

The City of Tuscaloosa's Mayor and Council are as follows:

**Walter Maddox, Mayor**  
**Burrell Odom, District 1**  
**Harrison Taylor, District 2**  
**Cynthia Lee Almond, District 3**  
**Matthew Calderone, District 4**  
**Kip Tyner, District 5**  
**Eddie Pugh, District 6**  
**Sonya McKinstry, District 7**

**Water Billing Office**  
Turn On/Turn Off  
Office Hours:  
8:00 a.m. – 4:30 p.m.  
Monday – Friday  
205- 248-5500  
Drive Through Hours  
7:30 a.m. – 5:00 p.m.

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

**Lakes Division**  
Source Division  
Office Hours:  
7:00 a.m. – 3:30 p.m.  
Monday – Friday  
205- 349-0279  
**Scott Sanderford**  
Lakes Division Manager

**Hilliard N. Fletcher**  
Wastewater Plant  
Office Hours:  
7:00 a.m. – 3:30 p.m.  
Monday – Friday  
205- 248-5900

**Jerry Plott Water Plant**  
2101 New Watermelon Road  
205-248-5600  
Tuscaloosa, AL 35406



**Jerry Plott Water Treatment Plant**  
AWPCA Best Operated Plant Award  
winner three years running

*The Plant must sit out of the competition for a year, but we look forward to a win next year!*



## CITY OF TUSCALOOSA WATER AND SEWER DEPARTMENT

## 2014 ANNUAL WATER QUALITY REPORT



**City of Tuscaloosa**  
**Ed Love Water Filtration Plant**  
1125 Jack Warner Parkway North East  
Tuscaloosa, Alabama 35404-1056  
Telephone 205- 248-5630  
Fax 205- 349-0213  
<http://www.tuscaloosa.com>

**Office Hours:**  
7:00 a.m. to 3:30 p.m.  
Monday - Friday

Additional Information:  
**Stephen Daly**  
Deputy Director,  
Water and Sewer Department

# THE SAFE DRINKING WATER ACT...

## What Does It Mean For You?

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. The purpose of the law is to insure 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 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.

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

1. 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.
2. 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.
3. 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

4. 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.
5. Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.
6. Action Level or AL: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

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.

### 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 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 involvement of these citizens, this program continues to be very successful. The City has always maintained compliance with this regulation. We would like to commend those 57 participants for their support of this endeavor.

WATER QUALITY REPORT								
PRIMARY DRINKING WATER PARAMETERS								
WATER SOURCE LAKE TUSCALOOSA								
<b>DETECTED CONTAMINANTS</b>								
<b>MICROBIOLOGICAL</b>								
All results meet or surpass Federal Drinking Water Regulations								
Period Covered: 12 Months Ending December, 2013	Units	MCL	MCLG	Highest Level in Distribution System	Range of detections	Violation (Yes/ No)	Major Sources in Drinking Water	
Total Coliform Bacteria				Presence of total coliform bacteria in <5% of the 120 required monthly samples	Coliform Present in 1.00 % of samples in one month	Not detected - 1.00 %	No	Naturally present in the environment
Only 6 of 2569 samples were positive for Total Coliform or 0.23%, in 2013. No samples were E. coli positive.								
Total Organic Carbon	mg/L	TT	N/A	1.8	1.1-1.8	No	Naturally present in the environment	
Turbidity	NTU	>0.3 in 5% of readings	N/A	0.5	0.002-0.500	No	Soil Runoff - Turbidity can interfere with disinfection	
Highest monthly number of readings above 0.3 NTUs = <1% (Less than 1%)								
Chlorine as Cl <sub>2</sub>	mg/L	4	4	3	0.2-3.0	No	Water additive used to control microbes	
<b>RADIOLOGICAL</b>								
All results meet or surpass Federal Drinking Water Regulations								
Gross Alpha	pCi/L	15	0	1.2 +/- 0.8	0.0 +/- 0.3 - 1.2 +/- 0.8	No	Erosion of natural deposits	
<b>INORGANIC CHEMICALS</b>								
All results meet or surpass Federal Drinking Water Regulations								
Fluoride as F <sup>-</sup>	mg/L	4	4	1.15	0.073 - 1.15	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizers and aluminum factories	
Nitrate as NO <sub>3</sub> -N	mg/L	10	10	0.26	0.22-0.26	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
Sulfate as SO <sub>4</sub>	mg/L	50	50	36.8	19.0 - 36.8	No	Erosion of natural deposits.	
<b>DISINFECTION BY-PRODUCTS</b>								
All results meet or surpass Federal Drinking Water Regulations								
Period Covered: 12 Months Ending December, 2013	Units	MCL	MCLG	Average Level in Distribution System	Range of detections	Violation (Yes/ No)	Major Sources in Drinking Water	
Haloacetic Acids	µg/L	60	N/A	25.1	17.1 - 36.3	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	42.4	21.7 - 70.5	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.								
<b>LEAD AND COPPER PRIMARY MONITORING</b>								
All results meet or surpass Federal Drinking Water Regulations								
Period Covered: 12 Months Ending December, 2013	Units	MCL	MCLG	Highest Level in Distribution System	Range of detections	Violation (Yes/ No)	Major Sources in Drinking Water	
Lead as Pb	mg/L	AL= 0.015	0	0.015	<0.005 - 0.015	No	Corrosion of household plumbing system; Erosion of natural deposits	
Copper as Cu	mg/L	AL= 1.3	1.3	0.606	<0.050 - 0.606	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. Only one lead result and only one copper result were above the action level.								
<b>ORGANIC CHEMICALS</b>								
UNREGULATED CONTAMINANTS								
All results meet or surpass Federal Drinking Water Regulations								
Period Covered: 12 Months Ending December, 2013	Units	MCL	MCLG	Highest Level in Distribution System	Range of detections	Violation (Yes/ No)	Major Sources in Drinking Water	
Bromodichloromethane	µg/L	N/A	N/A	7.28	2.46 - 7.28	No	By-Product of drinking water chlorination	
Chloroform	µg/L	N/A	N/A	7.0	2.97 - 6.96	No	By-Product of drinking water chlorination	
Dibromochloromethane	µg/L	N/A	N/A	2.61	1.39 - 2.61	No	By-Product of drinking water chlorination	

WATER QUALITY REPORT				
TABLE OF PRIMARY DRINKING WATER PARAMETERS MONITORING PERIOD ENDING DECEMBER 2013				
WATER SOURCE LAKE TUSCALOOSA				
<b>MICROBIOLOGICAL</b>			<b>RADIOLOGICAL</b>	
Analyte	MCL	Highest Level Detected	Analyte	Highest Level Detected
Total Coliform Bacteria	<5%	1.00%	Beta / Photon Emitters	4 mrem / yr N/A
Turbidity	<0.3 NTU	0.500	Alpha Emitters	15 pCi/L 1.2+/-0.8
<b>INORGANIC CHEMICALS</b>				
Antimony as Sb	6 ppb	ND	Combined Radium	5 pCi/L N/A
Arsenic as As	10 ppb	ND	Uranium	30 ppb N/A
Asbestos*	7 MFL	N/A	<b>ORGANIC CHEMICALS</b>	
Barium as Ba	2 ppm	ND	Endrin	2 ppb ND
Beryllium as Be	4 ppb	ND	Epichlorohydrin	TT ND
Cadmium as Cd	5 ppb	ND	Glyphosate	700 ppb ND
Chromium as Cr	100 ppb	ND	Heptachlor	400 ppb ND
Copper as Cu	AL=1.3ppm	0.606	Heptachlor epoxide	200 ppt ND
Cyanide as Cn	200 ppb	ND	Hexachlorobenzene	1 ppb ND
Fluoride as F <sup>-</sup>	4 ppm	0.71	Hexachlorocyclopentadiene	50 ppb ND
Lead as Pb	AL=15 ppb	15	Lindane	200 ppt ND
Mercury as Hg	2 ppb	ND	Methoxychlor	40 ppb ND
Nitrate as NO <sub>3</sub> -N	10 ppm	0.26	Oxamyl (Vydate)	200 ppb ND
Nitrite as NO <sub>2</sub> -N	1 ppm	ND	PCBs	500 ppt ND
Selenium as Se	50 ppb	ND	Pentachlorophenol	1 ppb ND
Thallium as Tl	2 ppb	ND	Picloram	500 ppb ND
<b>DISINFECTION BY-PRODUCTS</b>				
Chlorine	4 ppm	3	Simazine	4 ppb ND
Chloramines	4 ppm	ND	Toxaphene	3 ppb ND
Chlorite	1 ppm	0.938	Benzene	5 ppb ND
Chlorine Dioxide	800 ppb	0.5	Carbon tetrachloride	5 ppb ND
Bromate	10 ppb	ND	Chlorobenzene	100 ppb ND
Total Organic Carbon	TT	1.8	Dibromochloropropane	0.2 ppb ND
Total Trihalomethanes	80 ppb	70.5	o-Dichlorobenzene	600 ppb ND
Haloacetic Acids	60 ppb	36.3	p-Dichlorobenzene	75 ppb ND
<b>ORGANIC CHEMICALS</b>				
2,4-D	70 ppb	ND	1,2-Dichloroethane	5 ppb ND
2,4,5-TP(Silvex)	50 ppb	ND	1,1-Dichloroethylene	7 ppb ND
Acrylamide	TT	ND	cis-1,2-Dichloroethylene	70 ppb ND
Alachlor	2 ppb	ND	trans-1,2-Dichloroethylene	100 ppb ND
Atrazine	3 ppb	ND	Dichloromethane	5 ppb ND
Benzo(A)pyrene	200 ppb	ND	1,2-Dichloropropane	5 ppb ND
Carbofuran	40 ppb	ND	Ethylbenzene	700 ppb ND
Chlordane	2 ppb	ND	Ethylene dibromide	50 ppt ND
Dalapon	200 ppb	ND	Styrene	100 ppb ND
Di(2-ethylhexyl)adipate	400 ppb	ND	Tetrachloroethylene	5 ppb ND
Di(2-ethylhexyl)phthalates	6 ppb	ND	1,2,4-Trichlorobenzene	70 ppb ND
Dinoseb	7 ppb	ND	1,1,1-Trichloroethane	200 ppb ND
Diquat	20 ppb	ND	1,1,2-Trichloroethane	5 ppb ND
Dioxin[2,3,7,8-TCDD] *	30 ppq	ND	Trichloroethylene	5 ppb ND
Endothal	100 ppb	ND	Toluene	1 ppm ND
			Vinyl Chloride	2 ppb ND
			Xylenes	10 ppm ND

**AMAZING VALUE-** The City of Tuscaloosa provides great water quality and more than sufficient supply. This water is provided at the third lowest cost in the State of Alabama. The value and importance to Tuscaloosa can't be measured.