

2012 Violation

The City of Tuscaloosa had a failure to monitor violation in 2011. The problem occurred in the Jerry Plott Plant distribution system. The plant was feeding a new chemical, chlorine dioxide, on a trial basis. The required monthly distribution sampling for chlorine was not performed by our contractor. Chlorite was monitored at the plant on a daily basis. At no time did the maximum level exceed the requirements exiting the plant. The failure to monitor violation was reported to ADEM and in 2012 a public notification was sent to all water customers.

In December, 2012, the Ed Love Plant had four spiked filter turbidities that were over the limit of 0.3 NTU. The high readings were only momentary. Each filter was immediately cut off from the system while the problem corrected itself. The spikes were reported to ADEM. ADEM determined that no regulatory violations had occurred. At no time did the maximum level exceed the requirements exiting the plant. The values were recorded and noted in the City's monthly report to the state, and are included in this year's CCR.

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 2201 University Blvd., 2nd floor.

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 planning a second annual Watershed Festival and the fifth annual Lake Cleanup Day. These events are usually scheduled for May. The Lakes Division will announce these dates. For more information, call (205) 349-0279 or visit the City's website at www.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 ortho-phosphate is added for corrosion control. The finished water is pumped into the Distribution 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 orthophosphate 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 37 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 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 pm in the City Council Chambers on the second floor of Tuscaloosa City Hall, 2201 University Blvd. The agenda for each meeting is published in the Tuscaloosa News on Saturday and on the internet at www.tuscaloosa.com, or you may call (205) 248-5010.

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

Mayor, Walt Maddox
Bobby Howard, District 1
Harrison Taylor, District 2
Cynthia Almond, District 3
Lee Garrison, District 4
Kip Tyrner, District 5
Bob Lunderl, District 6
William Tinker, III, District 7

Water Billing Office

Turn On/Turn Off
Office Hours:
 8:00 am – 4:30 pm
 Monday – Friday
 (205) 248-5500
Drive Through Hours
 7:30 am – 5:00 pm

Lakes Division

Source Division
Office Hours:
 7:00 am – 3:30 pm
 Monday – Friday
 (205) 349-0279
Scott Sanderford
Lakes Division Manager

Distribution Division

Line Breaks/Leaks
Office Hours:
 7:00 am – 3:30 pm
 Monday – Friday
 (205) 248-5950

Hilliard N. Fletcher

Wastewater Plant
Office Hours:
 7:00 am – 3:30 pm
 Monday – Friday
 (205) 248-5900

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



Jerry Plott Water Treatment Plant Threepeats

For the third year in a row, the AWPCA's Best Operated Plant Award for a Membrane Plant was given to the Jerry Plott Filtration Plant.



CITY OF TUSCALOOSA WATER AND SEWER DEPARTMENT

2013 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:
Perry A. Acklin
Water Treatment Manager

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 assure that the nation's water supply systems serving 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 EPA's website address 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 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 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 means parts per million and is equal to mg/L or milligrams per liter
 ppt means parts per billion and is equal to µg/L or micrograms per liter
 ppt means parts per trillion and is equal to ng/L or picograms per liter
 pCi/L equals picocuries per liter, a measure of radiation
 NTU equals Nephelometric Turbidity Units
 CFU equals Colony Forming Units
 MFL means 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, the lead and copper 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

DETECTED CONTAMINANTS MICROBIOLOGICAL			
Period Covered: 12 Months Ending December 2012	Units	MCL	MCLG
Total Coliform Bacteria	Presence of total coliform bacteria in 5% of the samples (120 required)	0	0
Total Coliform Bacteria	Presence of total coliform bacteria in 100% of samples (100% required)	0	0
Only 4 of 2562 samples were positive for Total Coliform or 0.16%. In 2012, No samples were Total Coliform positive.			
Total Organic Carbon	mg/L	N/A	15.0
Turbidity	NTU	0.3	0.419
Chlorine as Cl ₂	mg/L	4	3.2
All results meet or surpass Federal Drinking Water Regulations			
RADIOLOGICAL			
Gross Alpha	pCi/L	15	0
All results meet or surpass Federal Drinking Water Regulations			
INORGANIC CHEMICALS			
Fluoride as F ⁻	mg/L	4	1.22
Nitrate as NO ₃ -N	mg/L	10	10
Sulfate as SO ₄	mg/L	50	36.1
All results meet or surpass Federal Drinking Water Regulations			
DISINFECTION BY-PRODUCTS			
Period Covered: 12 Months Ending December 2012	Units	MCL	MCLG
Halocetic Acids	µg/L	60	N/A
The sum of Dichloroacetic, Dichloroacetic, Monochloroacetic, & Trichloroacetic Acids annual average MCL equal to or less than 60 µg/L.			
Total Trihaloethanes	µg/L	80	N/A
The sum of Chloroform, Bromochloroethane, Dibromochloroethane & Bromoform annual average MCL equal to or less than 80 µg/L.			
LEAD AND COPPER PRIMARY MONITORING			
Period Covered: 12 Months Ending December 2012	Units	MCL	MCLG
Lead as Pb	mg/L	0.015	0
Copper as Cu	mg/L	1.3	1.3
There were no violations, more than 95% of samples were below the action level. Only one lead result and only one copper result were above the action level.			
ORGANIC CHEMICALS			
Period Covered: 12 Months Ending December 2012	Units	MCL	MCLG
Bromodichloromethane	µg/L	N/A	N/A
Trichloroethylene	µg/L	N/A	N/A
Chloroform	µg/L	N/A	N/A
Methane	µg/L	N/A	N/A

WATER QUALITY REPORT TABLE OF PRIMARY DRINKING WATER PARAMETERS MONITORING PERIOD ENDING DECEMBER 2012 WATER SOURCE LAKE TUSCALOOSA

MICROBIOLOGICAL			
Analyte	MCL	Highest Level Detected	Notes
Total Coliform Bacteria	<5%	0.91%	
Turbidity	<0.3 NTU	0.288	
INORGANIC CHEMICALS			
Arsenic as As	6 ppb	ND	
Asbestos as As	10 ppb	ND	
Asbestos	7 MFL	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	ND	
Chloride as Cl	200 ppb	ND	
Fluoride as F ⁻	4 ppm	ND	
Lead as Pb	AL=1.5ppb	ND	
Mercury as Hg	2 ppb	ND	
Nitrate as NO ₃ -N	10 ppm	ND	
Selenium as Se	50 ppb	ND	
Thallium as Tl	2 ppb	ND	
DISINFECTION BY-PRODUCTS			
Chlorine	4 ppm	3.1	
Chloroethanes	4 ppm	ND	
Chloride	1 ppm	ND	
Chlorine Dioxide	800 ppb	ND	
Bromate	10 ppb	ND	
Total Organic Carbon	TT	2.5	
Total Trihaloethanes	80 ppb	96.7	
Halocetic Acids	60 ppb	68.7	
ORGANIC CHEMICALS			
2,4-D	70 ppb	ND	
2,4,5-Tri(Silyl)	50 ppb	ND	
Acrylamide	TT	ND	
Alachlor	2 ppb	ND	
Azinphos	3 ppb	ND	
Barchlorophenylene	200 ppb	ND	
Carbaryl	40 ppb	ND	
Chloroethane	2 ppb	ND	
Dalapon	200 ppb	ND	
Di(2-ethylhexyl)adipate	400 ppb	ND	
Di(2-ethylhexyl)phthalate	6 ppb	ND	
Diquat	7 ppb	ND	
Dibutyltin	20 ppb	ND	
Dioxin(2,3,7,8-TCDF)	30 ppb	ND	
Endothal	100 ppb	ND	
RADIOLOGICAL			
Analyte	MCL	Highest Level Detected	Notes
Beta / Photon Emitters	4 mrem / yr	N/A	
Alpha Emitters	15 pCi/L	0.2 ± 0.3	
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 ppb	ND	
Hexachlorobenzene	1 ppb	ND	
Hexachlorocyclopentadiene	50 ppb	ND	
Lindane	200 ppb	ND	
Methoxychlor	40 ppb	ND	
Oxamyl (Nada)	200 ppb	ND	
PCBS	500 ppb	ND	
Pentachlorophenol	1 ppb	ND	
Picloram	500 ppb	ND	
Sinazafe	4 ppb	ND	
Toxaphene	3 ppb	ND	
Benzene	5 ppb	ND	
Carbon tetrachloride	5 ppb	ND	
Chlorobenzene	100 ppb	ND	
Dichloropropane	200 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 dichloride	50 ppb	ND	
Styrene	100 ppb	ND	
Tetrahaloethylene	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	