WHAT TREATMENT TECHNIQUES ARE USED TO TREAT MY WATER?

The raw water from Lake Tuscaloosa is gravity fed approximately two miles to the Raw Water Pumping Station, which is a quarter of a mile from the Ed Love Water Plant. The raw water is pumped into a raw water flash mixer where aluminum sulfate and lime are added for coagulation and potassium permanganate is added when necessary for removal of iron and manganese for taste and odor control.

Next, the water flows through four flocculators and four settling basins. The water is then filtered through multi-media filters, lime is added for pH and corrosion control, chlorine is added for disinfection, fluoride is added for the prevention of tooth decay, and ortho-polyphosphate is added for corrosion control. At this point, the water is pumped into the Distribution System, which consists of nine booster pump stations and thirteen storage tanks.

The Ed Love Water Plant, which is named after former superintendent Ed E. Love, is a multi-million dollar facility. The plant is maintained by 36 full-time employees. These employees are responsible for the highest quality water possible for more than 200,000 consumers. The treatment of the water is skillfully handled by our manager, a chief operator, two biologists, a chemist, a senior secretary, eight operators, one operator trainee, three maintenance operators, one electronics technician, two solids operators, two maintenance operator assistants, and eleven operator assistants. The Ed Love Water Plant is operated and maintained 24 hours a day, 365 days a year, which includes weekends and all holidays.

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

Water Mains in Service, 4" and larger. ……562 Miles
Water Storage Tanks……13 Tanks
Water Booster Pump Stations... ……9 Stations
Water Storage Capacity……25.4 Million Gallons
Water Treatment Capacity…45.7 Million Gallons / Day
Public Fire Hydrants……3492 Hydrants

The Ed Love Water Treatment Plant has been an award winning plant for the last nine years. The Alabama Water and Pollution Control Association, based on recommendations of a peer review committee, presents the awards annually. They are given in recognition of outstanding operations achieved by the operators of the plant.

The City is currently in the beginning stages of construction of a new water plant to facilitate the tremendous growth of our area. The plant is being built on the north side of the Black Warrior River near the Lake Tuscaloosa Dam. The projected completion date for this new plant is late 2009. The City is also moving forward with the implementation of the Supervisory Control Acquisition Data Administration or SCADA system for the Water & Sewer System and upgrading the security system for the Water Department. The SCADA system allows for continuous monitoring and better control of the water system's assets.

Thank you for allowing us to serve you and to present this ninth Annual Water Quality Report.
The Employees of the Ed E. Love Water Plant

WATER QUALITY REPORT
PRIMARY DRINKING WATER PARAMETERS

DETECTED CONTAMINANTS
MICROBIOLOGICAL
All results meet or surpass Federal Drinking Water Regulations

Period Covered: 12 Months Ending December, 2006	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		0	Coliform Present in 0.89 % of samples	Not detected - 0.89 % CP	No	Naturally present in the environment
Total Organic Carbon	mg/L	TT	N/A	1.6	0.8 - 1.6	No	Naturally present in the environment
Turbidity	NTU	0.3	N/A	0.411	0.028 - 0.411	Yes	Turbidity can interfer with disinfection
More than 99.99% of all filtered turbidity samples were below the 0.3 NTU.							
RADIOLOGICAL							
Gross Alpha	pCi/L	15	0	1.6 +/- 0.8	0.0 ± 0.3 - 1.6 ± 0.8	No	Erosion of natural deposits
INORGANIC CHEMICALS							
Fluoride as F^-	mg/L	4	4	0.8	0.78 - 0.83	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizers and aluminum factories
Nitrate as NO_3^--N	mg/L	10	10	0.3	0.23 - 0.30	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sulfate as SO_4	mg/L	50	50	26.7	19.6 - 26.7	No	Erosion of natural deposits.
DISINFECTION BY-PRODUCTS							
Period Covered: 12 Months Ending December, 2006	**Units**	**MCL**	**MCLG**	**Highest Level in Distribution System**	**Range of detections**	**Violation (Yes/No)**	**Major Sources in Drinking Water**
Haloacetic Acids	µg/L	60	N/A	20.1	8.36 - 44.2	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	34.6	8.29 - 87.9	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.							
Chlorine as Cl_2	mg/L	4	4	3.3	2.5 -4.1	No	Water additive used to control microbes
LEAD AND COPPER PRIMARY MONITORING							
Period Covered: 12 Months Ending December, 2006	**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	0.023	nd - 0.023	No	Corrosion of household plumbing system; Erosion of natural deposits
Copper as Cu	mg/L	AL= 1.3	1.3	0.180	nd - 0.180	No	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives
There were no violations as greater than 90% of samples were below the action level, (AL).							
ORGANIC CHEMICALS UNREGULATED CONTAMINANTS							
Period Covered: 12 Months Ending December, 2006	**Units**	**MCL**	**MCLG**	**Highest Level in Distribution System**	**Range of detections**	**Violation (Yes/No)**	**Major Sources in Drinking Water**
Bromodichloro-methane	µg/L	N/A	N/A	6.51	3.31 -6.51	No	By-Product of drinking water chlorination
Chloroform	µg/L	N/A	N/A	10.4	9.17 - 10.4	No	By-Product of drinking water chlorination
Dibromochloro-methane	µg/L	N/A	N/A	2.58	0.70 - 2.58	No	By-Product of drinking water chlorination

WATER QUALITY REPORT
TABLE OF PRIMARY DRINKING WATER PARAMETERS

MICROBIOLOGICAL			RADIOLOGICAL		
Analyte	**MCL**	**Highest Level Detected**	**Analyte**	**MCL**	**Highest Level Detected**
Total Coliform Bacteria	<5%	0.89%	Beta / Photon Emitters	4 mrem	N/A
Turbidity	<0.3 NTU	0.411	Alpha Emitters	15 pCi/L	1.6 +/- 0.8
INORGANIC CHEMICALS			Combined Radum	pCi/L	N/A
Antimony as Sb	6 ppb	ND	Uranium	30 ppb	N/A
Arsenic as As	10 ppb	ND	**ORGANIC CHEMICALS**		
Asbestos	7 MLF	ND	Endrin	2 ppb	ND
Barium as Ba	2 ppm	ND	Epichlorohydrin	TT	ND
Beryllium as Be	4 ppb	ND	Glyphosate	700 ppb	ND
Cadmium as Cd	5 ppb	ND	Heptachlor	400 ppb	ND
Chromium as Cr	100 ppb	ND	Heptachlor epoxide	200 ppt	ND
Copper as Cu	AL=1.3ppm	ND	Hexachlorobenzene	1 ppb	ND
Cyanide as Cn	200 ppb	ND	Hexachloro-cyclopentadiene	50 ppb	ND
Fluoride as F-	4 ppm	ND	Lindane	200 ppt	ND
Lead as Pb	AL=15 ppb	ND	Methoxychlor	40 ppb	ND
Mercury as Hg	2 ppb	ND	Oxamyl (Vydate)	200 ppb	ND
Nitrate as NO3--N	10 ppm	0.30	PCB's	500 ppt	ND
Nitrite as NO2--N	1 ppm	ND	Pentachlorophenol	1 ppb	ND
Selenium as Se	50 ppb	ND	Picloram	500 ppb	ND
Thallium as Tl	2 ppb	ND	Simazine	4 ppb	ND
DISINFECTION BY-PRODUCTS			Toxaphene	3 ppb	ND
Chlorine	4 ppm	4.1	Benzene	5 ppb	ND
Chloramines	4 ppm	ND	Carbon tetrachloride	5 ppb	ND
Chlorite	1 ppm	ND	Chlorobenzene	100 ppb	ND
Chlorine Dioxide	800 ppb	ND	Dibromochloropropane	200 ppt	ND
Bromate	10 ppb	ND	o-Dichlorobenzene	600 ppb	ND
TOC	TT	1.6	p-Dichlorobenzene	75 ppb	ND
TTHM	80 ppb	87.9	1,2-Dichloroethane	5 ppb	ND
HAA5	60 ppb	44.2	1,1-Dichloroethylene	7 ppb	ND
ORGANIC CHEMICALS			cis-1,2-Di-chloroethylene	70 ppb	ND
2,4-D	70 ppb	ND	trans-1,2-Di-chloro-ethylene	100 ppb	ND
2,4,5-TP(Silvex)	50 ppb	ND	Dichloromethane	5 ppb	ND
Acrylamide	TT	ND	1,2-Dichloropropane	5 ppb	ND
Alachlor	2 ppb	ND	Ethylbenzene	700 ppb	ND
Atrazine	3 ppb	ND	Ethylene dibromide	50 ppt	ND
Benzo(A)pyrene	200 ppb	ND	Styrene	100 ppb	ND
Carbofuran	40 ppb	ND	Tetrachloroethylene	5 ppb	ND
Chlordane	2 ppb	ND	1,2,4-Trichlorobenzene	70 ppb	ND
Dalapon	200 ppb	ND	1,1,1-Trichloroethane	200 ppb	ND
Di(2-ethylhexyl)-adipate	400 ppb	ND	1,1,2-Trichloroethane	5 ppb	ND
Di(2-ethylhexyl)-phthalates	6 ppb	ND	Trichloroethylene	5 ppb	ND
Dinoseb	7 ppb	ND	Toluene	1 ppm	ND
Diquat	20 ppb	ND	Vinyl Chloride	2 ppb	ND
Dioxin[2,3,7,8-TCD	30 ppq	ND	Xylenes	10 ppm	ND
Endothall	100 ppb	ND			

CITY OF TUSCALOOSA WATER AND SEWER DEPARTMENT

2007

ANNUAL WATER QUALITY REPORT

Office Address and Telephone Number

City of Tuscaloosa
Ed Love Water Plant
1125 Jack Warner Parkway North East
Tuscaloosa, Alabama 35404-1056
Telephone (205) 349-0247
Fax (205) 349-0213

http://www.tuscaloosa.com
http://www.ourgreatlake.org

Office Hours:
7:00 a.m. to 3:30 p.m.

WATER AND SEWER DEPARTMENT

Maurice T. Sledge, Director
Post Office Box 2090
Tuscaloosa, AL 35403-2090

The Tuscaloosa City Council Meetings are held once a week, every week in City Council Chambers on second floor of Tuscaloosa City Hall. The address is 2201 University Blvd. and the meeting times are, Tuesdays 6:00 PM. The Agenda for every meeting is published in the Tuscaloosa News on Saturday and on the internet at www.tuscaloosa.com or you may call 205-349-0499.
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 Tyner, District 5
Bob Lundell, District 6
William Tinker, III, District 7

Water Billing Office
Turn On/Turn Off
Office Hours:
8:00 a.m. - 4:30 p.m
Monday - Friday
(205) 349-0230
Drive Though Hours
7:30 a.m. - 5:00 p.m

Hilliard N. Fletcher
Wastewater Plant
Office Hours:
7:00 a.m. - 3:30 p.m.
Monday - Friday
(205) 349-0273

Distribution Division
Line Breaks/Leaks
Office Hours:
7:00 a.m. - 3:30 p.m.
Monday - Friday
(205) 349-0280

Lakes Division
Source Division
Office Hours:
7:00 a.m. - 3:30 p.m
Monday - Friday
(205) 349-0279

Ed E. Love Water Plant
Drinking Water Plant

Office Hours:
7:00 a.m. - 3:30 p.m.
Monday - Friday
(205) 349-0247

Additional Information:
Perry A. Acklin
Water Plant Manager
Phone: (205) 349-0247

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.

The 1996 amendments to the SDWA contained extensive 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. The amendments created the need for this report showing consumers the detected amounts of contaminants and the plain language definitions shown in this pamphlet.

The amendments recognized that some people might 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*

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
ppb 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 nanograms 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

TURBITY

Last year, on March 31st, the Ed Love Water Plant experienced an elevated turbidity in one of its twelve filters. Due to a chemical feed pump failure, filter eleven exceeded the 0.3 NTU turbidity limit. The reading was 0.411 NTU. The elevated turbidity occurred during a twenty minute period, as the plant was in the process of halting production. The water from this filter most likely did not enter the distribution system. Over 420,000 turbidity readings were logged for the year with only one above the 0.3 NTU limit.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for bacterial growth. Turbidity may indicate the presents of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

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

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 Lake Tuscaloosa, which is our source of drinking water.

Our Great Lake - Lake Tuscaloosa
Protect. Preserve. Play.

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

Lake Tuscaloosa as our primary source of drinking water needs to be protected by every individual who drinks and enjoys the water, as well as those who live or travel in the watershed!!! Several tips to help protect our source water are:

- Reduce the polluted run-off of septic tanks by having the tanks serviced and pumped at least once every three years and give the certificate of service to the Lakes Division.
- Reduce the polluted run-off of herbicides, pesticides, fertilizers, and etc. by not over applying or applying when it is going to rain.
- Adopt-a-stream or creek segment and help to restore and preserve.
- If you see someone dumping pollutants or anything into any of the lakes, please call the *City of Tuscaloosa Lakes Division Manager at (205) 349-0279 or the Ed Love Water Plant at (205)349-0247. Be prepared to give location and description of incident.*
- Check out our web site at *www.ourgreatlake.org* for all the latest reports and information on our lake.