

lish limits for contaminants in bottled water which must provide the same protection for public health. After the water reaches the lakes, it travels through pipelines to the Mohawk and A. B. Jewell water treatment plants where it is treated to remove substances that might threaten public health. After the water leaves the plants and enters the distribution system, it is tested again. More than 2,300 samples a year are analyzed to assure the water delivered to your homes and businesses is safe. In addition to the monitoring data, this report provides other information about Tulsa's drinking water and the system that serves about half a million people in north-eastern Oklahoma.

The Oklahoma Department of Environmental Quality has completed a Source Water Assessment of our water supply reservoirs and has determined that they are moderately susceptible to contamination. Please contact the ODEQ (telephone - 405/702-8100 or email - swap@deq.state.ok.us) to discuss the results of this assessment or the source water protection program in further detail.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Test Results Show Tulsa's Water is Safe

*** Definitions**

MCL=Maximum Contaminant Level: 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.

MCLG=Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected health risk.

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

MRDL=Maximum Residual Disinfectant Level: 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.

MRDLG=Maximum Residual Disinfectant Level Goal: The maximum level of a disinfectant added for water treatment at which no known or anticipated adverse effect on the health of persons would occur.

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

NTU or Nephelometric Turbidity Unit: A measurement of the turbidity, or cloudiness, of the water. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

mrem/yr=millirems per year: a measure of radiation absorbed by the body.

ppm: Parts per million. Comparable to one minute in two years. **ppb:** Parts per billion. Comparable to one minute in 2,000 years.

Regulated Contaminants	Likely sources of contaminants	Average	Minimum	Maximum	MCL*	MCLG*
Atrazine**	Runoff from herbicide used on row crops	0.155	0	0.31	3 parts per billion	3
Chlorine	Water additive to control microbes	2.0	0.1	2.9	MRDL*-4.0 parts per million annual average	MRDLG* - 4.0
Chlorite	By-product of drinking water disinfection	0.214	0.040	0.453	1 part per million	0.8
Copper	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	0.085 at 90th percentile			AL*=1.3 parts per million	1.3
Cyanide	Discharge from steel/metal; plastic; and fertilizer factories	0.4	0	9	200 parts per billion	100
Fluoride	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	0.93	0.57	1.21	4 parts per million	2
Gross Alpha Radionuclides	Erosion of natural deposits	0.52	0.46	0.57	15 pCi/L	n/a
Gross Beta Radionuclides	Decay of natural and man made deposits	2.42	2.17	2.68	4 mrem/yr*	n/a
Haloacetic Acids	By-product of drinking water disinfection	25	3	141	60 parts per billion annual average	n/a
Lead	Corrosion of household plumbing systems; erosion of natural deposits	0 at 90th percentile			AL*=15 parts per billion	0
Nitrate	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	0.15	0	0.53	10 parts per million	10
Total Coliform Bacteria within distribution system	Naturally present in the environment			2.5%	Presence of coliform bacteria in more than 5% of monthly samples	0
Total Organic Carbon	Naturally found in the environment	1.74	0.92	2.63	TT* - Treatment Technique	n/a
Trihalomethane	By-product of drinking water disinfection	37	5	125	80 parts per billion annual average	n/a
Turbidity Level Found	Soil runoff	Level found			0.24 NTU*	TT* = less than 0.3 NTU 95 percent of the time
		Lowest monthly % meeting regs			100%	
Unregulated Contaminants	Likely sources of contaminants	Average	Minimum	Maximum	MCL*	MCLG*
Sodium	Naturally occurring, urban stormwater runoff or discharge from sewage treatment plants	18 ppm*	9 ppm*	39 ppm*	Standards have not been established	

** Data collected November 2000. Frequency of monitoring requirements is within compliance regulations.

Which Plant Treats Your Drinking Water?

There is a vast underground network of pipes that carry drinking water from the treatment plants to our faucets. Which plant provides water to specific areas of the city and surrounding areas depends on daily changes in supply and demand. Generally, customers in the north and west portions of Tulsa and vicinity receive water that was treated at the Mohawk plant. Customers in the south and east areas of Tulsa and vicinity are served by the A. B. Jewell plant. Both plants serve the central areas of the city.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people 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).

How to Contact Us

City of Tulsa Quality Assurance

Public Works Department - Environmental Operations Division
707 S. Houston, Tulsa, OK 74127
918-596-2511

- To report a water line break or if you notice dramatic changes in the color, taste or odor of your tap water, please call the Water Emergency dispatcher at 596-9488.

- For questions about your water bill, please call Customer Service at 596-9511.

- This report is on the World Wide Web at <http://www.cityoftulsa.org>

- Tulsa's Environmental Network provides monitoring data at www.e-tulsa.net



City of Tulsa Water Supply Systems Public Works Department

Environmental Operations Division, 707 S. Houston, Tulsa, OK 74127
Tel: 918-596-2511
www.cityoftulsa.org

Este Informe contiene información muy importante. Tradúscalo o hable con un amigo quien lo entienda bien.

2003 Tulsa's Annual Water Quality Report

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER **Monitoring Requirements Not Met for the City of Tulsa Water System**

The City of Tulsa Water System did not fully comply with monitoring requirements twice during the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During August 2002 we did not complete all monitoring or testing for turbidity. The federal government requires us to tell you that we cannot be sure of the quality of our drinking water during that time. However, the City of Tulsa voluntarily employs additional water quality monitoring techniques that are more sensitive than are required by EPA regulations and these monitoring data demonstrated that our drinking water was safe.

What should I do?

There is nothing you need to do at this time.

What happened?

A continuous turbidity monitor for one of the twelve filters at the Mohawk Water Treatment Plant failed on August 8, 2002 and was not repaired until August 9, 2002. A similar incident occurred on August 16, 2002 and the monitor was not repaired until August 19, 2002. The monitors inform the operator about the status of the filters. During both of these incidents the City had additional water quality monitoring data for these specific filters that indicated they were performing properly and producing safe drinking water. New Federal and State regulations require that if a continuous turbidity monitor malfunctions the water system shall manually collect and analyze samples for turbidity from the filter until continuous monitoring equipment is repaired. City staff did not collect these manual samples as required.

What is being done?

New monitoring controls and revised procedures were implemented to ensure that Federal and State regulations are followed. For more information, please contact: Ms. Joan Arthur at 918-591-4029 or 707 S. Houston, Room 414, Tulsa, OK 74127

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.

This notice is being sent to you by the City of Tulsa Water System.

Public Water System ID# 1020418

Date distributed: June 1-30, 2003

Tulsa's drinking water is safe.

Tulsa's water treatment plants were designed to provide safe water, free of bacteria and other contaminants. As a result, the drinking water delivered to Tulsa area homes and businesses is safe and exceeds all federal requirements. The water is tested at the source lakes, and the City's laboratories and plant operators continuously monitor the quality of the water at the treatment plants, looking for substances which might be unsafe to public health.

This report explains the test results on samples taken as the water leaves the Mohawk and A. B. Jewell water treatment plants.

The table inside shows that during 2002 some contaminants were found in amounts that were less than the levels that are cause for concern. (For complete details of the analysis, call Quality Assurance at 596-2511.) Tulsa's raw water comes from three sources in northeastern Oklahoma: 1) Lake Oologah on the Verdigris River (in Rogers and Nowata counties), 2) Lakes Spavinaw and Eucha on Spavinaw Creek (in Mayes and Delaware counties), and 3) Lake Hudson on the Neosho River (in Mayes County). Lake Hudson was not used as a source during 2002.

As water travels over and beneath the surface of the land to our source lakes, it dissolves naturally occurring minerals and can pick-up substances such as microbial, inorganic, pesticides, herbicides, organic and radioactive contaminants that result from animal or human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations estab-

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Tulsa's Source Water Lakes and Watersheds



The Tulsa Metropolitan Utility Board invites you to get involved

Meetings that deal with decisions about our water are held on the 2nd and 4th Wednesdays of the month. Agendas are posted on the first floor of City Hall.

We encourage our customers to participate in the decisions that affect the quality of our drinking water.

For more information about meetings, call (918) 596-9621 or write to: TMUA, City Hall, Room 403, Tulsa, OK 74103

Jim Cameron, Chair
Louis Reynolds, Vice Chair
Joseph Paulk, Secretary
Mitch Adwon
Patty Eaton
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Richard Sevenoaks

www.tulsawater.com