

2003 Drinking Water Quality Report

University of Kansas - Lawrence Campus - July 2004
Prepared by the Department of Environment, Health & Safety

This report is designed to inform you about the water quality and services that your water system provides to you. Every water system's goal is to provide customers with a safe and dependable supply of drinking water. If you have any questions about this report or concerning your water utility, please contact Jon Rossillon at the Department of Environment, Health & Safety on campus by phone (785-864-0224), or by email (jrossillon@ku.edu).

The University of Kansas purchases its drinking water from the City of Lawrence which means that the water may originally come from either the Kansas River and/or the Clinton Reservoir. This report shows the campus water quality for 2003 and what it means. The bottom line is that the water that is provided to you is safe.

The City of Lawrence and the University of Kansas routinely monitor for various potential contaminants of concern in the drinking water according to federal and state laws. The tables at the end of the report show the results of this monitoring. It is important to remember that the presence of these constituents does not necessarily pose a health risk. More information about contaminants and their potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or by visiting their website (<http://www.epa.gov/safewater>).

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. Quality standards for public water systems are set at very stringent levels. To understand the possible health effects described for most constituents, we have provided the following example. A person would have to drink two liters of water every day at the maximum drinking water standard for a lifetime to have a one-in-a-million chance of having the described health effect.

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, and some elderly people 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, other microbiological contaminants, and information about potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

In the continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in the water system. Therefore, interruptions in supply may occur from time to time.

In 2003, KU incurred a Drinking Water Monitoring Violation for the month of September because one out of the forty water bacteriological monitoring samples that the KU EHS Department takes every month did not reach the KDHE laboratory in a timely manner. This is the first and only time that KU has gotten a water quality violation notice from KDHE since bacteriological monitoring began in 1992. KU EHS has tightened its procedures to make certain that this type of error does not occur again. This was a monitoring violation and not an emergency. No persons were deemed as being at risk from this violation. If you have any questions or comments about this incident, please contact Jon Rossillon at (785) 864-0224.

To help you better understand some of the terms used in this report, we have provided the following definitions.

Action Level (AL) - the concentration level of a contaminant at which treatment or other requirements must be performed.

Non-detects (ND) - no presence of the constituent detected.

Parts per million (ppm) - one part per million corresponds to one minute in two years, or one penny in \$10,000.

Parts per billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

Million fibers per liter (MFL) - a measure of the presence of asbestos fibers more than ten micrometers in length.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity in excess of five NTU is just noticeable to the average person.

Treatment technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Table 1. 2003 Water Quality Data as reported by the University of Kansas			
Parameter	Result		
Coliform Bacteria	None detected in 2003		
Parameter	Highest Level Allowed (EPA's MCL)	90 th Percentile	Ideal Goals (EPA's MCLG)
Copper (tested in 2001)	1.3 ppm AL	0.3774 ppm AL	1.3 ppm AL
Lead (tested in 2001)	15 ppb AL	6.9 ppb AL	0 AL

A possible source of the metal contaminants is the normal corrosion of the plumbing system.

Table 2. 2003 Water Quality Data as reported by the City of Lawrence				
Parameter	Highest Level Allowed (EPA's MCL)	Highest Level Detected Clinton Reservoir Water Treatment Plant	Highest Level Detected Kaw River Water Treatment Plant	Ideal Goals (EPA's MCLG)
Alpha emitters	15 pCi/L	0.9 pCi/L	1.5 pCi/L	0 pCi/L
Arsenic	50 ppb	1.4 ppb	1.5 ppb	-----
Atrazine	3 ppb Range	0.3 ppb 0.2 – 0.3 ppb	0.3 ppb 0.2 – 0.3 ppb	3 ppb -----
Barium	2 ppm	0.04 ppm	0.04 ppm	2 ppm
Beta emitters	50 pCi/L	5.1 pCi/L	7.9 pCi/L	0 pCi/L
Chromium	100 ppb	0.0 ppb	2.4 ppb	100 ppb
Fluoride	4 ppm	1.1 ppm	0.80 ppm	4 ppm
Nitrate	10.0 ppm	0.30 ppm	0.90 ppm	10.0 ppm
Selenium	50 ppb	1.3 ppb	2.2 ppb	50 ppb
Toluene	1.0 ppm	0.0010 ppm	0.0 ppm	1.0 ppm
Total Organic Carbon	TT	3.1 ppm	3.5 ppm	None
Turbidity	1.0 NTU	0.16 NTU	0.29 NTU	None
(Percentage of samples < 0.3 NTU)		100%	100%	
Asbestos (February 1995)	7 MFL	< 0.2 MFL		7 MFL
Total Trihalomethanes	80 ppb	64.8 ppb		None
HAA5s (Haloacetic acids)	60 ppb	44.3 ppb		None

Listed are contaminants detected in Lawrence’s drinking water as reported in the City of Lawrence’s *2004 Consumer Confidence Report*. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by-products. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Possible sources of the above contaminants include the erosion of natural deposits, runoff from herbicide used on row crops, decay of natural and man-made deposits, former chlorine supplier, water additive which promotes strong teeth, runoff from fertilizer use, chlorination by-products, and soil runoff. Not listed are the hundreds of other contaminants that were tested, but not detected.