

2005 Annual Drinking Water Quality Report City of Fayetteville Water Department

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. 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, in some cases, can pick up substances resulting from the presence of animals or from human activity. Our water source is the Beaver Water District, which treats surface water from Beaver Lake.

Contaminants that may be present in source water include: Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; Inorganic contaminants such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and herbicides which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; Organic chemical contaminants including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities.

The Arkansas Department of Health & Human Services has completed a Source Water Vulnerability Assessment for Beaver Water District. The assessment summarizes the potential for contamination of our source of drinking water and can be used as a basis for developing a source water protection plan. Based on the various criteria of the assessment, our water source has been determined to have a low susceptibility to contamination. You may request a summary of the Source Water Vulnerability Assessment from the City of Fayetteville Water Department at 575-8387.

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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

In order to assure 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 establish limits for contaminants in bottled water which must provide the same protection for public health.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We want you, our valued customers, to be informed about your water utility. If you have any questions about this report, please contact Alan Fortenberry, with the Beaver Water District, at 756-3651 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For questions pertaining to the City of Fayetteville Water & Sewer Department, please contact Tom Hubbard, Water & Sewer Operations Manager, at 575-8386, between the hours of 7:30 a.m. and 4:30 p.m. If you want to learn more, please attend any of our city council meetings. Water and sewer topics are not always on the agenda for each of these meetings. Therefore, please contact the City Clerk at 575-8323 for meeting agendas, time, date and location. They are normally held at 6:00 p.m. on first and third Tuesday of each month.

The City of Fayetteville Water Department and Beaver Water District routinely monitor for constituents in your drinking water according to Federal and State laws. The test results table shows the results of our monitoring for the period of January 1st to December 31st, 2005. In the table you might find terms and abbreviations you are not familiar with. To help you better understand these terms we've provided the following definitions:

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (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.

Maximum Contaminant Level Goal (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.

Maximum Residual Disinfectant Level (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.

Maximum Residual Disinfectant Level Goal (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.

NA - not applicable

Nephelometric Turbidity Unit (NTU) - a unit of measurement for the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Parts per million (ppm) - a unit of measurement for detected levels of contaminants in drinking water. One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - a unit of measurement for detected levels of contaminants in drinking water. One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

TEST RESULTS

MICROBIOLOGICAL CONTAMINANTS

Contaminant	Violation Y/N	Level Detected	Unit of Measurement	MCLG	MCL	Major Sources in Drinking Water
Total Coliform Bacteria (City of Fayetteville)	N	2.5% of August, 2005 samples were positive; 964 of 966 samples in 2005 were negative	Present	0	5% of monthly samples are positive	Naturally present in the environment
Turbidity (Beaver Water District)	N	Highest yearly sample result: 0.16 Lowest monthly % of samples meeting the turbidity limit: 100%	NTU	NA	> 0.3 NTU in > 5% of samples or any 1 sample > 1 NTU	Soil runoff

♦ Turbidity is a measurement of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

INORGANIC CONTAMINANTS

Contaminant	Violation Y/N	Level Detected	Unit of Measurement	MCLG	MCL	Major Sources in Drinking Water
Fluoride (Beaver Water District)	N	Average: 0.87 Range: 0.53 – 1.01	ppm	4	4	Water additive which promotes strong teeth
Nitrate [as Nitrogen] (Beaver Water District)	N	Average: 0.57 Range: 0 – 1.13	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

LEAD AND COPPER TAP MONITORING

Contaminant	Number of Sites over Action Level	90 th Percentile Result	Unit of Measurement	Action Level	Major Sources in Drinking Water
Lead (City of Fayetteville)	0	0.003	ppm	0.015	Corrosion from household plumbing systems; erosion of natural deposits
Copper (City of Fayetteville)	0	0.20	ppm	1.3	

DISINFECTION BY-PRODUCT PRECURSORS – Beaver Water District

♦ The percentage of Total Organic Carbon (TOC) removal was routinely monitored in 2005, and our water system met all TOC removal requirements set by USEPA. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs).

REGULATED DISINFECTANTS

Disinfectant	Violation Y/N	Level Detected	Unit of Measurement	MRDLG	MRDL	Major Sources in Drinking Water
Chlorine (City of Fayetteville)	N	Average: 0.8 Range: 0.05 – 1.3	ppm	4	4	Water additive used to control microbes

INVESTIGATIVE SAMPLES - IDSE

Contaminant	Violation Y/N	Level Detected	Unit of Measurement	MCLG	MCL	Major Sources in Drinking Water
HAA5 [Haloacetic Acids] (City of Fayetteville)	NA	Highest locational average: 40.4 Range: 9.3 – 60.7	ppb	0	60	By-products of drinking water disinfection
TTHM [Total Trihalomethanes] (City of Fayetteville)	NA	Highest locational average: 51.0 Range: 18.5 – 67.5	ppb	NA	80	

♦ Initial Distribution System Evaluations (IDSEs), required by the Stage 2 Disinfectants and Disinfection By-products Rule, are studies conducted by water systems to identify compliance monitoring sites that represent high disinfection by-product levels in distribution systems.