2004 Annual Drinking Water Quality Report
City of Fayetteville Water Department

We are pleased to present to you this year's **Annual Drinking Water Quality Report**. This report is designed to inform you about the high 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 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; and Radioactive contaminants which can be naturally- occurring or be the result of oil and gas production and mining activities.

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** or online at **http://epa.gov/safewater**. **Further information regarding source water and watershed protection can be obtained from the USEPA web site at http://www.epa.gov\surf**. City of Fayetteville information is available at **http://accessfayetteville.org**. The Arkansas Department of Health (ADH) completed a Source Vulnerability Assessment for Beaver Water District in June 2000. This 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. A report explaining the assessment process and results can be obtained from the Beaver Water District office, or accessed through the Source Water Assessment Program (SWAP) website at **http://www.healthyarkansas.com/eng/swp/swp.htm.** In order to assure tap water is safe to drink, USEPA 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.

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, Engineer 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 David Jurgens, Water & Sewer Superintendent, 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 & Sewer Department and the Beaver Water District routinely monitor for constituents in your drinking water in accordance with Federal and State laws. The table on page two shows the results of our monitoring for the period of **January 1st to December 31st, 2004**. In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (**ND**) - Laboratory analysis indicates that the constituent is not present.
Parts per million (**ppm**) *or Milligrams per liter (mg/l)* - One part per million corresponds to one minute in two years or one penny in $10,000.
Parts per billion (**ppb**) *or Micrograms per liter* - One part per billion corresponds to one minute in 2,000 years, or one penny in $10,000,000.
Millirems per year (**mrem/yr**) - Measure of radiation absorbed by the body.
Nephelometric Turbidity Unit (**NTU**) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Picocuries per liter (**pCi/l**) - Picocuries per liter is a measure of the radioactivity in water.
Action Level (**AL**) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow.
Treatment Technique (**TT**) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Maximum Contaminant Level - The "Maximum Allowed" (**MCL**) is 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 - The "Goal"(**MCLG**) is 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 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.

We constantly monitor the water supply for various constituents. We have not detected the presence of cryptosporidium in the finished water or source water on any of the occasions that we have tested in 2004. We believe it is important for you to know that cryptosporidum may cause serious illness in immuno-compromised persons.

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** at **1-800-426-4791**.

City of Fayetteville Water Department

TEST RESULTS (Where Sampled)

Contaminant	Violation Y/N	Level Detected	Unit Of Measurement	MCLG	MCL	Likely Source of Contamination
MICROBIOLOGICAL CONTAMINANTS						
Total Coliform Bacteria (City of Fayetteville)	N	**0.0041** 4.5% of June, 2004 samples were positive; all other 964 samples in 2004 were negative	Present	0	Presence of coliform bacteria in 5% of monthly samples	*Naturally present in the environment*
Fecal coliform and *Escherichia coli* (City of Fayetteville)	N	**0**	Present	0	A routine sample & repeat sample are total coliform positive, & one is also fecal coliform or *E. coli* positive	*Human and animal fecal waste*
Turbidity (Beaver Water) Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system	N	**0.25** (Highest yearly sample result) **0.08 (avg.)** Lowest monthly % of samples meeting turbidity limit: **100%**	NTU	n/a	> 0.3NTU in > 5% of samples or any 1 sample > 1 NTU	*Soil runoff*
RADIONUCLIDES (Beaver Water District) (None Detected)						
INORGANIC CONTAMINANTS (Beaver Water District)						
Fluoride	N	**0.00 – 0.99 0.53 (avg.)**	ppm	4	4	*Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories*
Nitrate (as Nitrogen)	N	**0.67 – 0.71 0.69 (avg.)**	ppm	10	10	*Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits*
SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES (Beaver Water District) (None Detected)						

VOLATILE ORGANIC CONTAMINANTS (Beaver Water District)

Contaminant	Violation Y/N	Level Detected	Unit of Measurement	MCLG	MCL	Major Sources in Drinking Water
TTHM [Total trialomethanes] (BWD-distribution system)	N	Highest running annual avg: **43.3** Range: **15.4 –76.7**	ppb	NA	Highest Running Annual avg: 80	*By-products of drinking water disinfection*
HAA5 [Haloacetic Acids] (BWD-distribution system)	N	Highest Running Annual avg: **46.0** Range: **17.3 – 79.7**	ppb	0	Highest Running Annual avg: 60	

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

LEAD AND COPPER TAP MONITORING (City Of Fayetteville)

Contaminant	Number of sites over AL	90% percentile result	95% percentile result	Unit of measurement	Action Level (AL)	Major Sources in Drinking Water
Lead	**0**	**0.002**	**0.004**	ppm	0.015	*Leaching from household plumbing systems; erosion of natural deposits.*
Copper	**0**	**0.05**	**0.05**	ppm	1.3	*Leaching from household plumbing systems; erosion of natural deposits.*

The Fayetteville water system is on a reduced monitoring schedule and required to sample once every 3 years for lead and copper at the customer's tap. Our last monitoring period was in 2002. Our next required monitoring period is in 2005.

UNREGULATED CONSTITUENTS (Beaver Water District)

Contaminant	Not Regulated	Level of Detect	Unit of measurement	MCLG	Major Sources in Drinking Water
Dibromochloromethane	" "	**0.9**	ppb	60	*By-products of drinking water disinfection*
Bromodichloromethane	" "	**3.83**	ppb	0	
Chloroform	" "	**12.4**	ppb	**N/A**	

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

COMPLIANCE MONITORING (Beaver Water District)

REGULATED DISINFECTANTS (City of Fayetteville)

Disinfectant	Violation Y/N	Level Detected	Unit of Measurement	MRDLG	MRDL	Major Sources in Drinking Water
Chlorine	N	Average: 0.7 Range: 0.1 – 1.6	ppm	4	4	*Water additive used to control microbes*

DISINFECTION BY-PRODUCT PRECURSORS (Beaver Water District)

- The percentage of Total Organic Carbon (TOC) removal was routinely monitored in 2004, 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).