

## **Siloam Springs Water Department**

### **2009 Annual Drinking Water Quality Report**

**Este documento contiene información importante acerca del agua potable que usted consume. Si no puede leer este informe, por favor contacte a Elena Corona al numero (479) 238-0958. Gracias.**

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 source is surface water from Illinois River. We also purchase treated surface water from Benton - Washington Regional Public Water Authority (PWA) whose source is Beaver Lake. Eastside Rural Water District customers receive water from Benton - Washington Regional PWA's treatment facility, and Allens Canning can receive water from Siloam Springs Water Department or Benton - Washington Regional PWA. All other customers receive water from Siloam Springs Water Department.

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 has completed a Source Water Vulnerability Assessment for Benton - Washington Regional Public Water Authority. 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 our office.

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).

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. It lives and reproduces only with the host. In the environment Cryptosporidium exists as a thick walled oocyst containing four organisms. Our monitoring indicates the presence of these organisms in our source water, the Illinois River. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. It is important to know that although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. Our monitoring consisted of 24 monthly samples that began on January 2007 and was completed on December 2008, and there were 6 detections. These occurred in the months of January, February and April - June 2007 and June 2008. The results ranged from a high of 0.5 oocysts/Liter in January 2007 to a low of 0.1 oocyst/Liter in June 2008 (approximately 0.5 and 0.1 oocysts per quart of water).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Siloam Springs Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

If you have any questions about this report or concerning your water utility, please contact Donnie Napier, Water Superintendent,

at 479-524-3513. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Board of Directors' Meetings. They are held on the first and third Tuesdays of each month at 6:30 PM in the City Hall Board Room.

Siloam Springs Water Department and Benton - Washington Regional Public Water Authority 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 1<sup>st</sup> to December 31<sup>st</sup>, 2009. 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)** - unenforceable public health goal; 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.

MICROBIOLOGICAL CONTAMINANTS						
Contaminant	Violation Y/N	Level Detected	Unit	MCLG (Public Health Goal)	MCL (Allowable Level)	Major Sources in Drinking Water
Total Coliform Bacteria (Siloam Springs Water Dept)	N	1 Positive sample in May	Present	0	1 positive sample per month	Naturally present in the environment
TURBIDITY						
Contaminant	Violation Y/N	Level Detected	Unit	MCLG (Public Health Goal)	MCL (Allowable Level)	Major Sources in Drinking Water
Turbidity (Siloam Springs Water Dept)	N	Highest yearly sample result: 0.28 Lowest monthly % of samples meeting the turbidity limit: 100%	NTU	NA	Any measurement in excess of 1 NTU constitutes a violation	Soil runoff
Turbidity (Benton-Washington PWA)	N	Highest yearly sample result: 0.86 Lowest monthly % of samples meeting the turbidity limit: 98%			A value less than 95% constitutes a violation	
♦ 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	MCLG (Public Health Goal)	MCL (Allowable Level)	Major Sources in Drinking Water
Fluoride (Siloam Springs Water Dept)	N	Average: 0.78 Range: 0.58 - 1.03	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth
Fluoride (Benton-Washington PWA)	N	Average: 0.70 Range: 0.57 - 0.83				
Nitrate [as Nitrogen] (Siloam Springs Water Dept)	N	Average: 2.31 Range: 1.82 - 2.63	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate [as Nitrogen] (Benton-Washington PWA)	N	Average: 0.39 Range: 0.0 - 0.78				
TEST RESULTS						
LEAD AND COPPER TAP MONITORING						
Contaminant	Number of Sites over Action Level	90 <sup>th</sup> Percentile Result	Unit	Action Level	Major Sources in Drinking Water	
Lead (Siloam Springs Water Dept)	1	<0.003	ppm	0.015	Corrosion from household plumbing system; erosion of	

Copper (Siloam Springs Water Dept)	0	<0.20	ppm	1.3	plumbing systems; erosion or natural deposits	
♦ Siloam Springs is on a reduced monitoring schedule and required to sample once every three years for lead and copper at the customers' taps. The data above is from our last monitoring period in 2008. Our next required monitoring period is the year 2011.						
<b>DISINFECTION BY-PRODUCT PRECURSORS</b>						
♦ The percentage of Total Organic Carbon (TOC) removal was routinely monitored in 2009, and all TOC removal requirements set by USEPA were met. 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).						
<b>REGULATED DISINFECTANTS</b>						
Disinfectant	Violation Y/N	Level Detected	Unit	MRDLG (Public Health Goal)	MRDL (Allowable Level)	Major Sources in Drinking Water
Chlorine (Siloam Springs Water Dept)	N	Average: 1.4 Range: 0.3 – 1.9	ppm	4	4	Water additive used to control microbes

<b>BY-PRODUCTS OF DRINKING WATER DISINFECTION</b>					
Contaminant	Violation Y/N	Level Detected	Unit	MCLG (Public Health Goal)	MCL (Allowable Level)
HAA5 [Haloacetic Acids] (Siloam Springs Water Dept)	N	Highest Running 12 Month Average: 31* Range: 12.7 – 62.2	ppb	0	60
HAA5 [Haloacetic Acids] (Benton-Washington PWA)	N	Highest Running 12 Month Average: 51* Range: 27.2 – 62.2			
TTHM [Total Trihalomethanes] (Siloam Springs Water Dept)	N	Highest Running 12 Month Average: 39* Range: 16.2 – 72.4	ppb	NA	<b>80</b>
TTHM [Total Trihalomethanes] (Benton-Washington PWA)	N	Highest Running 12 Month Average: 63* Range: 29.0 – <b>86.8</b>			
* The highest running 12 month average is calculated using the last 3 quarters of 2008 and all 4 quarters of 2009. The range reported is from monitoring during 2009 only.					

<b>UNREGULATED CONTAMINANTS</b>					
Contaminant	Level Detected	Unit	MCLG (Public Health Goal)	Major Sources in Drinking Water	
Chloroform (Siloam Springs Water Dept)	8.06	ppb	70	By-products of drinking water disinfection	
Chloroform (Benton-Washington PWA)	32.3				
Bromodichloromethane (Siloam Springs Water Dept)	5.38	ppb	0		
Bromodichloromethane (Benton-Washington PWA)	4.05				
Dibromochloromethane (Siloam Springs Water Dept)	2.38	ppb	60		
♦ 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. MCLs (Maximum Contaminant Levels) and MCLGs (Maximum Contaminant Level Goals) have not been established for all unregulated contaminants.					