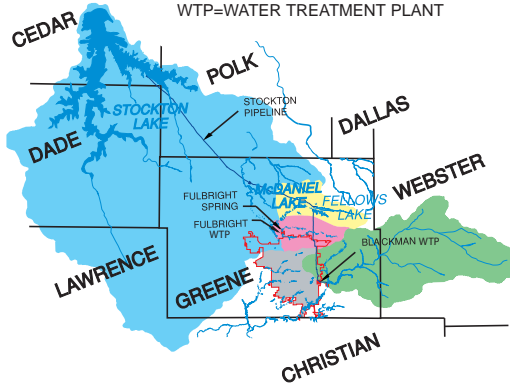


## LEGEND

- JAMES RIVER WATERSHED
  - FULBRIGHT SPRING RECHARGE AREA
  - FELLOWS/MCDANIEL WATERSHED
  - STOCKTON WATERSHED
- WTP=WATER TREATMENT PLANT



## Does our Water Meet all State and Federal Standards?

Yes! Drinking water supplied by City Utilities meets and surpasses all state and federal regulations. The highly-trained chemists and microbiologists who work in the certified laboratory, as well as the certified water plant operators who work in the treatment plants every day of the year, ensure this result.

## Source Water Contaminant Monitoring Results 2015

Analyte	Units	Average	Range	Comments	Major Sources
Cryptosporidium	oocysts/L	<0.1	<0.1 - 0.2	Detected in source waters only	Naturally present in the environment

Cryptosporidium is a microbial pathogen found in surface waters throughout much of the United States. Cryptosporidium may cause cryptosporidiosis, which is an abdominal infection with symptoms such as nausea, diarrhea, and abdominal cramps. Although filtration removes cryptosporidium, the most commonly applied filtration methods cannot guarantee 100% removal. City Utilities has conducted monitoring of both our source waters and our finished drinking waters. Our monitoring efforts to date have detected cryptosporidium only in our source waters, though the monitoring techniques cannot determine if the organisms are dead, or alive and infectious. Cryptosporidium must be ingested to cause disease and it may be spread through several means other than drinking water.

## Unregulated Contaminant Monitoring Results 2015

Detected Contaminants	Units	Highest Value	Range Detected
<b>UCMR3</b>			
Hexavalent Chromium (Chromium-6)	ppb	0.180	<0.005 - 0.180
Strontium	ppb	50.6	38.5 - 50.6
Chlorate	ppb	590	<20.0 - 590
Unregulated contaminants do not have a maximum contaminant level (MCL) associated with their occurrence. Utilities are periodically required to sample for unregulated contaminants to assist EPA in determining if an MCL is needed for those contaminants. During the latest round of monitoring, our utility tested for 28 contaminants - the 3 contaminants measured at detectable levels are listed in the table.			

## Source Water Assessment

In December 2003, the Department of Natural Resources completed a Source Water Assessment for City Utilities' drinking water sources. The assessment showed that, as expected for surface waters, the sources are susceptible to viruses and microbiological contaminants, which are inactivated by conventional treatment. In addition, all surface waters are moderately susceptible to land-use activities within the watershed. City Utilities, in support of the Watershed Committee of the Ozarks, will continue to encourage low-impact land use to reduce detrimental effects to our drinking water sources. The source water assessment for our system can be found online at <http://drinkingwater.missouri.edu/swip/swipmaps/pwssid.htm>. The City Utilities Public Water System ID (PWSID) is MO-5010754.

## Where Does Springfield's Water Come From?

Approximately 80 percent of Springfield's drinking water comes from surface water (lakes, rivers) and the rest from ground water (wells, spring). City Utilities' Fulbright and Blackman Water Treatment Plants use a combination of sources for water treatment, including both surface and ground water. Fulbright is located on the northern edge of Springfield and is served by Fulbright Spring (the original source for the city), a deep well, and McDaniel Lake. The Blackman Plant is in the southeastern corner of the city and receives water from Fellows Lake, Stockton Lake and/or the James River. Both Fellows and McDaniel Lakes can be supplemented with water from Stockton Lake. Also, one deep well is located in the distribution system and is used as an additional source when needed.



# WATER

## Quality Report 2015



For the 17th year in a row, City Utilities of Springfield's Blackman and Fulbright Water Treatment Plants have received the DIRECTOR'S AWARD from the Partnership for Safe Water, a program of the American Water Works Association (AWWA). This award is given in recognition of the efforts to achieve excellence in water quality far beyond what is required by federal regulations. Less than one percent of the treatment plants in the U.S. have received this recognition.

FOR MORE INFORMATION REGARDING THIS ASSESSMENT OR FOR ADDITIONAL WATER QUALITY DATA, CALL THE MANAGER - WATER QUALITY & OPTIMIZATION AT 417-831-8822.

# City Utilities of Springfield (PWS\* ID: MO5010754) Water Quality Summary 2015

## Information on Lead and Copper

Detected Contaminants	Units	MCLG	MCL	Average Level	Range Detected	Compliance	Potential Major Sources
<b>Treatment Plants</b>							
Fluoride	ppm	4	4	0.90	0.18 - 1.20	YES	Added during treatment for dental health or dissolved from natural deposits
Total Chlorine	ppm	4 (MRDLG)	4 (MRDL)	1.38	0.89-1.99	YES	Water additive used for disinfection
Barium	ppm	2	2	0.066	0.058 - 0.073	YES	Discharge of drilling wastes or from metal refineries; erosion of natural deposits
Nitrate	ppm	10	10	0.43	<0.13-1.21	YES	Runoff from fertilizer; leaching from septic tanks or sewage; erosion of natural deposits
Total Organic Carbon (TOC)	ppm	N/A	TT: Ratio ≥ 1.00	1.80	1.00 - 3.80	YES	Naturally occurring
Turbidity	NTU	N/A	TT: at least 95% of samples <0.3 NTU	0.04	0.02 - 0.20	YES	Soil runoff
				<b>Lowest Monthly % &lt; 0.3 NTU = 100% Fully Compliant - all months</b>			

<b>Distribution System</b>							
				<b>Highest LRAA</b>	<b>Range Detected</b>		
Total Trihalomethanes	ppb	N/A	80 (LRAA)	74	19.5 - 152	YES	By-product of drinking water disinfection
Haloacetic Acids	ppb	N/A	60 (LRAA)	38	0 - 55.1	YES	
Lead	ppb	0	AL = 15	<b>2013** Testing Results</b>		YES	Corrosion of household plumbing; erosion of natural deposits
				<b>90th Percentile Values</b>	<b>Range Detected</b>		
				5.3	<1.0-9.5		
Copper	ppm	1.3	AL = 1.3	0.128	0.0056 - 0.208	YES	
Total Coliform Bacteria	% positive samples	0	coliform bacteria in no more than 5% of samples	<b>2015 Testing - Highest Monthly % Positive</b>		YES	Naturally present in the environment - <b>No Fecal Coliform or E. coli in 1687 tests in 2015</b>
				1.38%			

<b>Additional Monitoring Data (General Water Quality Parameters)</b>					
Analyte	Units	Average	Range	Comments	Major Sources
Hardness	GPG	9.0	5.9 - 12.4	Hardness refers to the mineral content of water. Calcium and magnesium are the main contributors to water hardness.	Erosion of Natural Deposits
	ppm	153.2	101.2 - 211.4		

<b>Important Drinking Water Definitions</b>	
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. MCLGs allow for a margin of safety.
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 level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of disinfectant use to control microbial contamination.
AL	Action Level - The concentration of a contaminant which, if exceeded, triggers requirements which a water system must follow.
TT	Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.
Turbidity	Turbidity - A measure of the cloudiness or clarity of water. It is monitored because it is a good indicator of both water quality and the effectiveness of our filtration system.
LRAA	Locational Running Annual Average - the locational average of sample analytical results for samples taken during the previous four calendar quarters.

<b>Unit Descriptions/Definitions</b>		
NTU	nephelometric turbidity units (a measure of clarity)	N/A = not applicable
GPG	grains per gallon (measure of hardness - 1 GPG = 17.1 ppm)	
ppm	parts per million, or milligrams per liter (mg/L)	
ppb	parts per billion, or micrograms per liter (ug/L)	

\*Public Water System | \*\* System-wide testing of representative homes for lead and copper (which may be imparted to the water from plumbing and fixtures) is conducted every three years, as required by the Environmental Protection Agency. The latest round of testing was conducted in 2013, with results presented here. The next round of testing will occur in 2016.

City Utilities fully complies with the lead and copper provisions of the Safe Drinking Water Act. In 2013, City Utilities gathered samples from a number of residences in accordance with state and federal regulations. EPA regulations require that at least 90 percent of the samples are below the action level for both lead (15 ppb) and copper (1.3 ppm). Of the 58 residences sampled in 2013, none of the results exceeded the action level for either lead or copper.

Elevated levels of lead, if present, have the potential to cause serious health problems, especially for pregnant women and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. You can minimize lead exposure by flushing your tap for approximately 30 seconds prior to using water for drinking or cooking. You may also wish to have your water tested. Additional information is available from the **SAFE DRINKING WATER HOTLINE (800-426-4791) OR AT WWW.EPA.GOV/SAFEWATER/LEAD.**

## Possible Contaminants

As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and radioactive material, and can be polluted by animals or human activity. Contaminants that might be expected in untreated water include: microbial contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; organic chemicals from pesticides, herbicides, and industrial or petroleum use; and radioactive materials. 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.**



## Information for People with Special Health Concerns

Some people may be more vulnerable to certain types of contamination in drinking water than the general population. Immuno-compromised individuals—people with cancer who are undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants—can be particularly at risk for infections. These people should seek advice from their healthcare providers. Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA hotline listed below.

**ENVIRONMENTAL PROTECTION AGENCY'S  
SAFE DRINKING WATER HOTLINE: 800-426-4791**