

Shawnee Municipal Authority Water Quality Report 2015

We are very pleased to provide this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is, and always has been, to provide you with a safe and dependable supply of drinking water. The Shawnee Municipal Authority routinely monitors for constituents in your drinking water according to federal and state laws. This table shows the results of our monitoring for the period of January 1st, to December 31st, 2015. (Some of our data may be more than one year old, because the state allows us to monitor for some constituents, less often than once per year.) All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

Source of Drinking Water

Our water, is surface water drawn from Shawnee Twin Lakes and Wes Watkins Reservoir. An analysis of contamination susceptibility has been done. The analysis showed that our water's susceptibility to contamination is HIGH (All surface water is considered to have high susceptibility to contamination.) Information such as potential sources of contamination have been considered.

Contaminants that may be present in source water include: Microbes (viruses and bacteria), inorganics (salts and metals), pesticides and herbicides (which may come from a variety of sources such as agriculture, storm runoff, and residential uses), organic chemicals (byproducts of industrial processes and petroleum production), storm water run off, radioactive contaminants (which can be naturally occurring or be the result of oil and gas production and mining activities) and septic systems.

Customers with Health Concerns

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 that 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 advise about drinking water from their health care providers.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

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This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact the Supervisor at the City of Shawnee, Water Treatment Plant at (405) 273-0890.

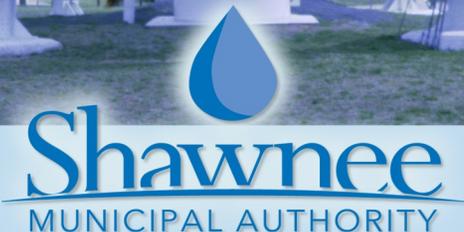
"We want our valued customers to be informed about their water utility."

Public participation on water quality issues, is welcomed at City Council Meetings. Meetings are held on the 1st and 3rd Monday of each month at 6:30 pm., at the City of Shawnee, City Hall Commission Chambers located at 16 W. 9th Street.



Annual Water Quality Report

Calendar Year 2015



Shawnee Municipal Authority Water Quality Test Results 2015

Detected Contaminants	Units	MCLG	MCL	Compliant	Results	Source of Contaminant
Coliform Bacteria Total Coliform	N/A	0	N/A	YES	Positive Sample 1	Naturally present in the environment
Lead & Copper Lead Copper	ppb ppb	0 1300	AL= 15 AL= 1300	YES	90 th Percentile = 0 90 th Percentile = 318	Corrosion of household plumbing; Erosion of natural deposits
Disinfection By-Products Chlorine	ppm	MRDLG = 4	MRDL = 4	Yes	range detected 3 - 3 highest detected 3	By-product of drinking water chlorination
Chlorite	ppm	0.8	1	YES	range detected 0.576 - 0.981 highest detected 0.981	By-product of drinking water chlorination
Haloacetic Acids	ppb	No Goal	60	YES	range detected 5.62 - 45.2 highest detected 26	By-product of drinking water chlorination
Total Trihalomethanes	ppb	No Goal	80	YES	range detected 13.4 - 62.0 highest detected 32	By-product of drinking water chlorination
Inorganic Contaminants Barium	ppm	2	2	YES	range detected 0.144 - 0.144 highest detected 0.144	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (measured as nitrogen)	ppm	10	10	YES	range detected 0.33 - 0.33 highest detected 0.33	Runoff from fertilizer, leaching from septic tanks, sewage; erosion of natural deposits
Radioactive Contaminants Beta and Photon Emitters	mrem/yr.	0	4	YES	4.46 - 4.46 4.46	Decay of natural and man-made deposits
Gross Alpha excluding radon and uranium	pCi/L	0	15	YES	range detected 1.66 - 1.66 highest detected 1.66	Erosion of natural deposits
Clarity Turbidity	NTU	N/A	N/A	No	highest detected 1 NTU lowest monthly % 0.3 NTU / 91 %	Storm related soil runoff
<i>Turbidity Levels</i>	<i>Due to historic rainfalls, Turbidity levels exceeded standards for the months of June and July. Turbidity levels have no health effects, however, it is used to measure effective filtration and can interfere with disinfection. Water Treatment Plant (WTP) staff adjusted components of treatment to reduce turbidity levels and corrected the situation. What can be done in the future to prevent this from re-occurring? WTP Staff will be more immediate in response to extended storm activities which may cause fluctuations in treatment.</i>					
<i>Total Organic Carbon</i>	<i>The percentage of Total Organic Carbon (TOC) removal was measured each month & the system met all TOC removal requirements set.</i>					

Not all sample results may have been used for calculating the Highest Level Detected; some results may be part of an evaluation to determine where compliance sampling should occur in the future. Data presented in this report is from the most recent testing done in accordance with regulations.

Barium. Some people who drink water containing barium in excess of the MCL over the years could experience an increase in blood pressure. **Chlorite.** Some children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some may experience anemia. **Copper.** Some people who drink water containing copper in excess of the action level over a short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver/kidney damage. People with Wilson's Disease should consult their doctor. **Fluoride.** Some who drink water with fluoride in excess of the MCL over many years could get bone disease. Children may get mottled teeth. **Lead.** Children who drink water containing lead in excess of the action level could experience delays in physical or mental development. Adults who drink this water over many years could develop kidney problems or high blood pressure. **Turbidity.** Has no health effects. It can interfere with disinfection & provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms, including bacteria, viruses, & parasites that can cause nausea, cramps, diarrhea, & headaches. **Haloacetic Acids.** Some who drink water in excess of the MCL over many years may have an increased risk of getting cancer. **Total Trihalomethanes.** Some who drink water containing excess of the MCL over the years may experience problems with liver, kidneys, or nervous system, & may have an increased risk of getting cancer. **Total Coliform.** Bacteria that are naturally present in the environment & are an indicator that other, potentially- harmful, bacteria may be present. Coliforms were found in more samples than allowed & this was a warning of potential problems. **Total Organic Carbon.** Has no health effects. However, it provides a medium for the formation of disinfection byproducts. Drinking water containing these byproducts in excess of the MCL may lead to health effects, liver or kidney problems, nervous system effects and may lead to an increased risk of getting cancer.

Definitions

MCLG: Maximum Contaminant Level 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. **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. **MRDL:** Maximum residual disinfectant level. **ppb:** micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water. **Avg:** Regulatory compliance with some MCLs are based on running annual average of monthly samples. **ppm:** milligrams per liter or parts per million - or one ounce in 7,350 gallons of water. **NTU:** Nephelometric Turbidity Units (a measure of clarity) **CFU:** Colony Forming Units **AL:** Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or requirements which a water system must follow. **pCi/L:** Picocuries Per Liter. A unit of measure for levels of radon gas.