

Kansas City Board of Public Utilities

2019 Water Quality Report

The mission of the Water Division of the Kansas City Board of Public Utilities (BPU) is to have available upon demand, to all of our customers, good quality water and to provide that water in the most efficient manner possible. For more than 100 years, BPU has provided this community with quality water. We are proud to continue this mission and hope that you find this water report useful and informative.

BPU is one of the top rated public water utilities in the country. In recent years, BPU was one of only a handful to once again receive the ***Partnership for Safe Water Directors Award***. The Partnership for Safe Water is a voluntary program between BPU (as well as other participating water utilities) and the following water authorities: the U.S. Environmental Protection Agency, the American Water Works Association, the Association of Metropolitan Water Agencies and the Association of State Drinking Water Administrators, all of whom help to sponsor the program.

The program was established to provide safe, high-quality drinking water to the public that exceeds certain EPA regulations. Less than one percent of all utilities nationwide receive this award, and BPU was the first and only utility in the metro area to receive this honor.

BPU has also received the ***Platinum Award for Utility Excellence*** from the Association of Metropolitan Water Agencies (AMWA), one of a select few utilities in the country to receive this recognition. The award recognized BPU's accomplishments in applying competitive business strategies to meet the expectations of drinking water consumers and municipal leaders. AMWA is the organization for the nation's largest public drinking water utilities.

We want our valued customers to be informed!

The Kansas City Board of Public Utilities (BPU) serves over 51,000 water customers in a service area of approximately 152 square miles. This service area includes Kansas City, Kansas, Edwardsville, southern Leavenworth County, parts of Bonner Springs and a small section of northern Johnson County. BPU's state-of-the art water system has the capacity to pump 72 million gallons of water a day (MGD), including one water treatment facility; three major pump stations; 1,000 miles of water pipes and two of the nation's largest horizontal collector wells.

This report describes the quality of your drinking water and how BPU complies with water regulations that protect your health.

This document also complies with the 1996 Safe Drinking Water Act, which requires water utilities to provide water quality information to customers every year.

To learn more, visit BPU's web site at www.bpu.com, or go to the Environmental Protection Agency Web site at www.epa.gov/safewater. Visitors are also welcome to attend BPU's regularly scheduled Board meetings, usually held on the first and third Wednesday of each month at 6:00 p.m., at 540 Minnesota Avenue, Kansas City, Kansas. To confirm the exact date and time of the next BPU Board meeting, call (913) 573-9024.

For questions about BPU water quality, please call BPU's Water Processing Division at (913) 573-9272.

Sources of drinking water (both tap water and bottled water) generally include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves organic and inorganic minerals, and may pick up radioactive material and substances resulting from animal or human activity.

BPU's water comes from the Missouri River watershed, which represents nearly one-sixth of the area of the continental United States. The Missouri River carries runoff from predominantly rural, non-industrialized regions. BPU water is collected and filtered through two horizontal collector wells in an aquifer deep below the Missouri River.

Before this "raw" water turns into drinking water, it is cleaned, treated and tested at BPU's Nearman Water Treatment Plant. The plant opened in 2000, and offers the latest treatment and technology methods available. Once the water meets or surpasses all regulations, it is then distributed through underground pipes to our customers.

BPU also has water interconnections with Kansas City, Missouri and Johnson County (Kansas) Water District No. 1 (WaterOne). Both of these water systems also use the Missouri River as their water supply source.

Is your water safe to drink? Yes it is!

BPU's water quality consistently exceeds all federal and state standards. Federal and state regulations include procedures and schedules to monitor water from the source to the tap. The Kansas Department of Health & Environment (KDHE) assures that the state's public water systems comply with all regulations, follow monitoring schedules and report results. Certified by the State of Kansas, BPU's laboratory monitors the physical, chemical and microbiological characteristics of the utility's water. In addition, the Operating Staff of the Nearman Water Treatment Plant is state-certified by KDHE.

During the 2018 calendar year, BPU is proud to have had no violation(s) of any federal or state drinking water regulations.

BPU's Laboratory Services Division monitors the quality of the drinking water as it leaves the treatment plant and also at customers' taps to assure that the water is safe to drink. Currently there are 1,200 regular sampling sites distributed widely around our community.

To produce the highest quality water for its customers, BPU subjects it to rigorous treatment to assure that sediment, harmful bacteria, protozoan parasites, and certain minerals are removed. BPU regularly tests its water using sophisticated equipment and scientifically advanced procedures.

Are *Cryptosporidium* and *Giardia* in my tap water?

These organisms have never been found in BPU's treated water. BPU's water treatment process uses multiple barriers to prevent the risk of these protozoan parasites being found in customer's finished water.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as individuals with cancer undergoing chemotherapy, persons who have undergone an organ transplant, people with HIV/AIDS or other immune system disorders, and some elderly persons and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

In addition, the Safe Drinking Water Hotline offers guidelines from the EPA/Centers for Disease Control on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants. For information, call EPA's toll-free number at (800) 426-4791, or go to their Web site at www.epa.gov/safewater.

Regulations for public water systems

BPU routinely monitors for contaminants in your drinking water. The following tables show monitoring results for the period of January 1 to December 31, 2018. All drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

During the 2018 calendar year, BPU had no violation(s) of drinking water regulations.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791, or go to their Web site at www.epa.gov/safewater.

Have questions about drinking water quality? Call or log-on to these resources:

Kansas City Board of Public Utilities

Water Processing Division

Phone: (913) 573-9272 or (913) 573-9284

E-mail address: kdaggett@bpu.com

BPU Web site: www.bpu.com

Laboratory Certification

The National Environmental Laboratory Accreditation Conference (NELAC) is a cooperative association of state and federal agencies that establishes environmental laboratory performance standards. Its goal is to ensure environmental laboratories produce known high-quality data. This data can then form a solid foundation for public health and environmental management decisions.

BPU's laboratory has been nationally accredited under the National Environmental Laboratory Accreditation Program (NELAP). NELAP is the program that implements the NELAC standards. This is accomplished by state and federal agencies that act as Accrediting Authorities.

Water Quality Data

The following tables list all of the drinking water contaminants which were detected during the 2018 calendar year. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1- December 31, 2018. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. **The bottom line is that the water that is provided to you is safe.**

Monitored Substances Tables

Monitored at Customer's Tap							Monitored June – Sept. 2017 ¹⁾
Substance	Units	MCL	MCLG	90 th Percentile	Range Detected	Sites Over AL	Likely Source
Copper ¹⁾	ppm	AL=1.3	1.3	0.390	0.056-0.570	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead ¹⁾	ppm	AL=0.015	0	0.0072	<0.0005-0.041	1	Corrosion of household plumbing systems, erosion of natural deposits

** 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. Your water system 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>.*

Monitored in the Distribution System				Monitored Jan. – Dec. 2018			
Substance	Units	MCL	MCLG	Average Detected	Highest RAA	Range Detected	Likely Source
Chloramines	ppm	4.0	4.0	2.53 ²⁾	2.72	1.0 – 3.6	Water additive used to control microbes
Chlorite	ppm	1.0	0.8	0.40 ²⁾	0.59	0.32-0.59	By-product of drinking water disinfection
HAA5 (Haloacetic acids)	ppb	60	N/A	19 ³⁾	21	<2-28	By-product of drinking water disinfection
Total Coliform	%	Presence <5% of Samples	0	2.16	NA	0 – 5.0	Naturally present in the environment
TTHM (Total Trihalomethanes)	ppb	80	N/A	34 ³⁾	36	23-47	By-product of drinking water chlorination

Monitored at the Treatment Plant				Monitored Jan. – Dec. 2018			
Primary Drinking Water Contaminants							
Substance	Units	MCL	MCLG	Average Detected	Range Detected	Likely Source	
Atrazine	ppb	3	3	0.052	<0.05-0.14	Runoff from herbicide used on row crops	
Barium	ppm	2	2	0.123	0.110-0.150	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Beta/photon emitters	pCi/L	50 ⁴⁾	0	8.8	8.8	Decay of natural and man-made deposits	
Chlorine dioxide	ppb	800	800	90	<100 – 320	Water additive used to control microbes	
Chlorite	ppm	1.0	0.8	0.49 ²⁾	0.32 – 0.68	By-product of drinking water disinfection	
Cyanide	ppb	200	200	<5	<5	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	

Fluoride	ppm	4	4	0.77	0.71– 0.89	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha emitters	pCi/L	15	0	4.9	4.9	Erosion of natural deposits
Nitrate (as N)	ppm	10	10	1.6	1.6	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radium 226	pCi/L	5	0	<1	<1	Erosion of natural deposits
Radium 228	pCi/L	5	0	<1	<1	Erosion of natural deposits
Selenium	ppb	50	50	<0.5	<0.5	Erosion of natural deposits
Total Organic Carbon	ratio ⁵⁾	TT Removal ratio >1	N/A	2.04 ⁵⁾	1.79-2.52	Naturally present in the environment
Turbidity	NTU %	TT=1.0 max TT<0.3 95% of the time	N/A	0.08 100%	0.04- 0.19 100%	Soil runoff causes water cloudiness by suspended matter
Uranium	ppb	30	0	4.4	4.4	Erosion of natural deposits

- 1) BPU tap water has had very low levels of copper and lead. For this reason, KDHE placed BPU on a reduced-monitoring frequency of once every three years. The data presented in the report are from the most recent testing done in accordance with the regulations.
- 2) Annual Average
- 3) Running Annual Average
- 4) EPA considers 50 pCi/L to be the level of concern for beta particles.
- 5) The monthly Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC rule removal requirements. The ratio shown is the average of the ratios for the 12 months of this reporting period.

Please Note: Because of sampling schedules, results may be older than 1 year

*Unregulated Contaminant Monitoring Rule				
Third Cycle (UCMR3) Sampling Period: January-December 2015				
Substance	Units	MCL	Average Detected	Range Detected
Chlorate	ppb		164	130-210
Chromium Total	ppb	100	0.25	0.20-0.30
Hexavalent Chromium (Dissolved)	ppb		0.14	0.11-0.18
Molybdenum	ppb		3.3	2.5 – 4.2
Strontium	ppb		548	500 – 610

*Unregulated contaminant monitoring helps EPA determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.

Monitored at the Treatment Plant		Monitored Jan. – Dec. 2018		
Secondary Drinking Water Contaminants				
Substance	Units	SMCL	Average Detected	Range Detected
Alkalinity as CaCO ₃	ppm	NA	209	180-270
Calcium	ppm	NA	79	66-94
Chloride	ppm	250	30	30
Specific Conductance	µmhos/cm	NA	821	710-930
Total Hardness as CaCO ₃	ppm	NA	320	320
Total Hardness as CaCO ₃	Grain/Gallon	NA	18.7	18.7
Magnesium	ppm	NA	27	23-30
Manganese	ppb	50	0.19	<2.0-2.3
Iron	ppm	0.3	<0.02	<0.02
pH	S.U.	6.5-8.5	7.5	7.2-7.6
O-Phosphate	ppm	NA	0.70	0.64-0.77
Potassium	ppm	NA	6.3	5.2-8.0
Silica	ppm	NA	15	13-16
Sodium	ppm	NA	57	50-62
Sulfate	ppm	250	190	190
Total Dissolved Solids	ppm	500	550	550
Metolachlor	ppb	NA	0.04	<0.05-0.11

Definitions:

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

Maximum Contaminant Level (MCL) - the highest level of a contaminant allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal (MCLG—see below) 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.

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Maximum Residual Disinfectant Level (MRDL) - the highest level of a disinfectant allowed in drinking water.

Maximum Residual Disinfectant Level Goal (MRDLG) – the level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

MFL – million fibers per liter.

Micromhos per Centimeter (µmhos/cm) – a measure of the ability of water to carry electric current.

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

Non-Detect (ND) - laboratory analysis indicates that the contaminant is not detected with present technology.

Not applicable (N/A) – the data does not apply for this contaminant and category.

Parts per Million (ppm) - one part per million corresponds to one minute in two years, or one grain of salt in six ounces of tomato juice. It is the same as milligrams per liter, mg/L.

Parts per Billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or one grain of salt in 55 gallons of tomato juice. It is the same as micrograms per liter, µg/L.

Picocuries per Liter (pCi/L) - a measure of the radioactivity in water.

Running Annual Average (RAA)- an average of sample results obtained over the most current 12 months and used to determine compliance with MCL's

SMCL – Secondary Maximum Contaminant level (or optimal range) set by KDHE.

Standard Units (S.U.) – a measuring unit for pH, based on hydrogen ion concentration.

Treatment Technique (TT) - a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Secondary contaminants are not regulated, but provide guidelines for producing good tasting and aesthetically pleasing water.

Additional Required Health Effects Language:

Total Organic Carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.

Useful phone numbers at BPU:

Water Processing Division..... (913) 573-9272

General BPU number, Monday – Friday (8 a.m. to 5 p.m.)...(913) 573-9000

Customer Service (to turn service on or off, or for billing questions by telephone)
Monday - Friday (7 a.m. to 6 p.m.) (913) 573-9190

Water Trouble.....(913) 573-9622

Electric Trouble.....(913) 573-9522

Environmental Protection Agency

Safe Drinking Water Hotline..... (800) 426-4791

Web site: www.epa.gov/safewater

Kansas Department of Health & Environment

Bureau of Water..... (785) 296-5500

Web site: www.kdheks.gov/water/

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien. Te Board of Public Utilities está de acuerdo con todas las regulaciones gubermentales para su agua.

Kansas City Board of Public Utilities
540 Minnesota Avenue
Kansas City, Kansas 66101
(913) 573-9000
www.bpu.com

What you should know about lead in drinking 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. The Kansas City Board of Public Utilities 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 EPA's Safe Drinking Water Hotline at (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

Some People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

The value of your tap water

Water is one of our most precious natural resources, and plays a critical role in our daily lives. There are a number of benefits to the safe reliable drinking water you enjoy, including:

Public Health – Safe water runs below our streets and to our homes, business, and workplaces 24 hours a day. BPU operates its own testing laboratory to monitor raw water quality as well as ensure water quality leaving the plant and in the distribution system, monitoring for contaminants and meeting the regulations for water safety and quality.

Fire Protection – In most communities, water flowing to fire hydrants is transported by the same system of mains, pumps, and storage tanks that deliver drinking water. One of the greatest values of BPU's water infrastructure is the fire protection it provides our community. BPU currently services and maintains 6,242 fire hydrants in our community.

Economic Support – It would be difficult, if not impossible, to grow a community or economy if safe water was not readily available. Current and future development depends on easy access to water, be it for residential use in homes, industrial uses in manufacturing facilities, or recreational uses like a large water park, a new resort casino, or a professional soccer stadium.

Quality of Life – Three percent of the tap water people use for drinking, with the other 97 percent used for other purposes including outdoor watering, bathroom uses, clothes washing, etc. Tap water is so much a part of our daily lives, most take it for granted. From making orange juice to washing fruit, from watering a garden to washing a car, within BPU's water service territory the water you need is always there when you need it – 24 hours a day, 7 days a week, 365 days a year.