



Versailles
Municipal
Utilities

2018 Water Quality Report

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Meetings: City Council Chambers on 1 st & 3 rd Tuesday of each month @ 5:30 PM		

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

Versailles Water Plant is a surface water treatment plant which obtains raw water from Pool 5 of the Kentucky River and is treated at our plant on US Hwy 62 West in Woodford County. When needed, we can also obtain additional treated water from Kentucky American Water Co. in Lexington, Kentucky. Versailles Water Treatment Plant is capable of treating 7,000 gallons of water per minute (10 million gallons of water per day). Based on a vulnerability assessment, our level of susceptibility was determined to be moderate. Potential sources of contamination in the source water area include agricultural runoff and two bridges that span the river, where accidents may occur. The complete source water assessment plan can be viewed at the Versailles Municipal Utilities Office at 196 S. Main St., Monday through Friday 8am - 4pm.

Drinking water, including bottled water, may reasonably be expected to contain at least small amount 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 may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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, radioactive material, and may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants** - such as viruses and bacteria. (sewage plants, septic systems, livestock operations, or wildlife)
- Inorganic contaminants** - such as salts and metals. (naturally occurring or from storm water runoff, wastewater discharges, oil and gas production, mining, or farming)
- Pesticides and herbicides** -storm water, agriculture, or residential runoff.
- Organic chemical contaminants**- including synthetic and volatile organic chemicals. (by-products of industrial processes and petroleum production or from gas stations, storm water runoff, or septic systems)
- Radioactive contaminants** - naturally occurring or from oil and gas production or mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.



Lead in the 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. Your local public water system is responsible for providing high quality drinking water, but cannot control the variety of materials used in 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>.

Internet Websites:

Several websites provide additional information that some of our customers have requested in years past. The Kentucky Division of Water, United States Environmental Protection Agency (U.S. EPA), and Centers for Disease Control and Prevention provide extensive amounts of information regarding public health, water conservation, and water sources. These websites are listed below:

Kentucky Division of Water (D.O.W.)

- <https://eec.ky.gov/Environmental-Protection/Water/Drinking/Pages/Drinking%20Water.aspx>

U.S. Environmental Protection Agency

- <https://www.epa.gov/ground-water-and-drinking-water>

Centers for Disease Control and Prevention

- <https://www.cdc.gov/>

Some or all of these definitions may be found in this report:

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) - 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.

Below Detection Levels (BDL)

- laboratory analysis indicates that the contaminant is not present.

Not Applicable (N/A) - does not apply.

Parts per million (ppm) - or milligrams per liter, (mg/l). One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - or micrograms per liter, ($\mu\text{g/L}$). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

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

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Variations & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

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

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

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these specific contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old.

	Allowable Levels		Highest Single Measurement	Lowest Monthly %			Violation	Likely Source of Turbidity	
Turbidity (NTU) TT *Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples		0.09	100			No	Soil runoff	
Regulated Contaminant Test Results									
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection			Date of Sample	Violation	Likely Source of Contamination
Radioactive Contaminants									
Combined radium (pCi/L)	5	0	1.3	1.3	to	1.3	Mar-16	No	Erosion of natural deposits
Inorganic Contaminants									
Barium[1010] (ppm)	2	2	0.02	0.02	to	0.02	Mar-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper[1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.05 (90th percentile)	0	to	0.06	Aug-17	No	Corrosion of household plumbing systems
Fluoride[1025] (ppm)	4	4	0.93	0.93	to	0.93	Mar-18	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	2 (90th percentile)	0	to	14	Aug-17	No	Corrosion of household plumbing systems
Nitrate[1040] (ppm)	10	10	0.4	0.4	to	0.4	Mar-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Synthetic Organic Contaminants including Pesticides and Herbicides									
Benzo(a)pyrene (PAH) [2306] (ppt)	200	0	BDL	BDL	to	47	Apr-17	No	Leaching from linings of water storage tanks and distribution lines
Disinfectants/Disinfection Byproducts and Precursors									
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.29 (lowest average)	1.00	to	2.47	2018	No	Naturally present in environment.
				(monthly ratios)					
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.									
Chloramines (ppm)	MRDL = 4	MRDLG = 4	1.50 (highest average)	0.57	to	2.62	2018	No	Water additive used to control microbes.
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.50 (highest average)	0.43	to	1.12	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) Haloacetic acids	60	N/A	39 (high site average)	10	to	57	2018	No	By-product of drinking water disinfection
				(range of individual sites)					
TTHM (ppb) (Stage 2) Total Trihalomethanes	80	N/A	44 (high site average)	16.6	to	64.4	2018	No	By-product of drinking water disinfection.
				(range of individual sites)					
Other Contaminants									
Cryptosporidium [oocysts/L]	0	TT (99% removal)	2 (positive samples)	3 (number of samples)			2018	No (See note below)	Human and animal fecal waste

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Cryptosporidium. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plant is sufficient to adequately remove Cryptosporidium from your drinking water.

Cryptosporidium is a microbial pathogen found in surface water. Crypto was detected in 2 of the 3 samples collected from the raw water source for our water system. It was not detected in the finished water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

Sodium (EPA guidance level = 20 mg/L)	Average		Range of Detection	
		13.0	13	to

Unregulated Contaminants UCMR4

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those for which EPA has not established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our office during normal business hours.

Unregulated Contaminants (UCMR 4)	Average	Range (ppb)			Date
HAA5	46.500	23	to	80	Dec-18
HAA6Br	9.033	4.4	to	13	Dec-18
HAA9	55.167	28	to	92	Dec-18

Level 2 Assessment: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct an assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year (2018), one (1) Level 2 Assessment was required to be completed for our water system. VMU completed the (1) Level 2 Assessment. In addition, we were required to take three (3) corrective actions and all have been completed. Our assessment found that there was an error in collecting our monthly Bacteriological samples; the samples were taken on an outside water spigot, which was the problem. Sampling now consists of taking no sample on an outside water spigot, along with properly cleansing the indoor faucet prior to collection. VMU has also installed dedicated sampling stations to eliminate faulty site locations for sampling. **Upon the resampling**, all samples were absent of Total Coliform.

Frequently Asked Questions:

Is there fluoride in my water?

- Yes. Versailles Water Treatment Plant is required by law to add fluoride to “finished” water. New Regulations, as of November 1st, 2015, lower the average from 0.60 – 1.20 ppm. Versailles currently averages 0.76 ppm annually.

What is pH of my water?

- pH levels vary in readings throughout our system, annually we average 8.02. 7.0 is neutral.

Is there lead in my water?

- On page one by the water faucet is a detailed explanation. Versailles historically has sampled low in both Lead and Copper; we are required to pull samples every 3 years. Sampling was conducted in 2017. Versailles has stayed in compliance with all required fields of testing.

Why do I have milky looking water?

- From time to time, your water can look milky or cloudy. This is a result of tiny air bubbles suspended in your water. Versailles Water has DO (dissolved oxygen) in it all the time, however, most of the time these tiny bubbles are not visible. Colder months allow for air bubbles to stay trapped as the water molecules become tighter in their formations hence trapping the air. If water has a cloudy or milky appearance simply pour a glass of water and observe. The air bubbles should rise and eventually clear up. If for some reason it does not clear from the bottom up please contact Versailles Water Plant at (859) 873-5740.

Why do I have yellow or brown water?

- The plumbing inside your house may be the problem. If discolored water appears for only a few minutes in your hot water then the water heater more than likely is the problem. Simply flushing your water heater may clear up your problem. Refer to your owner’s manual on your water heater or consult with a licensed plumber to fulfill that task. Sediments in our water mains sometimes get stirred up when fire hydrants are used or when the flow of the water inside the main has changed (water line/ main break). If cold water is discolored, wait 30 minutes after you notice the discolored water, turn the cold water on in your bathtub for several minutes to see if water clears up. If water doesn’t clear up within 10 minutes please contact Versailles Water Plant at (859) 873-5740.

Copies of the 2018 Water Quality Report will not be mailed to our customers, but will be available in our Water Office. If you would like a copy by mail, please contact our office.