2020 Water Quality Report ***Sacramento Waterworks*** **KY0750907**

Manager: James R Sallee Contact: James R Sallee Phone: 270-736-5274

Address: P.O. Box 245 Sacramento, KY 42372

Meetings: City Hall, 210 W 3rd St., Sacramento, KY 42372 3rd Monday of each month @ 4:30 PM

Sacramento Waterworks purchases water from two sources. Mc Lean County Regional Water Comission (MCRWC) is our primary source. MCRWC utilizes water from the Green River, which is classified as surface water. Muhlenberg Co Water District #3, is our second source, who in turn buys from Central City Water & Sewer (CCWS). CCWS treats surface water from the Green River. CCWS & MCRWC have completed Source Water Assessment Plans to identiffy potential sources of contamination. For the most part the susceptibility to contamination is gernerally moderate but there are some activities that are rated high. Roads, railroads, & culverts near the intakes pose a higher risk due to the potential for accidental spills. Mining and oil and gas wells also pose a threat. Agriculture and urban runoff may cause sediment, oil and grease, road salt, fertilizers, pesticides, nutrients, toxics, and other contaminants to enter the water source. The complete Source Water Assessment Plans are available for review. MCRWC's source water assessment is available at the Green River Area Development District., (270) 926-4433. CCWS's source water assessment is available at the Pennyrile Area Development District, (270) 886-9484

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 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 stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater 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.

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).

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 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

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, (µg/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.

Variances & 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.

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

To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 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. **Copies of this report are available upon request by contacting our office during business hours. A=Sacramento Waterworks, B=McLean County Regional Water Commission, C=Muhlenberg Co. Water District #3(Central City WTP)**

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Radioactive Contaminants								
Alpha emitters [4000] (pCi/L)	15	0	C=	1.48	1.48 to 1.48	Mar-20	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	C=	0.66	0.66 to 0.66	Mar-20	No	Erosion of natural deposits
Inorganic Contaminants								
Barium			B=	0.021	0.021 to 0.021	May-20	No	Drilling wastes; metal refineries; erosion of natural deposits
[1010] (ppm)	2	2	C=	0.022	0.022 to 0.022	Oct-20	No	
Fluoride [1025] (ppm)	4	4	B=	0.75	0.75 to 0.75	May-20	No	Water additive which promotes strong teeth
			C=	0.78	0.78 to 0.78	Oct-20	No	
Nitrate [1040] (ppm)	10	10	B=	1.25	0.65 to 1.25	Feb-20	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
			C=	1.16	1.16 to 1.16	Jan-20	No	
Synthetic Organic Contaminants including Pesticides and Herbicides								
Atrazine [2050] (ppb)	3	3	C=	0.58	BDL to 0.58	2020	No	Runoff from herbicide used on row crops
Simazine [2037] (ppb)	4	4	C=	1.16	BDL to 1.16	2020	No	Herbicide runoff
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	B=	1.78	1.33 to 2.3	2020	No	Naturally present in environment.
			C=	1.59	1.14 to 2.31	2020	No	
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.								
Chlorine (ppm)	MRDL = 4	MRDLG = 4	A=	1.07 (highest average)	0.36 to 1.59	2020	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	A=	47 (average)	22 to 53 (range of individual sites)	2020	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	A=	64 (average)	2.6 to 79 (range of individual sites)	2020	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants								
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	A=	0.0501 (90^{th} percentile)	0.0029 to 0.124	Jul-20	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0		0 (90^{th} percentile)	0 to 2	Jul-20	No	Corrosion of household plumbing systems
Source Water Contaninants (untreated water)								
Cryptosporidium [oocysts/L]	0	TT (99% removal)	B=	3 (positive samples)	8 (no. of samples)	2020	See note	Human and animal fecal waste
Other Constituents								
Turbidity (NTU) TT * Representative samples	Allowable Levels		Source	Highest Single Measurement	Lowest Monthly %	Violation		Likely Source of Turbidity
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples		B=	0.29	100	No		Soil runoff
			C=	0.083	100	No		

		Average	Range of Detection
Fluoride (added for dental health)	B=	0.7	0.63 to 0.85
Sodium (EPA guidance level = 20 mg/L)	B=	9.7	9.66 to 9.66

Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 3 samples of 8 collected from the raw water source for McLean County Regional Water Commission. 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 diseasae. Symptoms of infection include nausea, diarrhea, abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means of drinking water.

Cryptosporidium. We constantly monitor the water supply for various contaminants. We have detected cryptosporidium in some of the samples tested. We believe it is important for you to know that cryptosporidium may cause serious illness in 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. These people should seek advice from their health care providers.

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.

This report will not be sent out to individual customers. It will be available at City Hall.