2018 ***Water Quality Report*** ***Knott County Water and Sewer District*** **KY0600062**

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Meetings: 3rd Tuesday of each month 5:00 PM at the address above.

Knott County Water & Sewer District (KWSD) treats surface water from Carr Fork Lake and purchases water from Southern Water & Sewer District (SWSD) for our customers in the Salt Lick area. SWSD treats surface water from the Levisa Fork of the Big Sandy River. A source water assessment has been completed for the water supplies, including a rating of susceptibility to contamination. This susceptibility rating is based on several factors such as intake location, the proximity of the contaminant source, and the nature of the contaminant. The susceptibility to contamination for Knott County is rated moderate, whereas the rating for Southern is high. Activities that pose a threat to water quality include; roads and bridges; railroad; mining activities, oil and gas wells, untreated sewage; and hazardous waste sites. Under certain circumstances contaminants could be released that would pose challenges to water treatment, or even get into your drinking water. These activities, and how they are conducted, are of interest to the entire community because they potentially affect your health and the cost of treating your water. The complete Source Water Protection Plan is available for review at the Kentucky River Area Development District office in Hazard, KY, (606-436-3158).

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 http://www.epa.gov/safewater/lead.

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.

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=Knott County Water & Sewer Dist. B=Southern Water & Sewer Dist.

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.

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU	A=	0.09	100	No	Soil runoff
* Representative samples	Less than 0.3 NTU in	B=	0.29	100	No	
of filtered water	95% monthly samples					

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Alpha emitters [4000] (pCi/L)	15	0	A=	6.3	6.3 to 6.3	16-May	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	A=	0.729	0.729 to 0.729	16-Dec	No	Erosion of natural deposits
Inorganic Contaminants								
Arsenic [1005] (ppb)	10	N/A	B=	0.5	0.5 to 0.5	18-Aug	No	Natural erosion; runoff from orchards or glass and electronics production wastes
Barium [1010] (ppm)	2	2	A= B=	0.024 0.07	0.024 to 0.024 0.07 to 0.07	18-Apr 18-Aug	No No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	A=	0.018 (90^{th} percentile)	0 to 0.027	18-Sep	No	Corrosion of household plumbing systems
Cyanide [1024] (ppb)	200	200	B=	30	30 to 30	18-Aug	No	Discharge from steel/metal factories; plastic and fertilizer factories
Fluoride [1025] (ppm)	4	4	A= B=	0.83 0.9	0.83 to 0.83 0.9 to 0.9	18-Apr 18-Aug	No No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	A=	0 (90^{th} percentile)	0 to 3	18-Sep	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	A= B=	0.26 0.36	0.26 to 0.26 0.36 to 0.36	18-Apr 18-Feb	No No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite [1041] (ppm)	1	1	A=	0.01	0.01 to 0.01	14-Apr	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A= B=	1.67 1.18	1 to 3.55 1 to 2.03	2018 2018	No No	Naturally present in environment.
*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=	1.19 (highest average)	0.50 to 1.80	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	A=	67 (high site average)	32 to 72.6 (range of individual sites)	2018	Yes	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	A=	64 (high site average)	40 to 63 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

Unregulated Contaminant Monitoring

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.

Southern Water and Sewer District tested for the unregulated contaminates, but none were found at detectable levels in your water.

Violation # 2019-9580819

We inadvertently left a letter out of the URL for the 2017 CCR. The 2017 CCR is located at www.krwa.org/2017ccr/kcwsd.pdf. The correct address will also be reprinted on the customer bills. We have begun double checking that the links are typed correctly before being distributed to the public.

Violation # 2018-9580816 and 2018-9580817

Testing results showed that our system exceeded the standard, or maximum contaminant level (MCL), for haloacetic acids (HAA). The standard for haloacetic acids is 0.060 mg/L. It is determined by averaging all samples at each sampling location for the last 12 months. Haloacetic acids averaged at one of our system's locations for: (2018-9580816) HAA 1/1/2018 through 3/31/2018 was 0.062 mg/L and (2018-9580817) HAA 4/1/2018 through 6/30/2018 was .067 mg/l.

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

We increased our flushing of water lines, made changes to the treatment process at the plant, improved tank mixing and decreased water age.

Violation # 2019-9580818

Our water system Knott County Water and Sewer District recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During August 2018, we did not complete all monitoring or testing for Total Organic Carbon and therefore cannot be sure of the quality of your drinking water during that time.

Any sample we collect must be sent to and analyzed by a certified laboratory within a specified amount of time. We collected the sample on August 7, 2018, due to incorrect location codes an error was made for reporting of total organic carbon. We have since spoken with our lab to ensure the samples are coded correctly.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

On November 27, 2018 the lab contacted the Division of Water to correct the sample code locations. The sample was analyzed and the total organic carbon was acceptable.

For more information, please contact Jerry Hall at 606-642-3582 or 7777 Big Branch Road, Vicco, KY 41773

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.