Knott County Water and Sewer District
2022 Water Quality Report

Manager:	Jared Salmons	CCR Contact: Jerry B. Hall		PWSID:	KY0600062
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Meetings:	Water treatment plant main office / 3rd Thursday of each month at 5:30 PM				

Knott County Water & Sewer District (KCWSD) 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.

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.

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.**

K = KNOTT COUNTY WATER & SEWER DISTRICT S = SOUTHERN WATER DISTRICT

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants								
Barium [1010] (ppm)	2	2	S=	0.064	0.064 to 0.064	2022	No	Drilling wastes; metal refineries; erosion of natural deposits
Chromium [1020] (ppb)	100	100	S=	0.6	0.6 to 0.6	2022	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	S=	0.41	0.41 to 0.41	2022	No	Water additive which promotes strong teeth
			K=	0.42	0.42 to 0.42	May-22	No	
Nitrate [1040] (ppm)	10	10	S=	0.38	0.38 to 0.38	2022	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Selenium [1045] (ppb)	50	50	S=	0.7	0.7 to 0.7	2022	No	Discharge from petroleum and metal refineries or mines; erosion of natural deposits
Disinfection Byproducts Precursor								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	S=	1.32	1 to 2.14	2022	No	Naturally present in environment.
			K=	1.14	0.99 to 1.74	2022	No	

*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

Other Constituents

Turbidity (NTU) TT *Repersentative 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*	S=	0.29	100	No	Soil runoff
	Less than 0.3 NTU in 95% monthly samples	K=	0.084	100	No	

KNOTT COUNTY WATER AND SEWER DISTRICT (KY0600062)

Regulated Contaminant Test Results

Disinfectants/Disinfection Byproducts

Chlorine (ppm)	MRDL = 4	MRDLG = 4	K=	1.47 (highest average)	0.62 to 2.02	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	K=	51 (average)	31 to 73 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	K=	46 (average)	23.3 to 71.8 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.

Household Plumbing Contaminants

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	K=	0.076 (90^{th} percentile)	0 to 0.143	Aug-21	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	K=	0 (90^{th} percentile)	0 to 2	Aug-21	No	Corrosion of household plumbing systems

		Average	Range of Detection
Sodium (EPA guidance level = 20 mg/L)	K=	14.79	14.79 to 14.79

Secondary contaminants do not have a direct impact on the health of consumers. They are being included to provide additional information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level		Report Level	Range of Detection			Date of Sample
Chloride	250 mg/l	K=	13.4	13.4	to	13.4	Mar-22
Corrosivity	Noncorrosive	K=	-1.62	-1.62	to	-1.62	Mar-22
Fluoride	2.0 mg/l	K=	0.91	0.91	to	0.91	Mar-22
pH	6.5 to 8.5	K=	7.04	7.04	to	7.04	Mar-22
Sulfate	250 mg/l	K=	121.6	121.6	to	121.6	Mar-22
Total Dissolved Solids	500 mg/l	K=	222	222	to	222	Mar-22

If you have any questions regarding this report or would like to request a copy, please contact the Mr. Jerry B. Hall at (606) 642-3582 .

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.