Southern Water and Sewer District
Water Quality Report 2023

Water System ID: KY0360026 Manager: Randy Conley	CCR Contact: Chris Francis 606-874-2007	Mailing Address: 245 KY RT 680 McDowell, KY 41647	Meeting location and time: Water District Office 4th Monday, monthly at 5:30PM

The source of water for Southern Water and Sewer District, the City of Pikeville and Prestonsburg City Utilities is surface water withdrawn from Levisa Fork of the Big Sandy River. The source of water for Knott County Water and Sewer is surface water from Carr Fork Lake. We purchase a portion of our water from Pikeville, Prestonsburg and Knott County in addition to the water processed at our Water Treatment Plant in Allen. An analysis of the susceptibility of the raw water sources to contamination has been completed. The overall susceptibility is rated high for the sources of Southern, Pikeville and Prestonsburg due to many of the potential contaminant sources such as: mining, construction, roads/rail, sewage treatment plants, landfill and an active superfund site. Susceptibility to contamination of the source water for Knott County is considered moderate due to roads and bridges, mining activity, oil and gas wells, untreated sewage and hazardous waste sites. Activities and land uses within the watershed can pose potential risks to your drinking water. 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 our customers because they potentially affect your health and the cost of your drinking water. The complete source water assessment for Southern, Pikeville and Prestonsburg water utilities can be reviewed at the Big Sandy Area Development District office located in Prestonsburg, Kentucky. The complete source water assessment for Knott County can be viewed at the Kentucky River Area Development District office in Hazard, Kentucky.

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).

Information About Lead:

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 water system is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available 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.

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.

Regulated Contaminant Test Results			**P=Pikeville S=Southern K=Knott County PR=Prestonsburg**							
Contaminant [code] (units)	**MCL**	**MCLG**	**Source**	**Report Level**	**Range of Detection**			**Date of Sample**	**Violation**	**Likely Source of Contamination**
Inorganic Contaminants										
Barium			S=	0.05	0.05	to	0.05	23-May	No	Drilling wastes; metal refineries; erosion of natural deposits
[1010] (ppm)	2	2	PR=	0.086	0.086	to	0.086	23-Oct	No	
			P=	0.088	0.088	to	0.088	2023	No	
Fluoride			S=	1.08	1.08	to	1.08	23-May	No	Water additive which promotes strong teeth
[1025] (ppm)	4	4	PR=	0.86	0.86	to	0.86	23-Oct	No	
			P=	0.61	0.61	to	0.61	15-Jul	No	
			K=	0.41	0.41	to	0.41	23-May	No	
Nitrate			S=	0.44	0.44	to	0.44	23-Sep	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
[1040] (ppm)	10	10	PR=	0.351	0.351	to	0.351	23-Sep	No	
Selenium [1045] (ppb)	50	50	K=	0.5	0.5	to	0.5	23-May	No	Discharge from petroleum and metal refineries or mines; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors										
Total Organic Carbon (ppm)			S=	1.50	1	to	2.52	2023	No	Naturally present in environment.
(report level=lowest avg.	TT*	N/A	PR=	1.35	1	to	1.94	2023	No	
range of monthly ratios)			P=	0.96	0.61	to	1	2023	No**	
			K=	1.29	1	to	2.37	2023	No	
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.										
** Pikeville uses an approved alternative compliance method and is in compliance, despite the average being below 1.00										
Chlorine (ppm)	MRDL = 4	MRDLG = 4	S=	1.23 (highest average)	0.02	to	2.10	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	S=	22 (average)	3 (range of individual sites)	to	15	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	S=	85 (average)	30 (range of individual sites)	to	127	2023	**YES**	Byproduct of drinking water disinfection.
Household Plumbing Contaminants										
Copper [1022] (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	S=	0.009 (90th percentile)	0	to	0.028	21-Aug	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 0	AL = 15	0	S=	0 (90th percentile)	0	to	2	21-Aug	No	Corrosion of household plumbing systems
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		S=	0.29			100	No	Soil runoff	
			PR=	0.263			100	No		
			P=	0.27			100	No		
			K=	0.083			100	No		

Unregulated Contaminants (UCMR 5)		average	range (ppb)			date
Lithium	PR=	19.025	12.5	to	33.6	23-Oct

Your drinking water from Prestonsburg City Utilities 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. Thirty contaminants were tested for and one was detected (see table above).

Violation 2023-9951041
Southern Water and Sewer District received a violation for failure to distribute the 2022 Consumer Confidence Report to our customers before July 1, 2023. The website we distributed had a typo. Once we learned of the error, we re-distributed the corrected website address to our customers, but it was after the deadline of July 1, 2023.

Violation 2024-9951042
Testing results showed that our system exceeded the standard, or maximum contaminant level (MCL), for trihalomethanes. The standard for trihalomethanes is 0.080 mg/L. It is determined by averaging all samples at each sampling location for the last 12 months.

Trihalomethanes averaged at one of our system's locations for:
10/1/2023 through 12/31/2023 was 0.085 mg/L

A Public Notification describing the violation was distributed to our customers at that time. We have since had major filter rehabilitation in our water treatment plant and hope to return to compliance within the year.

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.

This report will not be mailed. Copies are available in our office. If you would like a copy mailed to you, please contact our office.