



Perry County Water & Sewer Water Quality Report for year 2015

KY0970484

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Meeting Dates and Time: 3rd Tuesday each month 10:00 AM

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Water - Essential for Life

This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product. Water is the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and the water system.

We purchase surface water treated by Knott County Water and Sewer District. The raw water source for the District is Carr Fork Lake. A source water assessment of the lake and watershed has been performed which includes a susceptibility analysis. Carr Fork's susceptibility to contamination is rated as moderate. However, there are a few areas of concern such as roads & bridges, logging and underground storage tanks and other activities that have the potential for the release of hazardous chemicals. Although mining is limited near the intake there are a substantial number of oil and gas wells in the protection area. 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 assessment 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).

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

Information About Lead:

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.

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.

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>.

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Kentucky Rural Water Association

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.

Knott County Water & Sewer District

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.121	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
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Radioactive Contaminants

Alpha emitters [4000] (pCi/L)	15	0	0.37	0 to 0.8	2010	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	0.33	0 to 0.6	2010	No	Erosion of natural deposits

Inorganic Contaminants

Barium [1010] (ppm)	2	2	0.03	0.03 to 0.03	2015	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.8	0.8 to 0.8	2015	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.11	0.11 to 0.11	2015	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Selenium [1045] (ppb)	50	50	1	1 to 1	2015	No	Discharge from petroleum and metal refineries or mines; erosion of natural deposits
Thallium [1085] (ppb)	2	0.5	0.1	0.1 to 0.1	2015	No	Leaching from ore-processing sites; discharge from glass, electronics, and drug factories

Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.15 (lowest average)	1.00 to 1.68 (monthly ratios)	2015	No	Naturally present in environment.
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*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

Perry County Water & Sewer

Inorganic Contaminants

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.020 (90 th percentile)	0 to 0.06	2014	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	1 (90 th percentile)	0 to 1	2014	No	Corrosion of household plumbing systems

Disinfectants/Disinfection Byproducts and Precursors

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.54 (highest average)	1.00 to 1.80	2015	No	Water additive used to control microbes.
HAA (ppb) (Stage 1) [Haloacetic acids]	60	N/A	58 (high site average)	26.4 to 70.9 (range of individual sites)	2015	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 1) [total trihalomethanes]	80	N/A	63 (high site average)	21 to 95 (range of system sites)	2015	No	Byproduct of drinking water disinfection

Maximum Contaminant Levels (MCL's) are set at very stringent levels. 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.

UCMR-3 Public Notification
Knott County Water & Sewer District

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants 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 3)		average	range (ppb)		date	EPA has not established drinking water standards for unregulated contaminants. There are no MCL's and therefore no violations if found.
vanadium		0.153	0	to 0.48	Oct-15	
strontium		710.912	350	to 980	Oct-15	
chromium-6		0.051	0	0.1 0.1	Oct-15	
total chromium		0.091	0	to 0.51	Oct-15	

Violation: Public Notification Rule

During 2015 we revived three violations for failing to perform public notification in accordance with 401 KAR 8:070. Specifically, failure to perform public notice within 1 year of receiving the original NOV for the following violations; 2013-9613610 Chlorine JUL 2013; 2014-9613614 Chlorine OCT 2013; and 2014-9613615 Chlorine DEC 2013. A public notice should have been performed and a copy submitted to Division of Water along with certification for these violations. The public notification was performed online as part of the 2013 Consumer Confidence Report (CCR) and certified. The problem occurred with the link to the online CCR that prevented it from being viewed. The link has been repaired and the original PN can be viewed at www.krwa.org/2013CCR/vicco.pdf. We have re-issued the public notice below. There are no health effects associated with these violations.

PUBLIC NOTIFICATION

Our water system violated one or more drinking water standards over past years. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

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 7/1/13-7/31/13, 10/1/14-10/31/14 & 12/1/13-12/31/13 we did not complete all monitoring or testing for Chlorine and therefore cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. You do not need to use an alternative (e.g., bottled) water supply.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for this contaminant and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

contaminant	required sampling frequency	number of samples taken	when samples should have been taken	when samples were or will be taken
Chlorine (Jul-13)	Daily	30	31	N/A
Chlorine (Oct-13)		31	31	
Chlorine (Dec-13)		30	31	

What happened? Who is at risk? What is being done?

The July & December 2013 violation occurred because we failed to collect the daily chlorine residual on the 31st. The October Chlorine residual violation occurred because the MOR was not received by the DOW. After receiving the violation in December we have since submitted the reports. We are being more cautious when collecting and recording samples; in addition we are sending our reports by certified mail.

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.

PUBLIC NOTIFICATION

Our water system violated one or more drinking water standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

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 2/1/15-2/28/15 we did not complete all monitoring or testing for Monthly Operating Report (MOR) parameters and therefore cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. You do not need to use an alternative (e.g., bottled) water supply.

The table below lists report(s) we did not properly complete or submit during the last year, how often we are supposed to report, when the report was due, when report should have been submitted, and the date on which the report was (or will be) submitted.

Report	Report frequency	Report Due	When report should have been submitted	When report was submitted
MOR	Monthly	10th day of the month	3/10/2016	3/30/2016

What happened? Who is at risk? What is being done?

The MOR was postmarked on 3/10/16; however upon reviewing the regulations it should be received by the Division of Water no later than the 10th. We have begun sending the MOR's earlier in the month. There are no health effects associated with this violation.

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.