(Christian County Water District) Water Quality Report (2017)

Water System ID: KY0240521 Manager: James Owen CCR Contact: James Owen Phone: 270-886-3696
Mailing Address: P.0 Box 7 Hopkinsville KY,42241
Meeting Location and Time: 1940 Dawson RD. Hopkinsville KY, 42240 1st Thursday Each Month

Source Information:

This report is to inform the public about the quality of water and service provided on a daily basis. During 2017 the Christian County Water District purchased water from three sources. Customers who live in the Gracey area,Hwyl 17,Hwy272,Hwyl64, and all side roads in these areas were supplied with water purchased from Barkley Lake Water District which is treated surface water drawn from Barkley Lake. Customer who live on the Todd County side of west fork red river on Barkers Mill and Chapel Hill were supplied with surface water purchased from Todd County Water District all other customer in Christian County were supplied with water purchased from Hopkinsville Water Environment Authority (HWEA) has treated surface water which is drawn from Barkley Lake, the North Quarry and the South Quarry.

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:

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/1). 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, (pg/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.

Christian County Water District
Water Quality Report (2017)

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.

Lead and Copper [code] (units)	Action Level (AL)	MCLG	90th Percentile	Sites Exceeding Action Level	Date of Sample	Violation	Likely Source of Contamination
Copper [1022] (ppm)	1.3	1.3	0.436	-0-	July 2015	NO	Corrosion of household plumbing systems
Lead [1030] (ppb)	15	0	4	-0-	July 2015	NO	Corrosion of household plumbing systems

Regulated Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Total Coliform Bacteria # or % positive samples	TT	0	0	N/A		NO	Naturally present in the 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	1.71 highest average)	0.30 to 3.95		NO	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	51 high site (average	35 to 85 range of individual sites)		NO	Byproduct of drinking water disinfection
HAA (ppb) (Stage 2) [Haloacetic acids] (Annual Sample)	60	N/A	85 (highsite)	35 to 85 (range of individual sites)	1QTR	NO	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	56 high (site average)	42 to 74 (range of individual sites)		NO	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	74 high site)	42 to 74 (range of individual sites)	3QTR	NO	Byproduct of drinking water disinfection

Christian County Water District received a Violation from Kentucky Division Of Water . Violation No: 2018-9579312 for 72 CCR Adequacy/Availability/Content.Although these incident were not an emergence's,as our customer you have a right to know what happened and what we did to correct these situation.

We had numerous no-detects in multiple date tables in in our 2016 CCR, we delete the data tables in our 2017 CCR to make it easy to understand. We also had the Copper and Lead were in the column for sites exceeding the action level and the action level date was not in the table. We corrected these in the 2017 CCR. The low end HAA was 32 in the 2016 CCR was incorrect it should have been 28. We corrected it in the 2017 CCR

Logan/Todd Regional Water Commission 2017 Water Quality Data
KY1101005

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.

	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	0.059	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
Microbiological Contaminants							
Total Coliform Bacteria # or % positive samples	1	0		N/A			Naturally present in the environment
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.0202	0.0202 to 0.0202	Jun-17	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	(90^{th} percentile)	0 to 0			Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.685	0.685 to 0.685	Jun-17	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	(90^{th} percentile)	0 to 0			Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.177	0.177 to 0.177	Mar-17	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.4 (lowest average)	1.37 to 2.25 (monthly ratios)	2017	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.

HWEA

2017 Water Quality Data

The data presented in this report is from the most recent testing done in accordance with administrative reflations in 401 KAR Chapter 8. As authorized and approved by the EPA, the State has reduced monitoring requirernents 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.

	Allowable Levels	Highest Single Level	Lowest •onvtiyx	Violation	Likely Source
1. Turbidity (WTU) TT	Never more than 1 NTU Less til an 0.3 NTU 95% of samples each month. (Population >10,000)	0.10	10 0% I	No	Soil runoff
		TU rbidrty is a me EG Lire of the D•ud in ess of t he wate r. Y^e man it•r rt be-cause rt is a good indicator of the effectiveness of our filtration.			

Regu la ted Conta m i ria nt Test Resu lts

Contaminart [code] (units)	MCL	MCLG	Highest Level	Range	Date of Sample	Violation Yes/No	Likely Source of Contamination
Microbial Contaminants							
2. Total Coliform Bacteria 8 positive samples	TT	N/A	4.9%	N/A	2017	No	Human and animal fecal waste

Revised Total Coliform Rule Definitions:

Level I Assessment: A Level I Assessment is a stu dy of the wate r system to identify potenti al pro blems and determine (if possible) why total coliform bacteria have been found in our water system.

Level II Assessment: A Level II Assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system on multiple occasions.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in the water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one (1) Level I Assessments. One (1) Level I Assessment was completed. In addition, we were required to take two (2) corrective actions and two (2) corrective actions were taken.

During the past year one (1) Level II Assessment was required to be completed for our water system. One (1) Level II Assessment was completed. In addition, we were required to take four (4) corrective actions, and we completed three (3) of these. The fourth corrective action will be completed by June 2018.

During both the Level I and Level II Assessments, HWEA was in full compliance with all State and Federal drinking water regulations.

	Average	Range of Detection
Fluoride (added for dental health)	0.7	0.62-0.87
Sodium (EPA guidance level = 20 rng/l	6.2	5.94-6.4

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Highest Level Found	Range	Date of Sample	Violation Yes/No	Likely Source of Contamination
Radioactive Contaminants							
3. Combined Radium (pCi/L)	5	0	1.5	1.5-1.5	Feb 2017	No	Erosion of natural deposits
4. Uranium (ug/l)	30	0	2.2	2.2-2.2	Feb 2017	No	Erosion of natural deposits
Inorganic Contaminants							
5. Copper [1022] (ppm) (0 sites exceeded theAL)	AL= 1.3	1.3	0.452 (90th percentile)	0.0073 - 0.548	July - Sept 2015	No	Corrosions of household plumbing systems
6. Lead [1030] (ppb) (0 sites exceeded the AL)	AL= 15	0	2.0 (90th percentile)	ND-14	July - Sept 2015	No	Corrosion of household plumbing systems systems
Lead and Copper monitoring is done together during the months of July, August and September.							
7. Arsenic [1005] (ppb)	**10**	N/A	0.3	0.3-0.3	Jan 2017	No	Natural erosion; runoff from orchards or glass and electronics production wastes.
8. Barium {1010} (ppm)	2.0	2.0	0.042	0.042 - 0.042	Jan 2017	No	Drilling wastes; metal refineries; erosion of natural deposits
9. Fluoride {1025} (ppm)	4.0	4.0	0.4	0.4-0.4	Jan 2017	No	Water additive which promotes strong teeth
10. Nitrate [1040] (ppm)	**10**	**10**	2.3	0.6-2.3	Jan 2017	No	Fertilizer runoff; leaching from septic tanks; sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
11. Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT	N/A	1.29 (lowest average)	0.58-2.15 (monthly ratios*)	2017	No	Naturally present in environment.

*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Lowest annual average of the monthly ratios must be 1.00 or greater to meet the treatment technique.

12. Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.36 (highest average)	0.2-2.59	2017	No	Water additive used to control microbes
13. Haloacetic acids or HAA (ppb) (Stage 2) Individual Sites	60	N/A	57 (annual average)	25 - 68	2017	No	By-product of drinking water disinfection
14. Total Trihalomethanes or TTHM (ppb) (Stage 2) Individual Sites	**80**	N/A	64 (annual average)	35-91	2017	No	By-product of drinking water disinfection

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

Regulated Contaminant Test Results Contaminant [code] (milts)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria # or % positive samples	TT	N/A	1	N/A	2017	No	Naturally present in the environment
Radioactive Contaminants							
Alpha emitters [4000] (pCi/L)	15	0	4.7	4.7 to 4.7	July-14	No	Erosion of natural deposits
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.023	0.023 to 0.023	Aug-17	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.450 (90^{th} percentile)	0.0148 to 0.76	Aug-17	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.9	0.9 to 0.9	Aug-17	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	3 (90 * percentile)	2 to 9	Aug-17	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.6	0.1 to 0.6	Feb-17	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.37 (lowest average)	1.00 to 1.94 (monthly ratios)	2017	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	1.19 (highest average)	0.50 to 2.00	2017	No	Water additive used to control microbis.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	41 (high site average)	21 to 54 (range of individual sites)	2017	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	56 (high site average)	22 to 67 (range of individual sites)	2017	No	Byproduct of drinking water disinfection.

This report will not be sent to individual customers. It will be available at 1420 Canton Rd, Cadiz, KY upon request.

Maximum Contaminant Level (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.

Notice by Barkley Lake Water District - PWSID: KY1110019 Violation 2018-3951113

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.

Barkley Lake Water District

We are required to monitor your drinking water for specific contaminants on a regular basis. Resutts of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 12/01/2017-12/31/2017 we did not complete aS monitoring or testing for 0999 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.

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

We received a Notice of Violation (NOV) from our primacy agency, Kentucky Division of Water (DOW). We failed to report our minimum daily chlorine residual samples, throughout the distribution system (Monthly Operational Report/MOR pg.7). This was for the December 2017 monitoring period. Remedial measures included submitting page 7 of the MOR to the DOW within 30 days. Performing public notification, required certification and detailing this NOV in the Consumer Confidence Report were also corrective actions.

Please share this information with aH the otherpeople who drink this water; especiaBy those who may not have received this notice (Mrectfy (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.