



Nicholasville Water Department

Water Quality Report for January 1-December 31, 2019

517 N. Main Street
Nicholasville, KY 40356

KY0570315

Manager: **Scott House**

Phone: **859-885-6974**

Meetings: City Hall

CCR Contact: **Scott House**

Water - Essential for Life

Meeting Dates and Time: Every Other Monday 5:00 PM

Phone: **859-885-6974**

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. **This report will not be mailed, but is available upon request by calling 859-885-6974.**

We are pleased to present this Annual Water Quality Report. The main source of water for Nicholasville customers is surface water from the Kentucky River (Pool #8). This report is designed to inform the public about the quality of the 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. The following is a summary of the systems susceptibility to contamination, which is part of the complete Source Water Assessment Plan (SWAP), and is available for inspection at the Water Treatment Plant. An analysis of the susceptibility of the Nicholasville Utilities water supply to contamination indicates that the susceptibility is generally low, however non-point source pollution, or "people pollution", can impact source water quality. With each rainfall, herbicides, pesticides, fertilizers, animal wastes, and household chemicals are washed from impermeable surfaces and into storm drains, ditches, sinkholes, or streams that flow into the Kentucky River. Please report any activity that might jeopardize the source water supply.

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.

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.

Level 1 Assessment - A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment - A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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

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. Unless otherwise noted, the report level is the highest level detected.

	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	0.12	100	No	Soil runoff

Microbiological Contaminants

Contaminant [code] (units)	MCL	MCLG	Report Level	Date of Sample	Major Sources of Drinking Water	Health Effects Language
Total Coliform Bacteria # or % positive samples	TT	N/A	5%	Jun-19	Naturally present in the environment.	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.

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	2.03	0 to 4.6	Nov-17	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	0.68	0 to 1.6	Nov-17	No	Erosion of natural deposits

Inorganic Contaminants

Barium [1010] (ppm)	2	2	0.020	0.02 to 0.02	Feb-19	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level = 0	AL = 1.3	1.3	0.070 (90 th percentile)	0 to 0.35	Sep-19	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.60	0.6 to 0.6	Feb-19	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level = 0	AL = 15	0	0 (90 th percentile)	0 to 0	Sep-19	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.30	0.2 to 0.3	Feb-19	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	1.49 (lowest average)	1.03 to 2.79 (monthly ratios)	N/A	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.

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.18 (highest average)	0.21 to 2.2	N/A	No	Water additive used to control microbes.
HAA (ppb) [Haloacetic acids] (Individual Sites)	60	N/A	46 (high site average)	8 to 68 (range of individual sites)	N/A	Yes	Byproduct of drinking water disinfection
TTHM (ppb) [total trihalomethanes] (Individual Sites)	80	N/A	79.225 (high site average)	32 to 97 (range of individual sites)	N/A	No	Byproduct of drinking water disinfection.

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.

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 water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take 2 corrective actions and we completed 2 of these actions.

During the past year one Level 2 assessment was required to be completed for our water system. One Level 2 assessment was completed. In addition, we were required to take two corrective actions and we completed two of these actions.

As required by the 4th Unregulated Contaminant Monitoring Rule (UCMR4) our water system has sampled for a series of unregulated contaminants. The purpose of monitoring for these contaminants is to help the EPA decide whether contaminants should have a standard. In 2019 our system monitored for cyanotoxins. Cyanotoxins can be produced during harmful algal blooms (HAB's). Our system did not detect any cyanotoxins. As our customers, you have a right to know that these data are available. If you are interested in examining these results, please contact our office during normal business hours.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for the Nicholasville Water Treatment Plant

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing (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 7/1/19-9/30/19 we did not monitor or test for Total Haloacetic Acids (HAA5) and therefore cannot be sure of the quality of your drinking water during that time.

What should I do?

There is nothing you need to do at this time.

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, 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.¹

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were taken
HAA5 ¹	4 samples every quarter	4	7/1/19-9/30/19	August 2019

What is being done?

On August 20, 2019 4 HAA5 samples were taken to a contract lab for analysis. Once received, the lab began to analyze the samples, however their equipment suffered an irreparable breakdown. The lab then sent our samples to secondary lab for analysis. Our samples were processed, but the secondary lab could not obtain results due to sample matrix evaporation in transit. Consequently, we were not able to submit results for HAA5 before the compliance window closed. Our contract lab has since purchased another machine for HAA5 analysis, and established a system for separate HAA5 analysis, extraction, and processing.

For more information, please contact Scott House at 859.885.6974 or by mail at 595 Water Works Rd, Nicholasville, KY 40356.

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.

This notice is being sent to you by the Nicholasville Water Treatment Plant. State Water System ID#: KY0570315.

Date distributed: _____.

¹HAA5's, also known as haloacetic acids (5), are a family of 5 disinfection byproducts. They are sampled at four different sites in our distribution system. They include monochloroacetic acid, monobromoacetic acid, dichloroacetic acid, trichloroacetic acid, and dibromoacetic acid.

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Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing (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. 1/1/19-12/31/19 we did not monitor or test for dichloromethane and therefore cannot be sure of the quality of your drinking water during that time.

What should I do?

There is nothing you need to do at this time.

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, 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.¹

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were taken
Dichloromethane ¹	1 sample per year	1	1/1/19-12/31/19	December 2019

What is being done?

On December 9, 2019 VOC² samples, including dichloromethane, were sent to an independent lab for analysis. The sample was analyzed on December 12 and again on December 23 yielding abnormally high levels of dichloromethane. An inquiry into the high dichloromethane results indicated contaminated sample trip blanks yielded inaccurate results. These results were invalidated and dichloromethane was resampled on January 9, 2020. While no dichloromethane was detected, the 2019 compliance window for this analyte had closed, triggering in a violation. Steps have been taken to assure lab results, including repeats, are delivered to the reporting agency within the compliance window.

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¹ Dichloromethane is a regulated volatile organic compound

² Volatile Organic Compound



2019 ANNUAL WATER QUALITY REPORT

CENTRAL DIVISON | Fayette and Surrounding Counties | PWSID: KY0340250



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

A Message from the Kentucky American Water President

To Our Valued Customer:

Kentucky American Water is proud to be your local water service provider, and I am pleased to share with you good news about the quality of your drinking water. Each year, we provide you with our Annual Water Quality Report that provides information about where your water comes from, the results of water testing, and information about what was found during that testing.



Quite a lot goes into bringing that water to your home. The miles of pipeline hidden below the ground. The facilities that draw water from the source. The plant where it's treated and tested. Our treatment plant operators, water quality experts, engineers, and maintenance crews working around the clock to make sure that water is always there when you need it. Delivering high-quality, reliable water service to your tap around the clock also requires significant investment in our water infrastructure to upgrade aging facilities. In fact, we invest approximately \$25 million in capital improvements each year. We are proud that we continue to supply water for about a penny per gallon—an exceptional value.

We do this because we believe we're delivering more than just water service. We deliver a key resource for public health, fire protection, economic development and overall quality of life. Our job is to ensure that quality water keeps flowing not only today, but well into the future. It's part of our commitment to you and the communities we serve.

We hope you agree that it's worth every penny and worth learning more about. Please take the time to review this report. It provides details about the source and quality of your drinking water using the data from water quality testing conducted for your local water system from January through December 2019.

We appreciate the opportunity to serve you.

Sincerely,

Nick O. Rowe
President, Kentucky American Water

About Kentucky American Water

Kentucky American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately half a million people.

With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 6,800 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to 15 million people in 46 states. American Water provides safe, clean, affordable and reliable water services to our customers to make sure we keep their lives flowing. For more information, visit amwater.com and follow American Water on [Twitter](#), [Facebook](#) and [LinkedIn](#).

Your Drinking Water Supply

The sources of water for both drinking and bottled water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. When water travels over the surface of the land or through the ground it dissolves naturally occurring minerals (possibly radioactive material) and picks up organic material from the presence of animals or humans. The following contaminants may be present in source water because of this process:

- **Microbial Contaminants**, such as viruses and bacteria from sewage, agricultural livestock operations or wildlife.
- **Inorganic Contaminants**, such as salts and metals that occur naturally or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and Herbicides**, which come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- **Organic Chemical Contaminants** (including synthetic and volatile organic chemicals), which are by-products of industrial processes and petroleum production, and may come from gas stations, urban storm water runoff and septic systems.
- **Radioactive Contaminants**, which occur naturally or result from oil and gas production and mining activities.

The drinking water supply for Kentucky American Water's Central Division is surface water from the Kentucky River and Jacobson Reservoir. The Kentucky River runs south of Lexington and through Owen County and Jacobson Reservoir is located in Fayette County. This surface water provides the primary source of drinking water produced by our three water treatment plants. The Kentucky River Station, Richmond Road Station, and Kentucky River Station II are capable of reliably producing up to a combined total of 85 million gallons of water per day (MGD). Our treatment processes are designed to protect human health by reducing contaminant concentrations to levels well below what might cause health concerns.

Protecting Your Drinking Water Supply

Protecting drinking water at its source is an important part of the process to treat and deliver high quality water. It takes a community effort to protect our shared water resources. This includes utilities, businesses, residents, government agencies and organizations. Everyone who lives, works, and plays in the area has a role and stake in clean water supplies.

What Can You Do?

Quality drinking water starts upstream. Everyone can help maintain and improve drinking water supplies:

- Eliminate excess use of fertilizers and pesticides, they contain hazardous chemicals that can reach our source water.
- Dispose of medicine, household chemicals, oils and paints at proper waste collection sites. Materials can pollute water ways if poured down the drain, flushed down the toilet, or dumped on the ground. Contact your county waste authority to find out how to properly dispose of these materials.

- Check for leaks from automobiles and heating fuel tanks. Clean up any spills using an absorbent material like cat litter. Sweep up the material and put it in a sealed bag in the trash.
- Volunteer with watershed groups in your area.
- Pick up after your pets.
- Remember that storm drains dump directly into local water bodies.

What Are We Doing?

Our vision is Clean Water for Life. Our priority is to provide reliable, quality drinking water for our customers. Protecting the source of our supply is an important part of that mission. We also work to understand and reduce potential risks to your drinking water supply.

The Kentucky Division of Water approved a Source Water Assessment and Protection Plan for Kentucky American Water in 2003. The plan focuses on potential sources of contamination for the water supplies used by Kentucky American Water.

The Kentucky River is most vulnerable to contamination from agricultural runoff, which may include pesticides, nutrients and silt from croplands, and substances resulting from the presence of animals on pasturelands. Jacobson Reservoir is most vulnerable to urban storm water runoff, which may include heavy metals from paved areas, nutrients, pesticides and organics (e.g., yard waste) from lawn care. Industrial and construction runoff in urban areas may include silts, synthetic chemicals and metals. A copy of the completed Source Water Assessment and Protection Plan may be viewed by calling our Customer Service Center at 800-678-6301.

Other efforts underway to protect our shared water resources include:

- **Community Involvement:** We have a proactive public outreach program to help spread the word and get people involved. This includes school education, contests, and other community activities.
- **Environmental Grant Program:** Each year, we offer funding for innovative, community-based environmental projects that improve, restore or protect watersheds supplies in our local communities.
- **Pharmaceutical Collection:** We sponsor the biannual Drug Take Back event as well as a drop box location at Lexington Police Department lobby for residents to safely dispose of unwanted drugs for free. This helps keep pharmaceutical products from entering water supplies.
- **Backflow Prevention Program:** Ensures the proper installation and maintenance of thousands of backflow prevention devices throughout our system. These devices ensure hazards originating on customers' properties and from temporary connections do not impair or alter the quality of water in our distribution system. For more information about Kentucky American Water's backflow prevention program, visit www.kentuckyamwater.com or contact the Cross Connection department at KAW.cc@amwater.com or 859-268-6310.

You Can Be Involved in Matters That Affect Your Water

Kentucky American Water welcomes your comments and questions regarding your water. To provide feedback on decisions that may affect the quality of your water, for questions about your water or this report, or to obtain additional copies of this report, please call our Customer Service Center at 800-678-6301 or 859-269-2386 ext 6 for Dorothy Rader, Manager, Water Quality and Environmental Compliance.

As a customer of a utility regulated by the Kentucky Public Service Commission, you have the opportunity to participate in periodic public hearings regarding Kentucky American Water. For more information about this process, please refer to the Public Service Commission website at <http://psc.ky.gov/> or call 800-772-4636.

Member of the Partnership for Safe Drinking Water Program

In 2018 Kentucky American Water's Kentucky River Station and Richmond Road Station treatment facilities were awarded the prestigious Twenty-Year Director's Award under the Partnership for Safe Water. Our Kentucky River Station II plant achieved its First Director's Award. The Partnership for Safe Water is administered by the U.S. Environmental Protection Agency (EPA), American Water Works Association and other water-related organizations. The award honors water utilities for achieving operational excellence by voluntarily improving their processes and meeting performance goals beyond what is required by federal and state drinking water regulations.



A Proud Master Member of the Kentucky EXCEL Program



The Kentucky Department for Environmental Protection administers a voluntary program that is open to anyone who wishes to improve and protect Kentucky's environment beyond regulatory requirements. The Master membership is the highest of the four membership levels, requiring members to demonstrate comprehensive environmental management planning; undergo an independent, third-party assessment of compliance; and commit to complete and report on at least four voluntary projects that will benefit Kentucky's environment. Kentucky American Water is proud to participate in this program at the Master level, and was the first utility in the state to do so.

Substances Expected to Be in Drinking Water

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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

To ensure tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations limiting the amount of certain substances in water provided by public water systems. The U.S. Food and Drug Administration establishes limits for contaminants in bottled water that must provide the same protection for public health.

Special Health Information

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 on the Internet

The U.S. Environmental Protection Agency, Centers for Disease Control and the Kentucky Division of Water web sites provide a substantial amount of information relating to water sources, water conservation, and public health. You may visit these sites at the addresses below:

U.S. Environmental
Protection Agency
www.epa.gov/ground-water-and-drinking-water

Kentucky Division of
Water
www.water.ky.gov

Centers for Disease
Control and Prevention
www.cdc.gov

Special Information about Lead in Drinking Water

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What is *Cryptosporidium*?

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. People with severely weakened immune systems have a risk of developing life-threatening illness. We encourage such individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water. Kentucky American Water began a second round of 24 consecutive months of monitoring for *Cryptosporidium* in our source waters in April 2015. Sample results were as follows:

- 2015: *Cryptosporidium* detected in 8 of our 27 source water samples with levels ranging from 0.089 to 0.390 oocysts per liter
- 2016: *Cryptosporidium* detected in 11 of our 36 source water samples with levels ranging from 0.087 to 2.3 oocysts per liter
- 2017: *Cryptosporidium* detected in 3 of our 9 source water samples with levels ranging from 0.089 to 0.744 oocysts per liter

Kentucky American Water's treatment processes are designed to remove *Cryptosporidium* from the water, but additional treatment options are being evaluated.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Availability of Monitoring Data for Unregulated Contaminants for Kentucky American Water

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2019 Kentucky American Water participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4). Detected contaminants sampled under the unregulated contaminant monitoring rule are included in a separate table in the Water Quality Results section of this report. If you are interested in examining the entire results, please contact Dorothy Rader, Manager, Water Quality and Environmental Compliance at 859-269-2386 ext 6 or 2300 Richmond Road, Lexington KY 40502

This notice is being sent to you by Kentucky American Water, State Water System ID#: KY0340250

Date distributed: 06-25-2020

Water Quality Testing

Kentucky American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The following tables contain results of our monitoring. While most monitoring occurred in 2019, certain substances are monitored less than once per year because the levels do not change frequently. We believe it is important that you know exactly what is in your water and how much of the substance is present in the water.

How to Read These Tables

Starting with a **Substance**, read across. **Year Sampled** is typically this past year or years prior. **MCL** shows the highest level of substance (contaminant) allowed. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **Highest Value** (results) represents the measured amount (less is better). **Range** tells the highest and lowest amounts measured. A No under **Violation** indicates government requirements were met. **Typical Source** explains where the substance usually originates.

Definitions of Terms

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions

Maximum Contaminant Level or 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 or 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 or 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 or 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

NA: Not applicable

ND: Not detected

NTU (Nephelometric Turbidity Units): A measurement of the clarity, or turbidity, of the water

pCi/L (picocuries per liter): A measure of radioactivity

ppb (parts per billion): One part substance per billion parts water, or micrograms per liter

ppm (parts per million): One part substance per million parts water, or milligrams per liter

ppt (parts per trillion): One part substance per trillion parts water, or nanograms per liter

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water

PARTS PER MILLION:

1 second
in 12 days

PARTS PER BILLION:

1 second
in 32 years

PARTS PER TRILLION:

1 second
in 32,000 years



Maximum Contaminant Levels (MCLs) are set at very stringent standards.

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 for a lifetime to have a one-in-a-million chance of having the described health effect.

Water Quality Results

Regulated Substances (Measured in the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	MCL	MCLG	Kentucky River Station		Richmond Road Station		Kentucky River Station II		Violation	Typical Source
				Highest Value	Range	Highest Value	Range	Highest Value	Range		
Fluoride (ppm)	2019	4	4	0.80	NA	0.86	NA	0.80	0.54 - 0.80	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2019	10	10	0.17	NA	0.23	NA	0.64	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage;
Total Organic Carbon ¹ (ppm)	2019	TT	NA	1.05	0.55 - 1.53	1.45	1.09 - 2.25	1.78	1.37 - 2.53	No	Naturally present in the environment
Turbidity ² (NTU)	2019	TT	NA	0.09	100% Lowest Monthly	0.09	100% Lowest Monthly	0.09	100% Lowest Monthly	No	Soil runoff

Regulated Substances (Measured in the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Highest Running Annual Average	Range	Violation	Typical Source
Total Trihalomethanes ³ (ppb)	2019	80	NA	63	12 - 56	No	By-product of drinking water disinfection
Haloacetic Acids ³ (ppb)	2019	60	NA	48	7 - 47	No	By-product of drinking water disinfection
Chloramines ⁴ (ppm)	2019	MRDL 4	MRDLG 4	2.62	0.58 - 4.15	No	Water additive used to control microbes

Regulated Substances (Measured at the Customer's Tap)

Substance (units)	Year Sampled	Action Level	MCLG	90 th Percentile	Range	Number of Samples	Number of Samples Above Action Level	Violation	Typical Source
Copper ⁵ (ppm)	2018	1.3	1.3	0.232	ND - 0.449	64	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead ⁵ (ppb)	2018	15	0	ND	ND - 1	64	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unregulated Contaminant Monitoring Rule 4 (Measured on the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	MCL	MCLG	Kentucky River Station		Richmond Road Station		Kentucky River Station II	
				Average	Range	Average	Range	Average	Range
Manganese (ppb)	2019	NA	NA	0.12	ND - 0.47	7.60	1.50 - 23	3.20	ND - 10

Unregulated Contaminant Monitoring Rule 4 (Measured in the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Average	Range
Haloacetic Acids (HAA5 ⁶) (ppb)	2019	NA	NA	22	7 - 47
Haloacetic Acids (HAA6Br ⁷) (ppb)	2019	NA	NA	5.0	1.3 - 11.0
Haloacetic Acids (HAA9 ⁸) (ppb)	2019	NA	NA	27	8 - 51

Information for customers in North Middletown

During the first quarter of 2019 the water delivered to you by the City of North Middletown was purchased from Kentucky American Water. Although we were not your direct water service provider during this time, we want you to be aware of data from your previous water provider. The table below shows data collected by the City of North Middletown from January through March of 2019. Kentucky American Water is proud to be your local water service provider. The Water Quality Report above provides information about where your water came from and the results of water testing during the previous calendar year. We encourage you to review this report and welcome your comments and questions regarding your water.

Regulated Substances (Measured in the Distribution System by the City of North Middletown)

Substance (units)	Year Sampled	MCL	MCLG	Highest Running Annual Average	Locational Running Annual Average Range	Violation	Typical Source
Total Trihalomethanes ³ (ppb)	1st Quarter of 2019	80	NA	30	28 - 30	No	By-product of drinking water disinfection
Haloacetic Acids ³ (ppb)	1st Quarter of 2019	60	NA	30	21 - 30	No	By-product of drinking water disinfection
Chlorine ⁴ (ppm)	1st Quarter of 2019	MRDL 4	MRDLG 4	2.48	2.11 - 2.75	No	Water additive used to control microbes

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- ¹ **Total Organic Carbon:** Although the concentration listed is ppm, the values shown are ratios used to determine compliance. Compliance with the TOC Treatment Technique (TT) requirement is based on the lowest running annual average (RAA) of the monthly ratios of the % TOC treatment removal achieved compared to the required removal. A minimum annual average ratio of 1.00 is required
- ² **Turbidity:** Turbidity is the clarity of water. It is measured as an indicator of water quality and the effectiveness of the filtration system. Compliance with the turbidity Treatment Technique (TT) is achieved when 95% of four-hour filtered water readings are 0.3 NTU or lower and no readings are greater than 1 NTU.
- ³ **Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAAs):** Compliance based on the highest LRAA (locational running annual average) that is calculated quarterly. The highest quarterly LRAA is the measured value in the table. 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. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
- ⁴ **Chloramines and Chlorine:** A public water system shall be in compliance with the MRDL if the running annual average of monthly averages of samples taken in the distribution system computed quarterly is less than or equal to the MRDL.
- ⁵ **Lead and Copper:** Compliance is achieved when at least 90% of samples collected from water standing in contact with plumbing for at least 6 hours are below the Action Level. The 90th percentile for lead was below the detection limit.
- ⁶ **HAA5** includes: dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid.
- ⁷ **HAA6Br** includes: bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, dibromochloroacetic acid, monobromoacetic acid, tribromoacetic acid.
- ⁸ **HAA9** includes: bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, trichloroacetic acid.



WE KEEP LIFE FLOWING