٨	Nicholas	wille Water Dep	artment		KY0570315
	Water Quality Rep	ort for January 1-I	December 31, 2020	Manager:	Scott House
		517 N. Main Street		Phone:	859-885-6974
		Nicholasville, KY 40356			
	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 Waster 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	If present, elevated levels of lead can cause			
the MCLGs as feasible using the best available treatment technology.	serious health problems, especially for			
Maximum Contaminant Level Goal (MCLG) - the level of a contaminant in drinking water below which there is no known or	pregnant women and young children. Lead in			
expected risk to health. MCLGs allow for a margin of safety.	drinking water is primarily from materials and			
<i>Maximum Residual Disinfectant Level (MRDL)</i> - 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.	components associated with service lines and home plumbing. Your local public water			
Maximum Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or	system is responsible for providing high			
expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.	quality drinking water, but cannot control the variety of materials used in plumbing			
Below Detection Levels (BDL) - laboratory analysis indicates that the contaminant is not present.	components. When your water has been			
<i>Not Applicable (N/A)</i> - does not apply.	sitting for several hours, you can minimize			
<b>Parts per million (ppm)</b> - or milligrams per liter, (mg/l). One part per million corresponds to one minute in two years or a single penny in \$10,000.	your tap for 30 seconds to 2 minutes before			
<i>Parts per billion (ppb)</i> - or micrograms per liter, ( $\mu$ g/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.	using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information			
<i>Parts per trillion (ppt)</i> - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.	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.			
<i>Parts per quadrillion (ppq)</i> - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.				
<i>Picocuries per liter (pCi/L)</i> - 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.				
<b>Nephelometric Turbidity Unit (NTU)</b> - 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.	© 2012 Kentucky Rural Water Association			
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.				

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

## To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. **Copies of this report are available upon request by contacting our office during business hours.** 

Regulated Contaminant	Fest Results	5	Nicholasvill	le Water D	epar	tment			
Contaminant [code] (units)	MCL	MCLG	Report Level	Range	of De	etection	Date of Sample	Violation	Likely Source of Contamination
Radioactive Contaminant	ts								
Alpha emitters [4000] (pCi/L)	15	0	2.025	0	to	4.6	Feb-17	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	0.675	0	to	1.6	Aug-17	No	Erosion of natural deposits
norganic Contaminants	•	-							
Barium [1010] (ppm)	2	2	0.02	0.02	to	0.02	Feb-20	No	Drilling wastes; metal refineries; erosion o natural deposits
Beryllium [1075] (ppb)	4	4	0.05	0	to	0.1	Feb-20	No	Coal-burning factories; metal refineries; electrical, defense, and aerospace industrie
Fluoride [1025] (ppm)	4	4	0.77	0.77	to	0.77	Feb-20	No	Water additive which promotes strong teet
Disinfectants/Disinfection	1 Byproduct	ts and Preci	irsors						
Total Organic Carbon (ppm) measured as ppm, but reported as a ratio)	TT*	N/A	1.49 (lowest average)	0.80	to nthly r	2.17	2020	No	Naturally present in environment.
Monthly ratio is the % TOC rem	oval achieved to	o the % TOC re	U /			/	ater for compli	ance.	
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.02 (highest average)	0.20	to	1.61	2020	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	53 (high site average)	11 (range of	to indiv	36 idual sites)	2020	No	Byproduct of drinking water disinfectior
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	71 (high site average)	22.7	to	121.6 idual sites)	2020	No	Byproduct of drinking water disinfection
lousehold Plumbing Cor	taminants			\ <u>U</u>		, , , , , , , , , , , , , , , , , , , ,			
Copper [1022] (ppm) sites exceeding action level = 0	AL = 1.3	1.3	0.07 (90 <sup>th</sup> percentile)	0	to	0.35	Sep-19	No	Corrosion of household plumbing system
Other Constituents									
Turbidity (NTU) TT * Representative samples	Allowable Levels		Highest Sing	ingle Measurement Lowest Monthly %			Violation		Likely Source of Turbidity
Turbidity is a measure of the clarity of the water and not a contaminant.	Less than 0.3 1	nan 1 NTU* NTU in 95% of 7 samples	0.1	2		100	No		Soil runoff

Unregulated Contaminants (UCMR 4)	average	ra	ange (pj	pb)	date
Manganese	1.355	0.66	to	2.1	Feb-20
HAA5	33.988	8.8	to	46	Nov-20
HAA6Br	5.527	1.5	to	12	Nov-20
HAA9	38.675	8.8	to	54	Nov-20

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that 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. In 2020 our system monitored for organic and inorganic compounds and for a family of disinfection by-products. Our system detected manganese, an inorganic element, and haloacetic acids 5,7 and 9 (HAA-5,7,9) which are a family of disinfection by-products created when chlorine interacts with total organic carbon (TOC) during the treatment process. If you are interested in examining these results, please contact Scott House at 859.885.6974 or by mail at Nicholasville WTP, 595 Water Works Rd, Nicholasville, KY 40356.

# 2020 Annual WATER QUALITY REPORT

**CENTRAL DIVISION | Fayette and Surrounding Counties** PWS ID: KY0340250





**WE KEEP LIFE FLOWING<sup>™</sup>** 

### A message from Kentucky American Water's President



#### **Nick Rowe**

President, Kentucky American Water Dear Kentucky American Water Customer,

Having access to safe, reliable water service is something that can be easily taken for granted. At Kentucky American Water, it's our top priority.

I am pleased to share with you our 2020 Consumer Confidence Report, which is a testament to the hard work and dedication of our employees. As you read through this annual water quality information, you will see that we continue to supply high quality drinking water service to keep your life flowing.

We monitor and test your water at multiple points throughout our process of drawing it from its source, treating it to meet drinking water standards, and distributing it through our pipeline systems. In fact, we test for about 100 regulated contaminants as required by state and federal drinking water standards.

**QUALITY:** We take water quality so seriously that all three of our water treatment plants have been nationally recognized with Directors Awards from the U.S. Environmental Protection Agency's (EPA) Partnership for Safe Water program for surpassing federal and state drinking water standards. We remain committed to protecting our sources of drinking water. We utilize advanced technology and detection methods that are paving the way for source water protection across the country.

**SERVICE:** Last year, we invested \$34 million to upgrade our water and wastewater treatment and pipeline systems in the communities we serve. These investments allowed us to improve water quality, water pressure and service reliability for our customers.

**VALUE:** While costs to provide water service continue to increase across the country, our investments help us provide high quality water service that remains an exceptional value for such an essential service.

We hope our commitment to you and our passion for water shines through in this report detailing the source and quality of your drinking water in 2020. We will continue to work to keep your life flowing – today, tomorrow and for future generations.

Proud to be your local water service provider,

Nick Rowe Kentucky American Water

This report contains important information about your drinking water. Translate it or speak with someone who understands it at 1-800-678-6301 Monday-Friday, 7 a.m. to 7 p.m.



### ATTENTION: Landlords and Apartment Owners

Please share a copy of this notice with your tenants. It includes important information about their drinking water quality.





### EVERY STEP OF THE WAY.

Our team monitors and tests your water at multiple points throughout our process of drawing it from its source, treating it to meet drinking water standards, and distributing it through our pipeline systems. In fact, American Water performs over one million tests annually for about 100 regulated contaminants, nationwide.

### EXPERTISE. RECOGNIZED AT THE HIGHEST LEVEL.

American Water is an expert in water quality testing, compliance and treatment and has established industry-leading water testing facilities. Our dedicated team of scientists and researchers are committed to finding solutions for water quality challenges and implementing new technologies. We are recognized as an industry leader in water quality and work cooperatively with the EPA so that drinking water standards and new regulations produce benefits for customers and public water suppliers. American Water has earned awards from the EPA's Partnership for Safe Water as well as awards for superior water quality from state regulators, industry organizations, individual communities, and government and environmental agencies.

### WATER QUALITY. DOWN TO A SCIENCE.

Our team also has access to American Water's Central Laboratory in Belleville, Illinois, which conducts sophisticated drinking water testing and analysis. American Water scientists refine testing procedures, innovate new methods, and set new standards for detecting potentially new contaminants—even before regulations are in place.



Just as Kentucky American Water is investing in research and testing, we also understand the importance of investing in the infrastructure that provides high-quality water service to you. Last year alone, we invested more than \$34 million to improve our water and wastewater treatment and pipeline systems.

### NOT JUST MEETING DRINKING WATER STANDARDS— SURPASSING THEM.

The EPA regulates about 100 potential contaminants and sets stringent standards for each one. **Kentucky American Water takes water quality so seriously that:** 

All 3 of our water treatment plants, Kentucky River Station, Richmond Road Station, and Kentucky River Station II, have been nationally recognized with Directors Awards from the EPA's Partnership for Safe Water program for surpassing federal and state drinking water standards.





# About Your Drinking Water Supply



### WHERE YOUR WATER COMES FROM

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 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.

Learn more about local waterways at: <a href="https://mywaterway.epa.gov/">https://mywaterway.epa.gov/</a>

The Kentucky River Station, Richmond Road Station, and Kentucky River Station II are capable of reliably producing up to a combined total of 85 milliongallons 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.

**Disinfection treatment:** Surface water supplies are treated with chloramines to maintain water quality in the distribution system.



### 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 Bob Money, 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.



### 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/Centers for Disease Control and Prevention (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).

## What are the **Sources of Contaminants**?

To provide tap water that is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, aquifers and/or groundwater. 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 can 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic Contaminants	such as salts and metals, which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
Pesticides and Herbicides	which may 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 also, come from gas stations, urban storm water runoff, and septic systems.
Radioactive Contaminants	which can be naturally occurring or may be the result of oil and gas production and mining activities.



# 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 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 through the following actions:

- Properly dispose of pharmaceuticals, household chemicals, oils and paints. Materials can impact waterways if poured down the drain, flushed down the toilet or dumped on the ground.
- 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; check with the local refuse facility for proper disposal
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Take part in watershed activities

Report any spills, illegal dumping or suspicious activity to the Kentucky Department of Environmental Protection, Emergency Response Branch: 1-800-928-2380

### WHAT ARE WE DOING?

Our priority is to provide reliable, quality drinking water service for customers. The source of supply is an important part of that mission. We work to understand and reduce potential risks to your drinking water supply by collaborating with regulators and community stakeholders.

## Here are a few of the efforts underway to protect our shared water resources:



**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 support the biannual Drug Take Back event and funded a drop box location at the Lexington Police Department lobby for residents to safely dispose of unwanted drugs for free. This helps keep pharmaceutical products from entering water supplies.

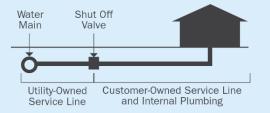
### Backflow Prevention Program: Ensures

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.

## 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. American Water 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.

## UTILITY-OWNED VS. CUSTOMER-OWNED PORTION OF THE SERVICE LINE



Please note: This diagram is a generic representation. Variations may apply.

# The most common source of lead in tap water is from the customer's plumbing and their service line.

Our water mains are not made of lead; however, the water service line that carries the water from the water main in the street to your home could be. Homeowners' service lines may be made of lead, copper, galvanized steel or plastic. You can assess your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve.

### MINIMIZING YOUR POTENTIAL EXPOSURE

You cannot see, smell or taste lead, and boiling water will not remove lead. Here are steps you can take to reduce your potential exposure if lead exists in your home plumbing.

### **CHECK YOUR PLUMBING AND SERVICE LINE**

If you live in an older home, consider having a licensed plumber check your plumbing for lead. If your service line is made of lead, and you're planning to replace it, be sure to contact us at 1-800-678-6301.

- **1. Flush your taps.** The longer the water lies dormant in your home's plumbing, the more lead it might contain. If the water in your faucet has gone unused for more than six hours, flush the tap with cold water for 30 seconds to two minutes before drinking or using it to cook. To conserve water, catch the running water and use it to water your plants.
- 2. Use cold water for drinking and cooking. Hot water has the potential to contain more lead than cold water. If hot water is needed for cooking, heat cold water on the stove or in the microwave.
- 3. Routinely remove and clean all faucet aerators.
- **4.** Look for the "Lead Free" label when replacing or installing plumbing fixtures.
- **5.** Follow manufacturer's instructions for replacing water filters in household appliances, such as refrigerators and ice makers, as well as home water treatment units and pitchers. Look for NSF 53 certified filters.

**Pb** 

**5. Flush after plumbing changes.** Changes to your service line, meter, or interior plumbing may result in sediment, possibly containing lead, in your water supply. Remove the strainers from each faucet and run the water for 3 to 5 minutes.

# Important Information About **Drinking Water**

### **CHLORAMINES**

Chloramines are a Kentucky and federally approved alternative to free chlorine for water disinfection. Chloramines can reduce disinfection by-product formation and may help reduce concerns related to taste. Chloramines are also used by many American Water systems and many other water utilities nationally.

Chloramines have the same effect as chlorine for typical water uses with the exception that chloramines must be removed from water used in kidney dialysis and fish tanks or aquariums.

Treatments to remove chloramines are different than treatments for removing chlorine. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis water treatment. Contact your pet store or veterinarian for questions regarding water used for fish and other aquatic life.

### **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 lifethreatening 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.

Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. 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.



## Definitions of Terms that may appear in this report

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

**LRAA:** Locational Running Annual Average

### 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

MFL: Million fibers per liter

NA: Not applicable

N/A: No data available

ND: Not detected

### Nephelometric Turbidity Units (NTU):

A measurement of the clarity, or turbidity, of the water

**pH:** A measurement of acidity, 7.0 being neutral

**picocuries per liter (pCi/L):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles)

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

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

RAA: Running Annual Average

### Secondary Maximum Contaminant Level (SMCL): Secondary MCLs are set to protect the odor, taste, and appearance of drinking water

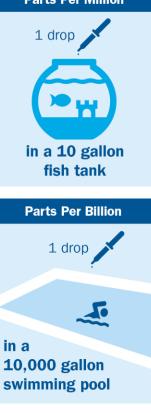
**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water

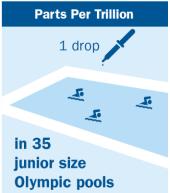
Variance and Exemptions: State or EPA permission not to meet and MCL or utilize a treatment technique under certain conditions

%: Percent

### MEASUREMENTS







## Water Quality Results

Kentucky American Water conducts extensive monitoring to determine if your water meets all water quality standards. The detections of our monitoring are reported in the following tables. While most monitoring was conducted in 2020, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting the tables below, see the "Definition of Terms" on the previous page. Some unregulated substances are measured, but maximum contaminant levels have not been established by the government. These contaminants are shown for your information.

### **NOTE:** Regulated contaminants not listed in these tables were not found in the treated water supply.

	REGULATED SUBSTANCES - Collected at the Treatment Plant													
Substance	Year	Compliance Achieved	MCLG	MCL	Kentucky River Station		Richmond Road Station		Kentucky River Station II					
(with units)	Sampled A				Highest Value	Range	Highest Value	Range	Highest Value	Range	Typical Source			
Fluoride (ppm)	2020	Yes	4	4	0.85	NA	0.85	NA	0.93	NA	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories			
Nitrate (ppm)	2020	Yes	10	10	0.26	NA	0.05	NA	0.57	NA	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits			

TURBIDITY - Monitored at the Treatment Plant												
Culture	Noor				Kentucky River Station					tucky River tation II		
Substance Year (with units) Sampled		Compliance Achieved	MCLG	MCL	Highest Value	Lowest Monthly % of Samples ≤ 0.3 NTU	Highest Value	Lowest Monthly % of Samples ≤ 0.3 NTU	Highest Value	Lowest Monthly % of Samples ≤ 0.3 NTU	est Monthly f Samples	
Turbidity <sup>1</sup> (NTU)	2020	Yes	NA	Π	0.09	100%	0.22	100%	0.07	100%	Soil runoff	

<sup>1</sup>**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.

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**

TREATMENT BYPRODUCTS PRECURSOR REMOVAL - Collected at the Treatment Plant											
Substance	Year	Compliance MCLG MCL Kentucky River F		Richmond Road Kentucky River Station Station II				Turinel Courses			
(with units)	Sampled	Achieved	MCLG	MGL	Lowest Average	Range Monthly Removal Ratios	Lowest Average	Range Monthly Removal Ratios	Lowest Average	Range Monthly Removal Ratios	Typical Source
Total Organic Carbon <sup>1</sup> (ppm)	2020	Yes	NA	Π	1.03	1.00 to 1.32	1.33	1.00 to 1.69	1.59	1.10 to 2.36	Naturally present in the environment

<sup>1</sup>Total Organic Carbon: Although the concentration listed is ppm, the values shown are ratios used to determine compliance. Compliance with the Treatment Technique (TT) requirement is based on the lowest running annual average (RAA) of monthly ratios of the treatment removal achieved compared to required rem oval. A minimum annual average ratio of 1.00 is required.

	REGULATED SUBSTANCES - Collected in the Distribution System												
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Running Annual Average	Range Detected	Typical Source						
Total Trihalomethanes <sup>1</sup> (ppb)	2020	Yes	NA	80	45	13.9 to 66.7	By-product of drinking water disinfection						
Haloacetic Acids <sup>1</sup> (ppb)	2020	Yes	NA	60	39	4.1 to 54.6	By-product of drinking water disinfection						
Chloramines <sup>2</sup> (ppm)	2020	Yes	MRDLG 4	MRDL 4	2.82	0.66 to 3.93	Water additive used to control microbes						
Chlorine <sup>2</sup> (ppm)	2020	Yes	MRDLG 4	MRDL 4	0.95	0.56 to 1.42	Water additive used to control microbes						

<sup>1</sup>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.

<sup>2</sup>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.

L	LEAD AND COPPER MONITORING PROGRAM - At least 50 tap water samples collected at customers' taps every 3 years												
Substance (with units)					Typical Source								
Lead <sup>1</sup> (ppb)	2018	Yes	0	15	ND	64	0	Corrosion of household plumbing systems					
Copper <sup>1</sup> (ppm)	2018	Yes	1.3	1.3	0.232	64	0	Corrosion of household plumbing systems					

<sup>1</sup>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.



## **About Us**

With a history dating back to 1886, **American Water** (NYSE: AWK) is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 7,000 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 help make sure we keep their lives flowing.

**Kentucky American Water**, a subsidiary of American Water, 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. For more information, visit **kentuckyamwater.com** and follow us on Twitter, Facebook, Instagram and YouTube.



### KENTUCKY AMERICAN WATER FACTS AT A GLANCE

- **COMMUNITIES SERVED** Portions of 14 counties
- **PEOPLE SERVED** Approximately half a million (90.77% residential, 6.82% commercial, .02% industrial)
- EMPLOYEES Approximately 151
- TREATMENT FACILITIES

Three surface water treatment facilities (average daily delivery is 40 million gallons per day (MGD); five wastewater plants (0.74 MGD permitted capacity)

- MILES OF PIPELINE
  2,333 miles of waterline and 27 miles of sewer pipe
- STORAGE AND TRANSMISSION
  26 water storage facilities
  18 water pumping stations
  19 wastewater pumping stations
- SOURCE OF SUPPLY
  98% surface water
  2% purchased water
- PARTNERSHIP FOR
  SAFE WATER AWARDS

All 3 of our treatment plants have received Directors Awards from the Partnership for Safe Water

## How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact Kentucky American Water's Customer Service Center Monday to Friday, 7 a.m. to 7 p.m. at 1-800-678-6301.



### WATER INFORMATION SOURCES

Kentucky American Water www.kentuckyamwater.com

Kentucky Division of Water https://eec.ky.gov/Environmental-Protection/Water/Drinking/Pages/information-for-consumers.aspx

United States Environmental Protection Agency (USEPA): <a href="http://www.epa.gov/safewater">www.epa.gov/safewater</a>

**Safe Drinking Water Hotline** 1-800-426-4791

Centers for Disease Control and Prevention https://www.cdc.gov/healthywater/

American Water Works Association

National Library of Medicine/National Institute of Health: www.nlm.nih.gov/medlineplus/drinkingwater.html This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-800-678-6301.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-800-678-6301.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-800-678-6301.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau peb ntawm 1-800-678-6301.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊 請致電 **1-800-678-6301**與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया **1-800-678-6301** र हमें काल करें।

Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-800-678-6301.

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyong kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa 1-800-678-6301.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số 1-800-678-6301.