



2014 Annual

Water Quality Report

Kentucky Northern Division

PWS ID: KY0340250



KENTUCKY
AMERICAN WATER

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 – and like so many years prior – we continue to supply water that meets or surpasses all state and federal water quality regulations for **less than a penny per gallon— an exceptional value.**



This is no small task. 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 24/7 also requires significant investment in our water infrastructure to upgrade aging facilities. In fact, we invest approximately \$20 million in capital improvements each year.

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 2014.

We appreciate the opportunity to serve you.

Cheryl D. Norton
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.

Founded in 1886, American Water (NYSE: AWK) is the largest publicly traded U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs approximately 6,400 dedicated professionals who provide drinking water, wastewater and other related services to an estimated 15 million people in more than 45 states and parts of Canada. More information can be found by visiting <http://www.amwater.com>.

Information on the Internet

The U.S. Environmental Protection Agency (EPA), 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:

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U.S. Environmental Protection Agency
<http://water.epa.gov/drink/index.cfm>

Centers for Disease Control and Prevention
<http://www.cdc.gov/>

Kentucky Division of Water
<http://water.ky.gov/pages/default.aspx>



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Protecting Your Water

The Kentucky Division of Water approved Source Water Assessment and Protection Plans for Kentucky American Water's suppliers in 2003. Kentucky American Water is in the process of finalizing a Source Water Assessment and Protection Plan for the Kentucky River Station II water treatment plant that treats water from pool 3 of the Kentucky River. These plans focus on identifying potential sources of contamination for drinking water supplies and encourage ongoing planning to protect source waters. The following are brief summaries of potential contamination sources for Kentucky American Water's sources of supply.

An analysis of Kentucky American Water's surface water supplies indicates that susceptibility to contamination is generally moderate with potential contamination sources identified as storage tanks, agricultural and lawn care activities, power line right-of-way applications, roadway runoff and septic systems.

A preliminary evaluation of pool 3 Kentucky River water indicates 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 pasture lands. Industrial and construction runoff in urban areas may include silts, synthetic chemicals and metals.

Carroll County Water sources are moderately susceptible to contamination from row crops, sewage treatment, permitted operations and road exposure. These cumulatively increase the potential for a release of contaminants within their watershed.

Warsaw Water Works' and Gallatin County Water's groundwater supply is moderately susceptible to contamination. Potential sources of contamination within the wellhead protection area include storage tanks, agricultural land use, highways, wastewater treatment, septic systems and machinery storage.

Georgetown Municipal Water's Royal Spring has been determined to have a moderate susceptibility to potential contamination due to runoff from various sources in an urban environment. Source Water Assessment and Protection Plans for each water system may be viewed by calling the Watershed Management Branch of the Kentucky Division of Water at (502) 564-3410.

Protection of drinking water is everyone's responsibility. You can help protect our water supplies by:

- Eliminating excess use of lawn and garden fertilizers and pesticides; they contain hazardous chemicals that can reach our source water.
- Picking up after your pets.

- Disposing of chemicals properly; take used motor oil to a recycling center.
- Disposing of used medicine properly (visit our web site at www.kentuckyamwater.com for additional information).
- Volunteering in watershed groups in our area.
- Remembering that storm drains dump directly into local water bodies.

Kentucky American Water encourages you to take an active part in protecting your water supply by participating in activities as they occur in your area.

You Can Be Involved in Matters That Affect Your Water

Kentucky American Water welcomes your comments and questions regarding water quality issues. You can contact us with questions about your water, your water bill, service issues, or to obtain additional copies of this report by calling our Customer Service Center at (800) 678-6301.

What are the Sources of Contamination?

When it rains, water travels over the surface of the land or through the ground, dissolving naturally occurring minerals (possibly radioactive material) and picking up organic material from animals or humans. The water ends up in rivers, lakes, streams, ponds, reservoirs, springs, and wells, where it may be used as a source of supply for both drinking and bottled water. The following contaminants may be present in source water as a result 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 may 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 also 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 majority of drinking water for Kentucky American Water's Northern Division customers is produced at our Kentucky River Station II water treatment plant that treats water from pool 3 of the Kentucky River as it passes through Owen County. This includes customers in our New Columbus Area. For the first few months of 2014 customers in Owenton were fed primarily from the 1.44 million gallon per day treatment facility in Owenton that treats surface water from Severn Creek near its confluence with the Kentucky River pool 2 south of Owen County. The Severn Creek supply is supplemented with surface water from Thomas Lake, in



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south-central Owen County. The 1.44 million gallon per day plant Owenton was decommissioned in 2014. Customers in our New Columbus area also received water purchased from the City of Georgetown. The source for the City of Georgetown is the historic Royal Spring, a groundwater source under the direct influence of surface water that has supplied Georgetown with drinking water since 1775. Water from the spring is pumped downstream to the treatment plant at 214 West Main Street.

Kentucky American Water customers in the Glencoe area receive water purchased from Gallatin County Water. The primary supply for Gallatin County Water is an underground aquifer that runs beneath Gallatin County. Our customers may receive treated water that Gallatin County Water purchases from the Warsaw Water Works treatment facility located in Warsaw. The Warsaw Water Works source is the same underground aquifer that is utilized by Gallatin County Water.

Customers in the Wheatley area receive water purchased from Carroll County Water District #1, whose source is groundwater from the Ohio River alluvial aquifer that is pumped from two separate well fields in Carroll and Gallatin counties. The Carroll County well field consists of five wells: three located at the water plant, one located on Henry Clay Lane and a well located on Fishing Street. The Gallatin County well field consists of two wells and is located on Highway 42 on the river side of the Gallatin Steel property. Carroll County Water District #1 can also purchase water that Carrollton Utilities treats from its wells located in downtown Carrollton.

Special Information on Nitrate

Nitrate in drinking water at levels above ten (10) ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask for advice from your health care provider.

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.

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.

The U.S. EPA issued a rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. To comply with this rule, Kentucky American Water began monitoring raw water sources for *Cryptosporidium* in March 2007 and completed 24 consecutive months of sampling. We detected the organism in our source water two times in Thomas Lake and one time in Severn Creek during this testing. Based on the results of our *Cryptosporidium* monitoring, no additional treatment will be required by the U.S. EPA regulation.

A Proud Member of the Partnership for Safe Water

In 2007 Kentucky American Water's Northern Division treatment plant in Owenton joined the Partnership for Safe Water program administered by the U.S. Environmental Protection Agency (EPA), American Water Works Association and other water-related organizations. Kentucky American Water's Kentucky River Station II joined the Partnership for Safe Water when it began operation in 2010. The Partnership is a voluntary commitment to continued improvement designed to help utilities provide safer water to millions of Americans by implementing prevention programs above those required by law. These preventive measures focus on improving treatment plant performance, thereby increasing protection of public health.



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 at (800-426-4791).

To ensure tap water is safe to drink, the U.S. 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.

Chloramines

Chloramines are a state- and federally-approved alternative to free chlorine, which provide good distribution disinfection while minimizing disinfection byproduct formation.

We are pleased to let our customers know that in January 2014 we began pumping water to Owenton customers from our new water treatment plant on pool 3 of the Kentucky River. The 20 million gallon per day water treatment plant is named Kentucky River Station II at Hardin's Landing. This plant draws water from the Kentucky River and uses chloramines for disinfection. Based upon the treatment processes we believe our customers will notice improved water quality as a result of this change.

Chloramines are the same as chlorine for all typical water uses; however, chloramines must be removed from water used in kidney dialysis and fish keeping. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis waters and your pet store or veterinarian for questions regarding water used for fish and other aquatic life. For more information about chloramines, please contact our Customer Service Center at (800) 678-6301.

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.

Commonly Asked Questions

Why do I have cloudy or milky water?

Occasionally your water may look cloudy or milky. Cloudy or milky-looking water is usually the result of lots of tiny air bubbles suspended in the water. The bubbles are so small that they are almost invisible, but together they look like someone poured milk in your water. Our water has dissolved air in it all of the time, but it has more during the colder months. When the colder water warms in your hot water heater or in the pipes of your home, it can no longer

hold all of the dissolved air, so air bubbles appear. There is nothing that Kentucky American Water can do to remove these air bubbles from the water, but be assured that these bubbles will clear on their own as the water warms up. If you allow a glass of water to stand for a few moments, the air bubbles will rise to the surface. This phenomenon is called entrained air, does not affect the quality of your water and is not harmful to consume. If the water does not clear from the bottom up, please contact our Customer Service Center at (800) 678-6301.

Why do I have brown or yellow water?

The internal plumbing of your house may be the culprit if discolored water only appears for a minute or two after your tap is turned on. Since iron is an essential nutrient, this condition poses no health hazard. If the discoloration bothers you, however, flush the tap until the water becomes clear, saving the flushed water for iron-loving plants. If the discoloration is detected only in your hot water supply, it is likely an indication of an issue with your hot water heater. You should consult your owner's manual for instructions and warnings regarding flushing your hot water heater or contact a licensed plumber.

Sediments in water mains sometimes get stirred up when fire hydrants are used and when the flow of water in mains is changed. These sediments may cause your water to turn brown or yellow. Wait 30 to 40 minutes after you notice the discolored water, and try turning on the cold water in your bathtub for a minute or two. You'll probably notice that it clears right away, since sediments settle quickly back to the bottom of water mains. Discolored water due to sediments poses no known health threat, but for aesthetic reasons you should avoid doing laundry until the water color clears. If the water does not clear after a few minutes, please contact our Customer Service Center at (800) 678-6301.

Is there lead in my water?

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Kentucky 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/index.cfm>. Kentucky American Water remains in full compliance with all of the requirements pertinent to lead and copper in drinking water.

What is the difference between "hard" and "soft" water?

Hardness is a measure of the concentration of two minerals (calcium and magnesium) naturally present in water. Excessive hardness can cause scale (white spots) to be



deposited in boilers, pipelines, faucet aerators and shower heads. Hard water also requires the use of large amounts of laundry soap to achieve the desired results. The use of water softeners adds sodium to the water, which acts as a softening agent. Soft water is either water that is low in calcium or magnesium, or water that has been treated in a softener. Hardness levels leaving our treatment plant in 2014 ranged from 79 (moderately hard) to 289 ppm (very hard) or 5 to 17 grains per gallon.

How much sodium is in my water?

The sodium level is approximately 12 ppm.

What is the pH (acidity) range of my water?

Water leaving our water treatment plant averaged 7.4 pH units. A pH of 7.0 is considered neutral – neither acidic nor basic.

Is there fluoride in my water?

Yes. Kentucky American Water is required by law to add fluoride to a level of near 1 ppm to assist in the prevention of dental cavities. The average fluoride level in our distribution system is 1.14 ppm.



There's a lot more to your water bill than just water.

When you turn on the tap, it's easy to see what your water bill buys. What's not as easy to see is what it takes to bring 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. The scientists, engineers, and maintenance crews working around the clock to make sure that water is always there when you need it. Your water payments are helping to build a better tomorrow by supporting needed improvements that will keep water flowing for all of us—today and well into the future. All for less than a penny a gallon.

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Protecting Our Water Supply – Backflow Prevention

Kentucky American Water has a backflow prevention program that ensures 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, please visit our web site at www.kentuckyamwater.com, or contact Senior Cross Connection Control Specialist Kenny Roney at kenny.roney@amwater.com or (859) 268-6310.

Unregulated Contaminant Monitoring Rule 3

Monitoring was performed by Kentucky American Water and Georgetown Municipal Water and Sewer during 2013 and 2014 respectively under the U.S. Environmental Protection Agency (EPA) Unregulated Contaminant Monitoring Rule 3 (UCMR 3). Unregulated contaminants are those that don't have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard.

Contaminants that were detected as part of the UCMR 3 monitoring are included in the Water Quality Results table. For a report containing all testing performed under the UCMR 3 rule, please contact our Customer Service Center at (800) 678-6301.



Water Quality Testing

Kentucky American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the following tables. While most monitoring was conducted in 2014, certain substances are monitored less than once per year because the levels do not change frequently.

We are pleased to report that during the past year, the water delivered to your home or business complied with, or exceeded, all state and federal drinking water standards. Although all of the substances listed below are under the Maximum Contaminant Level (MCL) set by the U.S. Environmental Protection Agency, we believe it is important



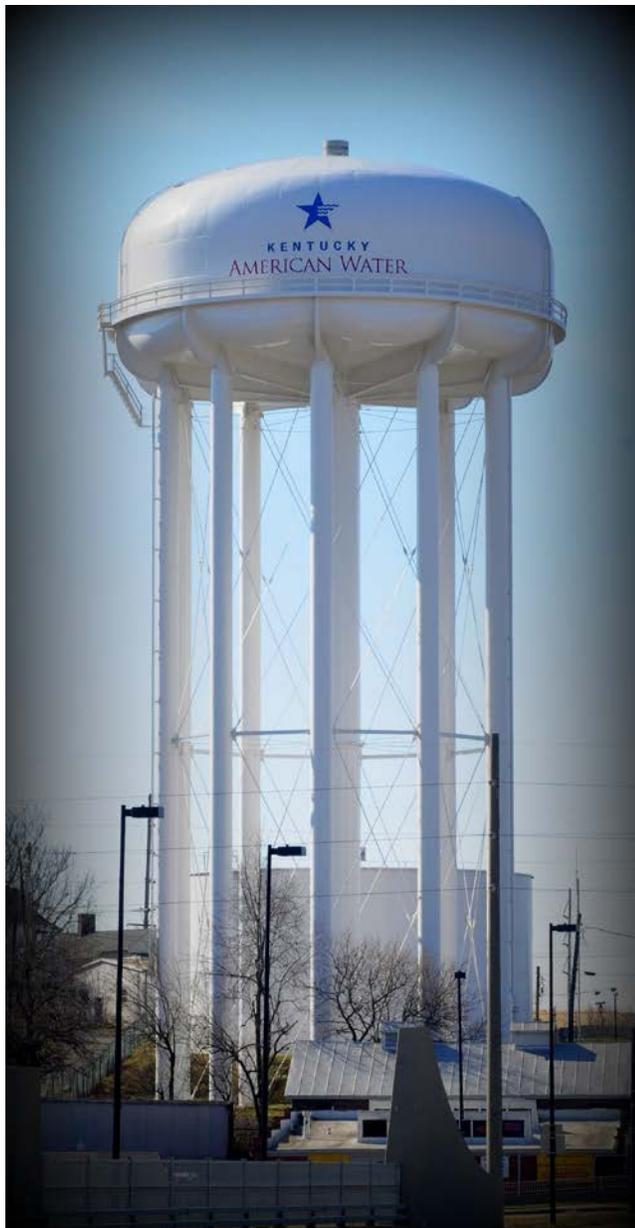
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that you know exactly what was detected and how much of the substance was present in the water.

For help with interpreting this table, see “How to Read This Table.”

Tap vs. Bottled Water

The water provided by Kentucky American Water must meet more intensive EPA testing requirements than bottled water, which is regulated by the Food and Drug Administration (FDA). In addition, our award-winning quality water is produced at less than \$0.01 a gallon, compared to bottled water that typically costs well over \$1 a gallon.



How to Read This Table

Start by finding a Substance, and then read across to find the information about that substance. The Year Sampled is 2014 or prior years. 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 generally better). Range tells the highest and lowest amounts measured. A Yes under Compliance Achieved means the amount of the substance met government requirements. Typical Source tells where the substance usually originates.

Definitions of Terms Used in This Report

- AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- MCL (Maximum Contaminant Level): 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.
- MCLG (Maximum Contaminant Level Goal): 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.
- MRDL (Maximum Residual Disinfectant Level): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- MRDLG (Maximum Residual Disinfectant Level Goal): 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 contamination.
- mrem/year (millirems per year): A measure of radiation absorbed by the body.
- 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): Measure of radioactivity in water.
- pH: A measurement of acidity, 7.0 being neutral
- 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 picograms per liter.
- TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.



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Water Quality Results

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

Substance (units)	Year Sampled	MCL	MCLG	Owenton Area Customers				Glencoe Area Customers				New Columbus Area Customers						Wheatley Area Customers		Compliance Achieved	Typical Source
				Kentucky American Water - Owenton Water Plant		Kentucky American Water - KRS II at Hardin's Landing		Warsaw Water Works		Gallatin County Water		Kentucky American Water - Owenton Water Plant		Kentucky American Water - KRS II at Hardin's Landing		Georgetown Municipal Water and Sewer System		Carroll County Water District			
				Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High		
Alpha emitters (pCi/L) ¹	2014	15	0	ND	ND	ND	NA	2.62	2.62 to 2.62	0.8	0.0 to 0.8	ND	NA	ND	NA	ND	NA	3.1	3.1 to 3.1	Yes	Erosion of natural deposits
Barium (ppm)	2014	2	2	NA	NA	ND	ND	0.06	0.006 to 0.06	0.035	0.0 to 0.035	NA	NA	ND	ND	0.024	NA	0.036	0.036 to 0.036	Yes	Discharge from petroleum refineries; Fire retardants; Ceramics; Electronics; Solder
Beta or photon emitters (pCi/L) ¹	2014	50	0	ND	NA	ND	NA	2.11	2.11 to 2.11	ND	NA	ND	NA	ND	NA	ND	NA	NA	NA	Yes	Decay of natural and man-made deposits
Combined radium (pCi/L) ²	2014	2	2	ND	NA	ND	NA	1.425	1.425 to 1.425	2.9	1.2 to 2.9	ND	NA	ND	NA	1.5	NA	0.54	0.54 to 0.54	Yes	Erosion of natural deposits
Fluoride (ppm)	2014	4	4	1.22	0.96-1.22	1.41	0.9-1.41	1.1	1.1 to 1.1	1.35	0.83 to 1.35	1.22	0.96-1.22	1.41	0.9-1.41	1.19	0.87-1.19	1.0	0.8 to 1.39	Yes	Water additive that promotes strong teeth
Nitrate (ppm)	2014	10	10	NA	NA	0.34	NA	5.75	4.64 to 5.75	7.11	4.73 to 7.11	NA	NA	0.34	NA	3.5	2.5-3.5	6.29	5.82 to 6.29	Yes	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
Total Organic Carbon (ppm) ³	2014	TT	NA	2.6	2.10-2.31	1.61	0.79-2.43	NA	NA	NA	NA	2.6	2.10-2.31	1.61	0.79-2.43	1.17	1.00-1.96	NA	NA	Yes	Naturally present in the environment
Turbidity (NTU) ⁴	2014	TT	NA	0.089	100% Lowest Monthly	0.11	100% Lowest Monthly	NA	NA	NA	NA	0.089	100% Lowest Monthly	0.11	100% Lowest Monthly	0.13	100% Lowest Monthly	NA	NA	Yes	Soil runoff
Uranium (ppb) ⁵	2014	20	3	ND	NA	ND	NA	0.29	0.216 - 0.34	1	0 to 1	ND	NA	ND	NA	2.2	NA	0.27	0.27 to 0.27	Yes	Erosion of natural deposits
Chromium (ppb) ⁶	2013	100	100	NA	NA	0.7	ND-0.70	NA	NA	NA	NA	NA	NA	ND	ND-0.70	0.723	ND-0.723	NA	NA	Yes	Discharge from steel and pulp mills; Erosion of natural deposits

Unregulated Substances (Measured on the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	MCL	MCLG	Owenton Area Customers				Glencoe Area Customers				New Columbus Area Customers				Wheatley Area Customers		Typical Source		
				Kentucky American Water - Owenton Water Plant		Kentucky American Water - KRS II at Hardin's Landing		Warsaw Water Works		Gallatin County Water		Kentucky American Water - Owenton Water Plant		Kentucky American Water - KRS II at Hardin's Landing		Georgetown Municipal Water and Sewer System			Carroll County Water District	
				Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High	Highest Value	Range Low-High		Highest Value	Range Low-High
Chromium (VI) (ppb) ⁶	2013	NA	NA	NA	NA	0.08	0.04-0.08	NA	NA	NA	NA	NA	NA	0.08	0.04-0.08	0.17	ND-0.17	NA	NA	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Molybdenum (ppb) ⁶	2013	NA	NA	NA	NA	1.50	ND-1.50	NA	NA	NA	NA	NA	NA	1.50	ND-1.50	2.05	ND-2.05	NA	NA	Naturally-occurring element found in ores and present in plants, animals and bacteria
Strontium (ppb) ⁶	2013	NA	NA	NA	NA	226	140-226	NA	NA	NA	NA	NA	NA	226	140-226	156	18.7-156	NA	NA	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium (ppb) ⁶	2013	NA	NA	NA	NA	0.4	ND-0.40	NA	NA	NA	NA	NA	NA	0.4	ND-0.40	0.421	ND-0.421	NA	NA	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Chlorate (ppb) ⁶	2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327	168-327	NA	NA	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide

Regulated Substances (Measured in the Distribution System)

Substance (units)	Year	MCL	MCLG	Highest RAA	Range Low-High	Compliance	Typical Source
Total Trihalomethanes (ppb) ⁷	2014	80	NA	68	14 - 108	Yes	By-product of drinking water disinfection
Haloacetic Acids (ppb) ⁷	2014	60	NA	57	0 - 68	Yes	By-product of drinking water disinfection
Chlorine (ppm) ⁸	2014	MRDL = 4	MRDLG = 4	1.0	0.5 - 2.0	Yes	Water additive used to control microbes
Chloramine (ppm) ⁹	2014	MRDL = 4	MRDLG = 4	2.7	0.4 - 5.1	Yes	Water additive used to control microbes
Chromium (ppb) ¹⁰	2013	100	100	0.5	ND - 0.5	Yes	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation

Bacterial Results (Measured in the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Highest Percentage Detected	Compliance Achieved	Typical Source
Total Coliform	2014	5% Positive	NA	2%	Yes	Naturally present in the environment

Regulated Substances (Measured at the Customer's Tap)

Substance (units)	Year Sampled	Action Level	MCLG	90th Percentile	Number of Samples	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Lead (ppb) ¹¹	2013	15	0	4	21	0	Yes	Corrosion of household plumbing systems
Copper (ppm) ¹¹	2013	1.3	1.3	0.29	21	0	Yes	Corrosion of household plumbing systems

- Alpha and Beta or Photon Emitters: The MCL for beta or photon emitters is 4 mrem/year (millirems per year is a measure of radiation absorbed by the body). The results in the table are reported in picoCuries/liter (pCi/L). EPA considers 50 pCi/L the level of concern for beta emitters. Kentucky American Water sampled for Alpha and Beta emitters in 2014. Warsaw Water Works sampled for Alpha and Beta Emitters in 2010. Gallatin County Water sampled for Alpha emitters in 2014. Georgetown Municipal Water and Sewer System sampled for Beta photon emitters in 2013. Carroll County Water District sampled for Alpha emitters in 2009.
- Combined Radium: Radium-226 and Radium-228 concentrations added together. Kentucky American Water-Northern Division sampled for Combined Radium in 2014. Carroll County Water District sampled for Combined Radium in 2010. Warsaw Water Works sampled for Combined Radium in 2010.
- Total Organic Carbon: Although the concentration is listed as ppm, the values shown are ratios that are 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.
- 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. Groundwater systems are not required to monitor for turbidity or to meet the TT for turbidity removal.
- Uranium: Kentucky American Water sampled for Uranium in 2008. Warsaw Water, Carroll County Water and Georgetown Municipal Water and Sewer System sampled for Uranium in 2013.
- UCMR3: Results in table are for 2013 quarterly monitoring at the Kentucky River Station II at Hardin's Landing treatment plant and 2014 monitoring at Georgetown Municipal Water and Sewer System. Chromium is a regulated contaminant that was tested with the rest of the UCMR 3 constituents.
- Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAAs): Compliance is based on the highest LRAA (locational running annual average) that is calculated quarterly. The highest quarterly LRAA is the measured value in the table.
- Chlorine: The highest RAA for free chlorine in the Warsaw Water Works, Gallatin County Water and Carroll County Water area is 1.0 ppm with a Low-High range of 0.5 ppm to 2.0 ppm.
- Chloramine: The highest RAA for total chlorine or chloramines in the New Columbus area is 2.4 ppm with a Low - High range of 1.3 ppm to 2.4 ppm.
- UCMR 3: Results in table are for 2013 quarterly monitoring done in the Kentucky American Water distribution system. Chromium is a regulated contaminant that was tested with the rest of the UCMR 3 constituents.
- Lead and Copper: Compliance is achieved when the results for at least 90% of samples collected from water standing in contact with plumbing for at least 6 hours are below the Action level. Kentucky American Water conducted lead and copper sampling in 2013 with the 90th Percentile for lead 4 ppb and for copper 0.29 ppm.