

2014 Annual Water Quality Report

Central Division
Ford Hampton Area
PWS ID: KY0340250



Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó 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.

Sincerely,

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>.

Source Water Information

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:



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WE CARE ABOUT WATER. IT'S WHAT WE DO.®

- **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 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.

All of the water for our customers in the Ford Hampton service area is provided by Winchester Municipal Utilities (WMU), Public Water System Identification Number - KY0250473. WMU's raw (untreated) water sources are the Kentucky River Pool 10 and the Carroll E. Ecton Reservoir, which are surface water sources. Pool 10 of the Kentucky River is approximately 25 miles in length extending upriver between Clark and Madison counties from a lock and dam located at Fort Boonesboro. The Kentucky River supplied the majority of the water treated in 2014. The remainder was obtained from the Carroll E. Ecton Reservoir located near the WMU water treatment facilities on Water Works Road in southern Clark County.

Protecting Your Water

The Kentucky Division of Water approved a Source Water Assessment and Protection Plan for WMU in 2003. An analysis of the susceptibility of the Winchester water supply to contamination indicates that this susceptibility is generally moderate, but there are a few areas of high concern. Several highway bridges, a segment of railroad, areas of row crops, three active Superfund Sites, three solid waste generators and/or transporters, and impaired streams occur in the immediate area of Winchester's Kentucky River intake. An accidental release of toxic materials from a bridge or railroad could pose an immediate threat to Winchester's Kentucky River intake. There are numerous permitted operations and activities and other potential contaminant sources of moderate concern within the watershed that cumulatively increase the potential for the release of contaminants within the area. These potential contaminant sources include everything from large capacity septic systems, to major roads, to underground storage tanks, to Tier II hazardous chemical users. A copy of the completed Source Water Assessment and Protection Plan may be viewed by calling the Watershed Management Branch of the Kentucky Division of Water at (502) 564-3410. 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.

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, since they contain hazardous chemicals that can reach our source water.
- Picking up after your pets.
- Disposing of chemicals properly and taking 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. For example, the company participates in annual riparian tree planting events to enhance our source water protection, and sponsors and participates in the annual River Sweep on the Kentucky River, coordinated by the Ohio River Valley Sanitation Commission (ORSANCO).

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 may 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. 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 (FDA) establish limits for contaminants in bottled water that must provide the same protection for public health. Winchester Municipal Utilities has a single water treatment plant located on Water Works Road in Clark County. Its treatment processes are designed to reduce contaminant concentrations and to provide maximum protection against microbial and viral pathogens that can be naturally present in surface waters.

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.

Information on the Internet

The U.S. EPA and Centers for Disease Control websites provide a substantial amount of information relating to



water sources, water conservation and public health. The Kentucky Division of Water Drinking Water Branch has a website that contains useful information as well. Visit these sites at the addresses below:

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>

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.

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.



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. Winchester Municipal Utilities has conducted monthly monitoring for *Cryptosporidium* in their raw water sources as required by the rule. They have detected a very small amount of the organism in the Kentucky River a few times during this testing. Based on the results of their *Cryptosporidium* monitoring to date, no additional treatment will be required by the new U.S. EPA regulation.

Special Information about Lead in Drinking Water

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

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.

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 usually in 2014 or the prior year. **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 **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 Unit):** 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.

Water Quality Testing

Kentucky American Water and Winchester Municipal Utilities conduct extensive monitoring during the year. The results of our monitoring are reported in the following table. While most monitoring was conducted in 2014, 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 was detected and how much of the substance was present in the water.

Unregulated Contaminant Monitoring Rule 3

Monitoring was performed during 2013 and 2014 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 Results

Regulated Substances (Measured by Winchester Municipal Utilities, KY0250473, on Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	MCL	MCLG	Winchester Municipal Utilities		Compliance Achieved	Typical Source
				Highest Value	Range Low-High		
Combined Radium (pCi/L) ¹	2014	5	0	1.53	1.53 to 1.53	Yes	Erosion of natural deposits
Barium (ppm)	2014	2	2	0.017	0.017 - 0.017	Yes	Discharge from petroleum refineries; Fire retardants; Ceramics; Electronics; Solder
Fluoride (ppm)	2014	4	4	1.4	0.75 - 1.4	Yes	Water additive that promotes strong teeth
Total Organic Carbon (ppm) ²	2014	TT	NA	1.33	1.17 - 2.53	Yes	Naturally present in the environment
Turbidity (NTU) ³	2014	TT	NA	3.1	98% monthly lowest	No	Soil runoff
Chromium (ppb) ⁴	2014	100	100	0.27	ND - 0.27	Yes	Discharge from steel and pulp mills; Erosion of natural deposits

Unregulated Substances (Measured by Winchester Municipal Utilities, KY0250473, on Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	MCL	MCLG	Highest Value	Range (Low-High)	Compliance Achieved	Typical Source
Chromium-6 (ppb) ⁴	2014	NA	NA	0.08	ND - 0.08	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
Strontium (ppb) ⁴	2014	NA	NA	260	220 - 260	Yes	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)	2014	NA	NA	0.35	ND - 0.35	Yes	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Chlorate (ppb) ⁴	2014	NA	NA	23	ND - 23	Yes	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide

Regulated Substances (Measured in the Distribution System by Kentucky American Water, KY0340250)

Substance (units)	Year Sampled	MCL	MCLG	Highest RAA	Range Low-High	Compliance Achieved	Typical Source
Total Trihalomethanes (ppb) ⁵	2014	80	NA	68	14 - 108	Yes	By-product of drinking water disinfection
Haloacetic Acids (ppb) ⁵	2014	60	NA	57	0 - 68	Yes	By-product of drinking water disinfection
Chlorine (ppm)	2014	MRDL = 4	MRDLG = 4	0.82	0.3 - 1.5	Yes	Water additive used to control microbes

Regulated Substances (Measured at the Customer's Tap by Kentucky American Water, KY0340250)

Substance (units)	Year Sampled	Action Level	MCLG	90th Percentile	Number of Samples	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Copper (ppm) ⁶	2012	1.3	1.3	0.14	55	0	Yes	Corrosion of household plumbing systems

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 in the Distribution System by Kentucky American Water, KY0340250)

Substance (units)	Year Sampled	MCL	MCLG	Highest RAA	Range Low-High	Compliance Achieved	Typical Source
Chromium (ppb) ⁷	2013	100	100	0.3	ND - 0.3	Yes	Discharge from steel and pulp mills; Erosion of natural deposits



Unregulated Substances (Measured in the Distribution System by Kentucky American Water, KY0340250)

Substance (units)	Year Sampled	MCL	MCLG	Highest Value	Range (Low-High)	Compliance Achieved	Typical Source
Chromium-6 (ppb) ⁷	2013	NA	NA	0.11	ND - 0.11	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
Strontium (ppb) ⁷	2013	NA	NA	515	117 - 515	Yes	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) ⁷	2013	NA	NA	1.0	ND - 1.0	Yes	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst

- 1. Combined Radium:** Radium-226 and Radium-228 concentrations added together.
- 2. 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. Total organic carbon data are from Winchester Municipal Utilities. The number reported in the Highest Value column is actually the lowest RAA, calculated quarterly, for the year.
- 3. 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. Turbidity data are from samples collected by Winchester Municipal Utilities. Please note that Winchester Municipal Utilities had a filtered water sample taken in January 2014 with a turbidity of 3.10 NTU, which is above the regulated limit of 1 turbidity unit. Appropriate action was taken to quickly restore compliance with the turbidity standard. A notice was sent to customers in May 2014 explaining this incident.
- 4. Unregulated Contaminant Monitoring Rule 3 (UCMR3):** Results in table are for 2014 monitoring by the Winchester Municipal Utilities. Chromium is a regulated contaminant that was tested with the rest of the UCMR 3 constituents.
- 5. 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.
- 6. 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. Lead and copper results are from samples collected by Kentucky American Water. The 90th percentile for lead was below the detection limit.
- 7. Unregulated Contaminant Monitoring Rule 3 (UCMR3):** Results in table are for 2013 quarterly monitoring. Chromium is a regulated contaminant that was tested with the rest of the UCMR 3 constituents. All detections are from the distribution system of the Ford Hampton area.

