



# Barbourville Utility Commission

**Serving Barbourville Since 1938**

## ***Annual Drinking Water Quality Report 2010***

**P.O. Box 1600  
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Barbourville, KY 40906  
606-546-3187  
PWSID # 0610016**

This report is to inform you about the excellent water and services that we deliver each day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect water resources. We are committed to ensuring the quality of your water remain at the highest level and the price at the lowest level as we meet the needs of our community.

The source of your drinking water is surface water from Laurel Lake. The intake for the water system is located on Craig's Creek near Keavy. The Barbourville Utility Commission also maintains a surface water intake on the Cumberland River at Barbourville; this intake is used in emergency situations. A source water assessment plan has been developed by the Cumberland Valley ADD Board, 342 Old Whitley Road London, KY 40743, with the following recommendations: Activities and land uses upstream of Barbourville Utility Commission's source of water can pose potential risks to your drinking water. Under certain circumstances contaminants could be released that would pose challenges to water treatment or even get into your drinking water. These activities, and how they are conducted, are of interest to the entire community because they potentially affect your health and the cost of treating your water. Activities immediately upstream of your water supply intake are of special concern because they provide little response time to the water system operators. An analysis of the susceptibility of the Barbourville water supply to contamination indicates that this susceptibility is borderline for the primary intake on Laurel Lake. Barbourville's proposed recommendations for Laurel Lake are plans to continue its protection measure as follows: (1) Communicate with USFS and local power companies to limit or possibly eliminate the use of Herbicides and pesticides with the watershed; (2) Communicate with farmers either directly or through USDA to encourage best management practices in the use of pesticides and herbicides; (3) Visually monitor for changes in land use and use of roadway(s); (4) Work with applicable permitting agencies to discourage or deny permitting of activities within the watershed that would degrade water quality; and (5) Visually monitor areas

to insure that no "straight pipes" are in use or are installed in the future.

An analysis of the susceptibility of the emergency intake water supply to contamination indicates that this susceptibility is generally moderate.

The Barbourville Utility Commission routinely monitors for contaminants in your drinking water according to Federal and State regulations. The table enclosed within this report shows the results of our monitoring for the period of January 1, 2010 through December 31, 2010. 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 can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include **a.** microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **b.** inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; **c.** pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; **d.** organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, and septic systems; **e.** radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities. To ensure that tap water is safe to drink, U.S. 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 that shall provide the same protection for public health.

*Drinking water, including bottled drinking 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 1-800-426-4791.*

If you would like to present your questions directly to the water system you can contact Chris Brewer, P.E., MBA at 546-3187. You are also invited to attend the regular commission meetings held the fourth Wednesday of each month at 4:30 pm at our office at 202 Daniel Boone Drive in Barbourville.

## **Awards**

Each year the Kentucky Division of Water's Drinking Water program assesses the ability of the state's surface water treatment plants to meet more stringent goals for turbidity removal. These goals are based upon the Area-Wide Optimization Program (AWOP) that stresses improved treatment plant operations, maintenance, management and design to further protect the public from microbial contaminants. Lower turbidity levels in treated water have been shown to correlate with this improved protection of the public's health.

For 2010, the Barbourville Water Treatment Plant was recognized as being Optimized for 100% of the time for both settled and filtered water goals and is considered a "totally optimized plant" for turbidity removal.

## **Definitions**

This report may contain many terms and abbreviations you might not be familiar with. To help you better understand these terms we are providing the following definitions:

*Below Detection Levels (BDL)* - laboratory analysis indicates that the contaminant is not present.

*Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is a measure of cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

*Action Level* - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

*Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*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 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.

*Parts per million (ppm)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*Parts per billion (ppb)* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

*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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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. Barbourville Utility Commission 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>.

PARTICULATE TEST RESULTS					
	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation Y/N	Likely Source
1. Turbidity (NTU)	Never more than 1 NTU. Less than 0.3 NTU 95% of samples each month. (TT)	0.09	100	N	Soil runoff

## REGULATED CONTAMINANT TEST RESULTS

Contaminant [code] (units)	MCL	MCLG	Level Found	Range	Date of Sample	Violation Yes/No	Likely Source of Contamination
<b>Microbiological Contaminants</b>							
Total Organic Carbon (ppm) measured as ppm, but reported as a ratio	TT	N/A	1.0 (annual average)	1.0 – 1.0 (monthly ratios)	2010	N	Naturally present in the environment.

*Treatment Technique TT for TOC is based on the lowest running annual average of monthly ratio of the percent TOC removal achieved to the percent TOC removal required a minimum ratio of 1.0 is required to meet the treatment technique and be in compliance.*

<b>Inorganic Contaminates</b>							
Copper [1022] (ppm)	AL=1.3	1.3	0.037 (90 <sup>th</sup> percentile)	0.000 – 0.076	August 2009	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead [1030] (ppm) Sites exceeding action level: 1	AL = 15	0	2.0 (90 <sup>th</sup> percentile)	0 - 21	August 2009	N	Corrosion of household plumbing.
Fluoride [1025] (ppm)	4	2	1.10	0.87 – 1.28	September 2010	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Barium [1010]	2	2	0.018	0.018 – 0.018	February 2010	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	MRDL 4	MRDLG 4	1.04 (annual average)	0.21 – 1.73	2010	N	Water additive used to control microbes
Alpha emitters [4000] (pCi/L)	15	0	0.40	0.4 – 0.4	October 2008	N	Erosion of natural deposits
Combined radium (pCi/L)	5	0	1.00	1.00 – 1.00	October 2008	N	Erosion of natural deposits

PARTICULATE TEST RESULTS							
Haloacetic acids or HAA (ppb)	60	N/A	28 (system average)	21- 38 (Range of system sites)	2010	N	By-product of drinking water disinfection
TTHM [total trihalomethanes] (ppb)	80	0	48 (system average)	22 - 88 (Range of system sites)	2010	N	By-product of drinking water chlorination

**Water systems in Kentucky must test for 106 contaminants. Only those contaminants that were detected are included in the test results table. Additional tests are conducted daily during the treatment process to ensure the water quality remains high.**

*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)*

**Maximum Contaminant Levels (MCL):**

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Because of the September 11, 2001 terrorist attacks on the United States, all water systems are adding additional security features to their systems. The Barbourville Utility Commission is in the process of increasing security at all of its facilities.

Due to this increased security, we are asking all of our customers to help us to identify any suspicious activity that they may see. Beginning in the Summer of 2005 all Barbourville Utility Employees will be wearing uniforms with the Barbourville Utility Commission logo on the left shirt pocket. They will also have identification badges that will be worn at all times.

If you notice anyone working around any water facilities and they do not have a uniform and ID badge on, please contact either the Barbourville Utility Commission or the local Police. If anyone comes to your property to do work on any utility, please ask to see his or her ID badge and report any suspicious activity immediately. Although there is no specific threat against Barbourville's water system and the likely hood of any attack is very small, we must all do our part to protect our water system.

The Barbourville Utility Commission is doing all that we can to protect your drinking water from any threat.

**If you ever have any questions about your water or any of our other utility services, please feel free to call our office at 546-3187 Monday thru Friday from 8:00 am until 4:30 pm. And if you ever need after hours or weekend assistance you can call the Barbourville Water Treatment Plant at 546-3189.**

The Barbourville Utility Commission provides other service in addition to your drinking water. We provide Electric service, Sewer service as well as Cable TV and Internet services. If you would like to know more about these services, please feel free to call or come by our office.

We at the Barbourville Utility Commission work around the clock to provide you with the best quality water possible. We ask that all of our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.