



**CALVERT CITY  
MUNICIPAL WATER SYSTEM  
2015 WATER QUALITY REPORT**

PWSID # KY0790056

## [Introduction](#)

Welcome to the Calvert City Water Utility Annual Water Quality Report. We produce this report annually to provide our customers with information concerning the quality of potable water produced by Calvert Water and to report the results of the quality control testing that was performed by the system during the annual reporting period. We also provide insight regarding plans for ongoing improvements to quality, reliability and service. Copies of the report are available upon request at City Hall. The report is also available at the City of Calvert City Website ([www.calvertcity.com](http://www.calvertcity.com)) by selecting the Consumer Confidence Report link on the homepage. The report will be mailed only to those customers or other consumers of water produced by the system that request a printed copy.

## [Water Source Information](#)

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 and the (potential sources) 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 storm water runoff, wastewater discharges, oil and gas production, mining, or farming); pesticides and herbicides (storm water runoff, agricultural or residential uses); organic chemical contaminants, including synthetic and volatile organic chemicals (by-products of industrial processes and petroleum production, or from gas stations, storm water runoff, or septic systems); radioactive contaminants (naturally occurring, from oil and gas production or mining activities). In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food & Drug Administration (FDA) regulations establish limits for contaminants in bottled water to provide the same protection for public health.

Drinking water, including bottled water, may be reasonably 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 EPA Safe Drinking Water Hotline (800-426-4791).

The source of water used by the Calvert Water is groundwater. Groundwater is obtained from three (3) wells ranging in capacity from 700 to 1,000 gallons per minute located east of the corporate limits of Calvert City. Each well obtains water from an aquifer comprised of Quaternary Period continental deposits and alluvial sands and gravels. The quality of source water obtained from each well is very good, routinely complying with the requirements established by the USEPA for primary and secondary drinking water standards. To further enhance quality, water is processed through an anthracite and sand filter system. Following filtration, chlorine is added for disinfection and fluoride is added to reduce tooth decay. The hardness of our groundwater can be characterized as moderate to hard. Hardness is a measure of the mineral content in the water. Hardness is not known to cause adverse health effects but it can cause problems in industrial uses as a build-up of scale in piping, boilers and other equipment can occur. The current treatment process does not significantly reduce hardness. The Calvert City Water System is operated by a group of experienced certified operators licensed by the Kentucky Division of Water for treatment plant and distribution system operations. Calvert City has interconnection points with both the North Marshall Water District (PWSID 0790319) and the Paducah Water System (PWSID 0730533). These sources of supply are utilized only during emergencies.

The Calvert City Water Utility has implemented Wellhead Protection Plan (WHPP) for the source water area. A susceptibility analysis included in the plan characterizes the risk for potential contamination of the aquifer as a medium risk. Potential contamination sources include spills of hazardous materials along the adjacent railroad and highways, leaking fuel storage tanks, agriculture activities and on-site wastewater treatment systems. The plan provides procedures for emergency response and notification should a release or spill of hazardous materials occur within the approved wellhead protection area. Calvert Water will continue working with the Kentucky Dept. of Environmental Protection to verify that businesses and industries located in the wellhead protection area implement best management practices to reduce the potential for a release of hazardous materials to the environment. A copy of the 2015 Update of the WHPP is on file for public review at City Hall.

## [Water Quality Information](#)

Calvert Water conducts routine sampling and testing of the water provided to our customers. Samples are obtained at various points within the supply and distribution system in accordance with Federal and State regulations. Each year in this report, a table is included to report the measured concentrations or occurrences of regulated compounds and

contaminants. Only those compounds or contaminants that were found in excess of the reporting limits are shown in the table. The table also shows the maximum contaminant level (MCL) and the maximum contaminant

level goal (MCLG) for each compound, element or parameter. Calvert Water did not exceed the MCL or MCLG during 2015.

The data presented in this report is from the most recent testing completed in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the Kentucky Division of Water has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Unless otherwise noted, the report level is the highest level detected.							
<b>Regulated Contaminant Test Results</b>							
<b>Contaminant [code] (units)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Report Level</b>	<b>Range of Detection</b>	<b>Date of Sample</b>	<b>Violation Y/N</b>	<b>Likely Source of Contamination</b>
<b>Radioactive Contaminants</b>							
Radium-228[4030] (pCi/l)	5	0	2.1	2.1 to 2.1	Oct 2014	N	Erosion of natural deposits
Combined Radium [4010](pCi/l)	5	0	3.6	3.6 to 3.6	Oct 2014	N	Erosion of natural deposits
<b>Inorganic Compounds</b>							
Barium [1010](ppm)	2	2	0.023	.023 to .023	Feb 2014	N	Drilling wastes; metal refineries; erosion of natural deposits
Chromium, Total [1020] (ppb)	100	100	2.9	2.9 to 2.9	Feb 2014	N	Discharge from steel and pulp mills; erosion of natural deposits
Copper [1022](ppm)	AL=1.3	1.3	0.0046	0.0046 to 0.0046	Feb 2015	N	Corrosion of household plumbing systems
Flouride [1025](ppm)	4	4	0.8	0.8 to 1.39	Jan 2015 - Dec 2015	N	Water additive which promotes strong teeth
Nitrate [1040](ppm)	10	10	0.5	0.6 to 0.6	Dec 2015	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Lead and Copper Rule</b>							
Copper [1022](ppm) Sites exceeding action level 0	AL=1.3	1.3	0.053 (90th percentile)	0.0063 to 0.114	Jul 2013	N	Corrosion of household plumbing systems
<b>Disinfectants/Disinfection By-Products and Precursors</b>							
Chlorine (ppm)	MRDL = 4	MRDLG=4	1.14 Average	0.57 to 1.35	Jan 2015 - Dec 2015	N	Water additive to control microbes
Haloacetic Acids (HAAS) [2456] ppb	60	N/A	1	0 to 1	Jul 2015	N	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) [2950] ppb	80	N/A	1	1 to 1	Jul 2015	N	By-product of drinking water disinfection

## Definitions and Abbreviations

**Action Level (AL)** – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

**Maximum Contaminant Level (MCL)** - The highest level of 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 contaminant in drinking water below which there is no known or expected risk in health. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** – the highest level of disinfectant allowed in drinking water.

This is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG)** – the level of drinking water disinfectant at 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.

**Not Applicable (N/A)** – does not apply

**Parts per Million (ppm)** - or milligrams per liter (mg/l) or one ounce in 7,350 gallons of water.

**Parts per Billion (ppb)** - or micrograms per liter (µg/l) or one ounce in 7,350,000 gallons of water

**Picocuries per liter (pCi/L)** – measure of radioactivity

Lead has not been detected above report levels in samples obtained for the Calvert Water distribution system during the reporting period. 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. Calvert City 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>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune 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).

### System Improvements

The Calvert City Board of Public Utility Commissioners programs capital improvements through a formal planning process. The current Capital Improvements Plan (CIP) was adopted in 2013. During 2015, undersized 60 year old cast iron mains serving the Elder Street area were replaced with 6” PVC mains. The project included replacement of meter services and service lines within the project area.

Also, a project to add a new operations building at the treatment plant was initiated and additional properties were acquired to enable the installation of an additional 3 wells in the future.

In 2016, the replacement of undersized old cast iron and galvanized steel mains along Cypress and Chesnut Street as well as Connifer Lane is planned. We anticipate beginning construction work for this project in early summer. This project will improve system capacity, reliability and accessibility.

In addition, we plan to extend water mains into two areas with Calvert Water’s service area that are currently unserved.

The Board of Public Utility Commissioners is committed to provide high quality water services that are reliable and cost effective. The Board strives to manage the system in a proactive manner that expands services to meet emerging needs while preserving the integrity of the system. The Board meets the 2<sup>nd</sup> Tuesday of each month at 4:00 p.m. in City Hall located at 861 East 5<sup>th</sup> Ave. in Calvert City, Kentucky. The public is encouraged to attend meeting. Questions concerning this report or the Calvert Water System can be directed by mail to Roger Colburn, General Manager, Calvert Water & Sewer, P.O. Box 36, 861 E. 5th Ave., Calvert City, KY 42029, by e-mail to [rcolburn@calvertcity.com](mailto:rcolburn@calvertcity.com) or by phone (270)395-7138.