



# Murray Water System

## Water Quality Report for year 2015

KY0180306

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Meetings: City Hall, 104 North 5 th Street  
2nd & 4th Thursday each  
Meeting Dates and Time: month. 6:30PM

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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.

Murray Water Supply comes from a ground water source drawn from five wells located within the McNairy Formation Aquifer. As determined by the Wellhead Protection Plan phase II submittal the aquifers susceptibility to contamination has been determined to be a medium risk. Sources of potential impact include railroads, highways and an electric sub-station within groundwater recharge areas. Water systems in Kentucky must test for many contaminants. Only those contaminants that were detected are included in the test results table. For a complete listing of the tests actually conducted you may contact the water treatment plant office. Murray water routinely monitors for contaminants in your drinking water according to Federal and State laws. The table enclosed within shows the results of our monitoring for the period of 1/1/15 to 12/31/15. If you have questions about this report or concerning your water utility, please contact Greg Roberts at (270) 762-0345. More information, including water conservation tips can be found on the City of Murray website at [www.MurrayKy.gov](http://www.MurrayKy.gov). We at Murray Water Treatment work diligently to provide top quality water to every tap. Our water treatment operators are highly trained and certified by the state of Kentucky

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:

**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.

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

**Not Applicable (N/A)** - does not apply.

### Information 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. Your local public water system 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

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

**Parts per billion (ppb)** - or micrograms per liter, ( $\mu\text{g/L}$ ). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

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

**Parts per quadrillion (ppq)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - 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.

**Nephelometric Turbidity Unit (NTU)** - 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.

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>.

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

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.

	<b>Allowable Levels</b>	<b>Highest Single Measurement</b>	<b>Lowest Monthly %</b>	<b>Violation</b>	<b>Likely Source</b>
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.051	100	No	Soil runoff

### Regulated Contaminant Test Results

<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</b>	<b>Likely Source of Contamination</b>
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#### Microbiological Contaminants

Total Coliform Bacteria # or % positive samples	1	0	1	N/A	2015	No	Naturally present in the environment
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#### Radioactive Contaminants

Combined radium (pCi/L)	5	0	1.51	1.51 to 1.51	Feb-14	No	Erosion of natural deposits
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#### Inorganic Contaminants

Barium [1010] (ppm)	2	2	0.012	0.012 to 0.012	Feb-14	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.094 (90 <sup>th</sup> percentile)	0 to 0.34	Jun-13	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	1.1	1.1 to 1.1	Feb-14	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 1	AL = 15	0	7.3 (90 <sup>th</sup> percentile)	0 to 20	Jun-13	No	Corrosion of household plumbing systems

#### Disinfectants/Disinfection Byproducts and Precursors

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.25 (highest average)	0.84 to 1.55	2015	No	Water additive used to control microbes.
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	5 (high site average)	2.5 to 5.8 (range of individual sites)	2015	No	Byproduct of drinking water disinfection.

<b>Unregulated Contaminants (UCMR 3)</b>	<b>average</b>	<b>range (ppb)</b>	<b>date</b>
strontium	20.500	18 to 22	Mar-14

*EPA has not established drinking water standards for unregulated contaminants. There are no MCL's and therefore no violations if found.*