

# Dry Ridge Water District

## Water Quality Report 2015

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|--|---|---|--|
| Water System ID: KY0410107<br>Superintendent: James Rhoton<br>859-824-3335 | CCR Contact: James Rhoton<br>859-824-3335<br><a href="mailto:jamey.rhoton@cdrky.org">jamey.rhoton@cdrky.org</a> | Mailing Address:<br>PO Box 145<br>Dry Ridge, KY 41035 | Meeting location and time:<br>Dry Ridge City Building<br>First & Third Monday monthly at 6:00 PM |
|--|---|---|--|

The City of Dry Ridge purchases water from the Williamstown Municipal Water Department. Williamstown treats surface water from Lake Williamstown. An analysis of the susceptibility of the Williamstown Municipal Water Department public water supply at Lake Williamstown to contamination indicates that this susceptibility is generally moderate. There are some areas of concern. Agricultural areas located in the watershed for Lake Williamstown's intake introduce the potential of agricultural chemicals and runoff, activities that contribute to non-point source pollution. Bridges, railroads, and Tier II hazardous chemical users in the area introduce the potential for spills of hazardous materials. Other areas of concern include power line right-of-ways with potential herbicide use, and major roads located throughout the watershed. The following is a summary of the systems susceptibility to contamination, which is a part of the completed Source Water Assessment and Protection Plan (SWAP). The completed plan is available for inspection at the Williamstown City Building, 400 north Main Street, Williamstown, KY 41097.

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).

### 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 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 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.

**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, (µg/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.

**Variations & 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.

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

This report will not be mailed unless requested. Copies are available at our office. If you desire a copy to be mailed to you please contact our office.

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>D=Dry Ridge<br/>W=Williamstown</b>                            | <b>Allowable Levels</b>   | <b>Source</b> | <b>Highest Single Measurement</b> | <b>Lowest Monthly %</b> | <b>Violation</b> | <b>Likely Source of Turbidity</b> |
|--|---|---------------|-----------------------------------|-------------------------|------------------|-----------------------------------|
| Turbidity (NTU) TT<br>* Representative samples of filtered water | No more than 1 NTU*<br>Less than 0.3 NTU in 95% monthly samples | W=            | 0.13                              | 100                     | No               | Soil runoff                       |

**Regulated Contaminant Test Results**

| <b>Contaminant [code] (units)</b>   | <b>MCL</b> | <b>MCLG</b> | <b>Source</b> | <b>Report Level</b>                 | <b>Range of Detection</b> | <b>Date of Sample</b> | <b>Violation</b> | <b>Likely Source of Contamination</b>                          |
|---|------------|-------------|---------------|-------------------------------------|---------------------------|-----------------------|------------------|--|
| Combined radium (pCi/L)   | 5          | 0           | W=            | 1.5                                 | 1.5 to 1.5                | Nov-13                | No               | Erosion of natural deposits                                    |
| Barium [1010] (ppm)   | 2          | 2           | W=            | 0.009                               | 0.009 to 0.009            | May-15                | No               | Drilling wastes; metal refineries; erosion of natural deposits |
| Copper [1022] (ppm) sites exceeding action level 0                            | AL = 1.3   | 1.3         | D=            | 0.093 (90 <sup>th</sup> percentile) | 0.025 to 0.11             | Sep-13                | No               | Corrosion of household plumbing systems                        |
| Fluoride [1025] (ppm)   | 4          | 4           | W=            | 0.7                                 | 0.7 to 0.7                | May-15                | No               | Water additive which promotes strong teeth                     |
| Lead [1030] (ppb) sites exceeding action level 0                              | AL = 15    | 0           | D=            | 1.5 (90 <sup>th</sup> percentile)   | 0 to 1.9                  | Sep-13                | No               | Corrosion of household plumbing systems                        |
| Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios) | TT*        | N/A         | W=            | 1.08                                | 0.64 to 1.51              | 2015                  | No               | Naturally present in environment.                              |

\*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

|  |          |           |    |                        |                                   |      |             |  |
|--|----------|-----------|----|------------------------|-----------------------------------|------|-------------|--|
| Chlorine (ppm)                               | MRDL = 4 | MRDLG = 4 | D= | 1.14 (highest average) | 0.08 to 1.40                      | 2015 | No          | Water additive used to control microbes. |
| HAA (ppb) (Stage 1) [Haloacetic acids]       | 60       | N/A       | D= | 67 (average)           | 38 to 110 (range of system sites) | 2015 | <b>YES*</b> | Byproduct of drinking water disinfection |
| TTHM (ppb) (Stage 1) [total trihalomethanes] | 80       | N/A       | D= | 87 (average)           | 43 to 118 (range of system sites) | 2015 | <b>YES*</b> | Byproduct of drinking water disinfection |

\*The Division of Water (DOW) has granted Dry Ridge Water District an extension to continue using Stage 1 rules to determine compliance for the Disinfection By-product Rule (Stage 2) monitoring until September 30, 2016.

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing (did) to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 10/1/2015 – 12/31/2015 we did not complete all monitoring by failing to report or correctly report testing results for Haloacetic Acids, Trihalomethanes and the Operation Evaluation Level Report. Therefore, we could not verify the quality of your drinking water to the primacy agency during that time.

The table below lists the violations we received during 2015 and the actions taken to rectify the violations.

| <b>Violation</b>                             | <b>Begin Date</b> | <b>End Date</b> | <b>Explanation / Remedial Measures</b>   |
|--|-------------------|-----------------|--|
| 2016-9593913 – Haloacetic Acids MCL exceeded | 7/1/2015          | 9/30/2015       | Disinfection by-product MCL exceeded. Public notification provided. We continue to work with the City of Williamstown to minimize the formation haloacetic acids while ensuring we maintain an adequate level of disinfectant. |
| 2016-9593914 – Trihalomethanes MCL exceeded  | 7/1/2015          | 9/30/2015       | Disinfection by-product MCL exceeded. Public notification provided.  |

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| 2016-9593915 – Haloacetic Acids MCL exceeded                   | 10/1/2015 | 12/31/2015 | Disinfection by-product MCL exceeded. Public notification provided. |
| 2016-NOV to be issued – Trihalomethanes MCL exceeded           | 10/1/2015 | 12/31/2015 | Disinfection by-product MCL exceeded. Public notification provided. |
| 2016-9593918 – OEL Report for Haloacetic Acids                 | 10/1/2015 | 12/31/2015 | Failed to submit OEL for first quarter. Report has been submitted.  |
| 2016-700 – Monitoring for Trihalomethanes and Haloacetic Acids | 10/1/2015 | 12/31/2015 | Failed to submit two routine samples for disinfection by-products.  |

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

**Health Effects:** Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.