

Williamstown Municipal Water Department

Water Quality Report 2016

Water System ID: KY0410472 Superintendent: Josh Stinson 859-824-4210	CCR Contact: Josh Stinson 859-824-4210 jstinson@wtownky.org	Mailing Address: 400 North Main Street, Williamstown, KY	Meeting location and time: Williamstown City Building 1 st Monday & Tuesday monthly 7:00 PM
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Our surface water source is Williamstown Lake. The following is a summary of the systems susceptibility to contamination, which is a part of the completed Source Water Plan (SWAP). The completed plan is available for inspection at the Williamstown City Building, 400 North Main St. Williamstown, KY 41097. 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. 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).

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.

Variance & 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.

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.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.18	100	No	Soil runoff

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.008	0.008 to 0.008	Apr-16	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.136 (90 th percentile)	0.0226 to 0.19	Jul-15	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.5	0.5 to 0.5	Apr-16	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	2 (90 th percentile)	2 to 3	Jul-15	No	Corrosion of household plumbing systems
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.16 (lowest average)	0.88 to 2.22 (monthly ratios)	2016	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	1.00 (highest average)	0.37 to 1.51	2016	No	Water additive used to control microbes.
Chlorite (ppm)	1	0.8	0.720 (average)	0.24 to 0.83	2016	No	Byproduct of drinking water disinfection.
Chlorine dioxide (ppb)	MRDL = 800	MRDLG = 800	320	0 to 320	2016	No	Water additive used to control microbes.
HAA (ppb) (Stage 1) [Haloacetic acids]	60	N/A	99 (system average)	35 to 70 (range of system sites)	2016	YES*	Byproduct of drinking water disinfection
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	52 (high site average)	50 to 52 (range of individual sites)	2016	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 1) [total trihalomethanes]	80	N/A	89 (system average)	54 to 77 (range of system sites)	2016	YES*	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	59 (high site average)	55 to 59 (range of individual sites)	2016	No	Byproduct of drinking water disinfection.

*The Division of Water (DOW) granted Williamstown Municipal Water an extension to continue using Stage 1 rules to determine compliance for the Disinfection By-product Rule (Stage 2) monitoring until September 30, 2016. Under these rules, Williamstown Municipal Water was out of compliance for the first three quarters of 2016 for Haloacetic Acids (HAA) and Trihalomethanes (TTHM).

Other Contaminants

Cryptosporidium [oocysts/L]	0	TT (99% removal)	0 (positive samples)	3 (no. of samples)	2016	No	Human and animal fecal waste
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Fluoride (added for dental health)	Average	Range of Detection
	0.80	0.65 to 0.84
Sodium (EPA guidance level = 20 mg/L)	10.6	10.6 to 10.6

Secondary contaminants do not have a direct impact on the health of consumers and are not required in the Consumer Confidence Report. They are being included to provide additional information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Aluminum	0.05 to 0.2 mg/l	0.06	0.06 to 0.06	Apr-16
Chloride	250 mg/l	25.1	25.1 to 25.1	Apr-16
Copper	1.0 mg/l	0.0221	0.0221 to 0.0221	Apr-16
Corrosivity	Noncorrosive	-0.192	N/A	Apr-16
Fluoride	2.0 mg/l	0.5	0.5 to 0.5	Apr-16
pH	6.5 to 8.5	7.53	7.53 to 7.53	Apr-16
Sulfate	250 mg/l	19	19 to 19	Apr-16
Total Dissolved Solids	500 mg/l	148	148 to 148	Apr-16

Violations for Disinfection By-products

Even though the Division of Water granted an extension to continue using Stage 1 rules to determine compliance for disinfection by-products some of our sites still exceeded the MCLs for individual sites and we received the following violations.

Violation	Begin Date	End Date	Explanation / Remedial Measures
2016-9951356 – Haloacetic Acids MCL exceeded	1/1/2016	3/31/2016	Disinfection by-product MCL exceeded. Public Notification provided.
2016-9951357 – Trihalomethanes MCL exceeded	1/1/2016	3/31/2016	Disinfection by-product MCL exceeded. Public Notification provided.
2016-9951359 – Haloacetic Acids MCL exceeded	4/1/2016	6/30/2016	Disinfection by-product MCL exceeded. Public Notification provided.
2016-9951360 – Haloacetic Acids MCL exceeded	7/1/2016	9/30/2016	Disinfection by-product MCL exceeded. Public Notification provided.

TTHMs [Total Trihalomethanes]. 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.

Haloacetic acids, or HAA. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Violations 2016-9951358, 2017-9951361, and 2017-9951362

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 2016, we did not complete all monitoring by failing to report or correctly report testing for OEL, chlorine, and chlorites. Therefore, we could not verify the quality of your drinking water to the primacy agency during that time.

Listed below are the individual violations, time-periods, and actions taken.

(2016-9951358) During 1/1/2016 – 3/31/2016 we did not complete all monitoring by failing to report or correctly report testing for Haloacetic Acids and Trihalomethanes (OEL).

(2017-9951361) During November 2016, we did not complete all monitoring or testing for chlorine.

(2017-9951362) During 12/1/2016 – 12/31/2016 we did not complete all monitoring by failing to report or correctly report testing for chlorites.

For the Stage 2 DBPR requirements we monitor for trihalomethanes (THM) and haloacetic acids (HAA). The standard for THM is 0.080 mg/L and the standard for HAA is 0.060 mg/L. A calculation of analytical results is part of an Operational Evaluation Level Report (OEL) to determine the potential of exceeding these standards. The operational evaluation requirements are intended as an indicator of operational performance and to allow systems to identify proactive steps to remain in compliance. Failure to submit an evaluation report to the State in the required time frame is a violation and requires a public notification.

We failed to submit a sufficient number of chlorine readings on day 30 of November 2016. They have since been submitted.

We failed to submit the report showing we performed the required chlorite testing during 12/1/2016 – 12/31/2016. The report has since been submitted.

There is nothing you need to do. We failed to submit the OEL report, chlorine readings, and the chlorite report at the appropriate times. The reports have since been submitted.

For more information, please contact Josh Stinson at 859-824-4210 or 400 North Main Street, Williamstown, KY 41097

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.

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.