The City of Ashland

2018 Annual Drinking Water Quality Report

Overview

Since 1920, the City of Ashland has been providing the region with high quality drinking water at very affordable rates. The Ashland water system has grown to include a network of waterlines stretching approximately 300 miles, 12 water storage tanks, 18 pump stations and a state-of-the-art water treatment plant capable of producing up to 24 million gallons of crystal clear treated drinking water per day. With over 30 highly qualified certified water plant operators, water distribution operators and laboratory technicians on staff, we are committed to excellence in our stewardship of your water system.

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 a safe, clean, and reliable supply of drinking water. We want to assure you that we will continue to monitor, improve, and protect the water system and deliver a high quality product. The information contained within this report includes results from January through December of 2018.

Ashland Board of Commissioners

The City of Ashland Board of Commissioners meet at 12:00pm on the second Thursday of each month and 6pm on the fourth Thursday of each month in the commission chambers located at the City Building, 1700 Greenup Avenue, Ashland, KY 41101. Meetings are open to the public. For more information regarding the board meetings, please contact (606) 327-2001.

Ashland Water Quality Management Team

Mark Hall • Utility Director
Bill Stambaugh • Water Plant Superintendent & CCR Contact
Frank Worsley • Water Plant Chief Operator
Reed Downs • Water Distribution Superintendent
Dave Chappelle • Water Distribution Field Supervisor

City of Ashland
P.O. Box 1839
1700 Greenup Avenue
Ashland, KY 41105

Office Hours M – F
8:30am – 5:00pm

www.ashlandky.gov
Ashland Water Works PWSID-KY0100011

Contacts:

Customer Service Phone:	(606) 327-2018
Water Plant (24 hour emergency number)	(606) 327-2058
Water Distribution:	(606) 327-2041
Utility Director:	(606) 327-2008

2018 Water Infrastructure Investment

Catlettsburg Water Tank

Figure 1: Before

The City of Ashland Board of Commissioners appropriated funds for various distribution system upgrades in 2018.

One of the most important upgrades was the rehabilitation of the Catlettsburg Water Tank, built in 1963. Cleaning of this tank was vital to the overall efficiency of the distribution system. This capital project was essential for maintaining water quality and ensures the delivery of treated drinking water to Ashland's customer base.

The Repair and painting of the 1,000,000 gallon Catlettsburg Water Tank was completed over the summer of 2018.

Figure 2: After

The interior and exterior of the tank was recoated, the sidewall ladder was replaced, roof handrail sections with a step-off platform were installed and the vent was replaced with a frost-free roof vent.

Figure 3: Tank Interior After

Water Line Replacement

The City of Ashland maintains over 300 miles of water line. In an ongoing effort to maintain water quality and system reliability, approximately 1 mile of water line was replaced in 2018.

Purposeful capital investments, such as extensive water line replacement and projects like the Catlettsburg Water Tank rehabilitation, are representative of the fact that the Ashland Board of Commissioners is dedicated to improving infrastructure and providing quality drinking water in the most efficient manner.

Our Source Water

The Ohio River

The source of water for our drinking water treatment plant is surface water from the Ohio River. An analysis of the source water indicates that its susceptibility to contamination is moderately high. Within the Kentucky portion of the protection zone alone, there are 535 identified potential contaminant sources. Of these, 302 have a susceptibility rating of high, 205 are rated medium and 28 are rated low. Not all contaminants with a high rating threaten the water supply equally. Oil spills, which receive a high rating, may float by the intake without a noticeable effect; whereas chemicals that mix with the water present a different kind of threat. The City of Ashland also maintains a 25 million gallon reservoir allowing the intake to shut down for contaminants to pass. The reservoir provides a reliable source of raw water. The complete Source Water Assessment Plan is available for inspection at the FIVCO Area Development District office located in the Industrial Park at 32 FIVCO Court, Grayson, KY 41134.

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); and 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. Immunocompromised 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

The Ashland Water System has an ongoing lead and copper-monitoring program. The latest results for lead testing were completed in the July of 2017. Lead and Copper tests are required every three years. Although the City of Ashland has never been in violation of lead and copper regulations, we continually monitor the corrosivity of the finished water and we are actively proceeding with removal of many potential sources of lead contamination within the public system.

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. The City of Ashland 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*.

Definitions

Some or all of these definitions may be found in this report:

ACTION LEVEL (AL) - THE CONCENTRATION OF A CONTAMINANT WHICH, IF EXCEEDED, TRIGGERS TREATMENT OR OTHER REQUIREMENTS THAT A WATER SYSTEM SHALL FOLLOW.

BELOW DETECTION LEVELS (BDL) - LABORATORY ANALYSIS INDICATES THAT THE CONTAMINANT IS NOT PRESENT.

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.

VARIANCES & EXEMPTIONS (V&E) - STATE OR EPA PERMISSION NOT TO MEET AN MCL OR A TREATMENT TECHNIQUE UNDER CERTAIN CONDITIONS.

TREATMENT TECHNIQUE (TT) - A REQUIRED PROCESS INTENDED TO REDUCE THE LEVEL OF A CONTAMINANT IN DRINKING WATER.

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.

NOT APPLICABLE (N/A) - DOES NOT APPLY.

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. Copies of this report are available upon request by contacting our office during business hours.

To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.28	100	No	Soil runoff

Regulated Contaminant Test Results **Ashland Water Works**

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.036	0.036 to 0.036	Mar-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Chromium [1020] (ppb)	100	100	5.6	5.6 to 5.6	Mar-18	No	Discharge from steel and pulp mills; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.107 (90th percentile)	0.0026 to 0.392	Jul-17	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.70	0.7 to 0.7	Mar-18	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	4 (90th percentile)	0 to 9	Jul-17	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.59	0.59 to 0.59	Feb-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Synthetic Organic Contaminants including Pesticides and Herbicides							
Di(2-ethylhexyl)phthalate [2039] (ppb)	6	0	BDL	BDL to 2	Oct-18	No	Discharge from rubber and chemical factories
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.32 (lowest average)	1.00 to 1.79 (monthly ratios)	2018	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	1.04 (highest average)	0.2 to 1.93	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	51 (high site average)	14.8 to 77 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	74 (high site average)	21 to 122.9 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

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 addition 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	0.04	0.04 to 0.04	Mar-18
Chloride	250 mg/l	22.5	22.5 to 22.5	Mar-18
Copper	1.0 mg/l	0.0014	0.0014 to 0.0014	Mar-18
Corrosivity	Noncorrosive	-0.453	-0.453 to -0.453	Mar-18
Fluoride	2.0 mg/l	0.7	0.7 to 0.7	Mar-18
Manganese	0.05 mg/l	0.002	0.002 to 0.002	Mar-18
Odor	3 threshold odor number	2	2 to 2	Mar-18
pH	6.5 to 8.5	8.23	8.23 to 8.23	Mar-18
Sulfate	250 mg/l	76.2	76.2 to 76.2	Mar-18
Total Dissolved Solids	500 mg/l	195	195 to 195	Mar-18

Unregulated Contaminants (UCMR 4)	Average	Range (ppb)			Date
HAA5	47.950	34.2	to	62.8	Oct-18
HAA6Br	12.913	9.85	to	16.5	Oct-18
HAA9	60.175	44.7	to	78.2	Oct-18

	Average	Range of Detection		
Fluoride (added for dental health)	0.85	0.57	to	1.28
Sodium (EPA guidance level = 20 mg/L)	23.6	23.6	to	23.6

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those for which EPA has not yet established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our office during normal business hours.

Violations 2018-9951257 and 2018-9951258

Our water system recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

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 April and May 2018 we did not complete all monitoring or testing for turbidity, and therefore cannot be sure of the quality of your drinking water during that time.

We completed the required monitoring for turbidity by performing grab samples for analysis. We have a turbidimeter that records turbidity measurements automatically while the plant is in operation, but it was not working properly in April and May 2018. We failed to have our turbidimeter equipment repaired within 5 days, which resulted in these violations. We have since had our equipment repaired and we are maintaining the proper data on site for our inspector to review.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

Violation 2019-9951259

Our water system recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

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 August 2018, we did not complete all monitoring or testing for Total Coliforms, and therefore cannot be sure of the quality of your drinking water during that time.

Every month we are required to take 40 samples for Total Coliform bacteriological analysis in the distribution system and report those results to the Division of Water by the tenth of the following month. In August 2018, we analyzed all 40 samples, but we inadvertently assigned the same identification number to two of those results, which meant that only one of them could be entered in the state's database. By the time we realized the error and corrected it, the data submission was late. We have taken steps to ensure we do not duplicate laboratory sample identification numbers for our samples in the future.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

Violation 2019-808

Our water system recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

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 10/1/2018-12/31/2018, we did not complete all monitoring or testing for Disinfection Byproducts, and therefore cannot be sure of the quality of your drinking water during that time.

Each quarter we are required to pull samples in the distribution system for analysis of Disinfection Byproducts. These samples must be taken during a very specific window of time and we failed to take the samples during that prescribed timeframe in the fourth quarter of 2018. We took many other sets of samples during the fourth quarter as part of our process control monitoring, but those samples do not count for compliance. We have taken steps to ensure that the required samples are collected at the right time in the future.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

For more information, please contact Bill Stambaugh at 606-327-2058 or PO Box 1839, Ashland, KY 41105.

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 would like a copy mailed to you please contact our office.