THE CITY OF ASHLAND

2023 Annual Drinking Water Quality Report

Ashland Water Quality Management Team

Utility Director: *Mark Hall*
Water Plant Superintendent & CCR Contact: *Bill Stambaugh*
Water Plant Chief Operator: Jeff Camp
Water Distribution Superintendent: *Reed Downs*
Water Distribution Field Supervisor: *Dave Chappelle*

The City of Ashland Board of Commissioners meet at 12:00pm on the 2nd & 4th Thursday of each month *(with the exception of Oct, Jan, Feb, & Mar in which the 4th Thursday meeting is at 6:00pm)* 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) 385-3300.

Contacts

Customer Service: 606-385-3275
Water Plant: 606-385-3200
After Hours Urgent: 606-385-3200
Water Distribution: 606-385-3186
Utility Director: 606-385-3332

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

General 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 will not be mailed unless requested. If you would like a copy mailed to you please contact our office.*

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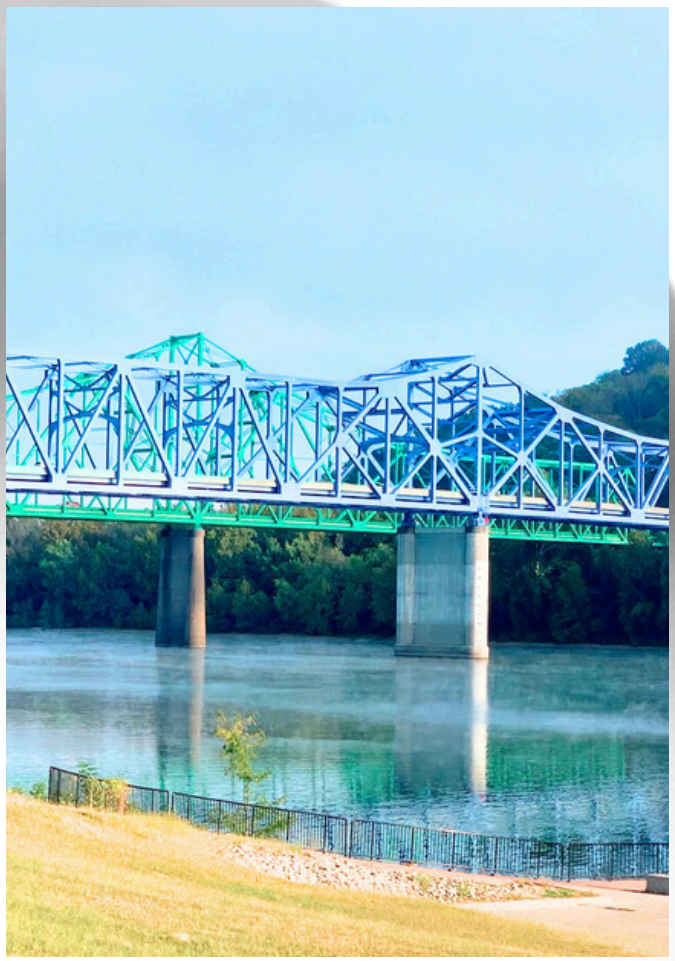
Pictured Above: The Statues of Venus, Genesis, & Vulcan located at the Port of Ashland on the Ohio River is the largest group of bronze sculptures placed on a single site in the United States.

Pictured Left: Bill Stambaugh, Ashland Water Treatment Plant Superintendent, performing routine lab analysis at the water treatment plant lab.

Our Source:
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 41143.

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).

Our Investment:

Infrastructure and People

With over $13.2 million appropriated for water system improvements in the 2024 fiscal year, the City of Ashland continues to invest into the future. Not only do we believe in capital investments, we feel investing in the growth and education of our employees is just as important. Through continued training and the achievement of higher levels of certification incentivized with pay, our staff is educated, experienced and dedicated to deliver high quality drinking water to the tap. Our treatment plant consists of a team of 10 Class IV-A, 2 Class III-A operators and 1 operator in training. We have 1 operator with Kentucky Microbiology Analyst Certification and certified by the KWWOA/KLA in laboratory analysis. Our drinking water distribution crew consists of 13-Class IV, 4-Class III, 1-Class II, 1-Class I certified operators.

The City of Ashland achieved Area Wide Optimization Program (AWOP) standards in 2023. The Area Wide Optimization Program (AWOP), established and implemented by USEPA, is a multi-state effort that the KY Division of Water has participated in since 1997. The primary goal of the program is is to maximize public health protection through optimization of existing water treatment and distribution facilities. The program promotes water quality and monitoring goals that exceed regulatory requirements; these provide increased public health protection, a “compliance insurance policy” for water systems, a proactive compliance approach for State Drinking Water Programs, and assist public water systems in achieving compliance. Originally focused on microbial water quality in surface water treatment plants, the program has expanded to include approaches to control chlorine disinfection by-products (DBPs) and harmful algal blooms, while maintaining distribution system water quality in both surface and ground water systems.

The program stresses the importance of ensuring data quality by developing checklists for field and plant equipment whose data are critical to becoming an optimized water treatment plant. By meeting these standards, Ashland’s water is among the best in the state for water quality.

The City of Ashland maintains over 300 miles of water line. In an ongoing effort to maintain water quality and system reliability the following line replacements were made during this reporting period:

US 23- 1,456 ft. of 16" pipe
US 23- 819 ft. of 24" pipe
Dixon St. Phase III- 500' of 12" pipe
Dixon St. Phase III- 40' of 6" pipe
1300 Block of Greenup Ave.- 280' of 12" pipe
Bybee Rd. Phase I- 1,475 ft. of 6" pipe
Forestview Dr.- 110 ft. of 4" pipe

The city has completed a construction project where a mixing system was installed at the Debord Hill tank. This tank mixing system is expected to provide more uniform water distribution throughout the tank, increase chlorine residuals and decrease the production of DBPs in the distribution system. The mixer will allow the volume of the tank to be replaced with fresh water more efficiently and enhance drinking water quality to an even higher standard.

Through capital investment and dedication to unparalleled water quality, Ashland has maintained quarterly compliance for DBPs for more than 7 years.

Pictured Above: Control Building for the Debord Hill Tank Mixer. All tank mixer components are contained within the tank in the background.

Pictured Above and Below: Construction taking place on the Dixon Street Phase III main line replacement project.

Definitions *Some or all of these 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.

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

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.

Information Regarding Lead:

The Ashland Water System has an ongoing lead and copper-monitoring program. The latest results for lead testing were completed in the September of 2023. 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.

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 water system is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.

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.

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.**

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	0.039	0.039 to 0.039	Mar-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.62	0.62 to 0.62	Mar-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.47	0.47 to 0.47	Mar-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.39 (lowest average)	1.14 to 1.80 (monthly ratios)	2023	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	1.02 (highest average)	0.24 to 1.73	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	28 (high site average)	8 to 21 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	64 (high site average)	19 to 93 (range of individual sites)	2023	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.073 (90^{th} percentile)	0.003 to 0.685	Sep-23	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 1	AL = 15	0	2 (90^{th} percentile)	0 to 21	Sep-23	No	Corrosion of household plumbing systems

Other Constituents					
Turbidity (NTU) TT * Representative samples	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.194	100	No	Soil runoff

	Average	Range of Detection
Fluoride (added for dental health)	0.9	0.66 to 1.13
Sodium (EPA guidance level = 20 mg/L)	20.7	20.7 to 20.7

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Chloride	250 mg/l	22.4	22.4 to 22.4	Mar-23
Corrosivity	Noncorrosive	-1.39	-1.39 to -1.39	Mar-23
Fluoride	2.0 mg/l	0.62	0.62 to 0.62	Mar-23
Odor	3 threshold odor number	1	1 to 1	Mar-23
pH	6.5 to 8.5	7.05	7.05 to 7.05	Mar-23
Sulfate	250 mg/l	63.3	63.3 to 63.3	Mar-23
Total Dissolved Solids	500 mg/l	192	192 to 192	Mar-23

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

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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 this
data is available. If you are interested in examining the results, please contact our office during normal business hours.