

# 2021 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: *Frank Worsley*  
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](http://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.*



## Table of Contents

General Overview .....	01
Contact information .....	01
Table of Contents .....	02
Images of Operations .....	02
Our Source .....	03
Water Infrastructure Investment ...	04
Staff Qualifications .....	04
Definitions .....	05
Information on Lead .....	05
Test Results .....	06
Secondary Contaminants .....	07
Violation .....	07



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.

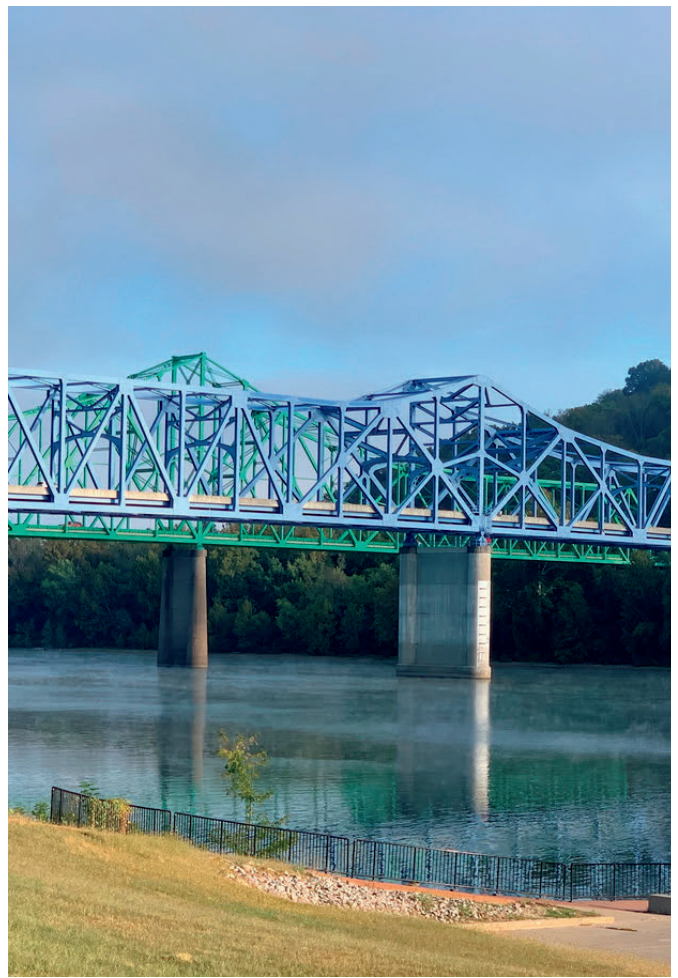


**Pictured Left:** Improvements at the Water Treatment Plant. This consists of new filter underdrains and state-of-the-art filter control panels. The height of the watermark on the columns indicates the level of media in the filter.

# 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).

# 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 July of 2020. 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.

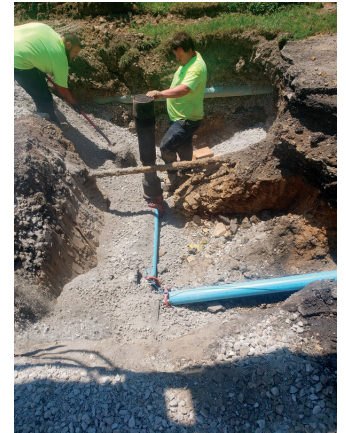
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Your local public water system is responsible for providing high 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>.

# Water Infrastructure Investment



With over \$7.4 million appropriated for water system improvements in the 2022 fiscal year and a \$13.1 million proposed for 2023, 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. 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 7 Class IV-A certified operators and 5 operators in training. We have 2 operators with Kentucky Microbiology Analyst Certification and certified by the KWWOA/KLA in laboratory analysis. Our distribution crew consist of 7-Class IV, 6-Class III, 2-Class II, 1-Class I certified operators.

The City of Ashland continues to make capital improvements to the distribution system. We have installed a total of nine auto flushing devices in the distribution system. These devices are used to improve chlorine levels and lower disinfection by product levels in areas of low water usage. Strategically located booster chlorine stations are also important as they ensure that chlorine levels in sufficient amounts are present throughout the distribution system. These improvements along with a detailed flushing program are key elements to producing high quality drinking water.



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:

- Nunley Court - 440' (replaced 2" with 4")
- Forestdale Ct. - 770' (replaced 2" with 4")
- Thurbury Rd. - 340' (replaced 2" with 4")
- Slem St. - 650' (replaced 2" with 6")
- Douglas St. - 1,200' (replaced 2" with 6")
- Cantrell St. - 380' (replaced 6" with 6")



The city is in final stages of completing a construction project at the Water Treatment Plant for installation of a new **Supervisory Control And Data Acquisition (SCADA)** system. **SCADA** is a system of software, hardware and wiring that allows the Water Treatment Plant operators to control the treatment process in real-time in response to changing system conditions. The new **SCADA** system will replace antiquated treatment controls and software that have limited functionality and for which replacement components are no longer available. The over \$3 million **SCADA** system investment by the city will improve treatment system reliability and provide measurable savings in energy, labor, and chemicals. This is expected to be completed by the end of August 2022.



**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.**

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		
<b>Inorganic Contaminants</b>									
Barium [1010] (ppm)	2	2	0.035	0.035 to 0.035	Mar-21	No	Drilling wastes; metal refineries; erosion of natural deposits		
Fluoride [1025] (ppm)	4	4	0.37	0.37 to 0.37	Mar-21	No	Water additive which promotes strong teeth		
<b>Disinfectants/Disinfection Byproducts and Precursors</b>									
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.28 (lowest average)	1.00 to 1.83 (monthly ratios)	2021	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	1.21 (highest average)	0.21 to 1.98	2021	No	Water additive used to control microbes.		
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	36 (high site average)	8 to 46 (range of individual sites)	2021	No	Byproduct of drinking water disinfection		
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	68 (high site average)	15 to 110 (range of individual sites)	2021	No	Byproduct of drinking water disinfection.		
<b>Household Plumbing Contaminants</b>									
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0561 (90 <sup>th</sup> percentile)	0.0015 to 0.312	Jul-20	No	Corrosion of household plumbing systems		
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90 <sup>th</sup> percentile)	0 to 2	Jul-20	No	Corrosion of household plumbing systems		
<b>Other Constituents</b>									
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		0.151	100	No	Soil runoff			
			Average	Range of Detection					
Fluoride (added for dental health)			0.8	0.29 to 1.15					
Sodium (EPA guidance level = 20 mg/L)			16.2	16.2 to 16.2					





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.

Pictured Right: Water Distribution Crews shown flushing a fire hydrant. This process ensures fresh water pulls into the system and maintains proper disinfection levels. Another benefit is testing the fire hydrants functionality.



Pictured Left: 250,000 gallon Foothills elevated tank.

