City of Columbiana

Water Treatment Plant

Drinking Water Consumers Confidence Report
For Calander Year 2025

28 W. Friend St. Columbiana, Ohio 44408 * 330-482-2173

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Drinking Water Consumer Confidence Report For 2025

Introduction

The **City of Columbiana Water Treatment Plant** has prepared the following report to provide information to you, the consumer, on the quality of our drinking water which has met all Ohio EPA standards. Included within this report is general health information, water quality test results, and how to participate in decisions concerning your drinking water and water system contacts.

The City of Columbiana's original water treatment plant (WTP) and raw water field were constructed in 1934. The WTP and well field underwent major modifications in 1954 and 1977, as well as several other modifications over the years, to accommodate increased system demands and to improve finished water quality. As for the last improvement, the existing facilities had a peak treatment capacity of 1.0 MGD and included nine raw water wells. The WTP and wells, along with the finished water distribution system, served the City's service area of approximately 6.5 square miles, including approximately 6,700 residents and businesses. In 2006, the City recognized the existing WTP was well beyond its useful life and could not be effectively modified or expanded to serve projected increases to system demands, nor meet current standards and regulations, which was supported by OEPA reviews and several engineering studies. Based on these studies, an entirely new WTP was authorized by the City to be designed and constructed, and funding sources were subsequently sought to support this endeavor.
Over a two-year period beginning in 2016, the all new WTP, with peak capacity of 2.25MGD, was constructed just north of the existing WTP site. Additionally, two new raw water wells and approximately 19,100 lineal feet of raw water main improvement were constructed at various locations within the City's system, and the existing WTP was demolished. The overall cost for the improvements were $20,493,000.00. In 2014, city water customers began paying an $11.00 surcharge on their bills to help the city build up a fund and demonstrate to the USDA (United States Department of Agriculture) it will have the ability to pay back a loan. The United States Department of Agriculture-Rural Development (USDA-RD) agency provided funding in the amount of $8,439,000.00 (Grant) and $11,224,000.00 (Loan), with the balance provided by the Ohio Public Works (OPWC) and other City direct contributions.

Source Water Information

The City of Columbiana Water Treatment Plant receives drinking water from 11 wells in the aquifer assigned to the Allegheny Formation, Pennsylvania Age. Recently, the city also received full funding to install a new 8" raw water line from our Crestview well area at a cost of about 1.3 million dollars which was completed as of May 2025. This new raw water line, which is 11,408 lineal feet (2.16 miles) was installed by direct boring and will have the capacity to carry 1.382 million gallons of raw water per day. Both wells were drilled and developed. They were tested at 600 gpm each which means we can safely use about 480 gallons per minute per well, which is .69 million gallons per day, per well. It is unknown at this time if both can be pumped at the same time and at max production. Other items that will be needed to finish these well are to bring in electricity to the site, install well pads, building to protect the wells them self, communications and electronics. Money spent to date for the raw water line, wells development, water quality testing, and engineering equals $1,190,414.34
In the near future we will also be looking for more wells along this new raw water line and other raw water lines in our system. The water plant has also already done a fracture trace study along these lines in the efforts to locate more well sites. This fracture trace study is the first step in locating fractures where water may be found. The next step, which is more labor intensive is doing a very low frequency (VLF) or an electrical imaging survey (EI) to pinpoint where to drill. The first area of investigation is on the water treatment plant property on the north side of the water plant. This area of investigation will be an area of approximately 23.2 acres. Unfortunately, due to underground utilities and electrical line overhead the EI survey must be used. This survey is more labor

and time extensive which makes it cost more than the VLF survey. The cost of doing this investigation will be around $17,500 to $21,000.00.

Looking for and developing more wells will accomplish two things. First, to have more sourced water which will guarantee the residents of the city water for the indefinite future. Second, this will allow the city to continue its growth and have enough water to reach peak production of 2.25 million gallons a day.

The Water Department also applied for and received two $50,000 grants for generators. These generators are very important during power outages to continue the flow of raw water to the treatment plant. The generator for wells #1 and #2 is complete and ready for use at a total cost of $77,614, of which the Water Department paid $27,614. The other generator was delivered on May 20, 2026. The automatic transfer switch will be delivered in June. Once the concrete pad is installed, hopefully in June, we will set this generator and have it wired to the existing well. The cost of this generator alone was $42,486. Once installed, the Water Treatment Plant will have raw water capacity of 1.38 million gallons per day, which will cover our present max treatment output. The Water Department is committed to finding grants and other sources of funding to purchase enough generators to match our max plant compacity of 2.25 MGD.

Susceptibility Analysis:

The susceptibility to contamination was estimated at each of the six well fields that comprise the City of Columbiana's source of drinking water. These susceptibility analyses for each well location are subject to revision if new potential contaminant sources are sited within the protection area, or if water sampling indicates contamination by a manmade contaminant source. The analyses may also be revised if a well is abandoned and replaced by a well of different construction.

A source water assessment recently indicated that under currently existing conditions, the likelihood of the aquifer becoming contaminated is relatively low to moderate. This Likelihood can be minimized by implementing appropriate protective measures. Copies of the source water assessment report prepared for the City of Columbiana are available by e-mailing krees@columbianaohio.gov. A copy of this report will be forwarded to the requested party.

What are sources of contamination to drinking water?

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 can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) Inorganic contaminants, such as salts and metals, which can be naturally- occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; (E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 can be obtained by calling the Federal Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Who needs to take special precautions?

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 infection. 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 (1-800-426-4791).

About your drinking water

The EPA requires regular sampling to ensure drinking water safety. For 2025, the City of Columbiana WTP conducts sampling for five (5) different contaminants which were Nitrate, Total Coliform (Bacteria), Chlorine, THM and HAA5. 195 samples were taken in year 2025 and all required testing met EPA requirements in the water supply. The Ohio EPA requires us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

Monitoring & Reporting Violations & Enforcement Actions
Year 2020 and 2023

Monitoring Violations:

No Monitoring Violations.

Corrections/Reporting Violations in the 2023 CCR

No Enforcement Actions.

Enforcement Actions

No Enforcement Actions.

Table of Detected Contaminants

Listed below is information on those contaminants that were found in the City of Columbiana water system drinking water.

Contaminant (units)	MCLG or MRDLG	MCL or MRDL	Level Found	Range of Detections	Violation?	Year Sampled	Typical Source of Contaminants
Radioactive Contaminants (Gross Alpha and Radium)							
Radium 228	5 pCi/L	5 pCi/L	0.399 +/- 0.377 pCi/L	1	NO	2023	Erosion of natural deposits
Nitrate							
Nitrate (measured as Nitrogen)	10 (mg/l)[2]	10 (mg/l)[2]	0.333 mg/l	0.1	NO	2024	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Inorganic Contaminants (Antimony, total – Arsenic – Barium – Beryllium, total – Cadmium – Chromium – Cyanide – Fluoride – Mercury – Nickel – Selenium – Thallium, Total)							
Fluoride	4.0 (mg/l)[2]	4.0 (mg/l)[2]	1.125 mg/l	NA	NO	2025	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Selenium	50 ug/L	50 ug/L [2]	1.80 ug/L	1	NO	2023	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.

Contaminant (units)	MCLG or MRDLG	MCL or MRDL	Level Found	Range of Detections	Violation?	Year Sampled	Typical Source of Contaminants
Synthetic Organic Contaminants, including Pesticides and Herbicides (Alachlor – Atrazine – Simazine)							
Volatile Organic Contaminants							
Bromodichloromethane		See THM results	1.35 ug/l	0.5	NO	2023	Reaction between chlorine, added during water treatment, and natural organic substances in the presence of bromide
Chloroform		See THM results	0.89 ug/l	0.5	NO	2023	Pulp and paper mills, hazardous waste sites, and sanitary landfills
Bromoform		See THM results	1.46 ug/l	0.5	NO	2023	The principal anthropogenic source of bromoform and dibromochloromethane in the environment is chlorination of water containing organic materials.
Contaminant (units)	**MCLG or MRDLG**	**MCL or MRDL**	**Level Found**	**Range of Detections**	**Violation?**	**Year Sampled**	**Typical Source of Contaminants**
Disinfectants and Disinfection Byproducts (Chlorine, THM's and HAA5)							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	0.9985833	0.90 to 1.05	No	4-2024 to 12-2025	Water additive used to control microbes
Sample location DS202 (THM)	n/a	80 ug/l	16.9 ug/l	0.5	NO	7-30-25	Byproduct of drinking water disinfection
Sample location DS202 (HAA5)	n/a	60 ug/l	6.36 ug/l	1.0	NO	7-30-25	Byproduct of drinking water disinfection
Sample location DS201 (THM)	n/a	80 ug/l	25.9 ug/l	.05	NO	7-30-25	Byproduct of drinking water disinfection
Sample location DS201 (HAA5)	n/a	60 ug/l	6.85 ug/l	1.0	NO	7-30-25	Byproduct of drinking water disinfection
Contaminant (units)	**Action Level (AL)**	**MCLG**	**Individual Results over the AL**	**90% of the test levels were less than**	**Violation?**	**Year Sampled**	**Typical Source of Contaminants**
Lead and Copper							
Lead (ppb)	15 ppb	0 ppb	0	0.0 ppb	NO	2023	Byproduct of drinking water disinfection
	0 out of **20** samples were found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3 ppm	1.3 ppm	0	0.0133 ppm	NO	2023	Byproduct of drinking water disinfection
	0 out of **20** samples were found to have copper levels in excess of the lead action level of 1.3 ppm.						

Violations:

The **City of Columbiana** had **No MCL, treatment technique, filtration, or disinfection (CT) violation or action level exceedance** during the year **2025.**

Lead Educational Information:

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 Columbiana Water Department 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 at 800-426-4791 or at http://www.epa.gov/safewater/lead.

Per the Lead and Copper Rules, Public Water Systems were required to develop and maintain a Service Line Inventory. A service line is the underground pipe that supplies your home or building with water. To View the Service Line Inventory, which lists the material type(s) for your location, at the present time, you can email krees@columbianaohio.gov, supply your address, and a screen shot will be supplied to you for your reference. By the end of July, you will be able to visit the city's website @ https://columbianaohio.gov/water/, on the left side of the page, there will be a link to take you to the service line material map.

Per- and Polyfluoroalkyl Substances (PFAS)

As part of the federal 2024 PFAS drinking water rule, Public Water Systems were required to monitor finished drinking water for PFAS by April 26, 2027. We completed this monitoring by participating in the Unregulated Contaminant Monitoring Rule 5 (UCMR 5) program, which monitored multiple contaminants, including the six regulated PFAS: PFOA, PFOS, HFPO-DA, PFBS, PFHxS, and PFNA. For the results, refer to the next section titled "Unregulated Contaminant Monitoring Rule (UCMR) Sampling".

Unregulated Contaminant Monitoring Rule (UCMR) Sampling

Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of these contaminants in drinking water and whether future regulation is warranted. In 2025, The City of Columbiana Water Treatment Plant participated in the fifth round of the Unregulated Contaminant Monitoring Rule (UCMR 5). We samples in April and October of 2025. 29 different analytes were tested. 28 analytes were not detected. 1, lithium had a defection for both tests. Results are on the table below. For a copy of the results please call Keith D. Rees at 330-482-2427

Contaminant (units)	MCLG or MRDLG	MCL or MRDL	Level Found	Range of Detections	Violation?	Year Sampled	Typical Source of Contaminants
Unregulated Contaminants							
Lithium (ppb)			11.0		No	2025	Naturally occurring and numerous commercial uses

Why is lithium included in UCMR 5 and what information is available?

Lithium is on the EPA's Fifth Contaminant Candidate List (CCL 5), a list of contaminants that are currently not subject to any proposed or promulgated National Primary Drinking Water Regulations (NPDWRs) but are known or anticipated to occur in public water systems (PWSs). Contaminants listed on the CCL may require future regulation under the Safe Drinking Water Act (SDWA). The EPA uses the CCL to identify priority contaminants for regulatory decision making and information collection needs. Lithium was selected for UCMR 5 through a contaminant prioritization process that considered expected or known occurrence in drinking water and the availability of health effects information. To learn more about the prioritization of lithium for UCMR 5, refer to the Information Compendium for Contaminants.

The EPA does not have a health advisory for lithium in drinking water. However, the CCL program derived a health reference level (HRL) for screening purposes based on the EPA's provisional peer-reviewed toxicity value (PPRTV) assessment for lithium. HRLs are not final determinations about the level of a contaminant in drinking water that is necessary to protect any particular population.

The HRL for lithium is based on adverse effects observed in patients administered lithium therapeutically. Lithium has been used in pharmaceuticals for decades to treat certain medical conditions. Despite the abundance of information on patients receiving lithium at therapeutic levels, there has historically been limited information available to evaluate health risks in people at the levels associated with typical drinking water consumption. This is one of the reasons the EPA is choosing to monitor for the presence and levels of lithium in drinking water systems around the country. The science on lithium's effects on human health, and at what levels, is still evolving.

The EPA has developed a Technical Fact Sheet: Lithium in Drinking Water (pdf) (270.84 KB) to help primacy agencies interpret the UCMR 5 monitoring results, understand health risks based on available information, and respond to public inquiries. For more information, please refer to the EPA's provisional peer-reviewed toxicity value (PPRTV) assessment for lithium, the CCL 5 supporting materials, and the UCMR 5 Data Summary. The agency has published details regarding the removal efficiencies for various technology types via its Drinking Water Treatability Database.

How can lithium be removed from drinking water?

Lithium cannot be removed by heating, boiling, or disinfecting water. Certain drinking water treatments can reduce lithium in drinking water. Available literature, based largely on bench- and pilot-scale research, suggests that ion exchange is effective for removing lithium from drinking water. Adsorption with novel media can also be effective. The EPA has published details regarding the removal efficiencies for various technology types via its Drinking Water Treatability Database.

Revised Total Coliform Rule (RTCR) Information:

The items listed below, (a through f), are for informational purposes only.
The City of Columbiana **was not** required to do a level 1 or level 2 assessment!

The City of Columbiana had no Total Coliform detections or violations

PWSs that triggered a Level 1 or Level 2 Assessment must inform their customers of:

a) The appropriate text (dependent on whether there is an *E. coli* MCL), listed below
b) The number of assessments required and completed.
c) The corrective actions required and completed.
d) The reasons for conducting assessments and corrective actions.
e) Whether the PWS has failed to complete any required assessments or corrective actions.
f) The specific assessment-related definitions as appropriate

RTCR VIOLATIONS:

None.

License to Operate (LTO) Status Information:

- In **2025** we had an unconditioned license to operate our water system. Public Water System Id is OH1500312

Public Participation and Contact Information:

How do I participate in decisions concerning my drinking water?
While we do not hold regular meetings, customers are encouraged to participate by contacting **Keith D. Rees – Superintendent of Water** at 330-482-2427

Definitions of some terms contained within this report:

- **Maximum Contaminant Level (MCL)**: The highest level of 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 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.

Definitions Required if term is used within the CCR.

- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Contact Time (CT)** means the mathematical product of a "residual disinfectant concentration" (C), which is determined before or at the first customer, and the corresponding "disinfectant contact time" (T).
- **The "<" symbol:** A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.
- **Level 1 Assessment** is a study of the water system to identify the potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Level 2 Assessment** is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
- **Not Applicable (N/A) –** Abbreviation meaning that this does not apply to our report.
- **Not Detected (ND) –** Abbreviation meaning a contaminant was not detected in drinking water sample(s).
- **Parts per Million (ppm)** or **Milligrams per Liter (mg/L)** are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.
- **Parts per Billion (ppb)** or **Micrograms per Liter (µg/L)** are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- **PFAS:** Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals applied to many industrial, commercial and consumer products to make them waterproof, stain resistant, or nonstick. PFAS are also used in products like cosmetics, fast food packaging, and a type of firefighting foam called aqueous film forming foam (AFFF) which are used mainly on large spills of flammable liquids, such as jet fuel. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing.
- **Picocuries per liter (pCi/L):** A common measure of radioactivity.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

Storage:

Columbiana presently has two storage tanks. Capacities are 1 million and 500,000 gallons.

Treatment information:

Columbiana Water supply utilizes conventional lime softening, aeration, coagulation, sedimentation, stabilization, chlorination, and fluoridation to produce the quality water Columbiana has enjoyed for over 80 years.

Backflow and Cross Connection Program:

An active Backflow and Cross Connection Program further protects your water. This program serves to help protect the consumer against the entrance of any potential contaminant from entering the distribution system. Backflow Prevention Devices are required throughout the distribution system. The devices are tested annually by State Certified Backflow Testers.

Bacterial Protection:

As a disinfectant. The OEPA requires that a minimum chlorine residual of .2 mg/L free chlorine be maintained in all parts of the distribution system. To ensure our compliance with this requirement, we collect daily samples from 48 sampling points around the city. At no time in 2025 was there any indication of water quality problems affecting the drinking water. Also, we conducted 96 bacterial tests on the water from the list of sampling points. **All tests indicated the water was bacteria free!**

Boil Advisory:

If a boil advisory is issued, this does not mean the water is unsafe to drink. It means, according to EPA guidelines, the designated area in the distribution system experienced conditions that may produce a situation for contamination. Because of this, it is advisable to boil the water prior to drinking it. During each advisory we collect samples for lab analysis to check for contamination. Once the results are received, if there is no contamination, the boil advisory is lifted.

Distribution Data :

There are 1,347 valves, 469 fire hydrants, 2,866 service connections, and 200 backflow devices.

Below is the general analysis of the City of Columbiana drinking water:

Daily Operational Tests:
Water Hardness, Total..... 96 mg/L*
Total Alkalinity..... 51 mg/L
pH..... 9.4
Fluoride..... 0.98 mg/L
Chlorine, Free..... 0.91 mg/L
Chlorine, Total..... 1.04 mg/L
Weekly Tests:
Water Stability..... Stable to slightly scale forming
Manganese..... 0.001mg/L
Iron..... 0.01 mg/L
Monthly Tests:
Phosphorous as "Total P"..... .30 mg/L

*Divide Water Hardness, Total by 17.1 to achieve grains per gallon.
Example: (94 mg/l ÷ 17.1 = 5.5 gpg.

City of Columbiana

Water at your service