# City of Columbiana




# Water Treatment Plant

## Drinking Water Consumers Confidence Report
## For Calander Year 2024

Revised 6-26-2025

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## Drinking Water Consumer Confidence Report For 2024

## 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 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. There is one test well at this location already which must be converted to a production well. There is also a second well location marked which still needs to be drilled and turned into a production well. If the first well produces as expected, it will supply 288,000 gallons of raw water per day. The second well possible production is currently unknown. The actual well(s) should be developed by late 2025 or early 2026 at an approximate cost $126,427. Other items that will be needed to finish this well area are to bring in electricity to the site, install well pads, building to protect the wells them self, communications and electronics.
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.

## 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. The City of Columbiana WTP conducts sampling for Inorganics (Antimony, total – Arsenic – Barium – Beryllium, total – Cadmium – Chromium – Cyanide – fluoride – mercury – nickel – selenium – thallium, total Nitrate, Radiologicals (Gross Alpha and Radium), Synthetic Organic Chemicals (SOC) (Alachlor – Atrazine – Simazine), Volatile Organic Chemicals (VOC), /Total Coliform (Bacteria), Chlorine, Lead and Copper, THM and HAA5.. We tested for twenty-Five (25) different contaminants, most of which were not detected in the City of Columbiana 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

1. A **2020**, nitrite detection of 0.309 ppm was left off the table of detected contaminations.
    a. The MCL and Public Health Goal is 1.0 ppm.
        i. There was no violation for MCL exceedance.

2. TTHMs, HAA5, Copper and Selenium were reported in the incorrect units of measure. TTHMs, HAA5, and Selenium values should have been reported in ppb. Copper should have been reported as ppm.
    a. TTHMs were reported as 0.0178 mg/L and 0.0164 mg/L. In the correct units of ppb, they equal 17.8 ppb and 16.4 ppb.
        i. The MCL in ppb is 80 ppb. There was no violation for MCL exceedance, just using the incorrect units of measurement.

3. The copper level in the report was listed as 1350 ppb and should have been listed as 1.3 ppm.
    a. To achieve ppm, take the 1350 ppb and divide by 1,000 to equal 1.3 ppm
        i. The MCL in ppm is 1.3 ppm
            1. There was no violation for MCL exceedance, just using the incorrect units of measurement.

4. Nitrate was reported as <0.237 mg/L and should have been reported as 0.237 mg/L.
    a. The MCL and MCLG is 10.0 mg/L.
        i. There was no violation for MCL exceedance, should not have used the (the less than )< sign.

5. The Alpha Radioactive Contaminant that was reported on the 2023 CCR as zero, was zero. The Ohio EPA only has results from 1/30/2020 and though results were 1.04 pCi/L
    a. If this is a violation, it is due to the lab not reporting the 2023 results which was zero to the Ohio EPA or the Ohio EPA did not receive/lost the results.
    b. The Water Treatment Plant will contact the lab and have them send the Ohio EPA the results again.
    c. The results were reported correctly on the 2023 CCR.

6. The Table of Detected Contaminants should only contain the most recent data for the contaminants that have been detected in the last 5 years in the drinking water.
    a. Because the City of Columbiana ran the required test per the Ohio EPA's requirements and all the results of these test for Volatile Organic Chemicals, Alachlor, Atrazine, Simazine, and several inorganics were not detected. Therefore, the Ohio EPA does not want us to list the test as ran and not detected because it may confuse the public.
    b. Any accurate test that have been done going back further than five years will have to be found in older CCR's
        i. This is a violation and moving forward the WTP will not list any test results more that five years old or any required test results showing non detect.

7. Please see page 6 for a revision. 90% copper number was listed as 13.3 and should have been 0.0133.

## Enforcement Actions

**No Enforcement Actions.**

## Table of Detected Contaminants

**TABLE OF DETECTED CONTAMINANTS**

| 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 |
| **Nitrite** | | | | | | | |
| Nitrite | 1.0 (mg/l)[2] | 1.0 (mg/l)[2] | .309 mg/l | 0.1 | NO | 2020 | 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] | 0.96 mg/l | 0.02 | NO | 2024 | 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. |
| **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 | 0.935833 | 0.65 to 1.2 | No | 4-2023 to 12-2024 | Water additive used to control microbes |
| | | | | | | | |
| Sample location DS202 (THM) | n/a | 80 ug/l | 12.3 ug/l | 0.5 | NO | 2024 | Byproduct of drinking water disinfection |
| Sample location DS202 (HAA5) | n/a | 60 ug/l | <1.00 ug/l | 1.0 | NO | 2024 | Byproduct of drinking water disinfection |
| Sample location DS201 (THM) | n/a | 80 ug/l | 19.4 ug/l | .05 | NO | 2024 | Byproduct of drinking water disinfection |
| Sample location DS201 (HAA5) | n/a | 60 ug/l | 1.04 ug/l | 1.0 | NO | 2024 | 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 **Revised from 13.3** | 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. | | | | | | |

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, you can visit

**Violations:**
The **City of Columbiana** had **No MCL, treatment technique, filtration, or disinfection (CT) violation or action level exceedance** during the year **2024.**

**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. {Name of 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 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 you 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.

**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 **2024** 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 – Water Superintendent** at 330-482-2427

**Definitions of some terms contained within this report:**

- **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 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.

**Definitions Required if term is used within the CCR.**

- **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.

- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

- **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).

- **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.

- **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.

- **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.

- **Picocuries per liter (pCi/L):** A common measure of radioactivity.

**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 2024 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 1,281 valves, 468 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..... 97 mg/L*
Total Alkalinity..... 50 mg/L
pH..... 9.4
Fluoride..... 0.96 mg/L
Chlorine, Free..... 1.00 mg/L
Chlorine, Total..... 1.04 mg/L
**Weekly Tests:**
Water Stability..... Stable to slightly scale forming
Manganese..... 0.000 mg/L
Iron..... 0.01 mg/L
**Monthly Tests:**
Phosphorous as "Total P"..... .37 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