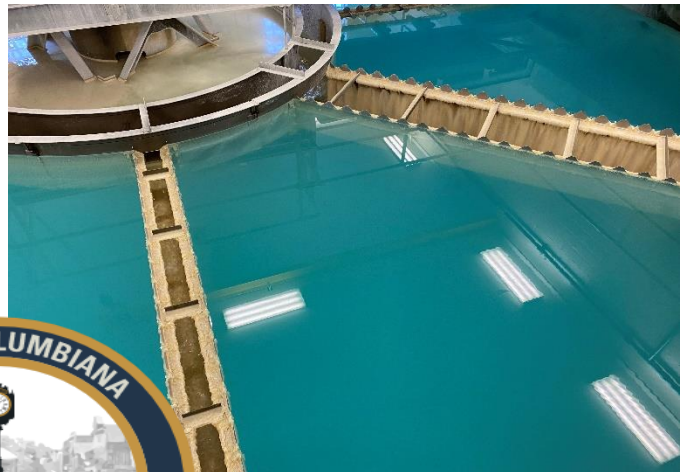
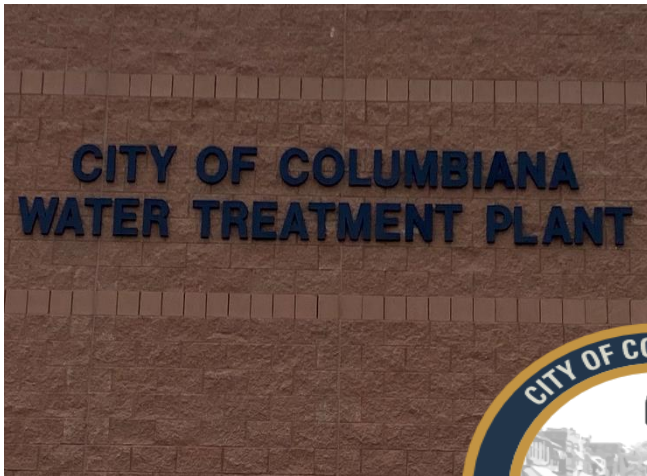


City of Columbiana Water Treatment Plant

Drinking Water Consumers Confidence Report Year 2022



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

Introduction:

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 of 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 6,400 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.

The City of Columbiana Water Department has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contact.

Source Water Information:

The City of Columbiana receives its drinking water from 11 wells in the aquifer assigned to the Allegheny Formation, Pennsylvania Age. 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. The City of Columbiana has a current, 2023, unconditioned license to operate as Public Water System ID (OH1500312).

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.

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 requesting 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 materials, 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 the 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 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 (1-800-4026-4791).

About your drinking water:

The EPA requires regular sampling to ensure drinking water safety. The City of Columbiana conducted sampling for Chlorine, Bacteria, Fluoride, Nitrite, THM and HAA5 during the year 2022. Six (6) different contaminants, most of which were not detected in the City of Columbiana water supply. The Ohio EPA requires us to monitor for 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, and Enforcement Actions:

Year 2021

Corrections to 2021 CCR

For the year of 2021, the City of Columbiana failed to report fluoride on the table of detected contaminants in the CCR. All required detected contaminants have been checked on the reporting documents. The missing 2021 fluoride information is listed on this 2022 CCR document. Moving forward, items needing to be listed in the table of detected contaminants in our CCR will be checked by more than one person to help guarantee accuracy!

Please see below the comments from the Ohio EPA:

SUBJECT: CONSUMER CONFIDENCE REPORT (CCR) NOTICE OF VIOLATION

Dear Public Water System Owner:

Ohio EPA has received the 2021 CCR for Columbiana City PWS. Based on our review, Columbiana City PWS is in violation of the Ohio Administrative Code (OAC) Rules 3745-96-01-04 for failure to comply with the CCR requirements. The following violations were noted:

1. The required Table of Detected Contaminants was incomplete and/or inaccurate in the report. For each detected contaminant, the Table should show the level for each contaminant detected in the water, the Maximum Contaminant Level (MCL), the Maximum Contaminant Level Goal (MCLG), and the likely or known source of that contaminant. Please see Section 8 of the Consumer Confidence Report Template and Instructions for more information about what is required to be included in the Table of Detected Contaminants.
 - a. The 2021 detection for fluoride was not included in the Table of Detected Contaminants in your report.
 - b. The Table in the 2021 report contains contaminants that were not detected in your PWS's water (i.e., SOCs and multiple IOCs).

Year 2021 Missing Fluoride Results

Table of Detected Contaminants 2021:

Listed below is information on those contaminants that were found in the City of Columbiana drinking water for the year 2021 and were left off the 2021 CCR.

Contaminants (Units) MCLG	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminates
Fluoride	4.0	4.0	1.00 Mg/L	0.70 - 1.3 Mg/L	No	2021	Natural and Water Additive

Monitoring, Reporting Violations, and Enforcement Actions:

Year 2022

No significant deficiency violations.

Table of Detected Contaminants: 2022

Listed below is information on those contaminants that were found in the City of Columbiana drinking water for year 2022.

TABLE OF DETECTED CONTAMINANTS:

Inorganic Chemicals							
Contaminants (Units) MCLG	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Nitrate							
Mg/L	10.0	10.0	0.159	0.159 to 0.159	No	2022	Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits
Fluoride							
Mg/L	4.0	4.0	1.00	0.82 - 1.10	No	2022	Natural and Water Additive

Disinfectants							
Contaminants (Units) MCLG	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Residual Disinfectants (Chlorine)							
Mg/L	4.0	4.0	1.23	0.94 to 1.40	No	2022	Water additive used to control microbes

Microorganisms							
Contaminants (Units) MCLG	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Total Coliform							
Present or Absent	Zero	5.0% ⁴	Zero	N/A	No	2022	Coliforms are naturally present in the environment; as well as feces; fecal coliforms and E. coli only come from human and animal fecal waste.

⁴ No more than 5.0% samples total coliform-positive (TC-positive) in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or E. coli if two consecutive TC-positive samples, and one is also positive for E.coli fecal coliforms, system has an acute MCL violation.

Disinfection Byproducts

Contaminants (Units) MCLG	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Trihalomethanes (THM) DS201							
Mg/L	>n/a ⁶	>.080	0.0055	N/A	No	2022	Byproduct of drinking water disinfection
Haloacetic Acids (HAA5) DS201							
Mg/L	>n/a ⁶	>.060	0.00317	N/A	No	2022	Byproduct of drinking water disinfection
Trihalomethanes (THM) DS202							
Mg/L	>n/a ⁶	>.080	0.00466	N/A	No	2022	Byproduct of drinking water disinfection
Haloacetic Acids (HAA5) DS202							
Mg/L	>n/a ⁶	>.060	0.00247	N/A	No	2022	Byproduct of drinking water disinfection
<p>⁶ Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants: Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L); chloroform (0.07 mg/L). Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.02 mg/L); monochloroacetic acid (0.07mg/L). Bromoacetic acid and dibromoacetic acid are regulated with this group but have no MCLGs.</p>							

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 WTP 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>.

Ground Water Rule

- Source:** GW Rule Source Deficiency Violation – A Special Notice for violation of significant ground water source deficiencies was not included in the 2021 CCR

"We were informed by the Ohio EPA that a significant deficiency in accordance with OAC Rule 3745-9-05(A)(12), (A connection to a well casing that is made above ground shall be installed through the following methods: (a) Threaded connection. (b) Welded connection. (c) Bolted flanges with rubber gaskets at twelve inches or greater above ground surface. (d) Extensions of the casing at least 0.5 inches into the base of a pump mounted on and sealed to a concrete pedestal" and OAC Rule 3745-9-05(A)(12) "A well shall have a well cap or seal to prevent the entrance of water, dirt, animals, insects, or other foreign matter. The top of the casing at its finished height shall be cut so that the surface will fit flush with the well cap and provide a tight seal. The well cap or seal shall fit securely to the top of the well casing, be secured with screws or other appropriate connections, and vent to the atmosphere. A point well that is not a public water system well may have a watertight well cap that does not vent to the atmosphere. Electrical conduits connections on the well cap or seal shall be threaded and sealed to prevent the entrance of insect and water.

- Several casing extensions have been added to the Edgerton well (#5) that do not meet the criteria of OAC Rule 3745-9-05(A)(10) detailed above. Ohio EPA observed numerous materials on or around the casing at the joints including but not limited to rubber banding, band/Pipe clamps, and what appeared to be a plastic bag with duct tape around it. This type of construction is inappropriate for a water supply well.
- Additionally, it did not appear that there was a cap on the wellhead that sits flush with the top of the casing. The "cap" on the well does not provide a tight seal and does not appear to have a screen that would prevent the entrance of water, dirt, animals, insects, or other foreign matter.) had been identified on (letter dated October 14, 2021).

We were directed to correct the deficiency by (November 14, 2021). We have completed the corrective action plan which is (Well #5: Extensions have been removed and a well cap is in place by (November 10, 2021) as prescribed by the Ohio EPA." But we failed to list this deficiency on the 2021 CCR!

- 2. Source:** GW Rule Source Deficiency Violation – A Special Notice for violation of significant ground water source deficiencies was not included in the 2021 CCR.

"We were informed by the Ohio EPA that a significant deficiency In accordance with OAC Rule 3745-9-05(A)(4), "Well casing, other than in a point well or radial collector well, shall meet the following ... (b) Steel pipe or tubing used as permanent well casing or liners shall conform to the following: (vii) Be structurally sound, watertight throughout its length ... " and OAC Rule 3745-9-05(A)(12), " ... Electrical conduit connections on the well cap or seal shall be threaded and sealed to prevent the entrance of insects and water." (a) During the survey, Ohio EPA observed several deficiencies associated with the Wonsetler well (#2). The electrical conduit connection had been created through the side of the casing and was exposed in various locations. It appeared that a previous connection for the conduit through the casing had been sealed with some type of putty or other material and not appropriately patched. Additionally, the well cap has a hole intended for the provision of the electrical conduit connection that was unused and therefore, not properly threaded and sealed to prevent the entrance of insects and water. (b) Several large openings in the casing, particularly for a well that is not provided with a wellhouse, provide significant pathways for contamination to enter the well. These openings are large enough that vermin, insects, and other organisms may freely enter the well.

We were directed to correct the deficiency by (November 14, 2021). We have completed the corrective action plan which is (Well #2: An electrical contractor was hired to repair the conduit and all holes in the casing were sealed) by (November 10, 2021) as prescribed by the Ohio EPA." But we failed to list this deficiency on the 2021 CCR!

- 3. Source:** GW Rule Source Deficiency Violation – A Special Notice for violation of significant ground water source deficiencies was not included in the 2021 CCR.

"We were informed by the Ohio EPA that a significant deficiency – In accordance with OAC Rule 3745-9-05(A)(12), "A well shall have a well cap or seal to prevent the entrance of water, dirt, animals, insects, or other foreign matter. The well cap or seal shall fit securely to the top of the well casing, be secured with screws or other appropriate connections, and vent to the atmosphere. Electrical conduit connections on the well cap or seal shall be threaded and sealed to prevent the entrance of insects and water" and OAC Rule 3745-81-01(S)(8), ""Significant deficiency" means a defect in design, operation, maintenance, administration, or a failure or malfunction in a system component, including sources, treatment, storage or distribution system that does any of the following: (a) May provide a pathway of entry for microbial or other contamination into the distribution system or that is indicative of a failure in a barrier that is already in place. (b) Causes, or has the potential to cause, an unacceptable risk to health or that could affect the reliable delivery of safe drinking water, as determined by the director." (a) During the survey, Ohio EPA observed that the well caps for Metz South well (#3) and Zellers well (#6) were not properly secured. Most of the bolts for well #6 were missing and almost all the bolts for well #3 were missing. What appeared to be a wire had been inserted in well #6, which means that the well cap could not possibly be properly secured to provide a watertight seal. (b) Additionally, there was a significant amount of electrical wiring strewn throughout the wellhouse for well #3. The pressure switch wiring appeared to be exposed, and a variety of electrical wiring was surrounding the wellhead. The wellhead should be readily available for maintenance and inspection. The amount of electrical wiring exposed, in some cases on the wellhouse floor, poses an electrical hazard to operators attempting to inspect and maintain the well and should be properly cleaned up and managed.

We were directed to correct the deficiency by (November 14, 2021). We have completed the corrective action plan which is (Well #3 and Well #6: The caps have been properly secured. All material on the floor has been cleaned up by (November 10, 2021) as prescribed by the Ohio EPA." But we failed to list this deficiency on the 2021 CCR!

Revised Total Coliform Rule (RTCR) Information

All water systems were required to begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the PWS.

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 2023 we had an unconditioned license to operate our water system.

Public Notice:

None

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.
- 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.

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 .2mg/l free chlorine be maintained in all parts of the distribution system. To insure our compliance with this requirement, we collect daily samples from over 100 sampling points around the city. At no time in 2022 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 safe.

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..... 94 mg/L*
Total Alkalinity..... 47 mg/L
pH..... 9.1
Fluoride..... 1.03 mg/L
Chlorine, Free..... 1.23 mg/L
Chlorine, Total..... 1.27 mg/L
Weekly Tests: Water Stability..... Stable to slightly scale forming
Manganese..... No detection
Iron..... 0.02 mg/L

Monthly Tests:

Phosphorous as "Total P"..... .44 mg/L

*Divide Water Hardness, Total by 17.1 to achieve grains per gallon.

Example: $(94 \text{ mg/l} \div 17.1 = 5.5 \text{ gpg})$

