City of Canton
Drinking Water Consumer Confidence Report For 2022

The ***City of Canton 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 contacts.

The Canton Water Department is pleased to present our twenty-fifth Annual Water Quality Report. The City of Canton is fortunate to have an abundant, dependable source of high-quality drinking water. We are proud to announce that our water continues to meet or exceed all federal and state Environmental Protection Agency (EPA) primary standards set for public health. During the 2022 year we had a current, unconditional license to operate our water system.

The Canton Water Department has been reinvesting heavily in the future of our public water system through the repair and replacement of aging infrastructure. We have also sought to extend water mains and add new customers where practical. In 2022 alone, **4.9** miles of aging water main were replaced and an additional **6.1** miles of new water main were added to the distribution system.

What is the source of Canton's drinking water? Canton Water Department obtains 100% of its water from underground wells. Our wells extend 100-200 feet deep into sand and gravel aquifers that were created long ago by glacial activity. These natural aquifers provided Canton with **6.91 Billion** gallons of water in **2022**. We have three separate well fields that supply water to our three water treatment plants. The first is referred to as our Northeast Well Field, which is located in the northeast section of Canton which produced **1.88 Billion** gallons of water. The second is referred to as our Northwest Well Field, which is located in the northwest section of Canton which produced **1.38 Billion** gallons of water. Finally, our Sugarcreek Well Field is located southwest of Canton which produced **3.66 Billion** gallons of water. The Source Water Assessment Reports have been completed for all three well fields. The reports indicate the well fields are highly susceptible to contamination due to the physical nature and location of the respective aquifers. A high susceptibility rating of the aquifer does not imply that the well fields will become contaminated. It only means that the existing/known aquifer conditions are such that ground water within the aquifer could become impacted if the potential contaminant sources are not appropriately managed. We have taken protective measures to avoid contamination. More information can be obtained by contacting Chris Boehm at chris.boehm@cantonohio.gov

Backup Measures: Should the need ever arise, we have several protective backup systems built into our utility that enable us to ensure a dependable flow of drinking water to our consumers. As previously mentioned, Canton has three separate water treatment plants and well fields. If one plant is taken off-line, the other two plants can make up the difference in water production. The City also has nearly 30 million gallons of drinking water stored in enclosed reservoirs, acting as a protective reserve of water. Another backup system includes diesel generators at the Northeast and Sugarcreek Water Treatment Plants. These powerful generators can provide enough electricity to operate the plants in the event of a widespread power outage. The systems described above ensure that the Canton Water Department can provide a dependable supply of drinking water to all of our consumers.

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).

What's in Canton's Drinking Water?

The EPA requires regular sampling to ensure drinking water safety. The Canton Water Department conducted sampling for nitrate; metals; volatile organic compounds; disinfection bi-products; bacteria and chlorine during 2022. Samples were collected for a total of 98 different contaminants most of which were not detected in the Canton Water Department 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.

How to read the Water Quality Data Table: EPA established the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The table shows the concentrations of detected substances in comparison to regulatory limits. Substances that were tested for, but not detected, are not included in this table.

Lead and Copper						
Contaminants (units)	**Action Level (AL)**	**Individual Results over the AL**	**90% of test levels were less than**	**Violation**	**Year Sampled**	**Typical source of Contaminants**
Lead (ppb)	15 ppb	None	1.6 ppb	No	2022	Corrosion of household plumbing systems
	__0_ out of _52__ samples were found to have lead levels in excess of the lead action level of 15 ppb.					
Copper (ppm)	1.3 ppm	None	0.78 ppm	No	2022	Corrosion of household plumbing systems
	__0_ out of _52_ samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

Contaminants (Units)	**MCLG**	**MCL**	**Level Found**	**Range of Detections**	**Violation**	**Sample Year**	**Typical Source of Contaminants**
Inorganic Contaminants							
Arsenic in PPB	0	10	1.37	ND – 1.37	No	2022	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium in PPM	2	2	0.12	0.055 - 0.116	No	2022	Discharge from metals refineries and erosion of natural deposits
Fluoride in PPM	4	4	1.16	1.11 – 1.27	No	2022	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate in PPM	10	10	0.111	ND – 0.111	No	2022	Runoff from fertilizer use; Erosion of natural deposits.
Residual Disinfectants							
Total Chlorine in PPM	MRDLG 4	MRDG 4	0.91	0.74 – 1.41	No	2022	Water additive to control microbes

Disinfection By-products							
TTHM in PPB Total Trihalomethanes	MRDLG N/A	80	34.4	4.4 – 38.0	No	2022	By-product of drinking water chlorination
HAA5 in PPB Haloacetic Acids	MRDLG N/A	60	15.5	4.6 – 22.7	No	2022	By-product of drinking water chlorination

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Unregulated Contaminates							
Bromodichloromethane in PPB	0	None	5.4	1.8 - 11.3	No	2022	By-product of drinking water chlorination, a TTHM
Bromoform in PPB	0	None	1.1	ND – 2.8	No	2022	By-product of drinking water chlorination, a TTHM
Chloroform in PPB	0	None	5.9	0.8 – 14.1	No	2022	By-product of drinking water chlorination, a TTHM
Dibromochloromethane in PPB	0	None	4.7	ND – 9.8	No	2022	By-product of drinking water chlorination, a TTHM
Dichloracetic Acid in PPB	0	None	7.3	2.8 – 15.3	No	2022	By-product of drinking water chlorination, an HHA5
Trichloroacetic Acid in PPB	0	None	3.4	ND – 7.6	No	2022	By-product of drinking water chlorination, an HHA5
Dibromoacetic Acid in PPB	0	None	2.3	1.1 – 3.8	No	2022	By-product of drinking water chlorination, an HHA5

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 Canton 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.

Ground Water Rule

We were informed by the Ohio EPA that a significant deficiency was identified on March 12, 2019.

Distribution: In accordance with OAC Rule 375-83-01 (H) (1) The owner operator shall ensure that all facilities and equipment necessary for the treatment and distribution of water shall be maintained, at a minimum as to function as intended. (2) In the event that the treatment facilities or equipment no longer function as intended, corrective action (which may include additional maintenance or modifications of the public water system) shall be taken by the owner.

(a) During the LSSV, Ohio EPA reviewed the inspection report completed by Liquid Engineering Corporation for the Cromer Reservoir on June 8, 2018. The inspection report highlighted the following deficiencies with the Cromer Reservoir that may provide a pathway of entry for microbial or other contamination into the distribution system or could affect the reliable delivery of safe drinking water for the City of Canton:

- The overall general appearance of the interior reservoir roof, walls, inlet and outlet was marked as "poor"
- The roof and walls showed signs of settling cracks, spalling, bugholes (A small hole in the surface of a concrete structure caused by the expansion and eventual outgassing of trapped pockets of air in setting concrete.), and substantial efflorescence.
- There were sections of exposed steel reinforcement on the roof of the tank.
- The reservoir walls showed signs of staining, which may be indicative of surface water infiltration into the tank.
- The inlet and outlet showed heavy and moderate uniform surface corrosion, respectively, and concentration cell corrosion throughout.
- The inspection report stated that there were large amounts of derbies, including biological and inorganic materials, present in the tank.
  The reservoir floor was unable to be inspected properly due to roughly one foot or more of iron and manganese sediment in some areas sediment exceeding seven feet.

(b) In addition to the deficiencies identified in the inspection report, it was noted in the 2019 LSSV that the concrete collars surrounding the tank vents were damaged and needed repair. The vents are also older-style vents which have larger screens that do not meet Ten States Standards for vent screen size.

Corrective Action: The City will shortly contract with Burgess & Niple, Inc. to develop a General Plan for renovations to the Sugarcreek Water Treatment Plant, including but not limited to an evaluation of Cromer reservoir and, specifically, the items mentioned in the significant deficiency letter. The plan will include a proposed scope of work, estimated cost, and a recommendation sequencing all suggested Sugarcreek Water Treatment Plant related work. The Plan will be used to design a set of construction plans, specifications and an engineering cost estimate for the overall project. When completed, and funding availability is confirmed, the project will be advertised for build and a contractor(s) selected.

The approximate timeline, which may be adjusted as more information becomes available, is as follows:

COMPLETED : March 31, 2020: Finalize Sugarcreek WTP General Plan

COMPLETED : September 14, 2020: Selection of engineering firm to perform condition assessment of Cromer.

COMPLETED : February 2, 2022: Finalize condition assessment report and City's decision to construct a new reservoir.

COMPLETED : May 2, 2022: Enter into contract with Arcadis to design the new Cromer Reservoir.

MISSED* : December 30, 2022: Finalize detail plans and specifications for the Cromer Reservoir project.

*This project will not be bid until 2025. Finalizing the design and plans closer to the bid of project allows for specifications and costs to be most up to date.

STARTED : October 2022 – April 2025: Renovation of the Sugarcreek WTP. We will need the Cromer Reservoir in operation during this renovation.

· February 22, 2025: Complete the bid phase.

· April 24, 2025: Begin construction.

· April 19, 2026: Substantial completion of Cromer reservoir project**.**

Revised Total Coliform Rule (RTCR) Information: The Revised Total Coliform 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 rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, 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. The Canton Water Department was not issued any assessments or deficiencies in 2022.

How do I participate in decisions concerning my drinking water? Public participation and comments are encouraged at regular meetings of the City Council which meets every Monday at 7:30 PM in City Hall Council Chambers. During the summer months of June, July and August, the Council meets every other week.

Who do I contact for more information?

For more information about your drinking water contact the EPA Safe Drinking Water Hotline at 800-426-4791; or contact the Northeast District Office of Ohio EPA at (330) 963-1200; or contact the Water Department Superintendent, Mr. Tyler S. Converse at (330) 489-3308

Why do I occasionally see discolored water leaving my tap?
Discolored water is usually due to the presence of iron. Visible Iron in drinking water can be caused by oxidation of dissolved iron by chlorine in the water, corrosion in the pipes that carry the water from the treatment plant to your home or corrosion in your home's plumbing, including the hot water heater. Problems with discolored water usually clear themselves within a day. If you have a prolonged discolored water problem, please notify us. You can call (330) 489-3035 or use the SeeClickFix App found on Google Play for android and Apple App Store for iOS.

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.

- 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.

- Non-Detect (ND): The level of the contaminate is below detection limits.

- 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).

- Microcystins: Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin.

- Cyanobacteria: Photosynthesizing bacteria, also called blue-green algae, which naturally occur in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations can pose a risk to public health.

- Cyanotoxin: Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as “algal toxin”.

- 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.

- 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.

- Master Meter (MM): A master meter is one that connects a wholesale public water system to consecutive public water system(s). This type of meter monitors the amount of water being sent to the consecutive system(s) and can also be used to determine the quality of water being delivered to the consecutive system(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.

- 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.