

City of Canton Water Department 2018

The Canton Water Department is pleased to present our twenty-first 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. We have a current, unconditional license to operate our water system. In the past year Canton Water has begun to implement the Wellhead Protection Plan and begun monitoring for far more contaminants than required by EPA to safe guard the source of your water supply, continued the valve assessment and replacement program as well as the leak detection program. All in an effort to provide our consumers with a safe, dependable supply of drinking water and top-notch customer service at a minimum cost.

What to expect from your drinking water? 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 Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

What are sources of contamination to drinking water? The sources of drinking water, both tap water and bottled water, includes 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; and **(E) Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

How do the EPA and the FDA fit in? 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.

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 persons 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 is the source of Canton's drinking water?

The Canton Water Department obtains 100% of its water from underground wells. Our wells extend hundreds of feet deep into sand and gravel aquifers that were created long ago by glacial activity. These natural aquifers provided Canton with **7,193,549,000** gallons of water in **2017**. 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. The second is referred to as our Northwest Well Field, which is located in the northwest section of Canton. Finally, our Sugarcreek Well Field is located southwest of Canton. 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 calling the Safe Drinking Water Hotline (1-800-426-4791). The Drinking Water Source Assessment Report can be found online at <http://wwwapp.epa.ohio.gov/gis/swpa/OH7608112.pdf>

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. Canton Water was not issued any assessments in 2017.

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 Sugar Creek 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's in Canton's Drinking Water? The EPA requires regular sampling of the Canton water supply to ensure drinking water safety. In 2017 alone we ran over 30,000 tests for more than 100 different substances. The good news is **none** of the contaminants that we detected exceed EPA established Maximum Contaminant Levels or resulted in a violation of drinking water standards. Only a very small percentage of the contaminants tested for exist in our water at detectable levels. The accompanying tables identify the contaminants that were detected. **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 the data, though accurate, are more than one year old.**

Canton Water Department has been involved in three water studies: Lead and Copper Monitoring, Disinfectants/Disinfection Byproduct Evaluation and Unregulated Contaminant Monitoring Regulation III.

Lead and Copper: 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 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 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Disinfectant/Disinfection Byproducts: Under the Stage 2 Disinfectant/Disinfection Byproduct Rule (D/DBPR), our public water system was required by USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and was to identify locations in our distribution system with elevated disinfection byproduct concentrations. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and from when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes and Haloacetic Acids. USEPA sets standards for controlling the levels of disinfectants and disinfection byproducts in drinking water. For compliance purposes, we currently sample for Stage II compliance at 2 distribution sites quarterly.

Unregulated Contaminate Monitoring Regulation III: Unregulated contaminant monitoring helps the EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. The City will soon be participating in UCMR4.

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.

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 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 about 32 years.

Parts per Trillion (ppt) or Nanograms per Liter (ng/L) are units of measure for concentration of a contaminant. A part per trillion corresponds to one second in 31,546 years.

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

ND: Contaminate Not Detected.

Maximum Residual Disinfectant Level Goal (MRDLG) The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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.

Frequently asked questions:

What is hard water?

Canton's water contains the naturally occurring mineral calcium, which is better known as hardness. Water was nicknamed hard when people found it **hard** to make soap suds or lather from the water. The presence of calcium in the water is not a health concern, but rather somewhat of a nuisance that is very costly to remove on a large scale. Some individuals use a water softener to remove unwanted hardness. Calcium buildup can be removed from spigots and coffee pots using vinegar.

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.

Test Results

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Inorganic Contaminants							
Barium in PPM	2	2	0.091	.045 - .091	No	2016	Discharge from metals refineries; erosion of natural deposits
Fluoride in PPM	4	4	1.09	.91 - 1.25	No	2017	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate in PPM	10	10	0.15	ND-0.15	NO	2017	Erosion of natural deposits, Fertilizer run off, Sewage leaching from septic systems
Synthetic Organic Contaminants including Pesticides and Herbicides							
Simazine in PPB	4	4	0.05	ND – 0.05	No	2015	Herbicide runoff
Residual Disinfectants							
Total Chlorine in PPM	MRDLG 4	4	0.71	0.52-0.86	No	2017	Water additive to control microbes
Disinfection By-products							
TTHM in PPB Total Trihalomethanes	MRDLG 0	80	36.9	18.4 – 42.7	No	2017	By-product of drinking water chlorination
HAA5 in PPB Haloacetic Acids	MRDLG 0	60	10.1	3.6 – 9.2	No	2017	By-product of drinking water chlorination
Unregulated Contaminants							
Bromodichloromethane in PPB	0	None	9.5	6.1 – 14.3	No	2017	By-product of drinking water chlorination
Bromoform in PPB	0	None	3.4	1.1 – 2.1	No	2017	By-product of drinking water chlorination
Chloroform in PPB	0	None	8.9	3.7 - 17.4	No	2017	By-product of drinking water chlorination
Dibromochloromethane in PPB	0	None	8.2	6.6 – 10.2	No	2017	By-product of drinking water chlorination
Dichloroacetic Acid in PPB	0	None	3.3	1.64 – 4.4	No	2017	By-product of drinking water chlorination
Trichloroacetic Acid in PPB	0	None	1.7	0.0 – 2.8	No	2017	By-product of drinking water chlorination
Dibromoacetic Acid in PPB	0	None	2.2	1.3 – 2.7	No	2017	By-product of drinking water chlorination

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	3.9 ppb	No	2016	Corrosion of household plumbing systems
	0 out of _30_ samples were found to have lead levels in excess of the lead action level of 15 ppb.					
Copper (ppm)	1.3 ppm	None	0.3 ppm	No	2016	Corrosion of household plumbing systems
	0 out of _30_ samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

Hydrant Flushing: During the warm summer months, you may see Water Department personnel flushing fire hydrants. We do this to remove the accumulation of iron sediment in the pipes, thereby reducing discolored water situations over the long term. Be aware, however, that hydrant flushing may **temporarily cause both a drop in water pressure and discolored water.**

