

AURORA CITY WATER CLEVELAND / PORTAGE WATER SYSTEMS 2017 CONSUMER CONFIDENCE REPORT

“We have current, unconditioned licenses to operate our water systems”

April 2018

PURPOSE:

The City of Aurora has prepared the following annual Consumer Confidence Report to provide information to you, the consumer, on the quality of our drinking water and raise awareness about what is involved with the production and delivery of safe water. This report is required as part of the Safe Drinking Water Act Re-authorization of 1996.

THE SOURCE OF YOUR WATER:

Portage System

The Portage Water system derives its water from a well field located on Coit Road and is a ground water system. The water is treated at the Shalersville Water Treatment Plant. The Shalersville plant utilizes ion exchange to soften the water. The aquifer, that supplies drinking water to the Shalersville area has a high susceptibility to contamination due to the sensitive nature of the aquifer in which the drinking water wells are located and existing potential contamination sources identified. More information is available by calling 1-800-963-1292. Portage County Water Resources vigilantly safeguards its ground water supplies. Future contamination may be avoided by implementing protective measures. Ohio EPA has approved the Shalersville “Wellhead Protection Area Delineation” and has prepared a “Drinking Water Source Assessment” on the Shalersville well field area. This document can be found on its web site at www.portageco.com/waterresources.htm. There are presently no known sources of pollution affecting our ground water and we intend to use public education and constant monitoring to improve our protection program. We need the cooperation of everyone living and working in the area where our water originates to prevent contamination. Portage County Water Resources maintains a comprehensive Source Water Protection Program to protect the area around the wells. Portage County supplies water to the cities of Aurora and Streetsboro, as well as Shalersville Township, from this plant.

Cleveland System

The Cleveland Water system draws source water from four intakes located far offshore in Lake Erie’s Central Basin. These intakes are spread out over 15 miles and are 3 to 5 miles offshore where the water is cleaner and has been minimally impacted from tributary runoff and coastal activities. Lake Erie is considered to be a surface water source. Cleveland Water also has interconnections with other area water systems, but these are for emergency use only. These interconnections are designed to assist other water systems if needed, not for other systems to supply Cleveland Water. As a result, we received no emergency water in 2017.

SUSCEPTIBILITY ANALYSIS

Cleveland Water

The State of Ohio performed an assessment of our source water in the late 1990s. For the purposes of source water assessments, all surface waters are considered to be susceptible to contamination. By their nature, surface waters are accessible and can be easily contaminated by chemicals and pathogens from an upstream spill. Contaminants may rapidly arrive at our intakes with little warning or time to prepare. However, based on the information compiled for our Source Water Assessment, the Cleveland Critical Assessment Zones (CAZ) are classified as low susceptibility due to the distance and depth of the intakes from potential contaminant sources. As a result, Cleveland Water’s source water (Lake Erie) is considered to have a low susceptibility to contamination due to the location of our intakes. Cleveland Water effectively treats our source to meet drinking water quality standards by using a multiple barrier approach. Protection of source water is one of these barriers we use.

On-shore potential sources of contamination that impact the major streams in the Cleveland vicinity include point and nonpoint source discharges along the shore and along streams that empty into the lake. However, Cleveland Water has not documented any evidence that local shoreline and/or upstream potential contaminant sources influence water quality in the lake near our intakes. Lake Erie water in the vicinity of our intakes generally flows from west to east, although fluctuations can occur due to wind direction. Flows from the Cuyahoga River move into the harbor area and tend to hug the shoreline as they move eastward. Because Cleveland Water’s intake structures are located a considerable distance offshore, potential contamination from the Cuyahoga River, Rocky River and nearshore sources is greatly minimized.

It is important to note that this assessment is based on available data, and therefore may not reflect current conditions in all cases. Water quality, land uses, and other activities that are potential sources of contamination may change with time. For more information about potential pollution sources or to get a copy of our Drinking Water Source Assessment Report, contact our Risk Management Section at 216-664-2444 x75838.

Since no single treatment process can address all possible contaminants, Cleveland uses a multiple barrier process to treat Lake Erie water in order to meet drinking water quality standards.

Cleveland is a surface water supplier and meets all state and federal standards.

Portage County Water

The aquifer that supplies drinking water to Portage County Water Resources' Shalersville Wellfield has a high susceptibility to contamination. This determination was made because of the following reasons:

- The sand and gravel aquifer has a shallow depth to water, ranging from 5 to 15 feet below the ground surface;
- The topography is relatively flat and the soils are loams, allowing for a significant amount of precipitation to infiltrate into the ground instead of running off;
- No confining layer exists which could act as a barrier between the ground surface and the aquifer; and
- Potential significant contaminant sources exist within the protection area.

Water quality data collected to meet public water supply requirements provide a direct measurement for the presence of contamination in drinking water. Water quality data were evaluated using the drinking water compliance database available at the Ohio EPA. The available water quality data do not indicate that contamination has impacted the aquifer. Because sampling requirements are for treated water, the lack of water quality impacts is not a certain indication of the lack of contamination. This determination is limited by the sampling that is performed for the water system.

Portage County Water Resources has identified six potential contaminant sources that lie within the determined wellhead/source water protection area for the Shalersville Wellfield, three of which are located within the inner management zone (or one-year time-of-travel zone). Two additional potential contaminant sources are located just outside the down-gradient portion of the protection area. Some of the types of potential contaminant sources present are asphalt plants, sand and gravel mining operations, brine injection wells, and abandoned dumps.

Consequently the likelihood for contamination of the source water at the Portage County Water Resources' Shalersville Wellfield is high unless the potential contaminants are handled carefully by implementing appropriate protection strategies.

The Aurora City Cleveland Water system also has an auxiliary connection with the Aurora City Portage Water system. During 2017 we used 1,000,000 gallons from this connection over 1 day. On average, this connection is used for approximately 1 day each year. This report does contain information on the water quality received from the Aurora Cleveland PWS and the Aurora Portage PWS.

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 run-off, 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 and undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, as some elderly persons and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. EPA/CDC guidelines on the 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 Aurora City Water conducted sampling for bacteria, lead and copper and disinfectant byproducts during 2017. There were a total of 231 bacteria samples collected during 2017. All sampling completed for the year proved negative for coliform bacteria. Daily chlorine residual samples are conducted to ensure that the water distribution system is maintaining an acceptable level to control bacteria. In 2017 the city performed 1,688 samples. All sampling met Ohio EPA standards. 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.

ASBESTOS LEVEL:

The City of Aurora tested for Asbestos in drinking water in 2013. There were no detectable levels found in the samples.

LICENSE TO OPERATE (LTO) STATUS INFORMATION:

In 2017 we had an unconditioned license to operate our water systems.

TABLE OF DETECTED CONTAMINANTS – PORTAGE

Contaminants (units)	MCLG	MCL	Level Found	Range of Detection	Violation	Sample Year	Typical Source of Contaminants
Alpha Emitters							
pCi/L	0	15	6.38	N/A	NO	2016	Erosion of natural deposits
Barium							
ppm	2	2	0.091	N/A	NO	2016	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine							
ppm	[4]	[4]	1.20	0.60 – 1.30	NO	2017	Water additive used to control microbes
Combined Radium							
pCi/L	5	0	0.04	N/A	< 0.01	2016	Erosion of natural deposits
Fluoride							
ppm	4	4	1.10	0.85 – 1.16	< 0.10	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate							
ppm	10	10	0.12	NA	< 0.10	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

TABLE OF DETECTED CONTAMINANTS – CLEVELAND

Contaminants (units)	MCLG	MCL	Level Found	Range of Detection	Violation	Sample Year	Typical Source of Contaminants
Turbidity							
NTU	N/A	TT	0.16	0.02 to 0.16	NO	2017	Soil runoff
Turbidity (% meeting standard)							
NTU	N/A	TT	100%	100%	NO	2017	Soil runoff
Fluoride							
mg/L	4	4	1.0	0.8 to 1.3	NO	2017	Water additive which promotes strong teeth
Nitrate as Nitrogen							
mg/L	10	10	.95	<0.01 to 0.95	NO	2017	Runoff from farm fertilizer use; leaching from septic; erosion of natural deposits
TTHM – Trihalomethane							
ug/L	N/A	80	31.3	12.3 to 39.3	NO	2017	Byproduct of drinking water chlorination
HAA5 – Haloacetic Acid							
ug/L	N/A	60	26.3	10.1 to 23.2	NO	2017	Byproduct of drinking water chlorination
Total Organic Carbon							
N/A	N/A	TT	1.11	1.01 to 1.38	NO	2017	Naturally present in the environment
Contaminants (units)							
MRDLG	MRDL	Level Found	Range of Detection	Violation	Sample Year	Typical Source of Contaminants	
Total Chlorine							
mg/L	4	4	1.17	1.03 to 1.22	NO	2017	Water additives used to control microbes

LEAD AND COPPER ACTION LEVELS:

AURORA CITY WATER – CLEVELAND SYSTEM

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	0	< .2	NO	JULY 2015	Plumbing / service lines
	<u>0</u> out of <u>30</u> samples were found to have lead levels in excess of the lead action level of 15 ppb.					
Copper (ppm)	1.3 ppm	0	0.33	NO	JULY 2015	Plumbing / service lines
	<u>0</u> out of <u>30</u> samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

AURORA CITY WATER – PORTAGE SYSTEM

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	0	< 0.2	NO	JULY 2017	Plumbing / service lines
	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	0	0.3	NO	JULY 2017	Plumbing / service lines
	0 out of _30_ samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

DISINFECTANT BYPRODUCTS LEVELS:

AURORA CITY WATER – CLEVELAND SYSTEM

Contaminants (units)	MCLG	MCL	Level Found	Range of Detection	Violation	Sample Year	Typical Source of Contaminants
TTHM – TRIHALOMETHANE							
ppb	No goal for the total	80	52.75	28.0 – 66.5	NO	2017	Byproduct of chlorination
HAAE – HALOACETIC ACID							
ppb	No goal for the total	80	20.9	9.5 – 22.5	NO	2017	Byproduct of chlorination

AURORA CITY WATER – PORTAGE SYSTEM

Contaminants (units)	MCLG	MCL	Level Found	Range of Detection	Violation	Sample Year	Typical Source of Contaminants
TTHM – TRIHALOMETHANE							
ppb	No goal for the total	80	33	33 – 33	NO	2017	Byproduct of chlorination
HAA5 – HALOACETIC ACID							
ppb	No goal for the total	80	9.5	9.5 – 9.5	NO	2017	Byproduct of chlorination

CHLORINE RESIDUAL AVERAGES

AURORA CLEVELAND SYSTEM

Contaminants (units)	MADLG	MRDL	Level Found	Range of Detection	Violation	Sample Year	Typical Source of Contaminants
CHLORINE –(ppm)	4	4	.79	.76 – .79	NO	2017	Water additives used to control microbes

AURORA PORTAGE SYSTEM

Contaminants (units)	MADLG	MRDL	Level Found	Range of Detection	Violation	Sample Year	Typical Source of Contaminants
CHLORINE –(ppm)	4	4	1.35	1.27 – 1.35	NO	2017	Water additives used to control microbes

Turbidity is a measure of the cloudiness of water that is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the samples analyzed each month and shall not exceed 1 NTU at any time. As reported in the Table of Detected Contaminants, Cleveland Water's highest recorded turbidity result for 2017 was 0.16 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100% (i.e., all samples met the limits).

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 Aurora City Water 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. A list of laboratories certified in the State of Ohio to test for lead may be found at <http://www.epa.ohio.gov/ddagw> or by calling 614-644-2752. 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>.

Unregulated Contaminants – Substances for which EPA requires monitoring to determine where certain substances occur and where it needs to regulate those substances.

Aurora Unregulated Contaminants	
Contaminant	Range of Detections (2014)
CHLORATE	44.5 – 148
CHROMIUM – (ug/L)	.181 – .40
MOLYBDENUM (ug/L)	.77 – 1.4
STRONTIUM (ug/L)	97.2 – 169
TESTOSTERONE (ug/L)	NA
VANADIUM (ug/L)	.131 – 0.30

PUBLIC PARTICIPATION AND CONTACT INFORMATION:

HOW DO I PARTICIPATE IN DECISIONS CONCERNING MY DRINKING WATER?

If you are interested in learning more about the water department and water quality contact the Utilities Department / Customer Service at 330-995-9109. Inquiries about public participation and policy decisions can be made by calling the Utilities Department at 330-995-9109.

NEED TO KNOW MORE?

Additional information concerning the extensive quality testing done by **Portage County Water Resources** may be obtained by calling **330-297-3685**.

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.
- 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.
- 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.
- Not Applicable (N/A): Does not apply.
- Picocuries per liter (pCi/L): A common measure of radioactivity.