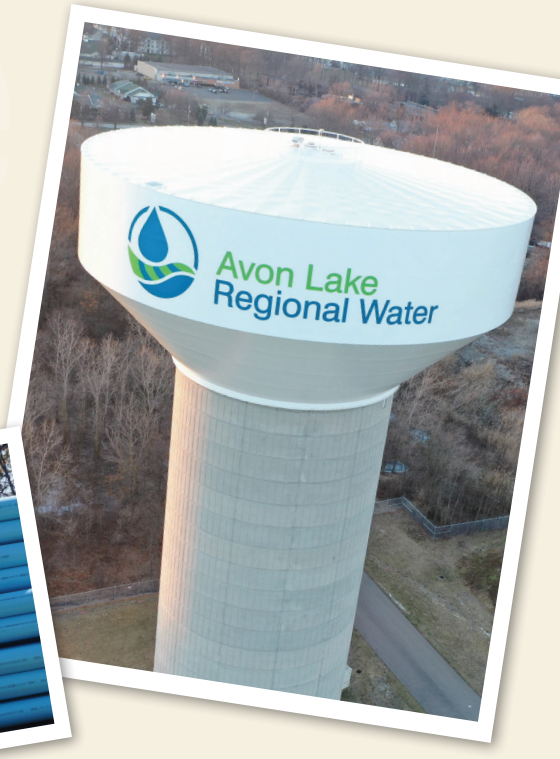
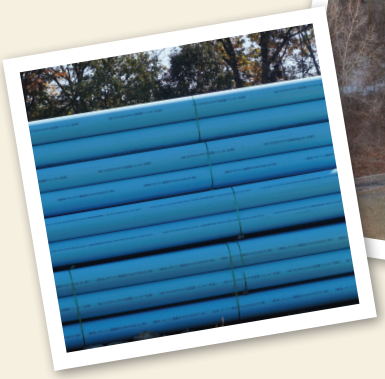
Avon Lake Regional Water

2022 DRINKING WATER CONSUMER CONFIDENCE REPORT

For the 2021 calendar year





The Board of Municipal Utilities

The Avon Lake Board of Municipal Utilities (the Board) is an independent board, that functions separately from Avon Lake City Council, that is composed of five members elected by the citizens of Avon Lake to serve four-year terms. The Board establishes policy and oversees the water and wastewater treatment operations of Avon Lake Regional Water. These private citizens, fellow Avon Lakers, represent you in determining the future of Avon Lake Regional Water.

Here are the individuals that served on the Board in 2021:

John Dzwonczyk (Chair)**, Anthony Abram, Randy Phillips, Timothy Rush, Dana Schnabel**

The Board meets twice a month, the first and third Tuesdays, at 6:30 p.m. at 201 Miller Road, Avon Lake, Ohio 44012. Meetings are open to the public and livestreamed on Facebook Live via our Facebook page, facebook.com/AvonLakeWater.

Avon Lake Regional Water

Serving the region, protecting our resource.

Investing in a High-Quality Future

The top priority of the Avon Lake Board of Municipal Utilities (the Board) is to ensure our customers (you) have clean, safe drinking water through seamless high-quality services.

As always, your drinking water in Avon Lake meets and exceeds U.S. and Ohio EPA standards. Each year, our Water Filtration Plant (WFP) operators and our Ohio EPA certified lab team perform over 100,000 water quality tests.

To continue to meet and exceed U.S. and Ohio EPA standards, the Board approves investments into your water service. These investments may include planned maintenance, replacement of critical infrastructure such as water lines, and/or making new water line connections for future demand.

For 2022 work, the Board approved the 2022 Project Bundle, which is several water line and water valve replacement projects throughout the City of Avon Lake (the City). The Bundle Project makes upgrades to our critical water line infrastructure and will reduce the potential for unexpected water service disruptions to customers that live in the project areas. Also, in some project areas like Armour Rd. and Avon Point Ave., Avon Lake Regional Water is partnering with the City on storm sewer and/or road rehabilitation.

The Board and staff of Avon Lake Regional Water take great pride in being able to provide Avon Lake and the region with clean, safe drinking water.

On behalf of the entire Board, we thank you for your continued support.

Sincerely,
John Dzwonczyk,
Chairman of the Avon Lake Board of Municipal Utilities

Avon Lake Regional Water has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Your drinking water met all Ohio EPA standards. 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. Also, the articles throughout the report show how Avon Lake Regional Water focused on keeping your water safe and planning for the future.

What Is The Source Of Your Drinking Water?

Avon Lake Regional Water (Avon Lake City PWS) receives its drinking water from Lake Erie. In Avon Lake, there are two separate intakes to ensure our ability to pump from this virtually endless source of quality raw water.

Avon Lake Regional Water treats water to meet EPA drinking water quality standards. A Source Water Assessment Report was prepared for Avon Lake Regional Water by Ohio EPA. Copies of the complete source water assessment report prepared for Avon Lake are available by contacting John Christopher at (440) 933-3229.

West Ridge Interconnect

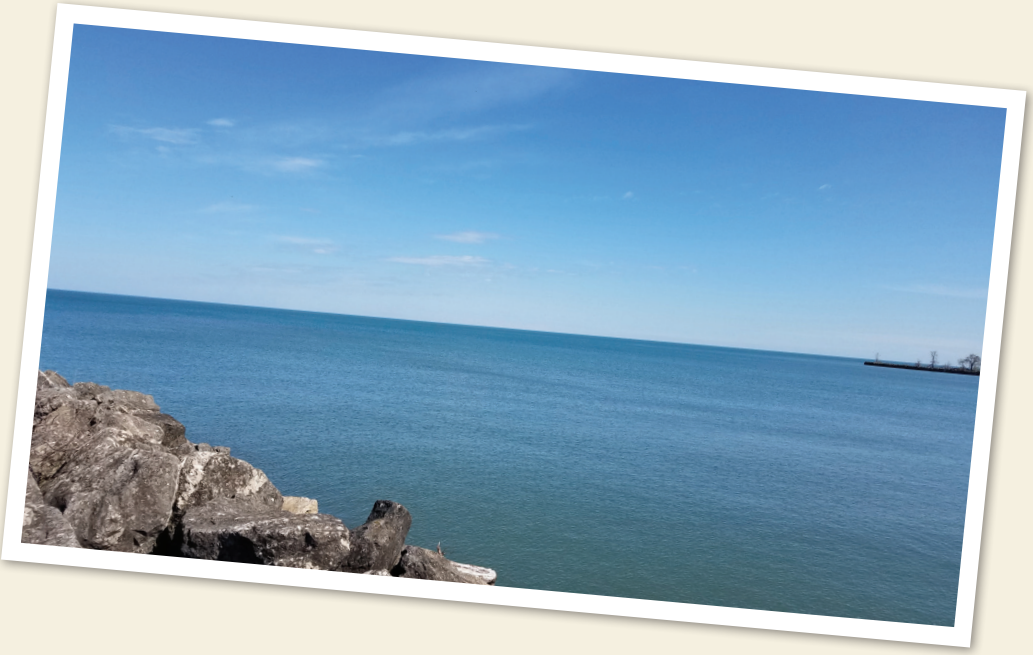
Avon Lake Regional Water also has an emergency connection with the City of Elyria. During 2021, we used zero gallons from this connection. This report does not contain information on the water quality received from the City of Elyria. You can contact Samuel F. Jacob, Water Plant Superintendent, City of Elyria, who has prepared this report. Mr. Jacob has over 44 years of experience in Water Treatment, and Class IV Water Plants. He currently holds an Ohio EPA Class IV Water Certificate. If you have any questions, concerns or would like additional information, please contact him at 440-324-7669 or 440-244-4310 extension 6201 or email him at sjacob@cityofelyria.org.

Excerpt from Drinking Water Source Assessment for the City of Avon Lake

6.0 SUSCEPTIBILITY ANALYSIS

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 readily contaminated by chemicals and pathogens with relatively short travel times from source to the intake. Based on the information compiled for this assessment, the Avon Lake Water System drinking water source protection area (CAZ) is susceptible to contamination from municipal waste water treatment discharges, industrial waste water discharges, air contamination deposition, combined sewer overflows, runoff from residential, agricultural and urban areas, oil and gas production and transportation, and accidental releases and spills from rail and vehicular traffic as well as from commercial shipping operations and recreational boating.

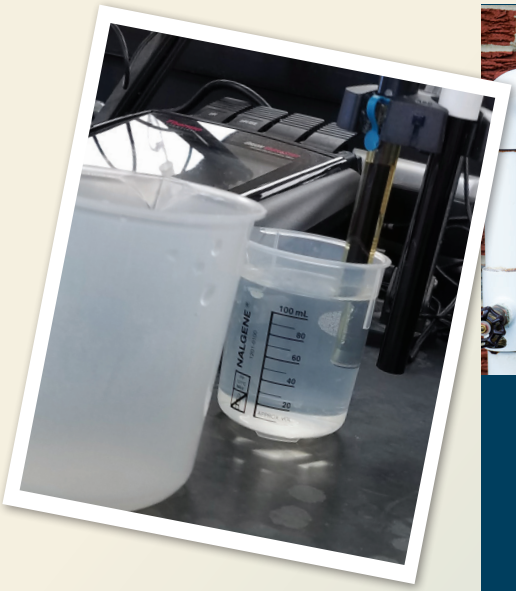
It is important to note that this assessment is based on available data, and therefore may not reflect current conditions in all cases. Water quality, land uses and other activities that are potential sources of contamination may change with time. While the source water for the City of Avon Lake is considered susceptible to contamination, historically, the Avon Lake Public Water System has effectively treated this source water to meet drinking water quality standards.



What Are Sources Of Contamination To Drinking Water?

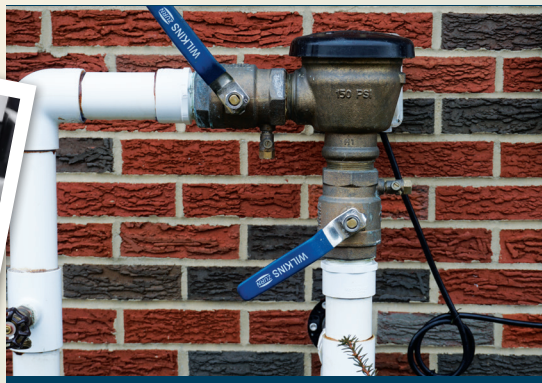
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick 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).



Backflow Prevention Devices Save Lives

Did you know that backflow prevention devices, such as the one shown above, protect our water quality? Backflow prevention devices are critical tools in preventing a backflow situation at a cross-connection to our public water supply. A backflow situation occurs when water flows backwards into the building's water system and/or the public water system. It happens where there is a cross-connection and a change in pressure causing the water to go backwards. A cross-connection is where a possible source of water contamination and the property and/or the public water system connect.

Common backflow hazards include hose connections to chemical solution aspirators to feed lawn and shrub herbicides, pesticides, or fertilizers; lawn irrigation systems; chemically treated heating systems; hose connections to a water outlet or laundry tub; and swimming pools, hot tubs, and spas. Backflow prevention devices, required where there is a cross-connection to the public water supply like those listed above, stop contaminants from backflowing into a water pipe directly connected to the public water system.

Annual testing and inspection of these backflow prevention devices is critical to ensuring our public water supply is protected for all.

License to Operate (LTO) Status Information

In 2021, Avon Lake had an unconditioned license to operate our water system.

About Your Drinking Water

The EPA requires regular sampling to ensure drinking water safety. Avon Lake Regional Water conducted sampling for bacteria, inorganic, radiological, and volatile organic contaminant sampling during 2021. Samples were collected for a total of 61 different contaminants most of which were not detected in the Avon Lake Regional Water 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 table: EPA establishes 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.

Listed below is information on those contaminants that were found in the Avon Lake Regional Water drinking water.

Table of Detected Contaminants

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Microbiological Contaminants							
Turbidity (NTU)[1]	NA	TT	0.25	0.03 to 0.25	No	2021	Soil runoff
Turbidity (% samples meeting standard)	NA	TT	100%	100%	No	2021	Soil runoff
Total Organic Carbon (TOC)[2]	NA	TT	1.19	1.0 to 1.58	No	2021	Naturally present in the environment
Disinfectants and Disinfection Byproducts[3]							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.33	1.19 to 1.45	No	2021	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)[4]	NA	60	12.60	9.9 to 14.6	No	2021	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)[4]	NA	80	27.38	15.0 to 39.6	No	2021	By-product of drinking water disinfection
Inorganic Contaminants							
Barium (ppm)	2	2	0.02	NA	No	2021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.93	0.09 to 1.09	No	2021	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	0.92	0.02 to 0.92	No	2021	Run off from fertilizer use, Leaching from septic tanks, sewage; Erosion of natural deposits
Lead and Copper							
	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	NA	<3.0	No	2021	Corrosion of household plumbing systems; erosion of natural deposits	
	Zero out of 32 samples were found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3 ppm	NA	0.02	No	2021	Erosions of natural deposits; leaching from wood preservatives; Corrosions of household plumbing systems	
	Zero out of 32 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.						

Definitions

- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Contaminant: Any physical, chemical, biological, or radiological substance or matter in water.
- 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 Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Residual Disinfectant Level (MRDL): The highest residual disinfectant level 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 residual 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.
- NA: Not Applicable
- ND: Not Detected
- NTU: Nephelometric Turbidity Units
- Parts per billion (ppb) or Micrograms per Liter (ug/L) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- 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.
- 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.
- Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium when the water is disinfected for the formation of disinfection byproducts. TOC removal early in the treatment plant is required.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water. For example Avon Lake Regional Water adds orthophosphate to maintain compliance with the lead and copper rule.
- VOC: Volatile Organic Chemicals
- WTP: Water Treatment Plant
- 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.

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. Avon Lake Regional 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. 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.

In 2021 Avon Lake had a current, unconditioned license to operate our water system from the Ohio EPA.

[1] Turbidity is a measure of the cloudiness of water and 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 above the Avon Lake WTP highest recorded turbidity result for 2021 was 0.25 NTU and lowest monthly percentage
of samples meeting the turbidity limits was 100%.

[2] The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. This removal ratio is calculated as the ratio between the actual TOC removal and the TOC rule removal requirements and other parameters. A value of at least one (1) indicates that the water system is in compliance with TOC removal requirements.

[3] These contaminants level found is the highest compliance value based on a running annual average. This average includes results from 2020 & 2021.

[4] Disinfection byproducts are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAA5s.

Avon Lake Regional Water

201 Miller Road
Avon Lake, Ohio 44012

Who Needs To Take Special Precautions?

Although Avon Lake Regional Water's drinking water is better than all state and federal water quality standards, 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).

How Do I Participate In Decisions Concerning My Drinking Water?

Public participation and comment are encouraged at regular meetings of the Avon Lake Board of Municipal Utilities which meets twice a month, the first and third Tuesdays, at 6:30 p.m. at 201 Miller Road, Avon Lake, Ohio 44012. If you would like to submit a comment to be read during the public comment portions of the meeting, please provide your comment via email to comments@avonlakewater.org or written letter to our office (Avon Lake Regional Water 201 Miller Road, Avon Lake, Ohio 44012) by 4:30 p.m. on the day of the meeting. For more information on your drinking water, contact John Christopher, Water Filtration Plant Manager at (440) 933-3229.

Have Additional Questions About Avon Lake Regional Water?

During the day, Monday-Friday, you may reach a customer service representative from Avon Lake Regional Water at (440) 933-6226. Avon Lake residents: if you experience an emergency after hours, please call (440) 933-3229. Like us on Facebook (facebook.com/AvonLakeWater) or visit our website at avonlakewater.org.