

Avon Lake Regional Water 2019 DRINKING WATER CONSUMER CONFIDENCE REPORT

For the 2018 calendar year

The Board of Municipal Utilities

The Avon Lake Board of Municipal Utilities is an independent board composed of five members elected by the citizens of Avon Lake to serve four-year terms. The Avon Lake Board of Municipal Utilities 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. The Avon Board of Municipal Utilities functions independently of Avon Lake City Council, but cooperates with the Council and City on major projects.

Here are the individuals that served on the Avon Lake Board of Municipal Utilities in 2018:

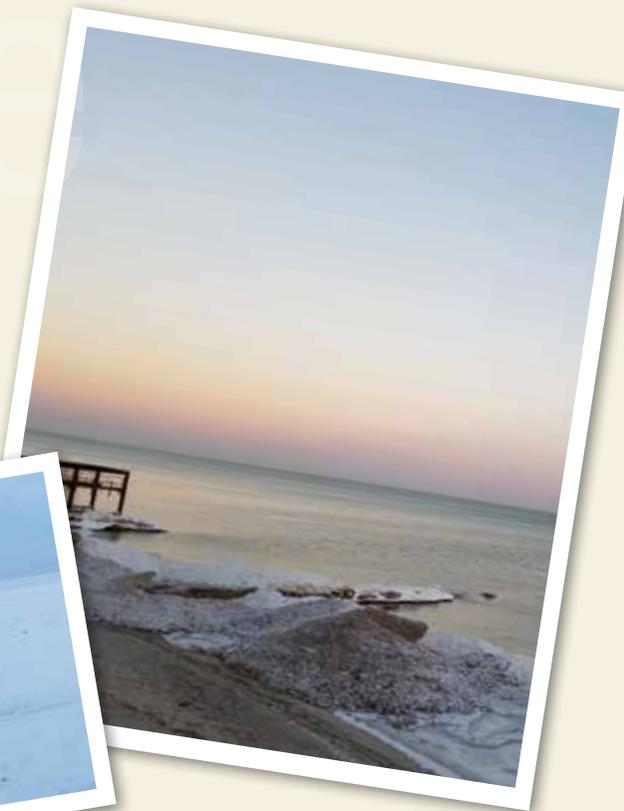
John Dzwonczyk (Chair),
Anthony Abram, Randy Phillips,
Timothy Rush, Dana Schnabel

The Avon Lake Board of Municipal Utilities 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.



**Avon Lake
Regional Water**

Serving the region,
protecting our resource.



Investing in the Value of Water

Water. One of the necessities of life. And, an afterthought unless unavailable.

Beginning in 2013, the Avon Lake Board of Municipal Utilities authorized a series of critical infrastructure improvements to the Avon Lake Regional Water system. Some improvements were mandated by Ohio EPA, such as the elimination of the City's combined sewers. Other improvements include the Water Reclamation Facility Rehabilitation and the three million gallon water tower. These improvements enhance reliability of water and wastewater services, guard public health, and protect Lake Erie.

Though you may not see these improvements on a daily basis, each one of these improvements benefits you, our customer, so you don't think twice about turning on your faucets or flushing your toilets.

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

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. 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.

The Year in Review

Continued Investment in Avon Lake's Future

2018 marked another year of investing in Avon Lake's future through critical infrastructure improvements. One highlight to the year was the substantial completion of our Water Reclamation Facility's rehabilitation. This was the first major rehabilitation to the facility since its initial construction in 1960 and upgrade to better treatment in 1972 when much of the equipment was first installed.

Project	Status
Combined Sewer Separation	
The 45 Area Combined Sewer Separation Project	Continued progress in 2018
Water Filtration Plant (WFP)	
Demolition of the Walker Road Blue Water Tower, which was already replaced in December 2017 with a new three million gallon clean-water water tower	Completed in October 2018
Water Reclamation Facility (WRF)	
Mechanical equipment to clarifiers	Completed in March 2018
Grit chamber	Completed in April 2018
Screening building	Completed in May 2018
Wash water system and conveyor with associated pumps	Completed in May 2018
Solids press	Completed in July 2018
Chain and flight collection system	Completed in March, May, and June 2018
Infrastructure Upgrades in Project Areas and Around Avon Lake	
Repaired 34 water line breaks	Completed in 2018
Replaced 31 fire hydrants	Completed in 2018
Replaced 9,622 feet of water line	Completed in 2018
Replaced 18,646 feet of sanitary sewer line	Completed in 2018



Thank You Avon Lake!

Avon Lake Regional Water would like to thank those Avon Lake property owners who separated their laterals. Your actions are helping protect Lake Erie and our drinking water for all residents of Avon Lake.

Walker Road Blue Water Tower: Thank You for Your Service to Avon Lake

On October 23, 2018, Avon Lake Regional Water said goodbye to its 500,000 gallon blue water tower on Walker Road. Check out the pictures below of the tower coming down.

As the population of Avon Lake grew and the need for water increased, it was time for a new, larger water tower. Completed in 2017, Avon Lake Regional Water constructed a new three million gallon water tower, just west of the blue tower. This tower, an \$8 million project paid for with funding from water rates and the Ohio EPA Revolving Loan Fund, will provide fresh, drinkable water in an emergency.



Source Water Information

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 Greg Yuronich at (440) 933-3229 or by viewing this webpage: <http://www.wapp.epa.ohio.gov/gis/swpa/OH4700311.pdf>



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).



Monitoring Beach Bacteria Counts

Lorain County Public Health collects water samples at the beach front of Veterans' Memorial Park. Avon Lake Regional Water tests the water sample to determine whether there is an unsafe level of E.coli bacteria¹ in the water. An unsafe level of E.coli bacteria is 235 organism/100 mL, which means it's not recommended for swimming.

Samples are taken Monday to Thursday. Once Avon Lake Regional Water receives a sample, our lab analysts at the Water Filtration Plant run the test, which takes 24 hours for the results. Results of the previous day's sample are posted Tuesday to Friday on our Facebook page, facebook.com/AvonLakeWater/.

¹Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

License to Operate (LTO) Status Information

In 2018, Avon Lake Regional Water had an unconditional license to operate our water system.

Table of Detected Contaminants

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

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Microbiological Contaminants							
Turbidity (NTU) ¹	NA	TT	0.29	0.04-0.29	No	2018	Soil runoff
Turbidity (% samples meeting standard)	NA	TT	100%	100%	No	2018	Soil runoff
Total Organic Carbon (TOC) ²	NA	TT	1.38	1.22-1.86	No	2017-18	Naturally present in the environment
Disinfectants and Disinfection Byproducts³							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.2	1.1-1.4	No	2017-18	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb) ⁴	NA	60	16.15	10.8-21.9	No	2017-18	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) ⁴	NA	80	41.48	24.5-51.5	No	2017-18	By-product of drinking water disinfection
Inorganic Contaminants							
Barium (ppm)	2	2	0.028	0.028	No	2018	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	4	4	1	0.7-1.2	No	2018	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	1.4	0.1-1.4	No	2018	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	1st Half 2018	Corrosion of household plumbing systems; erosion of natural deposits	
Zero out of 61 samples were found to have lead levels in excess of the lead action level of 15 ppb.							
Lead (ppb)	15 ppb	NA	<3.0	No	2nd Half 2018	Corrosion of household plumbing systems; erosion of natural deposits	
Zero out of 61 samples were found to have lead levels in excess of the lead action level of 15 ppb.							
Copper (ppm)	1.3 ppm	NA	0.07	No	1st Half 2018	Erosions of natural deposits; leaching from wood preservatives; Corrosions of household plumbing systems	
Zero out of 60 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.							
Copper (ppm)	1.3 ppm	NA	0.08	No	2nd Half 2018	Erosions of natural deposits; leaching from wood preservatives; Corrosions of household plumbing systems	
Zero out of 60 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.							

Unregulated Contaminants	Sample Point	Avg. Level Found	Range of Detections	Year Sampled
Manganese (ppb)	Entry Point	0.815	0.405-1.56	2018
Haloacetic Acids (HAA5) (ppb)	Distribution	16.574	10.490-23.895	2018
Haloacetic Acids (HAA6Br) (ppb)	Distribution	6.553	0.74-11.125	2018
Haloacetic Acids (HAA9) (ppb)	Distribution	22.583	11.45-33.535	2018

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2018 Avon Lake Regional Water participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4). For a copy of the results please call Greg Yurionich at 440-933-3229.



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.
- **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 lime to increase the pH of our finished water in order to maintain compliance with the lead and copper rule.
- **VOC:** Volatile Organic Chemicals
- **WTP:** Water Treatment Plant
- **The “<” Symbol:** A symbol that 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>.

Avon Lake has a current, unconditional license to operate our water system from the Ohio EPA.

¹Turbidity 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 2018 was 0.29 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

²The 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.

³These contaminants level found is the highest compliance value based on a running annual average. This average includes results from 2017 & 2018.

⁴Disinfection 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. For more information on your drinking water, contact Greg Yuronich 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, follow us on Twitter or Instagram (avonlakewater) or visit our website at avonlakewater.org.

