

WHAT IS NOT IN YOUR DRINKING WATER?

The City of Avon's drinking water, in addition to the contaminants listed in the table (located inside this brochure), is tested for the presence of 45 other contaminants, which do not appear in any detectable amounts.

HOW HARD IS YOUR WATER

Water hardness is expressed as a concentration of calcium carbonate, the concentration in your water averaged 122 mg/l in 2017. The historical objection to hardness has been its effect on soap. Although modern detergents counteract many of the problems of hard water, some consumers may seek softer water. Excessively soft water can cause corrosion in pipes, which can shorten the service life of pipes and household appliances and can result in toxic materials, such as lead and copper, being dissolved in drinking water.

Soft	Moderately Hard	Hard	Very Hard
0 - 75 mg/l CaCO ₃	75 - 150 mg/l CaCO ₃	150 - 300 mg/l CaCO ₃	Over 300 mg/l CaCO ₃

LEAD EDUCATIONAL INFORMATION

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

IS THERE A RISK?

Although the City of Avon's drinking water surpasses 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 infections. 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 CAN YOU LEARN MORE?

Please contact Ed McCallie, Utilities Superintendent at 440-937-5740 for additional information. In addition, the public is welcome to attend the regularly scheduled meeting of the Avon City Council on the second and fourth Monday of each month at 7:30PM at the Avon City Hall, 36080 Chester Road.

SAFE WATER ON TAP!



The City of Avon is
committed to supplying safe
water that surpasses all
state and federal standards.

2017
Water
Quality
Report

Avon Department of Utilities
35030 Detroit Road
Avon, OH 44011

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Where does your water come from?

The City of Avon receives its drinking water from the City of Avon Lake. The Avon Lake water treatment facility draws its water from Lake Erie. There are two separate pump stations and three intake cribs to insure their ability to pump from this endless source of quality raw water. The raw water is then treated with alum to aid in the removal of turbidity (dirt) after which it goes through flocculation, sedimentation and filtration. Once the turbidity is removed the water is treated with chlorine for disinfection and fluoride for dental health prior to being pumped to your tap. The Avon Lake Water Filtration facility is staffed around the clock with approximately 150 tests run on the drinking water every day and over 50,000 each year.

What are DRINKING WATER STANDARDS?

A source water assessment was conducted by the Ohio EPA for the City of Avon Lake water system in 2002. The City uses surface water drawn from an intake in Lake Erie. For the purposes of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. Due to the vast size and dilution capabilities of Lake Erie, Ohio EPA evaluated Avon Lake's contamination potential based on a Critical Assessment Zone (CAZ) for which it determined there was no direct source of pollution. Ohio EPA further determined that with Avon Lake's source water analysis and emergency operation plan that undetected contamination would be minimized and that no water quality violations have been recorded.

The City of Avon Lake's public water system treats the water to meet drinking water quality standards. Implementing measures to protect Lake Erie and the Black River can further decrease the potential for water quality impacts. More detailed information is provided in the Drinking Water Source Assessment report, which can be obtained by calling Greg Yuronich at 440-933-3229.

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 in source water come from various places: microbial contaminants such as viruses and bacteria may originate in sewage plants, septic systems, livestock operations and wildlife; salts, metals and other inorganic substances can occur naturally or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming; pesticides and herbicides enter the stream from agriculture, urban storm water runoff, and general residential use; while organic chemical contaminants are often by-products of industrial and petroleum production, they are also linked to gas stations, urban storm water runoff and septic systems; and finally, radioactive contaminants can occur naturally or via oil and gas production or mining activities.

In order to ensure that tap water is safe to drink, EPA 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

TABLE OF DETECTED CONTAMINANTS IN 2017

CONTAMINANTS (UNITS)	MCLG	MCL	LEVEL FOUND	RANGE OF DETECTIONS	VIOLATION?	YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
Microbiological Contaminants							
¹ Turbidity (NTU)	NA	TT	0.25	0.03 - 0.25	NO	2017	Soil Runoff
Turbidity (% samples meeting standard)	NA	TT	100%	100%	NO	2017	
² Total Organic Carbon (ppm)	NA	TT	1.11	1.11 - 1.72	NO	2017	Naturally present in the environment
Inorganic Contaminants							
³ Barium (ppm)	2	2	0.029	0.029	NO	2017	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Copper (ppm) 90th percent sample result	1.3	AL=1.3	0.05	NA	NO	2016	Corrosion of household plumbing
Zero out of thirty samples was found to have copper levels in excess of the copper action level of 1.3 ppm.							
Lead (ppb) 90th percent sample result	0	AL=15	<3	NA	NO	2016	Corrosion of household plumbing
Zero out of thirty samples was found to have lead levels in excess of the lead action level of 15 ppb.							
Fluoride (ppm)	4	4	1.02	0.14 - 1.31	NO	2017	Water additive which promotes strong teeth
Nitrate (ppm)	10	10	1.02	0.11 - 1.02	NO	2017	Natural deposits, fertilizers, sewage
³Volatile Organic Contaminants							
⁴ Haloacetic Acids (ppb)	NA	60	27.2	9.5 - 33.8	NO	2016-17	By-product of drinking water disinfection
⁴ Total Trihalomethanes (ppb)	NA	80	51.6	23 - 58	NO	2016-17	By-product of drinking water disinfection
Residual Disinfectants	MRDLG	MRDL					
³ Chlorine (ppm)	4	4	0.92	0.5 - 1.1	NO	2016-17	Water additive to control microbes
Radiological Contaminants (Alpha & Beta)							
⁵ Gross Alpha (pCi/l)	0	15	7.94	NA	NO	2015	Erosion of natural deposits

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 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 thirty seconds to two 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/labcert.aspx>, or by calling 614-644-2752. Information on lead in drinking water, testing methods, and steps you take to minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4719 or at <http://www.epa.gov/safewater/lead>.

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

Avon Lake Water Filtration Plant monitored for Cryptosporidium in the source water during 2017. Cryptosporidium was detected in 1 sample of 9 collected from the raw water from Lake Erie. It was not detected in the finished water. Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Monitoring of source water indicates the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

DEFINITIONS

- 1. AL = Action Level** – The concentration of a contaminant that, if exceeded, triggers a treatment or other requirement that a water system must follow.
- 2. Contaminant** – Any physical, chemical, biological, or radiological substance or matter in water.
- 3. MCL = Maximum Contaminant Level** – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG's as feasible using the best available treatment technology.
- 4. MCLG = Maximum Contaminant Level Goal** – The level of contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
- 5. MRDL = Maximum Residual Disinfectant Level**
- 6. MRDLG = Maximum Residual Disinfectant Level Goal**
- 7. NA = Not Applicable**
- 8. ND = Not Detected**
- 9. NTU = Nephelometric Turbidity Units**
- 10. 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.
- 11. 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.
- 12. pCi/l = picoCuries per liter** – A common measure of radioactivity.
- 13. TOC = Total Organic Carbon** 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.
- 14. TT = Treatment Technique** – A required process intended to reduce the level of a contaminant in drinking water. For example we add lime to increase the pH of our finished water in order to maintain compliance with the lead and copper rule.
- 15. VOC = Volatile Organic Chemicals**
- 16. WTP = Water Treatment Plant**
- 17. "<" Symbol** – A symbol that means 'less than.' A result of '<3.0 ppm' means that the lowest detectable level is 3.0 ppm and the contaminant was not detected in those samples.

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 daily samples and shall not exceed 1 NTU at any time. As reported above the Avon Lake WTP highest recorded turbidity result for 2017 was 0.25 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 2016 & 2017.

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.

⁵Gross Alpha Particles – Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.