

Avon Water Department
 Public Water System Identification Number 1305001
Drinking Water Quality Report
For the Year 2021

We are pleased to present to you the 2021 Annual Drinking Water Quality Report for the Borough of Avon. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the steps we take to continually improve and monitor the water treatment process and protect our water resources.

Avon's water source is from 3 wells located west of Main St., two on Woodland Ave. and one on Stanton Place. Two of the wells, #1 & #2, draw water from the Mount Laurel Winonah aquifer. The third, #4, draws water from the Old Bridge aquifer. Well # 3 was sealed several years ago. The # 4 well was constructed to replace the # 3 well. These wells are used approximately 6 months of the year, from May through Oct. The remaining months of the year Avon purchases water from N.J. American Water Co. The water that Avon purchases, from N.J. American, comes from ground water from the Potomac-Raritan-Magothy Aquifer and surface water from the Glendora Reservoir, Jumping Brook, the Manasquan River, the Shark River, and the Swimming River Reservoir.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for Avon's water system, which is available at www.state.nj.us/dep/swap/ or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550. The following is a summary of what the source water assessment determined for Avon's system.

Avon By The Sea Water Department- PWSID # 1305001

Avon By The Sea Water Department is a public community water system consisting of 3 wells, 0 wells under the influence of surface water, 0 surface water intakes, 0 purchased ground water sources, and 1 purchased surface water source. This system's source water comes from the following aquifers: Mount Laurel-Wenonah aquifer, upper Potomac-Raritan-Magothy aquifer. This system purchases water from the following water system: NJAWC-MON SYS

Susceptibility Ratings for Avon By The Sea Water Department Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report; New Jersey American Water Co.- Mon. Sys. PWSID # 1345001, which is available at www.state.nj.us/dep/swap/ or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550. The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			Radon			Disinfection Byproduct Precursors		
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Wells -3			3			3			3			3		1	2		1	2		2	1		3	
GUDI -0																								
Surface water intakes - 0																								

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Karl Klug, Water/Sewer Superintendent, at 732-502-4506. We want our valued customers to be informed about their water utility. Avon's Borough meetings are held at Borough Hall 301 Main Street. Meetings are on the second and fourth Mondays of each month at 7:00 p.m.

The Avon Water Department routinely tests for contaminants in your drinking water according to Federal and State laws. The following tables show the results of Avon's and N.J. American Water Co.'s monitoring for the period of January 1st to December 31st, 2021. The state allows 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 representative, are more than one year old. There is a separate table that lists the results of N.J. American Water Co. All of the water samples collected are tested by state certified laboratories.

As you will see by the tables our systems had no violations. We're proud that your drinking water meets all Federal and State safe drinking water requirements. We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels.

DEFINITIONS

In the following tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a 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 -The "Goal"(MCLG) is 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.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ND = Not detected

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 Goal (MRDLG): The level of a 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 contamination.

Recommended upper limit (rul)

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

AVON WATER DEPT. TEST RESULTS

Contaminant	Units of Measure	Level Detected	Highest level Detected	MCL	MCL G	Likely sources of Contamination
Radioactive Contaminants						
Alpha emitters	Pci/L	< 3	< 3	15	0	Erosion of natural deposits
Combined Radium -226 and -228	Pci/L	1.5	1.5	5	0	Erosion of natural deposits
Radium -228	Pci/L	< 1	< 1	5	0	Erosion of natural deposits
Inorganic Contaminants:						
Nitrate	Ppm	0.2	0.2	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Lead ¹ (2020)	Ppb	90 th percentile = ND	ND	AL=15	0	Corrosion of household plumbing systems, erosion of natural deposits
Copper (2020)	Ppm	90 th percentile =0.3	0.4	AL=1.3	1.3	Corrosion of household plumbing systems, erosion of natural deposits
Treatment By-Products Stage-2						
Total Trihalomethanes (TTHMs)	Ppb	3.34 to 91 ³	AVG.= 55.94 ²	80	NA	By-Product of drinking water disinfection.
Total Haloacetic Acids (THAAs)	Ppb	1.62 to 18.6	AVG = 8.42 ²	60	NA	By-Product of drinking water disinfection.
Disinfectants						
Chlorine (Jan-Sept.) Chloramines(Oct-Dec)	ppm	0.1 to 1.4	AVG.= .39	MRDL= 4	MRDLG =4	Water additive used to control microbes

Footnotes

¹ 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 Avon 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 is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

² This number represents the highest locational running annual average (LRAA) calculated from the data collected during 2021.

³ In 2021, two TTHM samples exceeded the MCL of 80 PPb . This was not a violation, as compliance is based on the locational running annual average (LRAA) which was below the MCL. *Some people who drink trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*

ADDITIONAL INFORMATION

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Avon's system received monitoring waivers for asbestos and synthetic organic chemical contaminants.

NJ AMERICAN WATER CO TEST RESULTS

DISINFECTANTS - Collected at the Treatment Plants					
Substance (with units)	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Chloramines (ppm) (Surface Water)	N/A	TT: Results \geq 0.2	0.59 ¹	0.59 - 3.15	Water additive used to control microbes.

1 - Data represents the lowest residual entering the distribution system from our surface water treatment plant.

DISINFECTION BYPRODUCTS - Collected at the Treatment Plant					
Substance (with units)	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Bromate (ppb)	N/A	10	0	ND	By-product of drinking water disinfection.

TREATMENT BYPRODUCTS PRECURSOR REMOVAL - Collected at the Treatment Plant ¹					
Substance	MCLG	MCL	Lowest Compliance Result	Range Detected	Typical Source
Total Organic Carbon (TOC)	N/A	TT: > 35% removal	19%	19% - 60%	Naturally present in the environment.
Ratio of Actual / Required TOC Removal	N/A	TT: Running annual average > 1	1	1.0 - 1.7	Naturally present in the environment.

1 - Annual average of ratio removal compliance based on annual present of ratio removal. (Running annual average)

TURBIDITY - Collected at the Treatment Plant ¹					
Substance (with units)	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Turbidity (NTU)	N/A	TT: Results > 1 NTU	0.5	0.03 - 0.5	Soil runoff.
	N/A	TT: At least 95% of samples <0.3 NTU	99.9%	N/A	Soil runoff.

1. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

REGULATED SUBSTANCES - Collected at the Treatment Plant					
Substance (with units)	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Barium (ppm)	2	2	ND	N/A	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Nitrate (ppm)	10	10	0.72	0.09 - 0.72	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.
Fluoride (ppm)	N/A	2	0.71	0.48 - 0.71	Erosion of natural deposits; water additive that promotes strong teeth

OTHER SUBSTANCES OF INTEREST- Collected at the Treatment Plant

Substance (with units)	MCLG	Recommended Limit	Highest Result	Range Detected	Comments
Aluminum ¹ (ppm)	N/A	0.2	0.1	ND - 0.1	Erosion of natural deposits
Iron ^{1,2} (ppm)	N/A	0.3	0.31	ND - 0.31	Naturally Occurring
Manganese ^{1,3} (ppm)	N/A	0.05	0.017	ND - 0.017	Naturally Occurring
Sodium ⁴ (ppm)	N/A	50	226	29 - 226	Erosion of natural deposits

1 - Substances with Secondary MCLs do not have MCLGs and are not legally enforceable; these limits are primarily established to address aesthetic concerns.

2 - The recommended upper limit for iron is based on unpleasant taste of the water and staining of laundry. Iron is an essential nutrient, but some people who drink water with iron levels well above the recommended upper limit could develop deposits of iron in a number of organs of the body.

3 - The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from high levels which would be encountered in drinking water.

4 - For healthy individuals the sodium intake from water is not important because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be of concern to individuals on a sodium restricted diet.

USEPA's Health Advisories are non-enforceable and provide technical guidance to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination

PERFLUORINATED COMPOUNDS

Substance (with units)	MCL	Highest Compliance Result	Range Detected	Typical Source
Perfluorononanoic acid (PFNA) (ppT)	13	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorooctanoic Acid (PFOA) (ppt)	14	6.1	3.1 - 6.1	Used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire fighting foams, cleaners, cosmetics, lubricants, paints, polishes, adhesives and photographic films
Perfluoropentanoic Acid (PFOS) (ppt)	13	3	2.1 - 3.0	Manmade chemical; used in products for stain, grease, heat and water resistance

2018-2019 UCMR (Coastal North AM2 schedule was quarterly from Nov 2018, Feb 2019, May 2019 and Aug 2019-- these results are from entire sampling schedule of 2018-2019)

ADDITIONAL WATER QUALITY PARAMETERS OF INTEREST - Water Leaving the Treatment Facility

Parameter	Range Detected	Typical Source
Bromochloroacetic Acid	ND - 4.1	By-product of drinking water disinfection
Bromodichloroacetic acid	ND - 3.6	By-product of drinking water disinfection
Chlorodibromoacetic acid	ND - 2.5	By-product of drinking water disinfection
Dibromoacetic Acid	ND - 0.95	By-product of drinking water disinfection
Dichloroacetic Acid	0.64 - 20	By-product of drinking water disinfection
Monobromoacetic Acid	ND - 0.55	By-product of drinking water disinfection
Total Haloacetic Acids	ND - 22	By-product of drinking water disinfection

Total Haloacetic Acids - Br		ND - 8.3	By-product of drinking water disinfection
Total Haloacetic Acids-UCMR4		0.64 - 27	By-product of drinking water disinfection
Trichloroacetic Acid		ND - 11	By-product of drinking water disinfection
2-Methoxyethanol		NA	Used as a solvent in varnishes, dyes, resins, airplane deicing solutions. It is also used in organometallic chemistry synthesis.
Manganese*		ND - 73	Naturally-occurring elemental metal; largely used in aluminum alloy production. Essential dietary element.
Germanium			

*Manganese has a Secondary MCL of 50 ppb

Our Water Research Efforts

Cryptosporidium is a protozoan found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, people with severely weakened immune systems have a risk of developing a life threatening illness. We encourage such people to consult their doctors regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease. It can also be spread through means other than drinking water. For additional information regarding cryptosporidiosis and how it may impact those with weakened immune systems, please contact your personal health care provider. The U.S. EPA issued a rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. To comply with this rule, New Jersey American Water once again began conducting 24 consecutive months of monitoring for *Cryptosporidium* in our raw water sources starting in in 2015. The monitoring to date indicates the presence of these organisms in the source water. The samples were collected from the source **before** the water was processed through our treatment plants. We continued monitoring until April 2017. The data collected is presented in the Source Water Monitoring table below.

Substance (2015-2017)	Jumping Brook Plant	Oak Glen Plant	Typical Source
Cryptosporidium	ND	ND	Microbial pathogens found in surface waters throughout the United States.
Giardia	ND -0.089	ND - 0.558	Microbial pathogens found in surface waters throughout the United States.

Avon purchases only treated water from N.J. American Water Co.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances, which may be found in wells, lakes, reservoirs and other untreated sources, may include

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil or gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agricultural, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- 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, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which much provide the same protection for public health.

All 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Please call the Avon Water Dept. Office at 732-502-4506 if you have questions