

Meadowview / Elkton West Water Quality Report for 2021

ARTESIAN WATER MARYLAND • 664 CHURCHMANS ROAD • NEWARK, DELAWARE 19702

PWSID# MD0070015

SPRING 2022

Superior Water Quality

We are pleased to present our annual Water Quality Report for 2021. Each spring this report is published in accordance with the requirements of the United States Environmental Protection Agency (EPA) and the Maryland Department of the Environment (MDE). The Water Quality Report interprets our monitoring and testing data from 2021 and provides valuable information relating to the quality of your water supply. We are proud to report that the water you receive from Artesian again fully complies with national and state drinking water standards.

Since 1905, Artesian has provided safe, high-quality water and superior service to customers throughout the Delmarva Peninsula. Artesian crews work around-the-clock to monitor water quality and supply. Our treatment process includes disinfection, various filtration processes, pH adjustment and corrosion control as needed to ensure our systems meet all applicable state and federal regulations. In addition to treatment, we regularly invest in water quality monitoring and compliance testing by EPA-certified labs and experts in our internal laboratory. Artesian routinely monitors constituents to ensure our water quality is in full compliance with all applicable standards.

We encourage you to take the time to review the report. If you have any questions about this report or the quality of your tap water, call us at (443) 245-7777 or (800) 332-5114. Our Customer Service Representatives and our Water Quality Department are ready to assist you.

This report is also available on our website at www.artesianwater.com.

As always, it is our pleasure to serve you.



Meadowview/ Elkton West

WATER QUALITY REPORT

Information concerning
public water system

MD0070015



www.epa.gov/watersense/

A Safe Water Source

The Meadowview / Elkton West public water system is supplied with water from two (2) wells located in Cecil County and water purchased from Artesian Water Company's (Delaware) system. The two wells located in Cecil County are ground water wells located in the Patuxent formation and use the natural filtering capability of the aquifer to remove harmful bacteria and other substances from the water. The treatment plant at Meadowview / Elkton West uses the best available technology to ensure that we are providing water that meets or exceeds all Environmental Protection Agency (EPA) and the Maryland Department of the Environment (MDE) water quality parameters. Regular testing also helps us ensure high quality. The water purchased from Artesian Water Company's (Delaware) system is primarily ground water and supplemented by surface water. The water quality report for the Artesian Water Company (Delaware) system can be viewed at <https://www.artesianwater.com/wp-content/uploads/wqawc2021.pdf> beginning July 1, 2022.

We also maintain an emergency interconnection from Suez Delaware, suez-na.com (formerly United Water Delaware), which operates a surface-water treatment plant in Stanton, Delaware. Suez Water's supply comes from the White Clay and Red Clay Creeks. You can view Suez's water quality report for 2021 which will be available online beginning July 1, 2022 at: www.mysuezwater.com/sites/default/files/DECCR2021.pdf.

This purchased water meets all applicable state and federal regulations, and is used to augment our supply. Further evaluation of the state's water supply is made available by the (MDE), through a program designed to assess the susceptibility of public water sources to contamination. MDE's source water assessment plan has been completed and approved by the EPA. Copies can be obtained by contacting Artesian's Water Quality Department at (443) 245-7777 or you can view copies online at the MDE's Source Water Assessment Reports website at:

https://mde.maryland.gov/programs/water/water_supply/source_water_assessment_program/pages/index.aspx

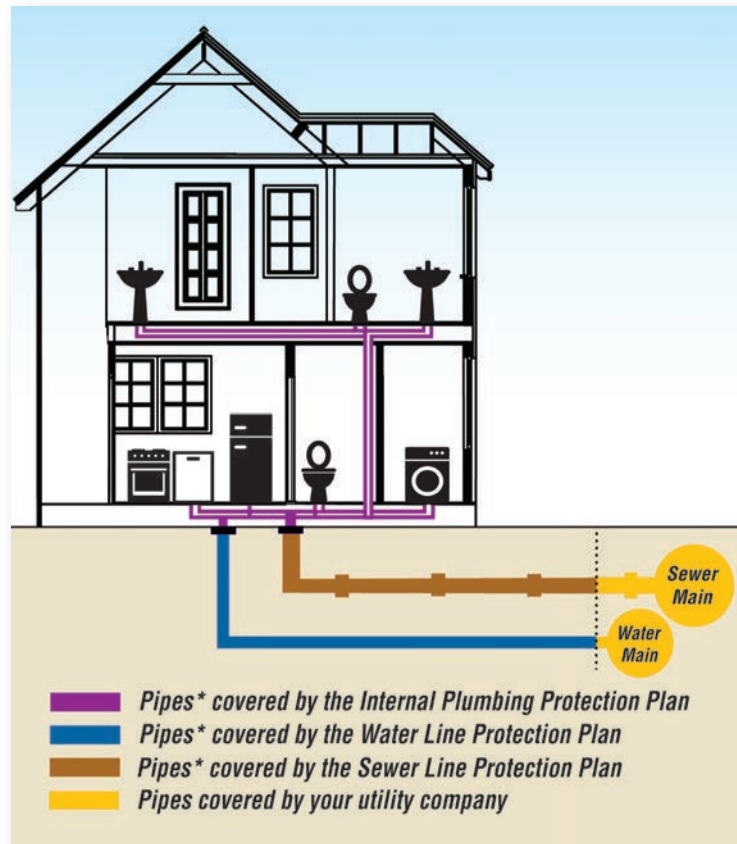
Emerging Contaminants and Proactive Treatment

Artesian takes water quality seriously and we want to assure you that we take extra precautions to ensure the safety of the water being provided to our customers, including proactive testing and treatment when necessary for emerging and unregulated contaminants. Artesian water comes from multiple sources and interconnected water systems. We routinely monitor groundwater and are capable of shutting down wells to install new treatment without any service interruptions. Our rigorous testing program includes daily sampling throughout our systems to ensure all treatment processes are working properly and high-quality water is being provided to our customers.



Future Reliability

Artesian's ability to reliably deliver high-quality water in Cecil County continues to play a critical role in the area's economic development. A significant example of such growth is the Phase 1 development, now under way, of the U.S. Navy's former Bainbridge Naval Training Center site just off I-95 along the Susquehanna River in Port Deposit. Work is currently being done to evaluate the water intake structure in the river to ensure that water demands will be met as development expands. The approximately 1,200-acre site has been inactive since the U.S. Navy departed in 1976 and is now being returned to use through its commercial and industrial development.



Service Line Protection Plans

We encourage all of our customers to enroll in our Water, Sewer and Internal Plumbing Protection Plans. Nearly 25% of our customers are currently enrolled in the Water Line Protection Plan and nearly 20% have enrolled in the Sewer Line Protection Plan since we began offering these plans in 2007.

As a homeowner, you are responsible for the maintenance of the water and sewer lines that run from your house to the street, as well as all of the internal water and wastewater pipes. Clogs, breaks, blockages from tree roots, and even pipe collapses can and do happen without warning. Pipes that become clogged can back-up systems with raw sewage causing major inconvenience while breaks and collapses can harm the environment and be expensive and unpleasant to clean-up.

We've learned customers that are informed and prepared contribute to the protection of water resources that we all enjoy through responsible care for pipes. Artesian's Service Line Protection Plans guarantee an added peace of mind of water, sewer and internal plumbing protection that can help cover unexpected costs of repairing and replacing internal wastewater pipes, leaking water lines and pipe collapses to sewer lines that could cost you thousands of dollars!

The Plans are Easy, Affordable and Convenient

- Emergency expert service repairs around-the-clock, managed by an experienced Artesian team
 - No deductible or hidden service fees
 - No negotiating with contractors or plumbers
 - Easy monthly billing added to your existing water bill

Water Line Protection Plan - \$5.50/month

Sewer Line Protection Plan - \$11.00/month

Internal Plumbing Protection Plan - \$8.50/month

Enroll online at: www.artesianwater.com Or call: **302.453.6930**



Meadowview / Elkton West Water Quality Report for 2021

PWSID# MD0070015

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

	Unit of Measure	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Highest Level Detected	Range of Level Detected Low – High	Sample Date	Violation ?	Likely Source of Contamination
Inorganic Contaminants								
Barium	ppm	2	2 ¹	0.101	0.101	2021	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate ²	ppm	10	10 ¹	7.57	7.01 – 7.57	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

	Unit of Measure	MCL	MCLG	Highest Level Detected	Range of Level Detected Low – High	Sample Date	Violation ?	Likely Source of Contamination
Radiological Contaminants								
Gross Alpha	pCi/l	15	0	4.6	4.6	2020	No	Erosion of natural deposits.
Gross Beta	pCi/l	50 ³	0	6	6	2020	No	Decay of natural and man-made deposits.
Radium, combined	pCi/l	5	0	3.6	3.6	2020	No	Erosion of natural deposits..

	Unit of Measure	MCL	MCLG	Highest Level Detected	Range of Level Detected Low – High	Sample Date	Violation ?	Likely Source of Contamination
Disinfection/Disinfection By-Products								
Chlorine (free)	ppm	4 (MRDL)	4 (MRDLG) ⁴	1.74	1.30 – 1.74	2021	No	Water additive used to control microbes.
Haloacetic Acid, total	ppb	60		1.00 ⁵	nd – 1.00 ⁶	2021	No	By-product of drinking water chlorination.
Trihalomethanes, total	ppb	80		9.00 ⁵	1.70 – 9.00 ⁶	2021	No	By-product of drinking water chlorination.

	Unit of Measure	SMCL	Average Level Detected	Range of Level Detected Low – High	Sample Date	Violation ?	Likely Source of Contamination	
Secondary Contaminants								
Chloride	ppm	250	90	90	2016	n/a		
Iron	ppm	0.3	0.03	nd – 0.06	2021	n/a		
Manganese	ppm	0.05	0.027	0.027	2021	n/a		
pH, Field	0 - 14 scale	6.5 – 8.5	7.45	7.13 – 7.68	2021	n/a		

	Unit of Measure	Action Level (AL)	MCLG	90th Percentile	No. of Sites Over AL	Sample Date	Violation ?	Likely Source of Contamination
Lead & Copper⁷								
90th Percentile Lead	ppb	15	0	>1	0	2020	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
90th Percentile Copper	ppm	1.3	1.3 ¹	0.262	0	2020	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.



Meadowview / Elkton West Water Quality Report for 2021

PWSID# MD0070015

	Unit of Measure	MCL	Average Level Detected	Range of Level Detected Low – High	Sample Date	Violation ?	Likely Source of Contamination
Unregulated Contaminants							
Alkalinity, total	ppm	n/r	42.8	11.8 – 59.0	2021	n/a	
Conductivity	umhos	n/r	69	55 – 130	2021	n/a	
Hardness, Calcium	ppm	n/r	23	15 – 32	2021	n/a	
Nickel	ppb	n/r	8	6 – 9	2018	n/a	Erosion of natural deposits.
PFAS	ppt	n/r ⁸	27.07	27.07	2020	n/a	
Phosphate, total	ppm	n/r	0.54	0.36 – 0.76	2021	n/a	Naturally occurring.
Sodium	ppm	n/r	45.1	45.1	2021	n/a	

Unit Descriptions

- ppm — Parts per million, or milligrams per liter (mg/L)
- ppb — Parts per billion, or micrograms per liter (µg/L)
- pCi/L — Picocuries per liter (a measure of radioactivity)
- ppt — Parts per trillion, or nanograms per liter (ng/L)
- umhos — Measurement of conductivity
- n/a — Not applicable
- ND — Not detected
- n/r — Monitoring not required, but recommended

Notes For All Contaminants

- Although EPA sets the “goal” at the same level as the maximum contaminant level for these contaminants, Artesian Water strives to maintain levels lower than the MCL.
- Nitrate [measured as Nitrogen] - Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.
- EPA considers 50 pCi/L to be the level of concern for Beta particles.
- The U.S. Environmental Protection Agency sets the MRDLG for chlorine residual at 4 parts per million (ppm). Artesian Water strives to meet a range between 0.5 ppm and 3 ppm.
- Highest 4-quarter average of samples collected and used by the State Department of the Environment for compliance.
- Range includes all samples tested for, whereas highest level detected is based upon the highest 4-quarter average.
- Under the Lead and Copper Rule, we sample for these contaminants once every 3 years.
- Currently, there are no federal regulations (i.e. Maximum Contaminant Levels (MCLs)) for PFAS in drinking water. However, the U.S. Environmental Protection Agency (EPA) has issued a Health Advisory Level (HAL) of 70 parts per trillion (ppt) for the sum of PFOA and PFOS concentrations in drinking water. While not an enforceable regulatory standard, when followed, the EPA HAL does provide drinking water customers, even the most sensitive populations, with a margin of protection from lifetime exposure to PFOA and PFOS in drinking water. Beginning in 2020, the Maryland Department of the Environment (MDE) initiated a PFAS monitoring program. MDE anticipates that EPA will establish an MCL for PFOA and PFOS in the near future. This would entail additional monitoring. Additional information about PFAS can be found on the MDE website: mde.maryland.gov

Important Drinking Water Definitions

- MCLG — MAXIMUM CONTAMINANT LEVEL GOAL:** 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.
- MCL — MAXIMUM CONTAMINANT LEVEL:** 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.
- AL — ACTION LEVEL :** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- MRDLG — MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL:** 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 contaminants.
- MRDL — MAXIMUM RESIDUAL DISINFECTANT LEVEL:** 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.
- SMCL — SECONDARY MAXIMUM CONTAMINANT LEVEL:** Non-enforceable guideline which is not directly related to public health, commonly associated with cosmetic or aesthetics within the water.

Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring Violation	01/01/2021	03/31/2021	We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During January 1, 2021 to March 31, 2021, we did not complete testing for NITRATE and therefore cannot be sure of the quality of our drinking water during that time. Follow up compliance samples indicated ranges were within acceptable limits.

Expected Substances In Drinking Water

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

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:

- 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 and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, 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 must provide the same protection for public health.

If You Have A Special Health Concern

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 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).

PFAS In Drinking Water

PFAS – short for per- and polyfluoroalkyl substances – refers to a large group of more than 4,000 human-made chemicals that have been used since the 1940s in a range of products, including stain- and water-resistant fabrics and carpeting, cleaning products, paints, cookware, food packaging and fire-fighting foams. These uses of PFAS have led to PFAS entering our environment, where they have been measured by several states in soil, surface water, groundwater and seafood. Some PFAS can last a long time in the environment and in the human body and can accumulate in the food chain.

Lead In Drinking Water

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. Artesian 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 or at www.epa.gov/safewater/lead.

Radon

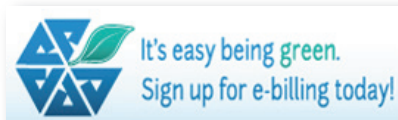
Radon is a radioactive gas that is found in nearly all soils. It typically moves up through the ground to the air and into homes through the foundation. Drinking water from a ground water source can also add radon to the home air.

Community Outreach and Education

People often want to learn more about their water, so Artesian is happy to provide speakers – free of charge – to community organizations, schools and other groups. Our staff of experienced employees can speak about topics such as conservation, water supply and treatment, and related subjects. We also offer our Water Conservation and Education Program to local schools! Visit our website for more information at www.artesianwater.com.

e-Billing

We offer a free e-billing service so you can view, print and pay your water bills online. Currently over 21,000 customers have enrolled in e-billing. If you have not enrolled yet, you can by visiting our website at <http://www.artesianwater.com/e-billing> or contacting our Customer Service Department.



If you have any questions about the contents of this report, please call Artesian at (443) 245-7777, toll free at 1 (800) 332-5114 or email at custserv@artesianwater.com. Our Customer Service Representatives and Water Quality Department are ready to assist you. More information about Artesian is available at our website: www.artesianwater.com.

Landlords, apartment managers, businesses, schools, etc. should share this information with others who might not receive this information directly. Consider posting the information in a public place or advise others that the report is available by contacting Artesian by phone or online at www.artesianwater.com.

Artesian Water Maryland
664 Churchmans Road
Newark, DE 19702

