

# Town of Chesapeake City Water Quality Report for 2022

TOWN OF CHESAPEAKE CITY, MARYLAND

PWSID# MD0070006

SPRING 2023

## Superior Water Quality

Artesian Water Company, the Town of Chesapeake City's water operator, is pleased to provide this Water Quality Report for the year 2022. Please notice that substances such as iron, chloride, and sodium are commonly found in drinking water. They occur naturally at trace levels, and the United States Environmental Protection Agency (EPA) has deemed that these substances pose no health hazard from consumption in drinking water. This report indicates the concentrations of these and many other substances obtained during analyses performed from January 1, 2022 – December 31, 2022 unless otherwise specified. If you have any questions about this report or the quality of your tap water, please contact the Town of Chesapeake City at (410) 885-5298.

## Town of Chesapeake City

### WATER QUALITY REPORT

Information concerning  
public water system

**MD0070006**



[www.epa.gov/watersense/](http://www.epa.gov/watersense/)

## A Safe Water Source

The Town of Chesapeake City water system is supplied with water purchased from the Artesian Water Company (Delaware) Main System. The system's supply comes from groundwater wells and uses the best available technology and conducts regular testing to ensure water quality.

The Artesian Water Company (Delaware) Main System's complete water quality report can be viewed at <https://www.artesianwater.com/wp-content/uploads/wqawc2022.pdf> once available online beginning July 1, 2023.

The Division of Public Health, in conjunction with the Department of Natural Resources and Environmental Control, has conducted source water assessments for nearly all community water systems in the state of Delaware. The Source Water Assessment report can be found on the Delaware SWAPP website [www.delawaresourcewater.org/assessments](http://www.delawaresourcewater.org/assessments) or contact Artesian's Water Quality Department at (302) 453-6900 to obtain a copy.

# Town of Chesapeake City Water Quality Report for 2022

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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	Sample Date	Violation ?	Likely Source of Contamination
<b>Disinfection/Disinfection By-Products</b>								
Chlorine (free)	ppm	4 (MRDL)	4 (MRDLG) <sup>1</sup>	1.20	0.45 – 1.20	2022	No	Disinfectant used in drinking water industry.
Trihalomethanes, total	ppb	80		1.7	1.7	2022	No	By-product of drinking water disinfection.

	Unit of Measure	MCL	Average Level Detected	Range of Level Detected	Sample Date	Violation ?	Likely Source of Contamination
<b>Unregulated Contaminants</b>							
Alkalinity, total	ppm	n/r	84.3	63.2 – 163.0	2022	n/a	
Calcium Hardness	ppm	n/r	33	30 – 35	2022	n/a	
Conductivity	umhos	n/r	123.2	54.3 – 186.9	2022	n/a	
Phosphate, total	ppm	n/r	0.70	0.31 – 1.68	2022	n/a	

	Unit of Measure	SMCL	Average Level Detected	Range of Level Detected	Sample Date	Violation ?	Likely Source of Contamination
<b>Secondary Contaminants</b>							
Iron	ppm	0.3	0.05	nd – 0.30	2022	n/a	Short-term fluctuations related to iron removal treatment.
pH, Field	0 - 14 scale	6.5 – 8.5	7.33	6.90 – 7.86	2022	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

1. The U.S. Environmental Protection Agency sets the MRDLG for chlorine residual at 4 parts per million (ppm). Artesian Water independently monitors the purchased water and strives to see a range between 0.5 ppm and 3 ppm.

## 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.

## 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 – or 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.

Beginning in 2020, the Maryland Department of the Environment (MDE) initiated a PFAS monitoring program. Our water system was not tested for PFAS in 2022. In March 2023, EPA announced proposed Maximum Contaminant Levels (MCLs) of 4 ppt for PFOA and 4 ppt for PFOS, and a Group Hazard Index for four additional PFAS compounds. Future regulations would require additional monitoring as well as certain actions for systems above the MCLs. EPA will publish the final MCLs and requirements by the end of 2023 or beginning of 2024. Additional information about PFAS can be found on the MDE website:

[mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx](http://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx)

## Lead In Drinking Water

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 Water Company is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water.

If you are concerned about lead in your water and wish to have your water tested, contact Artesian Water Quality Department at 302-453-2507. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at

<http://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.

# Artesian Water Company Water Quality Report for 2022

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

PWSID# DE0000552

SPRING 2023

## Superior Water Quality

We are pleased to present our annual Water Quality Report for 2022. Each spring this report is published in accordance with the requirements of the United States Environmental Protection Agency (EPA) and the Delaware Division of Public Health (DPH). The Water Quality Report interprets our monitoring and testing data from 2022 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 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 water systems are meeting all state and federal regulations. In addition to treatment, we invested nearly \$275,000 in water quality monitoring and compliance testing by EPA certified labs and experts in our internal laboratory. Artesian routinely monitors to make certain our water quality is in full compliance with all 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 (302) 453-6930 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](http://www.artesianwater.com).

*As always, it is our pleasure to serve you.*



**Artesian  
Water  
Company**

**WATER  
QUALITY  
REPORT**

Information concerning  
public water system

**DE0000552**



[www.epa.gov/watersense/](http://www.epa.gov/watersense/)

## A Safe Water Source

The Artesian Water Company public water system is supplied with water from 67 wells located throughout northern New Castle County. These wells are in the Columbia, Potomac, Cockeysville Marble and Mount Laurel formations. Our ground water wells use the natural filtering capability of the aquifer to remove harmful bacteria and other substances from the water. These wells are located in mostly confined aquifers that provide additional protection from surface-borne contaminants. Our treatment stations use the best available technology to ensure that we are providing water that meets or exceeds all Environmental Protection Agency (EPA) and State Division of Public Health water quality parameters. Regular testing also helps us ensure high quality.

In 2022, we purchased an average of 1.1 million gallons per day of surface water from the Chester Water Authority as well as an additional 0.04 million gallons per day of surface water from the City of Wilmington. The Chester Water Authority's supply comes from the Susquehanna River basin, while the City of Wilmington's supply comes from the Brandywine River basin. You can view the water quality report for Chester Water Authority at

<https://chesterwater.com/wp-content/uploads/2023/03/CCR2022.pdf>.

The City of Wilmington's water quality report can be found at [ccrwilmingtonde.com](http://ccrwilmingtonde.com)

The Division of Public Health, in conjunction with the Department of Natural Resources and Environmental Control, has conducted source water assessments for nearly all community water systems in the state of Delaware. The assessments show that the sources are considered very low to very highly susceptible to contaminants entering the untreated water supply. The Source Water Assessment report can be found on the Delaware SWAPP website [www.delawaresourcewater.org/assessments](http://www.delawaresourcewater.org/assessments) or contact Artesian's Water Quality Department at (302) 453-6900 to obtain a copy.

# Emerging Contaminants and Proactive Treatment

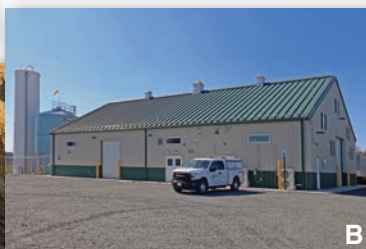
Artesian takes water quality seriously. To ensure the quality of the water being provided to our customers, we take extra precautions, including proactive testing and treatment when necessary for emerging and unregulated contaminants. Artesian water comes from multiple sources and through an interconnected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



As water quality has become an increasing priority nationwide, the regulatory landscape has evolved. For over 115 years, Artesian has made delivering safe, secure, high-quality water to customers one of our highest priorities. Advancements in technology and continued analysis have significantly lowered previously acceptable levels of regulated contaminants, and a variety of new contaminants have been added to the list of constituents requiring treatment and removal. The most notable of the newly regulated contaminants are the family of chemicals known as per- and polyfluoroalkyl substances, commonly referred to by the acronym PFAS.

For nearly 10 years, Artesian has been at the forefront of the effort to remove PFAS from water sources. As early as 2013, we conducted rigorous sampling of our sources and began installing treatment capable of removing PFAS. The U.S. Environmental Protection Agency published its proposed PFAS maximum contaminant levels for drinking water in March 2023. Artesian is ahead of the curve, with treatment in place at many of our facilities and several additional projects in progress to install treatment at sites with PFAS levels above the newly proposed standards.

## From Water Source to the Tap



During 2022, we invested over \$48 million in capital investments to enhance existing supply and treatment capacities, increase self-sufficiency and strategically meet the needs of continuing development to ensure that our customers continue to enjoy secure, and high-quality service. These investments included placing into service a new Booster Station along Route 40 (A) and completing upgrades of two other booster stations in New Castle County. This critical investment enables us to better move available supplies of water from south to north in our service territory in New Castle County.

To further enhance reliability for our customers in northern New Castle County, we are currently constructing the Doe Run water treatment plant, scheduled to be placed into service during the summer of 2023. This station is designed to treat up to 1 million gallons of water per day and will provide another source of supply in this northern area.

To meet the needs of our growing customer bases in Sussex County and southern New Castle County, we completed the Dagsboro Armory Road Tank in the Town of Dagsboro in 2022(B) and we are currently constructing the Cedar Lane Tank in Middletown(C). These elevated tanks are designed for 1 million gallons of additional water storage in each of these rapidly growing communities. Moreover, throughout 2022, we continued our proactive water main replacement program, renewing over 3.28 miles of main and 309 services and replacing 20 fire hydrants(D).

## SAVE WATER



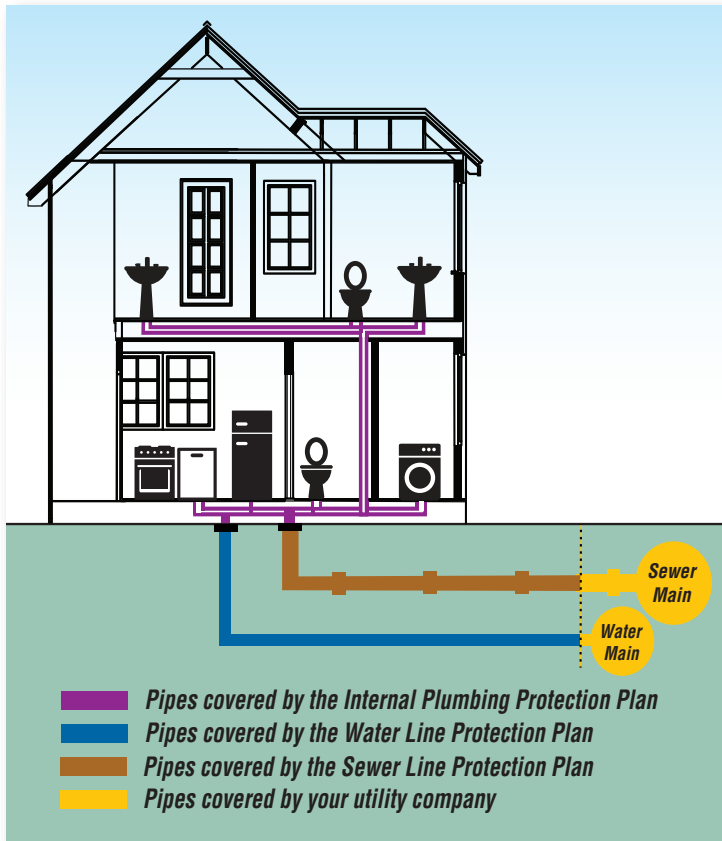
Clean water is one of our most precious natural resources. Artesian knows how valuable water is, and how important it is for all of us to conserve, now and in the future. Teaching the next generation about the water cycle and ways to conserve in your home or garden can be both educational and entertaining.

Check out the links below to access some fun facts and interactive games.

<https://drinktap.org/Kids-Place>

<https://wateruseitwisely.com/kids/>

<https://www.epa.gov/watersense/watersense-kids>



## 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 service line protection plan and nearly 20% have enrolled in the sewer line protection plan since we began offering them 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 within your home. Clogs, breaks, blockages from tree roots, and even pipe collapses can and do happen without warning. Pipes that become clogged can backup systems with raw sewage causing major inconvenience, while breaks and collapses can harm the environment and be expensive and unpleasant to cleanup.

Customers who are informed and prepared contribute to protecting 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 the 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** - \$5.99/month

**Sewer Line Protection Plan** - \$11.50/month

**Internal Plumbing Protection Plan** - \$10.99/month

Enroll online at: [www.artesianwater.com](http://www.artesianwater.com) Or call: **302.453.6930**



# Artesian Water Company

## Water Quality Report for 2022

PWSID# DE0000552

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (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 during 2022. 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	Year Sampled	Violation?	Likely Source of Contamination
<b>Inorganic Contaminants</b>								
Barium	ppm	2	2 <sup>1</sup>	0.244	nd – 0.244	2020	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	ppb	100	100 <sup>1</sup>	5	nd – 5	2020	No	Discharge from steel and pulp mills; Erosion of natural deposits.
Cyanide, Free	ppm	200	200 <sup>1</sup>	12	nd – 12	2020	No	Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
Fluoride	ppm	2	2 <sup>1</sup>	1.11	nd – 1.11	2022	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nickel	ppb	100	100 <sup>1</sup>	8	nd – 8	2020	No	Erosion of natural deposits.
Nitrate <sup>2</sup>	ppm	10	10 <sup>1</sup>	7.30	nd – 7.30	2022	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	ppb	50	50 <sup>1</sup>	5	nd – 5	2020	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

### Volatile Organic Contaminants

Cis-1,2-Dichloroethene	ppb	70	0	0.6	nd – 0.6	2021	No	Discharge from drug and chemical factories.
Methylene Chloride	ppb	5	0	1	nd – 1	2020	No	Discharge from drug and chemical factories.
Methyl+butyl Ether (MTBE)	ppb	10	0	3.8	nd – 3.8	2022	No	Gasoline additive.
Tetrachloroethylene	ppb	1	0	0.51	nd – 0.51	2022	No	Discharge from factories and dry cleaners.

### Radiological Contaminants

Gross Alpha	pCi/l	15	0	5.1	nd – 5.1	2019	No	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation.
Radium, combined	pCi/l	5	0	4.2 <sup>3</sup>	1.8 – 4.9 <sup>4</sup>	2022	No	Erosion of natural deposits.

### Disinfection/Disinfection By-Products

Chlorine (free and total)	ppm	4(MRDL)	4(MRDLG) <sup>5</sup>	3.58	nd – 3.58	2022	No	Disinfectant used in drinking water industry; Low levels were a one-time occurrence, follow up samples showed normal levels.
Haloacetic Acids, total <sup>4</sup>	ppb	60		27.76 <sup>3</sup>	nd – 63.60 <sup>4</sup>	2022	No	By-product of drinking water chlorination.
Trihalomethanes, total <sup>4</sup>	ppb	80		33.90 <sup>3</sup>	12.40 – 45.10 <sup>4</sup>	2022	No	By-product of drinking water chlorination.

	Unit of Measure	Action Level (AL)	MCLG	90th Percentile	No. of Sites Over AL	Year Sampled	Violation?	Likely Source of Contamination
<b>Lead &amp; Copper <sup>7</sup></b>								
90th Percentile Lead	ppb	15	0	0	0	2020	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
90th Percentile Copper	ppm	1.3	1.3 <sup>1</sup>	0.245	0	2020	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.



# Artesian Water Company

## Water Quality Report for 2022

PWSID# DE0000552

	Unit of Measure	MCL	MCLG	Average Level Detected	Range of Level Detected	Year Sampled	Violation?	Likely Source of Contamination
<b>Unregulated Contaminants</b>								
Alkalinity, total	ppm	n/r		92	24 – 311	2020	n/a	
Conductivity	umhos	n/r		292	52 – 529	2020	n/a	
1, 4 Dioxane	ppb	n/r	3.5	0.06	nd – 0.14	2022	n/a	
Hardness, Calcium	ppm	n/r		79	30 – 247	2020	n/a	
Hardness, Total	ppm	n/r		126	40 – 330	2020	n/a	
Perfluorooctanoic acid (PFOA)	ppb	n/r	0.070 <sup>8</sup>	0.009	nd – 0.042	2022	n/a	
Perfluorooctanesulfonic Acid (PFOS)	ppb	n/r	0.070 <sup>8</sup>	0.0003	nd – 0.020	2022	n/a	
Phosphate, total	ppm	n/r		1.02	0.06 – 6.42	2022	n/a	
Sodium	ppm	n/r		31.13	4.81 – 75.60	2022	n/a	
Total Organic Carbon (TOC)	ppb	n/r		0.20	nd – 2.8	2020	n/a	
Turbidity	NTU	5 <sup>6</sup>	1	0.07	nd – 1.10	2020	n/a	

	Unit of Measure	State SMCL	Average Level Detected	Range of Level Detected	Year Sampled	Violation?	Likely Source of Contamination
<b>Delaware Secondary Contaminants</b>							
Aluminum	ppb	50 – 200	nd	nd – 19	2020	n/a	
Chloride	ppm	250	59	nd – 149	2020	n/a	
Iron	ppm	0.3	0.02	nd – 0.17	2022	n/a	
Manganese	ppm	0.05	0.029	nd – 0.048	2021	n/a	Short-term fluctuations related to manganese removal treatment.
pH, Field	0 - 14 scale	6.5 – 8.5	7.33	6.36 – 9.97	2022	n/a	Short-term fluctuations related to treatment processes.
Silver	ppm	0.1	nd	nd – 0.001	2020	n/a	
Solids, total dissolved	ppm	500	226	40 – 388	2020	n/a	
Sulfate	ppm	250	20.5	nd – 53.6	2020	n/a	
Zinc	ppm	5	0.123	nd – 0.249	2020	n/a	

### 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.
- Highest 4-quarter average of samples collected and used by the State Division of Public Health for compliance.
- Range includes all samples tested for, whereas highest level detected is based upon the highest 4-quarter average.
- 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.
- This MCL applies only to surface water systems.
- Under the Lead and Copper Rule, we sample for these contaminants once every 3 years
- Currently there is no MCLG, EPA has issued a Health Advisory Level. EPA's health advisory levels were calculated to offer a margin of protection against adverse health effects.

### Definitions of Terms

**90TH PERCENTILE** — the 90th highest reading (out of a total of 100 samples), which is used to determine compliance with the Lead and Copper Rule.

**ACTION LEVEL** — the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**MAXIMUM CONTAMINANT LEVEL (MCL)** — 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 (MCLG)** — 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.

**MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL)** — the highest level of a disinfectant in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.

**MAXIMUM RESIDUAL DISINFECTANT LEVEL 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 contaminants.

**NEPHELOMETRIC TURBIDITY UNIT (NTU)** — a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**SECONDARY MAXIMUM CONTAMINANT LEVEL (SMCL)** — non-enforceable guideline which is not directly related to public health, commonly associated with cosmetic or aesthetics within the water.

**NON-DETECTS (ND)** — laboratory analysis indicates that the constituent is not present.

**NOT REGULATED (N/R)** — no MCL identified because these substances are unregulated.

**PARTS PER MILLION (PPM)** — 1 part per million corresponds to 1 minute in 2 years or a single penny in \$10,000.

**PARTS PER BILLION (PPB)** — 1 part per billion corresponds to 1 minute in 2,000 years, or a single penny in \$10,000,000.

**PARTS PER TRILLION (PPT)** — 1 part per trillion corresponds to 1 minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**PICOCURIES PER LITER (PCI/L)** — a measure of the radioactivity in water.



## 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).

## 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](http://www.epa.gov/safewater/lead).

## Radon, Cryptosporidium & Giardia

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. The EPA indicates that, compared to radon entering the home through soil, radon entering the home through water will in most cases be a small source of risk. The EPA and the State of Delaware have not yet set standards for monitoring radon in drinking water, although we do expect sampling to become mandatory in the near future. Artesian Water Company is keeping a close eye on the situation and will be sure to comply with any new regulations as required.

*Cryptosporidium* and *Giardia* parasites have been known to contaminate drinking water reservoirs of surface water treatment plants. Water purchased by Artesian from the Chester Water Authority and the City of Wilmington are surface water supplies. Both have tested for these parasites and have found no problems in their treated water product.

## Monitoring Waivers

The Artesian Water Company public water system currently has a waiver for asbestos monitoring due to non-detectable results from 1995 sampling. The State of Delaware's Office of Drinking Water will be conducting new sampling to determine whether this waiver will be continued.

## Artesian Water Service Facts

Population Served	approximately 301,000
Metered Customers	97,200
Annual Production	8.7 billion gallons
Miles of Main	1,442
Active Wells	215
Treatment Facilities	75
Storage Capacity	176.5 million gallons
Water Service Territory	305 square miles
Wastewater Service Territory	58 square miles
Average Cost Per Day for Residential Water Service	\$1.63

*If you have any questions about the contents of this report, please call Artesian at (302) 453-6930, toll free at 1 (800) 332-5114 or email at [custserv@artesianwater.com](mailto: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](http://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](http://www.artesianwater.com).*

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