

# Town of Chesapeake City Water Quality Report for 2020

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

PWSID# MD0070006

SPRING 2021

## Superior Water Quality

We are pleased to present our annual Water Quality Report for 2020. 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 2020 and provides valuable information relating to the quality of your water supply. We are proud to report that Artesian's water 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 are meeting all 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 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 (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](http://www.artesianwater.com).

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



## 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 Artesian Water Company's (Delaware) system. The system's supply comes from groundwater wells. The Artesian Water Company (Delaware) Main System's complete water quality report can be viewed at <https://www.artesianwater.com/wp-content/uploads/2021/05/wqawc2020.pdf>. Artesian Water Company (Delaware) uses the best available technology and conducts regular testing to ensure water quality.

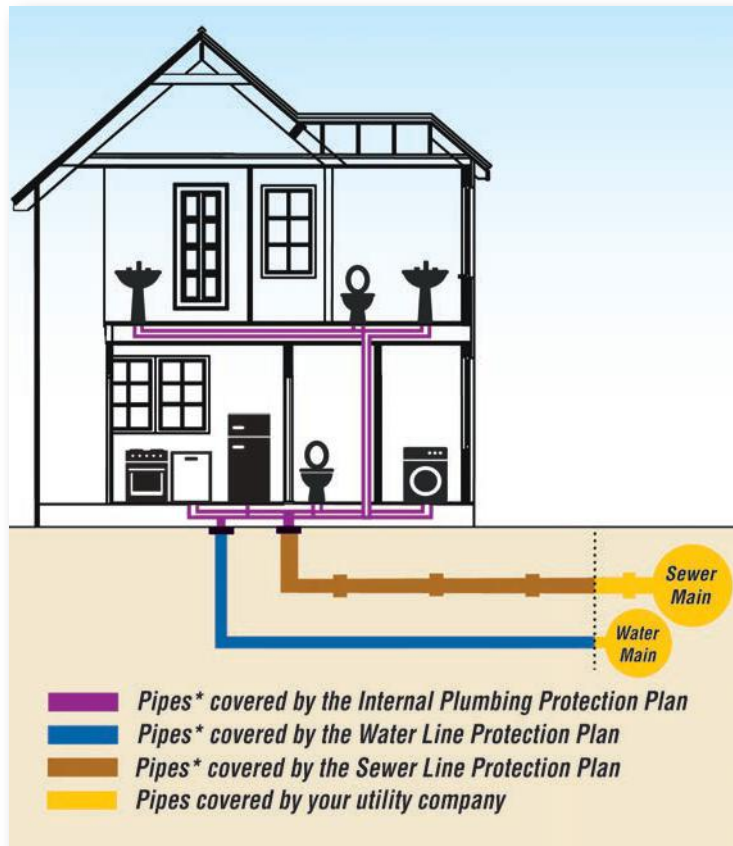
The Division of Public Health, in conjunction with the Department of Natural Resources and Environmental Control, has conducted source water assessments for nearly all community water systems in the state of Delaware. The Source Water Assessment report can be found on the Delaware SWAPP website [www.delawaresourcewater.org/assessments](http://www.delawaresourcew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

# From Water Source to the Tap

Artesian's ability to reliably deliver high-quality water in Cecil County is continuing to play a critical role in the area's economic development. For example, two new warehouse facilities totaling 500,000 square feet are expected to be started in 2021 at the Principio Business Park.

Development activity in Cecil County is supported by our ongoing program to add additional sources of water supply. We are drilling new wells in the area of Principio Business Park, and we expect to put a second interconnection with the town of North East into service in 2021 to tie into our Route 40 service area between North East and Elkton.

Elkton recently approved a transformational master development project on 630 acres, which is expected to break ground within the next year. The mixed-use project will include both residential and light-industrial construction. We continue to provide 250,000 gallons per day of water to the town of Elkton, and 113,000 gallons per day to the town of Chesapeake City through interconnections with each town.



## 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 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](http://www.artesianwater.com) Or call: **302.453.6930**



# Town of Chesapeake City Water Quality Report for 2020

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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 Low – High	Sample Date	Violation ?	Likely Source of Contamination
<b>Disinfection/Disinfection By-Products</b>								
Chlorine (free)	ppm	4 (MRDL)	4 (MRDLG) <sup>1</sup>	1.63	0.26 – 1.63	2020	No	Disinfectant used in drinking water industry.
Haloacetic Acids, total	ppb	60		1.59	1.59	2020	No	By-product of drinking water chlorination.
Trihalomethanes, total	ppb	80		8	8	2020	No	By-product of drinking water chlorination.

	Unit of Measure	MCL	Average Level Detected	Range of Level Detected Low – High	Sample Date	Violation ?	Likely Source of Contamination
<b>Unregulated Contaminants</b>							
Phosphate, total	ppm	n/r	1.34	0.46 – 2.38	2020	n/a	

	Unit of Measure	SMCL	Average Level Detected	Range of Level Detected Low – High	Sample Date	Violation ?	Likely Source of Contamination
<b>Secondary Contaminants</b>							
Iron	ppm	0.3	0.09	nd – 0.60	2020	n/a	Short-term fluctuations related to iron removal treatment.
pH, Field	0 - 14 scale	6.5 – 8.5	7.35	6.77 – 8.18	2020	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)
- 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 strives to meet 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.



# Artesian Water Company

## Water Quality Report for 2020

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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 2020. 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	Violation?	Likely Source of Contamination
<b>Inorganic Contaminants</b>							
Barium	ppm	2	2 <sup>1</sup>	0.244	nd – 0.244	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	ppb	100	100 <sup>1</sup>	5	nd – 5	No	Discharge from steel and pulp mills; Erosion of natural deposits.
Cyanide, Free	ppm	200	200 <sup>1</sup>	12	nd – 12	No	Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
Fluoride	ppm	2	2 <sup>1</sup>	1.79	0.36 – 1.79	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	No	Erosion of natural deposits.
Nitrate <sup>2</sup>	ppm	10	10 <sup>1</sup>	7.75	nd – 7.75	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	ppb	50	50 <sup>1</sup>	5	nd – 5	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

### Volatile Organic Contaminants

Methylene Chloride	ppb	5	0	1	nd – 1	No	Discharge from drug and chemical factories.
Methyl-t-butyl Ether (MTBE)	ppb	10	0	4.3	nd – 4.3	No	Gasoline additive.

### Radiological Contaminants

Gross Alpha <sup>3</sup>	pCi/l	15	0	5.1	nd – 5.1	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	4.23 <sup>3</sup>	nd – 5.4 <sup>4</sup>	No	Erosion of natural deposits.

### Disinfection/Disinfection By-Products

Chlorine (free and total)	ppm	4 (MRDL)	4 (MRDLG) <sup>5</sup>	3.24	nd – 3.24	No	Disinfectant used in drinking water industry. Short term fluctuations related to treatment process.
Haloacetic Acids, total <sup>4</sup>	ppb	60		26.67 <sup>3</sup>	nd – 33.30 <sup>4</sup>	No	By-product of drinking water chlorination.
Trihalomethanes, total <sup>4</sup>	ppb	80		48.95 <sup>3</sup>	19.00 – 76.00 <sup>4</sup>	No	By-product of drinking water chlorination.

	Unit of Measure	Action Level (AL)	MCLG	90th Percentile	No. of Sites Over AL	Violation?	Likely Source of Contamination
<b>Lead &amp; Copper <sup>8, 9</sup></b>							
90th Percentile Lead	ppb	15	0	0	0	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	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.



# Artesian Water Company

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	Unit of Measure	MCL	MCLG	Average Level Detected	Range of Level Detected	Violation?	Likely Source of Contamination
<b>Unregulated Contaminants</b>							
Alkalinity, total	ppm	n/r		92	24 – 311	n/a	
Conductivity	umhos	n/r		292	52 – 529	n/a	
1, 4 Dioxane	ppb	n/r	3.5	1.39	nd – 4.9	n/a	
Hardness, Calcium	ppm	n/r		79	30 – 247	n/a	
Hardness, Total	ppm	n/r		126	30 – 257	n/a	
Perfluorooctanoic acid	ppb	n/r	0.070	0.0001	nd – 0.0034		
Phosphate, total	ppm	n/r		1.04	0.05 – 3.08	n/a	
Total Organic Carbon (TOC)	ppb	n/r		0.20	nd – 2.8		
Turbidity	NTU	5 <sup>6</sup>	1	0.07	nd – 1.10	n/a	

	Unit of Measure	State SMCL	Average Level Detected	Range of Level Detected	Violation?	Likely Source of Contamination
<b>Delaware Secondary Contaminants</b>						
Aluminum	ppb	50 – 200	nd	nd – 19	n/a	
Chloride	ppm	250	59	nd – 149	n/a	
Iron	ppm	0.3	0.05	nd – 2.00	n/a	Short-term fluctuations related to iron removal treatment.
Manganese <sup>7</sup>	ppm	0.05	0.016	nd – 0.078	n/a	Short-term fluctuations related to manganese removal treatment.
pH, Field	0 - 14 scale	6.5 – 8.5	7.29	5.77 – 8.49	n/a	
Silver	ppm	0.1	nd	nd – 0.001	n/a	
Sodium	ppm	n/r	36.92	4.67 – 85.50	n/a	
Solids, total dissolved	ppm	500	226	40 – 388	n/a	
Sulfate	ppm	250	20.5	nd – 53.6	n/a	
Zinc	ppm	5	0.123	nd – 0.249	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.
  - This testing is part of EPA's Fourth Unregulated Contaminant Monitoring Rule. For more information please visit <https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule>
  - Under the Lead and Copper Rule, we sample for these contaminants once every 3 years.
  - Samples last collected in 2019 for compliance.
- We regularly collect water samples throughout our service areas to monitor your water for bacteria. A sample collected December 1st came back positive for Total Coliform, which indicates that bacteria may be present, prompting additional samples to be taken. Confirmation samples showed no bacteria was detected in the distribution system. As an additional precaution, Artesian collected a third round of samples in the system, which also came back negative.

### 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

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](http://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](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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**664 Churchmans Road**  
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