**TOWN OF ELKTON** 100 Railroad Avenue Elkton, Maryland 21921

> TOWN OF ELKTON 2020 Annual Drinking Water Quality Report Town of Elkton, Cecil County, Maryland

# 2020 Annual Drinking Water Quality Report Town of Elkton, Cecil County, Maryland

Mayor Robert Alt and the Commissioners of the Town of Elkton are pleased to present the 2020 Annual Drinking Water Quality Report to our citizens and water service customers in the Elkton community. This report is intended to inform you about the quality of our drinking water, and to assure you that we are providing a safe and reliable supply of drinking water to our residents, our business community, and our other customers.

The Town of Elkton's drinking water is derived from three (3) sources: 1) surface water from the Big Elk Creek; 2) groundwater from deep within the Potomac aquifer; and 3) an Interconnection with Artesian Water Maryland, Inc. Water from the Big Elk Creek, a perennial stream supplying the Elkton Water Treatment Plant (*MD0070011*) is chemically treated, filtered, and disinfected, then pumped into the Town's distribution system, which includes both pipelines to all developed areas within the town and storage facilities that reserve water for times of peak demand and for emergency fire-fighting needs. Groundwater is obtained from four wells (*Well 1R-CE944619, Well 2R –CE100297, Well 3-CE045556, Well 5-CE130053*), only requiring minimal treatment, then pumped into the distribution system. A source water assessment was performed by the Maryland Department of the Environement (MDE) and is available on their website, <u>mde.maryland.gov</u>. The Interconnection with Artesian Water Maryland provides supplemental water from Artesian Water Company (*CC-DE0000552-TP99*), about 14.56 % of our total daily distribution, which is derived from over fifty wells throughout New Castle County, along with water Artesian purchases from the Chester Water Authority and the City of Wilmington. Important information from the Artesian Water Quality Report is included with this report. The Artesian report, in its entirety, can also be obtained by calling Artesian at (302) 453-6930 or viewing the report on Artesian's website at www.artesianwater.com.

The Town's water treatment plant, its wells, and related facilities are operated and maintained under a contract with Inframark. Inframark responsibly oversees the treatment and distribution of drinking water throughout the town, as well as monitoring water quality and sampling from the distribution system to determine and ensure compliance with all Federal and State drinking water quality standards. Elkton's drinking water meets all Federal and State treatment and quality standards. The information presented in this report and the report from Artesian Water Maryland demonstrate that Elkton's drinking water does not contain contaminants at levels that are harmful to the public. This report further outlines water quality with respect to specific contaminants present or potentially present in Elkton's drinking water, and includes technical information collected and reported to the Maryland Department of the Environment during 2020.

#### SUMMARY

The sources of public drinking water (tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs and wells, and are subject to potential contamination by substances that are naturally occurring or manmade in origin. 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: <u>Microbial Contaminants</u>, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; <u>Inorganic Contaminants</u>, such as salts and metals, which can be naturally occurring or the result of urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; <u>Pesticides and Herbicides</u>, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; <u>Organic Chemical Contaminants</u>, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and <u>Radioactive Contaminants</u>, which can be naturally occurring or be the result of oil and gas production and mining activities. More information about the potential human health effects by contaminants in public drinking water and information relating to the Safe Drinking Water Act can be obtained by contacting the U.S. Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or via the Internet at www.epa.gov/drink/index.cfm In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

For nitrates and other contaminants that were detected at levels lower than the allowable MCL, it is important to understand that the EPA has determined that drinking water is safe at these allowable levels. To experience the possible health effects described for many of the regulated constituents a person would have to drink two liters of water every day containing a constituent at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Although the Town of Elkton adheres to all Federal and State regulations relating to the treatment, distribution and testing of drinking water to ensure a safe and dependent supply, some people may be more vulnerable to contaminants than the general population. An immune compromised person may be adversely affected by one or more contaminants in drinking water, e.g., a person undergoing chemotherapy, an organ transplant recipient, a person with HIV / AIDS or other immune system disorder, the elderly, and some infants who may be at risk for infections. These people should seek advice about drinking water and potential contaminants that could affect their health from a qualified and knowledgeable health care provider. More information about the potential health effects by contaminants in public drinking water may be obtained by contacting the United States Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791 or on the Internet at www.epa.gov/drink/index.cfm.

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien. (This report contains very important information about your drinking water. Translate it, or speak with someone who understands it).

If you have any technical questions regarding the 2020 Annual Drinking Water Quality Report, please contact the Town of Elkton, Administration Office, Elkton Municipal Building, 100 Railroad Avenue, Elkton, Maryland 21921 Telephone: (410) 398-0970 Facsimile: (410) 392-6633 Email: administration@elkton.org TTY users should contact the Administration Office through the Maryland Relay Service at 711.

"The Town of Elkton's water resources are critical to the continuing health, prosperity and growth of our community. Consequently we will continue to strive toward the goals of maintaining the highest quality of water and developing additional sources to meet future demands. We encourage our residents and our business community to conserve and respect our most valued natural resource."

Mayor Robert J. Alt

A copy of Artesian Water Company's Water Quality Report for 2020 is included with this report, since Elkton purchases approximately 14.56 % of its daily water distribution from Artesian.

## **Annual Drinking Water Quality Report**

### MD0070011 TOWN OF ELKTON

Annual Water Quality Report for the period of January 1 to December 31, 2020

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

For more information regarding this report contact:

Name Lewis H. George, Jr,

Phone 410-398-0970

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

TOWN OF ELKTON is Surface Water

## **Sources of Drinking Water**

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.

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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

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 storm water 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 storm water runoff, and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. We are responsible for providing high quality drinking water, but we 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 <a href="http://www.epa.gov/safewater/lead.">http://www.epa.gov/safewater/lead.</a>

## Source Water Information

| SWA = Source Water Assessment |                         |               |               |   |
|-------------------------------|-------------------------|---------------|---------------|---|
| Source Water Name             |                         | Type of Water | Report Status | Location  |
| BIG ELK CREEK                 | 01-BIG ELK CREEK FILTER | SW            | Y             |   |
| CC-DE0000552-TP99             | PURCHASED - DE0000552   | GW            |               |   |
| WELL 1R CE944619              | CE944619                | GW            | Y             | T OF ELKTON APPROX. 120 FT W OF NORMAN ALLEN ST |
| WELL 2R CE100297              | CE100297                | GW            |               | ELKTON APPROX. 100 FT N OF WALTER BOULDEN ST    |
| WELL 3 CE045556               | CE045556                | GW            | Y             | ELKTON APPROX. 450 FT S OF RT 40                |
| WELL 5 CE130053               | CE130053                | GW            |               | ELKTON APPROX. 600 FT S OF 284 PULASKI HWY      |

#### Lead and Copper

#### Definitions:

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

| Lead and Copper | Date Sampled | MCLG | Action Level (AL) | 90th Percentile | # Sites Over AL | Units | Lead and Copper | Likely Source of Contamination  |
|-----------------|--------------|------|-------------------|-----------------|-----------------|-------|-----------------|---|
| Copper          | 08/27/2018   | 1.3  | 1.3               | 0.53            | 0               | ppm   |                 | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |

#### Water Quality Test Results

| Definitions:                                      | The following tables contain scientific terms and measures, some of which may require explanation.   |
|---|--|
| Avg:  | Regulatory compliance with some MCLs are based on running annual average of monthly samples.   |
| Maximum Contaminant Level or 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.  |
| Level 1 Assessment:                               | A Level 1 assessment is a study of the water system to idertify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.  |
| Maximum Contaminant Level Goal or 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.   |
| Level 2 Assessment:                               | A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions. |
| Maximum residual disinfectant level or 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<br>microbial contaminants.   |
| Maximum residual disinfectant level goal or MRDLO | 3: 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.  |
| na:   | not applicable.  |
| mrem:   | millirems per year (a measure of radiation absorbed by the body)   |
| ppb:  | micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.  |
| ppm:  | milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.  |

## Water Quality Test Results

Treatment Technique or TT:

A required process intended to reduce the level of a contaminant in drinking water.

## **Regulated Contaminants**

| · · ·   |                 |                           | ······                      | []                       |          | T     |           |  |
|---|-----------------|---------------------------|-----------------------------|--------------------------|----------|-------|-----------|--|
| Disinfectants and<br>Disinfection By-Products | Collection Date | Highest Level<br>Detected | Range of Levels<br>Detected | MCLG                     | MCL      | Units | Violation | Likely Source of Contamination   |
| Chlorine                                      | 2020            | 1.3                       | 1.1 - 1.3                   | MRDLG = 4                | MRDL = 4 | ppm   | N         | Water additive used to control microbes.   |
| Haloacetic Acids (HAA5)                       | 11/13/2019      | 44.4                      | 16.2 - 44.4                 | No goal for the total    | 60       | ppb   | N         | By-product of drinking water disinfection.   |
| Total Trihalomethanes<br>(TTHM)               | 11/13/2019      | 46.7                      | 19.1 - 46.7                 | No goal for the<br>total | 80       | ppb   | N         | By-product of drinking water disinfection.   |
| Inorganic Contaminants                        | Collection Date | Highest Level<br>Detected | Range of Levels<br>Detected | MCLG                     | MCL      | Units | Violation | Likely Source of Contamination   |
| Nitrate [measured as<br>Nitrogen]             | 2020            | 4                         | 0 - 4.02                    | 10                       | 10       | ppm   | N         | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| Radioactive Contaminants                      | Collection Date | Highest Level<br>Detected | Range of Levels<br>Detected | MCLG                     | MCL      | Units | Violation | Likely Source of Contamination   |
| Beta/photon emitters                          | 2020            | 9.1                       | 0 - 9.1                     | 0                        | 50       | pCi/L | N         | Decay of natural and man-made deposits.  |
| Combined Radium 226/228                       | 2020            | 4.6                       | 0.8 - 4.6                   | 0                        | 5        | pCi/L | N         | Erosion of natural deposits.   |
| Gross alpha excluding radon and uranium       | 2020            | 8.4                       | 0 - 8.4                     | 0                        | 15       | pCi/L | N         | Erosion of natural deposits.   |

## Turbidity

|                                | Limit (Treatment<br>Technique) | Level Detected | Violation | Likely Source of Contamination |
|--------------------------------|--------------------------------|----------------|-----------|--------------------------------|
| Highest single measurement     | 1.0 NTU                        | 0.1 NTU        | N         | Soil runoff.                   |
| Lowest monthly % meeting limit | 0.3 NTU                        | 100%           | N         | Soil runoff.                   |

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration

## **Total Organic Carbon**

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

| Unregulated Contaminant Monitoring Rule (USMR 4) |       |      |         |          |  |  |  |  |  |  |  |
|--|-------|------|---------|----------|--|--|--|--|--|--|--|
|  | Units | Year | Average | Range    |  |  |  |  |  |  |  |
| HAA5   | Ppb   | 2020 | 30.2    | 4.4-60.0 |  |  |  |  |  |  |  |
| HAA6BR   | Ppb   | 2020 | 5.5     | 0.37-9.7 |  |  |  |  |  |  |  |
| HAA9   | Ppb   | 2020 | 35.5    | 4.7-69.3 |  |  |  |  |  |  |  |
| MANGANESE  | Ppb   | 2020 | 18.5    | 0.5-68.8 |  |  |  |  |  |  |  |

# Meadowview / Elkton West Water Quality Report for 2020

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

**PWSID# MD0070015** 

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*. *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

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/wqawc2020.pdf* once available online beginning July 1, 2021.

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 2020 which will be available online beginning July 1, 2021 at: *www.mysuezwater.com/sites/default/files/DECCR2020.pdf* 

This purchased water meets all State and Federal regulations, and is used to augment our supply. Further evaluation of the state's water supply is made available by the Maryland Department of the Environment (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: www.mde.state.md.us/programs/Water/Water\_Supply/Source\_Water\_Assessment\_Program/Pages/Programs/ WaterPrograms/water\_supply/sourcewaterassessment/index.aspx

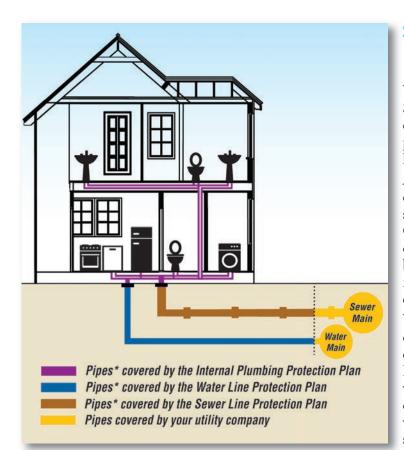
# From Water Source to the Tap

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

Meadowview / Elkton West Water Quality Report for 2020

15 YEARS

PARIOR SERVICE

#### **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.

| Inorganic Contaminants | Unit of<br>Measure | Highest<br>Level<br>Allowed<br>(MCL) | ideai<br>Goai<br>(MCLG) | Highest<br>Level<br>Detected | Range of<br>Level<br>Detected<br>Low – High | Sample<br>Date | Violation<br>? | Likely Source of Contamination  |
|------------------------|--------------------|--------------------------------------|-------------------------|------------------------------|---|----------------|----------------|---|
| Nitrate <sup>2</sup>   | ррт                | 10                                   | 10 <sup>1</sup>         | 7.29                         | 6.97 – 7.29                                 | 2020           | No             | Runoff from fertilizer use; Leaching from septic tanks, sewage;<br>Erosion of natural deposits. |

| Radiological Contaminants | Unit of<br>Measure | (MCL)           | MCLG | Highest<br>Level<br>Detected | Range of<br>Level<br>Detected<br>Low – High | Sample<br>Date | Violation<br>? | Likely Source of Contamination          |
|---------------------------|--------------------|-----------------|------|------------------------------|---|----------------|----------------|---|
| Gross Alpha               | pCi/l              | 15              | 0    | 4.6                          | 4.6   | 2020           | No             | Erosion of natural deposits.            |
| Gross Beta                | pCi/l              | 50 <sup>3</sup> | 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<br>Measure | (MCL)    | MCLG                   | Highest<br>Level<br>Detected | Range of<br>Level<br>Detected<br>Low – High | Sample<br>Date | Violation<br>? | Likely Source of Contamination             |
|-----------------------------|--------------------|----------|------------------------|------------------------------|---|----------------|----------------|--|
| Disinfection/Disinfection E | By-Products        |          |                        |                              | -   |                |                |  |
| Chlorine (free and total)   | ppm                | 4 (MRDL) | 4 (MRDLG) <sup>4</sup> | 2.20                         | 0.53 - 2.20                                 | 2020           | No             | Water additive used to control microbes.   |
| Haloacetic Acid, total      | ppb                | 60       |                        | 0.595                        | nd — 1.346                                  | 2020           | No             | By-product of drinking water chlorination. |
| Trihalomethanes, total      | ppb                | 80       |                        | 6.505                        | 2.20 - 9.206                                | 2020           | No             | By-product of drinking water chlorination. |
|                             |                    |          |                        |                              |   |                |                |  |

|                            | Unit of<br>Measure | Action<br>Level<br>(AL) | MCLG             | 90th<br>Percentile | No. of<br>Sites<br>Over AL | Sample<br>Date | Violation<br>? | Likely Source of Contamination   |
|----------------------------|--------------------|-------------------------|------------------|--------------------|----------------------------|----------------|----------------|--|
| Lead & Copper <sup>7</sup> |                    |                         |                  |                    |                            |                |                |  |
| 90th Percentile Lead       | ppb                | 15                      | 0                | >1                 | 0                          | 2020           | No             | Erosion of natural deposits; Leaching from wood preservatives;<br>Corrosion of household plumbing systems. |
| 90th Percentile Copper     | ppm                | 1.3                     | 1.3 <sup>1</sup> | 0.262              | 0                          | 2020           | No             | Erosion of natural deposits; Leaching from wood preservatives;<br>Corrosion of household plumbing systems. |

# Meadowview / Elkton West Water Quality Report for 2020

#### **PWSID# MD0070015**

|                       | Unit of<br>Measure | MCL | Average<br>Level<br>Detected | Range of<br>Level<br>Detected<br>Low – High | Sample<br>Date | Violation<br>? | Likely Source of Contamination |
|-----------------------|--------------------|-----|------------------------------|---|----------------|----------------|--------------------------------|
| Unregulated Contamina | nts                |     |                              | _   |                |                |                                |
| Alkalinity, total     | ppm                | n/r | 39.9                         | 25.2 - 51.8                                 | 2020           | n/a            |                                |
| Conductivity          | umhos              | n/r | 71                           | 45 — 91                                     | 2020           | n/a            |                                |
| Hardness, Calcium     | ppm                | n/r | 24                           | 18 — 35                                     | 2020           | n/a            |                                |
| Nickel                | ppb                | n/r | 8                            | 6 — 9                                       | 2018           | n/a            | Erosion of natural deposits.   |
| Phosphate, total      | ppm                | n/r | 1.97                         | 1.46 - 2.22                                 | 2020           | n/a            | Naturally occurring.           |
| Sodium                | ppm                | n/r | 46.1                         | 46.1  | 2020           | n/a            |                                |

| Secondary Contaminants | Unit of<br>Measure<br>S | SMCL      | Average<br>Level<br>Detected | Range of<br>Level<br>Detected<br>Low – High | Sample<br>Date | Violation<br>? | Likely Source of Contamination                                   |
|------------------------|-------------------------|-----------|------------------------------|---|----------------|----------------|--|
| Chloride               | ppm                     | 250       | 90                           | 90  | 2016           | n/a            |  |
| Iron                   | ppm                     | 0.3       | 0.01                         | nd — 0.08                                   | 2020           | n/a            |  |
| pH, Field              | 0 - 14 scale            | 6.5 - 8.5 | 7.45                         | 6.77 - 8.23                                 | 2020           | n/a            | Short-term fluctuations related to pH adjustments in the system. |

### **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

15 YEAR

- 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.
- 2. 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 arecaring for an infant you should ask advice from your health care provider.
- 3. 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.
- 6. Range includes all samples tested for, whereas highest level detected is based upon the highest 4-quarter average.
- 7. Under the Lead and Copper Rule, we sample for these contaminants once every 3 years.

### **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).

# 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: <a href="http://www.artesianwater.com/e-billing">http://www.artesianwater.com/e-billing</a> 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**.

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