# Meadowview / Elkton West Water Quality Report for 2015

Artesian Water Maryland • 664 Churchmans Road • Newark, Delaware 19702 PWSID# MD0070015 Spring 2016

## Superior Water Quality

We are pleased to present our annual *Water Quality Report* for 2015. 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 describes 2015 results from our monitoring and testing data and valuable information relating to the quality of our water supply.

Artesian is committed to providing reliable and high quality water to our customers. Artesian crews work around-the-clock to monitor water quality and supply. Our treatment includes disinfection, various filtration processes, pH adjustment, and corrosion control as needed to ensure our systems are meeting all state and federal regulation. In addition to our treatment, we routinely monitor for Organics, Inorganics, Metals, Disinfection By-Products, Lead and Copper, and Radionuclides to make certain our water quality is exceeding standards.

Since 1905, Artesian has provided safe drinking water and excellent customer service to the people on the Delmarva Peninsula. We are proud to report that our water again fully complies with national and state drinking water 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 systems of Artesian Water

**MD0070015**

EPA WaterSense PARTNER

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## A Safe Water Source

Meadowview / Elkton West public water system is supplied with water from two (2) wells located in Cecil County. These ground water wells are 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 station 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 Maryland Department of the Environment (MDE) water quality parameters. Regular testing also helps us ensure high quality.

In addition, we purchased water from Artesian Water Company's (Delaware) system. This water supply is primarily ground water and supplemented by surface water. The water quality report for the Artesian Water Company (Delaware) system can be viewed at *www.artesianwater.com/WQR/AWC2015.pdf*.

We also maintain an emergency interconnection from United Water Delaware (UWDE), which operates a surface-water treatment plant in Stanton, Delaware. UWDE 's water supply comes from the White Clay and Red Clay Creeks. You can view UWDE's water quality report for 2015 which will be available online beginning July 1, 2016 at: *www.unitedwater.com/delaware/LocalLanding.aspx*

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*

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## PUBLIC WATER SYSTEM I.D. MD0070015

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

| | Unit of Measure | Highest Level Allowed (MCL) | Ideal Goal (MCLG) | Average Level Detected | Range of Level Detected | Sample Date | Violation? | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| **Inorganic Contaminants** | | | | | | | | |
| Barium | ppm | 2 | 2[4] | 0.108 | 0.108 | 2015 | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. |
| Nickel | ppb | 100 | 100[4] | 0.006 | 0.006 | 2015 | No | Erosion of natural deposits. |
| Nitrate[1] | ppm | 10 | 10[4] | 7.34 | 6.96 – 7.77 | 2014 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| Selenium | ppb | 50 | 50[4] | 0.004 | 0.002 – 0.005 | 2014 | No | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines. |

| | Unit of Measure | Highest Level Allowed (MCL) | Ideal Goal (MCLG) | Average Level Detected | Range of Level Detected | Sample Date | Violation? | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| **Radiological Contaminants** | | | | | | | | |
| Gross Alpha | pCi/l | 15 | 0 | 5.15 | 4.00 – 6.30 | 2014 | No | Erosion of natural deposits. |
| Gross Beta | pCi/l | 50[5] | 0 | 4.25 | 4.00 – 4.50 | 2014 | No | Decay of natural and man-made deposits. |
| Radium, combined | pCi/l | 5 | 0 | 0.0027 | 0.0027 | 2015 | No | Erosion of natural deposits. |

| | Unit of Measure | Highest Level Allowed (MCL) | Ideal Goal (MCLG) | Average Level Detected | Range of Level Detected | Sample Date | Violation? | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| **Disinfection/Disinfection By-Products** | | | | | | | | |
| Chlorine (free) | ppm | 4 (MRDL) | 4 (MRDLG)[3] | 1.48 | 0.61 – 3.41 | 2015 | No | Water additive used to control microbes. |
| Haloacetic Acid, total | ppb | 60 | | 1.67 | ND – 4.87 | 2015 | No | By-product of drinking water chlorination. |
| Dibromoacetic Acid | ppb | n/r | | 0.15 | ND – 1.17 | 2015 | n/a | |
| Dichloroacetic Acid | ppb | n/r | | 1.22 | ND – 3.55 | 2015 | n/a | |
| Tricholoracetic Acid | ppb | n/r | | 0.31 | ND – 1.32 | 2015 | n/a | |
| Trihalomethanes, total | ppb | 80 | | 4.51 | 1.32 – 12.00 | 2015 | No | By-product of drinking water chlorination. |
| Bromodichloromethane | ppb | n/r | | 1.09 | ND – 3.24 | 2015 | n/a | |
| Chloroform | ppb | n/r | | 3.13 | 1.32 – 7.41 | 2015 | n/a | |
| Dibromochloromethane | ppb | n/r | | 0.29 | ND – 1.31 | 2015 | n/a | |

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## PUBLIC WATER SYSTEM I.D. MD0070015

| Unregulated Contaminants | Unit of Measure | Highest Level Allowed (MCL) | Average Level Detected | Range of Level Detected | Sample Date | Violation? | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Alkalinity, total | ppm | n/r | 29 | 9.2 – 40 | 2015 | n/a | |
| Conductivity | umhos | n/r | 162 | 72 – 252 | 2015 | n/a | |
| Hardness, Calcium | ppm | n/r | 23 | 18 – 29 | 2015 | n/a | |
| Phosphate, total | ppm | n/r | 1.74 | 1.17 – 2.28 | 2015 | n/a | Naturally occurring. |
| Sodium | ppm | n/r | 49.85 | 49.85 | 2015 | n/a | |

| Secondary Contaminants | Unit of Measure | Highest Level Allowed (SMCL) | Average Level Detected | Range of Level Detected | Sample Date | Violation? | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Iron | ppm | 0.3 | 0.01 | ND – 0.01 | 2015 | n/a | Short-term fluctuations related to iron removal treatment. |
| pH, Field | 0 - 14 scale | 6.5 – 8.5 | 7.52 | 6.67 – 8.93 | 2015 | n/a | Short-term fluctuations related to pH adjustments in the system. |

| Lead & Copper[2] | Unit of Measure | Action Level (AL) | Ideal Goal (MCLG) | 90th Percentile | No. of Sites Over AL | Sample Date | Violation? | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| 90th Percentile Lead | ppb | 15 | 0 | <2 | 0 | 2014 | No | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| 90th Percentile Copper | ppm | 1.3 | 1.3[4] | 0.371 | 0 | 2014 | No | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |

## 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

1. 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.
2. Under the Lead and Copper Rule, we sample for these contaminants once every 3 years.
3. 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.
4. 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.
5. EPA considers 50 pCi/L to be the level of concern for Beta particles.

## 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: *http://www.artesianwater.com/e-billing* or contacting our Customer Service Department.

It's easy being green.
Sign up for e-billing today!

*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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