



# Mountain Hill Water Quality Report for 2010

## Dear Valued Customer,

Enclosed is our annual *Water Quality Report*. We are pleased to report that our water once again fully complies with national and state drinking water standards. For more than 100 years, we have provided the people of the Delmarva Peninsula with the very best water. 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:

- programs implemented to maintain the quality of water we supply
- valuable information relating to the quality of our water supply
- 2010 results from our monitoring and testing data

Supplying safe drinking water requires regular maintenance and upgrades to our facilities. To that end, Artesian invested \$13 million in 2010 for infrastructure improvements to continue and improve service for the nearly 300,000 people we serve across the Delmarva Peninsula. We maintain more than 1,100 miles of water mains and more than 170 wells to provide service to a territory of more than 275 square miles. And still, you pay less than a penny per gallon to receive high-quality tap water that provides public health protection, fire protection and support for the economy.

We encourage you to take time to review the report and, if you have any questions, to call us at (443) 245-7777. Our Customer Service Representatives, as well as our Water Quality Department headed by Chad Hall, 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.

## MOUNTAIN HILL

# WATER QUALITY REPORT

Information concerning  
public water systems of  
Artesian Water Company

**MD0070034**



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

## A Safe Water Source

The Mountain Hill public water system is supplied with water from one well located in Cecil County. This well is located in the Potomac formation. This ground water well uses the natural filtering capability of the aquifer to remove harmful bacteria and other substances from the water. This well is located in a semi-confined aquifer that provides some additional protection from surface-borne contaminants. The treatment station at Mountain Hill 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.

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 not been completed and approved by the EPA for Mountain Hill. As soon as it has been completed information will be provided on how to obtain a copy.

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## PUBLIC WATER SYSTEM I.D. MD0070034

	Unit of Measure	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Highest Level Detected	Annual Range	Major Sources
<b>Inorganic Contaminants</b>						
Barium	ppb	2000	2000 <sup>3</sup>	24	n/a	Discharge of drilling wastes or metal refineries. Erosion of natural deposits.
Fluoride	ppm	2	2 <sup>3</sup>	0.1	nd – 0.1	Erosion of natural deposits.
Nitrate	ppm	10	10 <sup>3</sup>	0.7	0.6 - 0.7	Runoff from fertilizer use. Erosion of natural deposits.
Turbidity <sup>1</sup>	ntu	5	1	0.3	nd – 0.3	Soil runoff.

### Disinfection/Disinfection By-Products

Chlorine (free and total)	ppm	4 (MRDL)	4 (MRDLG) <sup>2</sup>	2.9	nd – 2.9	Disinfectant used in drinking water industry.
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### Lead & Copper

90th Percentile Lead (2008 Data)	ppb	15	0	nd	nd	Corrosion of household plumbing systems. Erosion of natural deposits.
Number of Sites exceeding Lead Action Level				0		
90th Percentile Copper (2008 Data)	ppb	1300	1300 <sup>3</sup>	93	12 – 122	Corrosion of household plumbing systems. Erosion of natural deposits.
Number of Sites exceeding Copper Action Level				0		

### Unregulated Contaminants

Acetone	ppb	n/r		20.3	n/a	Short-term fluctuations in pH adjustment system.
Alkalinity, total	ppm	n/r		78	n/a	
Carbon dioxide, free	ppm	n/r		3.2	n/a	
Chloride	ppm	n/r	250	28.4	n/a	
Conductivity	umhos	n/r		250	n/a	
Hardness, Calcium	ppm	n/r		25	n/a	
Hardness, Total	ppm	n/r		36	n/a	
Iron	ppb	n/r	300	280	nd – 280	
Manganese	ppb	n/r		8	n/a	
Nickel	ppb	n/r		4	n/a	
pH, Field	0 - 14 scale	n/r	6.5 – 8.5	8.9	3.9 – 8.9	
Phosphate, total	ppm	n/r		0.2	n/a	
Sodium	ppm	n/r		41	n/a	
Solids, total dissolved	ppm	n/r	500	115	n/a	
Sulfate	ppm	n/r	250	1.3	n/a	
Tetrahydrofuran (THF)	ppb	n/r		1.8	n/a	
Zinc	ppb	n/r	5000	22	n/a	

### Microbiological Contaminants – Total Coliform

Highest number of positive samples in any one month	One (1) in September. Negative results in all remaining monthly samples collected. One (1) coliform sample per month is collected.	Naturally present in the environment. (All subsequent samples tested negative for bacteria)
Highest number of positive <i>E.coli</i> samples in any one month	One (1) in September. (All subsequent samples tested negative)	(See Note 1)

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PUBLIC WATER SYSTEM I.D. MD0070034

## NOTES

1. This MCL applies only to surface water systems.
2. 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.
3. 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.

**Important Information Pertaining to Lead:** 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 Water 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

**Note 1 Important Information Pertaining to E.coli:** *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly and people with severely compromised immune systems.

**Violations:** Although Mountain Hill did not exceed any State or Federal Maximum Contaminant Level, there was one reporting violation this previous year. Due to a delay in delivery by the Postal Service, our July bacteria testing result arrived late at the Maryland Department of the Environment (MDE).

## 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.

**NON-DETECTED (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 one minute in 2,000 years, or a single penny in \$10,000,000.

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

## The following chemicals were tested for but not found in 2010

Inorganic Contaminants	Disinfection By-Products	Synthetic Organic Contaminants (Pesticides and Herbicides)	Volatile Organic Contaminants
Aluminum	Bromodichloromethane	2,4,5-TP (Silvex)	1,1,1,2-Tetrachloroethane
Antimony	Bromoform	2,4-D	1,1,1-Trichloroethane
Arsenic	Chloroform	3-Hydroxycarbofuran	1,1,2,2-Tetrachloroethane
Beryllium	Dibromochloromethane	4,4'-DDD	1,1,2-Dichloroethane
Cadmium		4,4'-DDE	1,1-Dichloroethane
Chromium		4,4'-DDT	1,1-Dichloroethene
Color, Apparent		Acenaphthene	1,1-Dichloropropene
Cyanide		Acenaphthylene	1,2,3-Trichlorobenzene
Mercury		Alachlor	1,2,3-Trichloropropane
Nitrite		Aldicarb	1,2,4-Trichlorobenzene
Odor (Threshold Odor)		Aldicarb Sulfone	1,2,4-Trimethylbenzene
Selenium		Aldicarb Sulfoxide	1,2-Dichlorobenzene
Silver		Aldrin	1,2-Dichloroethane
Surfactants, MBAS		alpha-BHC	1,2-Dichloropropane
Thallium		alpha-Chlordane	1,3,5-Trimethylbenzene
		Anthracene	1,3-Dichlorobenzene
		Atrazine	1,3-Dichloropropane
		Benzo(a)anthracene	2,2-Dichloropropane
		Benzo(a)pyrene	2-Butanone (MEK)
		Benzo(b)fluoranthene	2-Chloroethylvinyl Ether
		Benzo(g,h,i)perylene	2-Chlorotoluene
		Benzo(k)fluoranthene	2-Hexanone
		beta_BHC	3-chloro-1-propene
		bis(2-chloroethyl) ether (BCEE)	4-Chlorotoluene
		Butachlor	4-Isopropyltoluene
		Butylbenzylphthalate	Acrylonitrile
		Carbaryl	Benzene
		Carbofuran	Bromobenzene
		Chlordane	Bromochloromethane
		Chrysene	Bromomethane
		Dalapon	Carbon Disulfide
		delta-BHC	Carbon Tetrachloride
		Di(ethylhexyl)adipate	Chlorobenzene
		Di(ethylhexyl)phthalate	Chloroethane
		Dibenzo(a,h)anthracene	
		Dibromochloropropane	
		Dicamba	
		Dieldrin	
		Diethylphthalate	
		Dimethyl phthalate	
		Di-n-butylphthalate	
		Di-n-octyl phthalate	
		Dinoseb	
		Endosulfan I	
		Endosulfan II	
		Endosulfan sulfate	
		Endrin	
		Endrin aldehyde	
		Ethylene Dibromide	
		Fluoranthene	
		Fluorene	
		gamma-Chlordane	
		Heptachlor	
		Heptachlor Epoxide	
		Hexachlorobenzene	
		Hexachlorocyclopentadiene	
		Indeno(1,2,3-cd)pyrene	
		Lindane	
		Methomyl	
		Methoxychlor	
		Metolachlor	
		Metribuzin	
		Oxamyl (Vydate)	
		PCBs	
		Pentachlorophenol	
		Phenanthrene	
		Picloram	
		Propachlor	
		Pyrene	
		Simazine	
		Toxaphene	
		Trifluralin	
			Chloromethane
			cis-1,2-Dichloroethene
			cis-1,3-Dichloropropene
			Dibromomethane
			Dichlorodifluoromethane
			Ethyl methacrylate
			Ethylbenzene
			Hexachlorobutadiene
			Iodomethane
			Isopropylbenzene
			m,p-Xylene
			Methyl Isobutyl Ketone (MIBK)
			Methyl methacrylate
			Methylene Chloride
			Methyl-t-butyl ether (MTBE)
			Naphthalene
			n-Butylbenzene
			n-Propylbenzene
			o-Xylene
			para-Dichlorobenzene
			sec-Butylbenzene
			Styrene
			tert-Butylbenzene
			Tetrachloroethene
			Toluene
			trans-1,2-Dichloroethene
			trans-1,3-Dichloropropene
			trans-1,4-Dichloro-2-butene
			Trichloroethene
			Trichlorofluoromethane
			Vinyl acetate
			Vinyl chloride
			Xylenes, total

## **Expected Substances and Health Risks**

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals, or radioactive substances. All 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.

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 have established limits for bottled water, which must provide the same protection for public health.

For more information about contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

## **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 about drinking water.

## **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.

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.

## **Questions?**

If you have any questions about the contents of this report, please call Artesian Water at (443) 245-7777, toll free at 1 (800) 332-5114 or email us at [custserv@artesianwater.com](mailto:custserv@artesianwater.com).

## **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 for fourth graders! Contact Joanne Rufft, Director of Community Relations, toll free at 1 (800) 332-5114 for more information.

*If you have questions or comments about your water service or quality, please contact Artesian Water at (443) 245-7777 or e-mail us at [custserv@artesianwater.com](mailto:custserv@artesianwater.com). Information about Artesian Water can also be found on our website: [www.artesianwater.com](http://www.artesianwater.com)*

*Landlords and apartment complex managers are encouraged to share this report with tenants. Additional copies can be downloaded from our website or you may contact customer service to obtain additional copies.*

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