



Town of Dagsboro

Dagsboro, DE 19939

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W A T E R Q U A L I T Y R E P O R T

Artesian Water Company, Dagsboro's water operator, is pleased to provide this Water Quality Report for the year 2011. Please notice that substances such as iron, chloride, and sodium are commonly found in drinking water. They occur naturally at trace levels, and the EPA has deemed that these substances pose no health hazard from consumption in drinking water. This report indicates the concentrations of these and many other substances obtained during analyses performed from Jan. 1, 2010 – Dec. 31, 2010 unless otherwise specified. If you have any questions about this report or the quality of your tap water, please call Stacey Long at (302) 732-3777.

A Safe Water Source

The water serving your home comes from the Millsboro Water Department via an interconnection. Millsboro has three (3) wells, one located in the Manokin aquifer and the other two located in the Columbia aquifer. The Manokin aquifer is confined and is not subject to contamination from nutrients and pesticides. The Columbia aquifer is unconfined and is potentially subject to contamination from nutrients and pesticides.

Source Water Assessment Plan

Further evaluation of the Dagsboro's water supply is made available by the Delaware Department of Natural Resources and Environmental Control (DNREC), through a program designed to assess the susceptibility of public water sources to contamination. DNREC's source water assessment plan has been completed and approved by the EPA. Copies can be obtained by contacting Stacey Long at the phone number listed above or by visiting DNREC's Source Water Program website at <http://www.wr.udel.edu/swaphome/swassessments.html>.

Expected Substances and Health Risks

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. 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.

The following tables contain terms and abbreviations that might be unfamiliar to you; yet, they are important toward understanding the data in the tables. The definitions of those terms and abbreviations follow.

90th Percentile

The eighteenth highest lead and copper reading (out of a total of twenty). This value is used to determine compliance with the Lead & Copper Rule.

Action Level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a public-water system must follow.

Maximum Contaminant Level (MCL)

This value is the highest level of a contaminant that is allowed in drinking water. The State of Maryland sets MCLs as close to the MCLGs as feasible using the best available water-treatment technology.

Maximum Contaminant Level Goal (MCLG)

This value is level of a contaminant for which the State of Delaware has determined that no known or expected risk to health exists. MCLGs allow for a margin of safety.

NTU (Nephelometric Turbidity Unit)

A measure of the clarity of the water. Turbidity in excess of 5 NTU is barely noticeable to the average person.

Non-detect (nd)

Laboratory analyses using the state-approved methods indicate that the contaminant is not present.

Not regulated (n/r)

No MCL is identified because the substance is unregulated. (It is unregulated because the State of Delaware has deemed that the substance poses no risk to health in any concentration in drinking water.)

Parts per billion (ppb)

One part of the named substance in a billion parts of the drinking water. Equivalent relationships are one minute in 2,000 years or one penny in \$10,000,000.

Parts per million (ppm)

One part of the named substance in a million parts of the drinking water. Equivalent relationships are one minute in 2 years or one penny in \$10,000. (1 ppm equals 1,000 ppb.)

picoCuries per liter

A measure of radioactivity in drinking water.

Treatment Technique (tt)

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

Important information pertaining to 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.

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>.

Public Meeting Information

For the opportunity to ask more questions or participate in decisions that may affect your drinking water quality, a public meeting is held the fourth Monday, each month, at 7:00 p.m. at the Bethel Center.

Important Information Pertaining To Nitrate:

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.

Substances Detected

Substance/Parameter	Unit of Measure	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Highest Level Detected	Annual Range	Major Sources
Inorganic Contaminants						
Nitrate	ppm	10	10	5.3	4.6 – 5.3	Erosion of natural deposits. Runoff from fertilizer use.
Nitrate/Nitrite	ppm	10	10	5.3	4.6 – 5.3	Erosion of natural deposits. Runoff from fertilizer use.
Organic Contaminants						
Ethylbenzene	ppb	700	700	0.6	nd – 0.6	Discharge from petroleum refineries.
Toulene	ppb	1000	1000	0.8	nd – 0.8	Discharge from petroleum refineries.
Xylenes, total	ppb	10000	10000	2.8	nd – 2.8	Discharge from chemical factories.
Disinfection/Disinfection By-products						
Chlorine, free and total	ppm	4	4	1.7	nd – 1.7	Disinfectant used in drinking water industry.
Haloacetic Acids, total	ppb	60	0	1	n/a	By-product of drinking water chlorination.
Trichloroacetic Acid	ppb	n/r		1	n/a	
Trihalomethanes, total	ppb	80	0	6.7	n/a	By-product of drinking water chlorination.
Bromodichloromethane	ppb	n/r		3.2	nd – 3.2	
Bromoform	ppb	n/r		0.5	nd – 0.5	
Chloroform	ppb	n/r		5.3	nd – 5.3	
Dibromochloromethane	ppb	n/r		2.6	nd – 2.6	
Unregulated Contaminants						
2-Butanone (MEK)	ppb	n/r		5.9	nd – 5.9	
Acetone	ppb	n/r		10	nd – 10	
Alkalinity, Total	ppm	n/r		59	35 – 59	
Calcium	ppm	n/r		55	36 – 55	
Chloride	ppm	n/r	250	16	13 – 16	
Conductivity	umhos	n/r		209	182 – 209	
Hardness, total	ppm	n/r		39	34 – 39	
Iron	ppb	n/r	300	910	10 – 910	
pH, Field	0-14 scale	n/r		7.2	6.1 – 7.2	
Sodium	ppm	n/r	50	17.4	15 – 17.4	
Solids, total dissolved	ppm	n/r	500	128	56 – 128	
Sulfate	ppm	n/r	250	12.3	nd – 12.3	
Lead & Copper						
		Action Level		90 th Percentile		
90th Percentile Lead	ppb	15	0	8	nd - 149	Corrosion of household plumbing systems, erosion of natural deposits.
Number of Sites Exceeding Lead Action Level				0		
90th Percentile Copper	ppb	1,300	0	661	29 – 1000	Corrosion of household plumbing systems, erosion of natural deposits.
Number of Sites Exceeding Copper Action Level				0		
Microbiological Contaminants						
Total Coliform						
Highest number of positive samples in any one month	Negative results in 100% of monthly samples collected. One coliform sample per month is collected.		Naturally present in the environment.			

Substances Tested for but Not Found

		Volatile Organic Contaminants	
<p style="text-align: center;">Inorganic Contaminants</p> <p>Antimony Fluoride Arsenic Iron Barium Mercury Beryllium Nitrite Cadmium Selenium Chromium Sulfate Cyanide Thallium</p> <p style="text-align: center;">Radiological Contaminants</p> <p>Gross Alpha Emitters Uranium</p> <p style="text-align: center;">Disinfection By-products</p> <p>Dibromoacetic Acid Dichloroacetic Acid Monobromoacetic acid Monochloroacetic acid</p>	<p>1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene 1,3-Dichloropropane 1,4-Dichlorobenzene 2,2-Dichloropropane 2,4,5-trichlorophenol 2-Chloroethylvinyl Ether 2-Chlorotoluene 2-Hexanone 3-chloro-1-propene 4-Chlorotoluene 4-Isopropyltoluene</p>	<p>Acetone Acrylonitrile Benzene Bromobenzene Bromochloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromomethane Dichlorodifluoromethane Ethyl methacrylate Hexachlorobutadiene Isopropylbenzene m,p-Xylene Methyl Isobutyl Ketone (MIBK) Methyl methacrylate Methylene Chloride Methyl-t-butyl ether (MTBE)</p>	<p>Naphthalene n-Butylbenzene n-Propylbenzene o-Xylene para-Dichlorobenzene sec-Butylbenzene Styrene tert-Butylbenzene Tetrachloroethene Tetrahydrofuran (THF) tr-1,2-Dichloroethene tr-1,3-Dichloropropene tr-1,4-Dichlorobutene Trichloroethene Trichlorofluoromethane Vinyl acetate Vinyl chloride</p>
Synthetic Organic Contaminants (Pesticides/Herbicides/Insecticides)			
<p>2,4,5-TP (Silvex) 2,4-D 3-Hydroxycarbofuran Acenaphthene Acenaphthylene Acifluorfen Alachlor Aldicarb Aldicarb Sulfone Aldicarb Sulfoxide Aldrin Anthracene Atrazine Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene</p>	<p>Butachlor Butylbenzylphthalate Carbaryl Carbofuran Chlordane Chrysene Dalapon Di(ethylhexyl)adipate Di(ethylhexyl)phthalate Dibenzo(a,h)anthracene Dibromochloropropane Dicamba Dieldrin Diethylphthalate Dimethyl phthalate Di-n-butylphthalate Di-n-octyl phthalate Dinoseb</p>	<p>Endrin Ethylene Dibromide Fluoranthene Fluorene Heptachlor Heptachlor Epoxide Hexachlorobenzene Hexachlorocyclopentadiene Indeno(1,2,3-cd)pyrene Iodomethane Lindane Methiocarb Methomyl Methoxychlor Metolachlor Metribuzin Oxamyl (Vydate) PCBs</p>	<p>Pentachlorophenol Phenanthrene Picloram Propoxur Pyrene Simazine Toxaphene</p>