



Cecil County
 Department of Public Works
 PWSID: 0070015



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Meadowview/Highlands Water System

**Annual Drinking
 Water Quality Report**

Calendar Year 2011

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IMPORTANT: Drinking Water Quality Information Inside

This is Cecil County's annual report on water quality in accordance with the 1996 Safe Drinking-Water Act. The data in this report are the result of drinking water quality testing performed for you in 2011.

Cecil County Department of Public Works
 Water and Wastewater Division
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June 2012



What is this Water Quality Report About?

Inside this Annual Issue . . .

- What is this Water Quality Report About?..... 2
- Spanish (Español)..... 2
- How We Test and Monitor Our Drinking Water 2
- How is Your Water Treated and What is the Source of Meadowview/Highlands Drinking Water?..... 2
- Why There May Be Contaminants in our Water Supply 3
- Health Note for “At Risk” Consumers 3
- Is There Lead in my Water?..... 3
- Meadowview/Highlands Water Quality Statistics and Data Results 4
- What is in my Water?..... 4
- Understanding the Drinking Water Quality Terms..... 5
- Source Water Assessment and Protection..... 5
- Frequently Asked Questions by our Consumers 6
- Protecting Your Drinking Water Supply! 7
- Where Can I Find Out More Information on my Water? 7

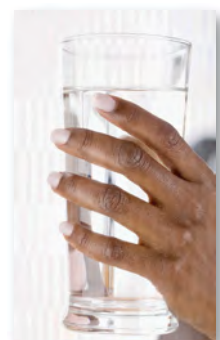
How is Your Water Treated and What is the Source of Meadowview/Highlands Drinking Water?

The drinking water for the Meadowview/Highlands System is drawn from two wells, Sycamore and Fletchwood, which are drilled deep below the earth’s surface into the underground aquifer known as the Patuxent Formation. The water is treated with sodium hypochlorite as a precautionary disinfection agent prior to entering the water system as well as soda ash for pH control.

In addition, the County purchases water from United Water Delaware, which operates a surface-water treatment plant in Stanton, Delaware. The Stanton Water Treatment Plant drains source water from the White and Red Clay Creek, and its primary disinfection process is sodium hypochlorite and chlorine. A complete copy of the 2011 Water Quality Report from United Water Delaware can be obtained at http://www.unitedwater.com/uploadedFiles/Localized_Content/UW_Delaware/20/CCR-UWDE-UWBE_2008.pdf

We’re pleased to present to you this year’s Annual Drinking Water Quality Report. This report is to inform you about the fine quality water and services Cecil County provides to you every day and provides an overview of last year’s (2011) drinking water quality. Under the “Consumer Confidence Reporting Rule” of the Federal Safe Drinking Water Act (SDWA), community water systems are required to report this water quality information to the consuming public. Presented in this report is information regarding the source of our water, its constituents and health risks associated with any contaminants detected in quantities exceeding a drinking water regulatory maximum contaminant level (MCL), action level (AL), or treatment techniques (TT).

On December 21st, 2011 the Meadowview/Highlands Water System was sold to Artesian Water Company. Any questions, concerns or comments concerning the Meadowview/Highlands Water System should be directed to Artesian Water Company at their customer service number 443-245-7777 or their toll free number 1-800-332-5114 or emailed to custserv@artesianwater.com. This Annual Water Quality Report was prepared by and distributed by Cecil County Water and Wastewater Division as we were the owner of the Meadowview/Highlands Water System for the majority of the 2011 calendar year. Any questions concerning this water quality report should be directed to Cecil County Water and Wastewater Division at 410-996-6260 or emailed to jcoale@ccgov.org. Future Annual Water Quality Reports for this water system will be prepared by and distributed by Artesian Water Company.



Spanish (Español)

Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduscalo o hable con alguien que lo entienda bien.

How We Test and Monitor Our Drinking Water



Cecil County Department of Public Works analyzes the water for more than 80 contaminants and of the few contaminants that **were found, all contaminants were below the EPA’s MCLs with the exception of nitrates.** The MCLs were established by the U.S. Congress in the SDWA of 1974 and its revisions in 1986 and 1996. Testing is performed by Cecil County on a daily basis at the treatment plant and the County performs additional testing to the water that is distributed throughout the System.

During 2011, all contaminants were detected at levels below health standards with the exception of nitrates. The elevated levels were immediately reported to MDE

These standards and other drinking water regulations are constantly reviewed by the EPA and, if needed, revised to reflect the latest medical research. In our State, the Maryland Department of the Environment (MDE) enforces and oversees these standards and regulations.

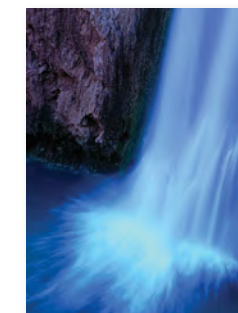
The County continues to make improvements to your water system to ensure the quality of water is at its highest. We want you to understand the efforts we make to continually improve the water treatment process and we are committed to ensuring the highest quality of your water.

Why There May Be Contaminants in our Water Supply

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 radioactive material, and can pick up substances resulting from the presence of animal or human activity.

Contaminants that may be present in the source waters include:

- (i) **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (ii) **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.
- (iii) **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (iv) **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 stormwater runoff, and septic systems.
- (v) **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.

Consumers should be aware that drinking water, including bottled water, may reasonably be expected to contain at least trace 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 **Environmental Protection Agency’s Safe Drinking Water Hotline (800-426-4791).**



Health Note for “At Risk” Consumers

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 their drinking water from their health care providers. The EPA/Centers for Disease Control (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).**

Is There Lead in My 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. Cecil County 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 or until it becomes cold or reaches a steady temperature 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 <http://www.epa.gov/safewater/lead>.



Meadowview/Highlands Water Quality Statistics and Data Results

The table below lists all of the drinking water contaminants that we detected in the drinking water distribution system during calendar year 2011 or, in some cases, during the most recent sampling period. This table lists only those contaminants that had some level of detection. We routinely monitor for a number of contaminants in the water supply to meet regulatory drinking water compliance requirements. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. 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 change frequently. In these cases, the most recent sample data are included along with the year in which the sample was taken.

What is in my Water?

Contaminants Detected in Meadowview/Highlands Drinking Water

Substances We Detected	Unit	What's Allowed (MCL)	What's the Goal (MCGL)	Detected Level	Range Detected	Typical Source of Contaminant	Did We Exceed the Limit
Disinfection By-Products							
Total Trihalomethanes (TTHM)	ppb	80 ¹	N/A	53.5	13.6 – 53.5	By-product of drinking water chlorination	NO
Haloacetic Acids (HAA5)	ppb	60 ¹	N/A	85	24.3 - 85	By-product of drinking water chlorination	NO
Lead and Copper Rule							
Copper ²	ppm	1.3	1.3	0.12	N/A	Corrosion of household plumbing systems; erosion of natural deposits	NO
Lead	ppm	0.015	0	0.003	N/A	Corrosion of household plumbing systems; erosion of natural deposits.	NO
Inorganic Contaminants							
Barium	ppm	2	2	0.14	0.071 – 0.14	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	NO
Nitrate ³	ppm	10	10	10.4	6.5 – 10.4	Runoff from fertilizers; leaching from septic tanks; sewage	YES
Sodium ⁴	ppm	N/A	N/A	93	44 - 93	Erosion of natural deposits	NO
Volatile Organic Contaminants							
Chloroform	ppb	N/A	70	1.9	0.6 – 1.9	By-product of drinking water chlorination	NO
Synthetic Organic Contaminants							
Di(2-ethylhexyl) phthalate ⁵	ppb	6	0	5.6	5.6	Discharge from rubber and chemical factories	NO
Di(ethylhexyl) adipate	ppb	400	400	1.5	1.5	Discharge from chemical factories	NO
Radioactive Contaminants							
Gross alpha	pCi/L	15	0	6.3	4 – 6.3	Erosion of natural deposits	NO
Gross beta ⁶	pCi/L	50	0	4.5	4 - 4.5	Decay of natural and man-made deposits	NO
Radium 226	pCi/L	5	0	2	1.7 - 2	Erosion of natural deposits	NO
Radium 228	pCi/L	5	0	1.5	1.5	Erosion of natural deposits	NO
Combined radium	pCi/L	5	0	3.5	3.5	Erosion of natural deposits	NO

¹ 1 Compliance with the MCL for Disinfection By-Products (DBPs) is determined by a running annual average for all sites sampled. Exceedance of the MCL during a monitoring period does not indicate the system was in violation of the MCL.

² You can minimize your exposure to lead and copper by flushing you tap for 30 seconds to 2 minutes before using and not consuming hot water from the tap. Copper is an essential nutrient, but some people drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer kidney or liver damage. People with Wilson's Disease should consult their personal doctor.

³ Nitrates in drinking water at levels above 10 ppm is a health risk for infants of less than six (6) 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 consult with your health care provider.

⁴ Results are from the 2009 monitoring year, which is the most recent sampling completed in accordance with the MDE by EPA regulations.

⁵ Results are from the 2006/2007 monitoring years, which is the most recent sampling completed in accordance with the MDE by EPA regulations.

⁶ The MCL for Beta particles is written as 4 mrem/year. The EPA considers 50 pCi/L to be the level of concern for Beta particles.

Understanding the Drinking Water Quality Terms

(What They Mean in Plain English)

In the water quality tables and throughout this report you may find terms and acronyms you might not be familiar with. The following definitions are provided to help you better understand these terms:

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirement, which a water system must follow.

DBP (Disinfection By-Products): Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are compounds that can be formed when drinking water is disinfected with chlorine, thus a by-product is created.

EPA (The United States Environmental Protection Agency): The Federal agency created in 1970 that implements major environmental legislation. EPA's Office of Drinking Water oversees federal drinking water regulations and standards.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology. Contaminants in drinking water, if detected, must be present in levels below the MCLs in order for the system to be in compliance with all applicable regulations.

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, over and above the MCL.

MRDL (Maximum Residual Disinfectant Level): Disinfectant level beyond which some people may experience irritating effects. Based on running annual average of monthly averages of distribution system samples computed quarterly.

ND (Non-detect): laboratory analyses indicate that the contaminant is not present, when using the EPA regulated methods and equipment.

Ninetieth percentile (for lead and copper only) (90th%): Ninety percent of the homes where tap water was tested are at or below this level.

NRL: (No regulatory limit)

NTU: (Nephelometric Turbidity Unit): Unit of measure for clarity of water.

pCi/L: (Picocuries per liter): A measure of radioactivity (radiation) in water.

ppb: (Parts per billion) or micrograms per liter (ug/L), Corresponds to one penny in \$10,000,000 or one minute in 2,000 years.

ppm: (Parts per million) or milligrams per liter (mg/L), Corresponds to one penny in \$10,000 or one minute in two years.

SDWA (Safe Drinking Water Act): The Safe Drinking Water Act of 1974 and its 1986 Amendments are the laws enacted by Congress authorizing the EPA to establish national drinking water regulations.

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.

Total Coliform: A type of bacteriological test routinely used to determine if contamination has occurred in the drinking water system.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Source Water Assessment and Protection

The Maryland Department of the Environment (MDE) conducted and completed a source water assessment for community water systems, including yours, several years ago.

Components of the assessment included (1) delineation of areas that contribute to each water source, (2) identification of potential sources of contamination within the areas, and (3) determination of the susceptibility at each water supply to contamination.

In general, contamination of water supplies can come from several natural and man-made sources. As water travels over the surface of the land it dissolves naturally occurring minerals, and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

Copies of this assessment may be obtained by contacting the Water Supply Program at MDE located at 1800 Washington Blvd., Baltimore, Maryland 21230, (410) 537-3702. For more information on the Maryland Source Water Protection Program see www.mde.state.md.us/Programs/WaterPrograms/Water_Supply/sourcewaterassessment.



The Cecil County Department of Public Works Water and Wastewater Division strive to provide our customers with a safe, uninterrupted water supply. We hope that all of our customers recognize the need to protect our most precious resource, our community water supply.



Frequently Asked Questions by Our Consumers

Q. Who makes the rules and regulations for drinking water?

A. Regulations are made by both federal and state agencies. The Safe Drinking Water Act (SDWA) was passed by Congress in 1974 and amended in 1986 and 1996. It is governed by the United States Environmental Protection Agency (EPA). The website for these standards is <http://www.epa.gov/safewater/standards.html>. In addition to the SDWA, the EPA has promulgated several specific rules, including the Total Coliform Rule and the Lead and Copper Rule, to address various types of water contaminant problems.

Q. Do energy and water efficient laundry machines really work?

A. Yes! Newer models use 40% less water and can save you up to 6,000 gallons per year.

Q. Is it safe to drink water from my garden hose?

A. No. Substances used in vinyl garden hoses to keep them flexible can get into the water as it passes through the hose, which are not good for you or your pets. Check with your local hardware store to find the hoses made with "food-grade" plastic.

Q. Is it okay to use water from the hot-water tap for drinking, cooking, or making baby formula?

A. No, it is not recommended to use water from the hot-water tap due to potential impurities that may exist. Hot water generally comes from a hot water heater that may contain impurities that should not be ingested. Some of these impurities might be metals from household plumbing that are concentrated in the water heating process.

Q. What is "Hard" Water?

A. Hardness in drinking water is caused by minerals including calcium and magnesium. Typically when each of these minerals are present in elevated volumes, the water is said to be hard because making a lather or suds is "hard".



Protecting Your Drinking Water Supply!

Ongoing System Improvements

The Cecil County Department of Public Works Water and Wastewater Division is continually upgrading its treatment and distribution systems to improve water quality. It is our goal to provide our customers with a safe and reliable source of water which continues to meet state and federal quality requirements.

Everyone Can Help Conserve Water!

To help you and your family, here are a number of ways that you can conserve water both inside and outside your home. You can reduce your water use by 20-70 percent by installing more water-efficient fixtures in your home! Leaking and dripping faucets can waste 15-20 gallons a day, which can add up to 6,000 gallons per year. **Use water wisely!**

Additional water conservation information can be found at www.epa.gov/safewater/publicoutreach/index.html or www.mde.state.md.us/programs/waterprograms/water_conservation/.

- ◆ Check faucets and leaky toilets and do not use the toilet for trash disposal;
- ◆ Turn off the water while you brush your teeth and take shorter showers;
- ◆ Run your washing machine and dishwasher only when they are full;
- ◆ Repair or replace leaking hoses and sprinklers.

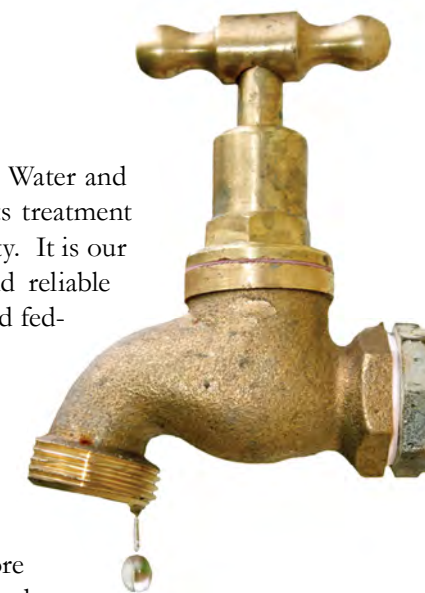
Help Us Out!

Your drinking water system may be a target for people intent on disrupting and causing harm to your community water supply.

Because utilities are often located in isolated areas, your drinking water system may cover large areas that are difficult to secure and patrol. Residents can help by monitoring and reporting any suspicious activity in and around their water utility. **Report any suspicious activity or vandalism immediately to 911.**

Examples of suspicious activity might include the following:

- ◆ People dumping or discharging material into a reservoir, river, or stream;
- ◆ An unidentified vehicle parked near water supply facilities;
- ◆ Suspicious opening or tampering with manhole covers, buildings, hydrants, or equipment;
- ◆ People climbing on top of water tanks;
- ◆ People photographing or videotaping utility facilities, structures or equipment;
- ◆ Unidentified people loitering around locked gates, doors, or entrances to water supply facilities;
- ◆ People other than fire companies and water utility staff connected to hydrants.



Where Can I Find Out More Information on My Water?

If you do not understand what was presented to you in this report, or if you need additional information about your drinking water contact ArtesianWater at (443) 245-7777, toll free at 1 (800) 332-5114 or email at custserv@artesianwater.com.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or on EPA's web site at <http://www.epa.gov/safewater/index.html>.

