CECIL COUNTY

PWSID: 0070019

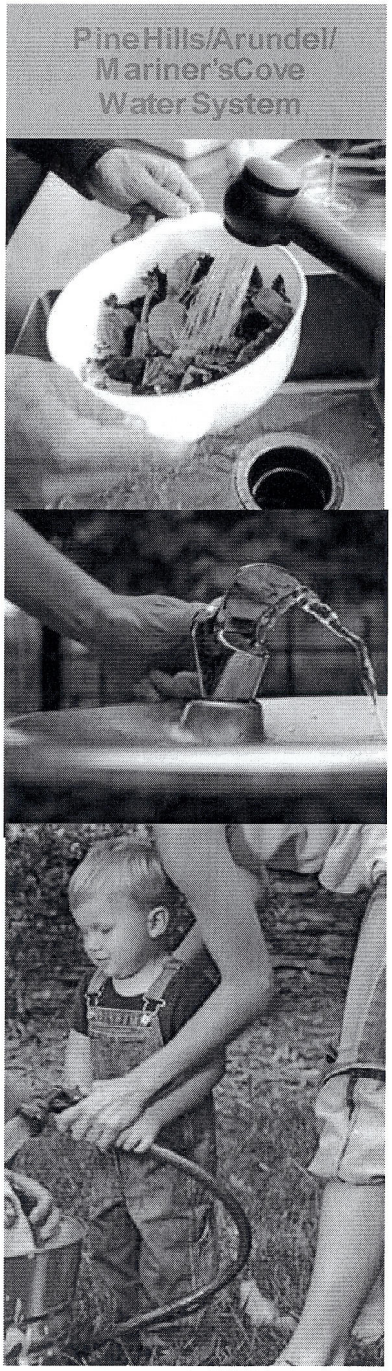
Department of Public Works

[redacted]

Calendar Year 2008

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 in 2008.

June 2009



About this Report...

We are once again proud to present to you our annual drinking water quality report. This report is for the period of January 1, 2008 through December 31, 2008 (except where noted) for the Pine Hills/Arundel/Mariner's Cove public water system. Under the "Consumer ConfidenceReporting Rule" of the Federal Safe Drinking Water Act (SDWA), community water systems are required to report this water quality infomation 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).

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

What's Inside:

About this Report 2
Your Water is Safe! 2
Where Does Our Drinking Water Come From? 2
Substances that May be in Drinking Water 3
Important Health Information 3
How Can Lead Exposure be Reduced? 4
Pine Hills/Arundel/Mariner's Cove Water Quality Data 5
Source Water Assessment 5
Acronyms and Definitions 6
Protecting Your Drinking Water Supply! 6
Answers to Frequently Asked Questions FAQs 7
Contact Information 7

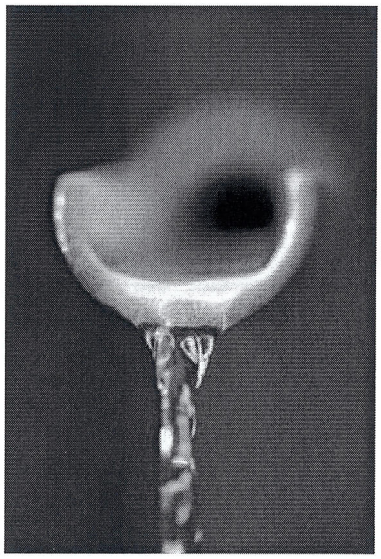
Your Water is Safe!

As you can see by the Tables and information in this Report, the drinking water provided to you met all drinking water health standards for the calendar year 2008. We have learned through our extensive monitoring and testing that some contaminants have been detected, but the Environmental Protection Agency (EPA) has confirmed that **YOUR WATER IS SAFE AT THESE LEVELS**, once again.

Cecil County Department of Public Works analyzes the water for more than 80 contaminants and of the few contaminants that were found were well below EPA's MCLs. 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.

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 of its highest.

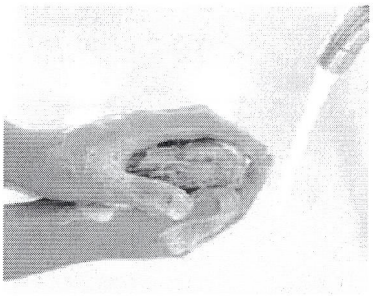


Where Does Our Drinking Water Come From?

The drinking water for the Pine Hills/Arundel/Mariner's Cove System is drawn and distributed from three wells, which are each 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 distribution system.

In addition, soda ash and polyphosphate are added to the treated water for pH and corrosion control of the distribution system.

CECIL COUNTY



Substances that May be in 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 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.

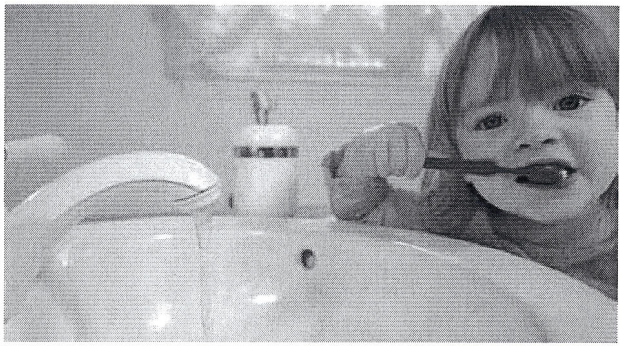
Consumers should be aware that drinking water, including bottled water, may reasonably be expected to contain at least trace amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Important Health Information

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).

How Can Lead Exposure be Reduced?

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 15 to 30 seconds or until in 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.



Pine Hills/Arundel/Mariner's Cove Water Quality Data

The table below lists all of the drinking water contaminants that we detected in the drinking water distribution system during calendar year 2008 or, in some cases, during the most recent sampling period. Although all of the substances we detected are under the Maximum Contaminant Level (MCL), as shown on the table below, we feel it is important that you know what was detected and how much was present. 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.

Contaminants Detected in Pine Hills/Arundel/Mariner's Cove Drinking Water During Calendar Year 2008

Substances We Detected	Unit	What's Allowed (MCL)	What's The Goal (MCLG)	Detected Level	Range Detected	Typical Source of Contaminant	Did We Exceed the Limit?
Inorganic Contaminants							
Nickel[1]	ppm	N/A	N/A	0.006	0.005-0.006	Erosion of natural deposits	NO
Barium[2]	ppm	2	2	0.007	0.006-0.007	Discharge of drilling wastes, discharge from metal refineries;erosion of natural deposits	NO
Copper	ppm	1.3	1.3	0.39	N/A	Corrosion of household plumbing fixtures; erosion of natural deposits; leaching from wood preservatives	NO
Sodium[1]	ppm	N/A	N/A	1.8	1.7-1.8	Erosion of natural deposits	NO
Volatile Organic Contaminants							
Total Trihalomethanes[2]	ppb	80	N/A	61.1	0-61.1	By-product of drinking water disinfection	NO
Haloacetic Acids[2]	ppb	60	N/A	63.81	0-63.81	By-product of drinking water disinfection	NO
Radioactive Contaminants							
Alpha emitters[3]	pCi/L	15	0	13	13	Erosion of natural deposits	NO
Beta/photon emitters[3,4]	pCi/L	50	0	14	14	Decay of natural and man-made deposits	NO
Radium 226[3]	pCi/L	5	0	0.3	0.3	Decay of natural and man-made deposits	NO
Combined Radium[3]	pCi/L	5	0	0.3	0.3	Erosion of natural deposits	NO
Synthetic Organic Contaminants							
Di(2-ethylhexyl) phthalate[3]	ppb	6	0	1.0	1.0	Discharge of rubber and chemical factories	NO

[1] Results are from the 2006 monitoringyear, which is the most recent sampling completed in accordance with MDE by EPA regulations.
[2] Results are from the 2007 monitoringyear, which is the most recent samplingcompleted in accordancewith MDE by EPA regulations.
[3] Results are from the 2004 monitoringyear, which is the most recent samplingcompleted in accordancewith MDE by EPA regulations.
[4] The MCL for the Beta particles is written as 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for Beta particles.

CECIL COUNTY

This newsletter is printed on recycled paper using soy-based inks.

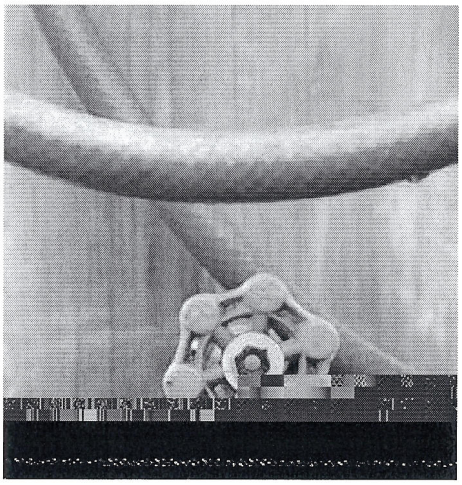
Source Water Assessment

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*.



Acronyms and Definitions Found in this Report - *What they mean in plain english*

In the tables and elsewhere in 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.

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.

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

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.

NRL: (No regulatory limit)

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

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

Total Coliform: A type of bacteriologic al 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.

Protecting Your Drinking Water Supply!

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 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.

Water Conservation Tips - Every Drop Counts!

To help you and your family, here are a number of ways that you can conserve water. You can reduce your water use by 20-70 percent by installing more water-efficientfixturesin your home!

Additional water conservation information can be found at *www.epa.gov/safewater/publicoutreach/index.html*.

- 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;
- Fill a container with water and put it in the fridge, rather than running the water to cool it off.

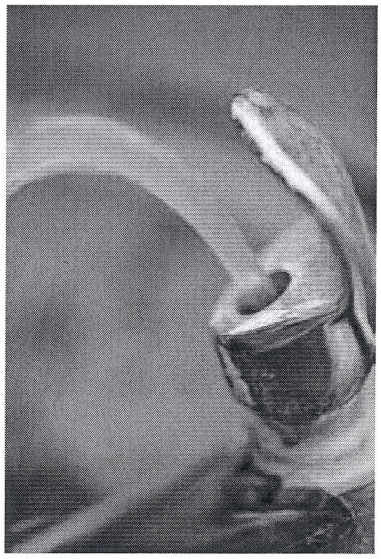
Get Involved

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 difficultto 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;
- Unidentifiedpeople loitering around locked gates, doors, or entrances to water supply facilities;
- People other than firecompanies and water utility staff connected to hydrants.



CECIL COUNTY

Answers to Frequently Asked Questions FAQs

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. Sometimes ice cubes made from the tap water, or the melted water from ice cubes contains white particles. What are these particles and where do they come from?

A. Ice cubes freeze from the outside in. Ice is formed from pure water (hydrogen and oxygen) therefore the minerals such as calcium and magnesium normally found in the water sometimes end up as visible particulates in the core of the ice cube. The white particles are not toxic.

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 web site 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. Can I store my drinking water indefinitely?

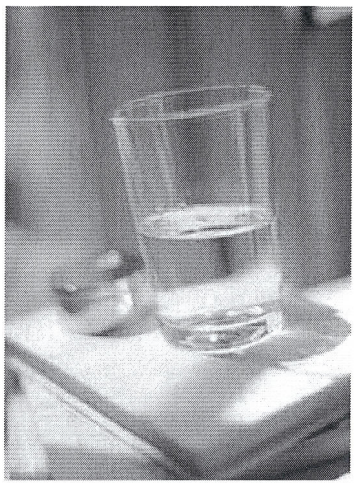
A. No. The disinfectant in drinking water will eventually dissipate even if it is stored in a closed container. Some experts believe that water could be stored in a closed container up to six months before needing to be replaced.

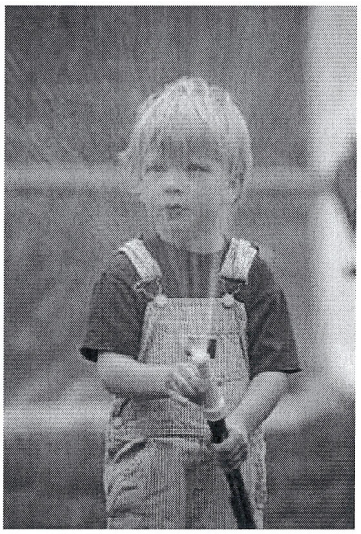
Q. How much water is lost to a dripping faucet?

A. Dripping faucets can waste 15-20 gallons a day, which can add up to 6,000 gallons per year. Water is a precious resource that should be conserved and if faucets are leaking this costs you money.

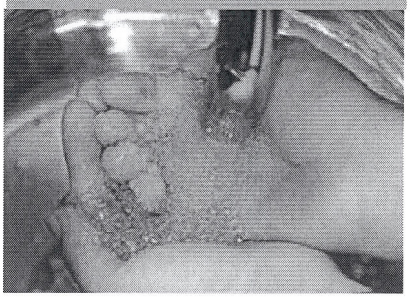
If you have questions about this report or for more information about your drinking water...

The point of contact for your water system for water quality information is William K. Owens, Manager of Water and Wastewater, 410-996-6260. 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.*





Pine Hills/Arundel/ Mariner'sCove Water System



CECIL COUNTY

PWSID: 0070019

Department of Public Works

[redacted]

June 2009

IMPORTANT: Drinking Water Quality Information Inside

To Our Water Service Customers:

We are once again pleased to report that your drinking water meets or exceeds all standards set for quality and safety.

Please recycle

Cecil County Department of Public Works
Water and Wastewater Division
P.O. Box 370
Chesterstown, MD 21914