

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

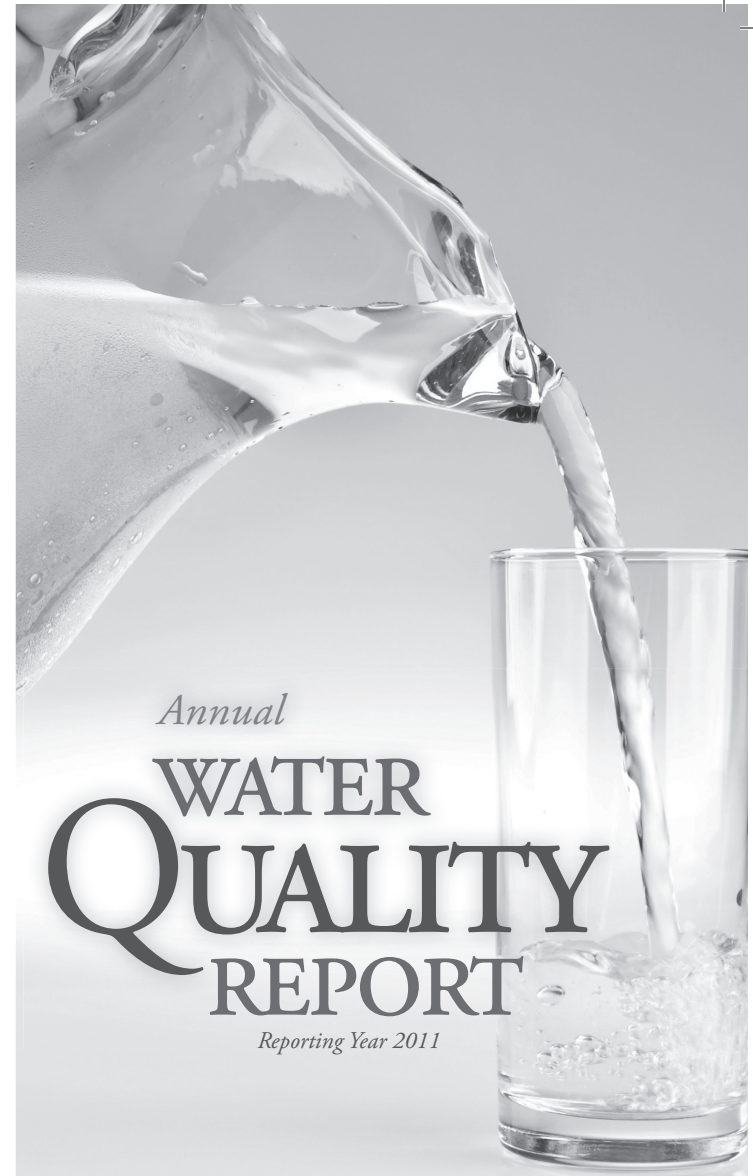
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; and Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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

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# Annual WATER QUALITY REPORT

Reporting Year 2011

Presented By  
Town of Ocean City

PWS ID#: 0230003

## Questions?

For more information about this report, or for any questions relating to your drinking water, please call Howard Iman, Water Department Superintendent, at (410) 524-8388.

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. We are responsible for providing high-quality drinking water, but we 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](http://www.epa.gov/safewater/lead).

## Lead in Home Plumbing

Council meetings are normally held on the 1st and 3rd Mondays of each month beginning at 6 p.m. Tuesday before the council meeting. Both are normally held in the council chambers at City Hall, Third Street and Baltimore Avenue. Any members of the public who wish to attend are encouraged to call (410) 289-8221 to verify the meeting time and place.

## Community Participation

The susceptibility analysis for the Ocean City water supply is based on a review of the water-quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that the Ocean City water supply is not susceptible to contaminants originating at the surface due to the protected nature of the confined aquifers. The water supply is susceptible to naturally occurring iron in the aquifers, chlorides due to saltwater intrusion, and trihalomethanes and haloacetic acids, which are disinfection by-products.

The Maryland Department of Environment (MDE) Water Supply Program has conducted a Source Water Assessment for the Town of Ocean City. The major components of this report as described in the Maryland Source Water Assessment Plan (SWAP) are (1) delineation of an area that contributes water to the source and (2) identification of potential sources of contamination. Recommendations for management of the assessment area conclude the report. The MDE Water Supply Program delineated the source water assessment using methods approved by the U.S. EPA. Potential sources of contamination within the assessment area were identified based on MDE site visits and a review of MDE databases. Well information and water-quality data were also reviewed. A map showing the source water assessment areas and potential contaminant sources was enclosed.

## Source Water Assessment

The Town Of Ocean City Water Department customers are fortunate because they enjoy an abundant water supply from two underground aquifers. The twenty-five wells that draw from these aquifers range in depth from 200 feet to more than 400 feet.

## Where Does My Water Come From?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Important Health Information

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

us to continue providing you and your family with high-quality drinking water.



Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with high-quality drinking water.

## Quality First

## Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state allows us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES											
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Manokin Aquifer				Ocean City Aquifer		Distribution System		VIOLATION	TYPICAL SOURCE
		MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Alpha Emitters (pCi/L)	2007	15	0	1	NA	2 <sup>1</sup>	1–2 <sup>1</sup>	NA	NA	No	Erosion of natural deposits
Barium (ppm)	2009	2	2	0.01	NA	NA	NA	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters <sup>2</sup> (pCi/L)	2008	50	0	5	NA	9	8–9	NA	NA	No	Decay of natural and man-made deposits
Combined Radium (pCi/L)	2007	5	0	0.09	0.2–0.9	2 <sup>1</sup>	1–2 <sup>1</sup>	NA	NA	No	Erosion of natural deposits
Di(2-ethylhexyl) Phthalate (ppb)	2008	6	0	NA	NA	0.6	NA	NA	NA	No	Discharge from rubber and chemical factories
Fluoride (ppm)	2009	4	4	0.114	NA	0.188	0.163–0.188	NA	NA	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] <sup>3</sup> (ppb)	2011	60	NA	NA	NA	NA	NA	11.4	8.1–15.8	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] <sup>3</sup> (ppb)	2011	80	NA	NA	NA	NA	NA	57	47.8–60.6	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2009	1.3	1.3	0.31	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES											
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Manokin Aquifer				Ocean City Aquifer		VIOLATION	TYPICAL SOURCE		
		MCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH				
Chloride (ppm)	2008	250	NA	NA	NA	213	NA	No	Runoff/leaching from natural deposits		

UNREGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Manokin Aquifer		Ocean City Aquifer		TYPICAL SOURCE	
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
3-Hydroxycarbofuran (ppb)	2008	NA	NA	0.5	NA	NA	
Bromodichloromethane (ppb)	2010	0.5	NA	0.5 <sup>1</sup>	NA <sup>1</sup>	By-product of drinking water disinfection	
Chloroform (ppb)	2010	0.5	NA	0.5 <sup>1</sup>	NA <sup>1</sup>	By-product of drinking water disinfection	
Dibromochloromethane (ppb)	2010	0.5	NA	0.5 <sup>1</sup>	NA <sup>1</sup>	By-product of drinking water disinfection	
Sodium (ppm)	2009	72	NA	125	33–125	Leaching from natural deposits	

<sup>1</sup> Sampled in 2008.

<sup>2</sup> The MCL for beta particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

<sup>3</sup> We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

## Definitions

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that 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 the MCLGs as feasible using the best available treatment technology.

**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.

**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.

**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.

**NA:** Not applicable

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

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).



### Who uses the most water?

On a global average, most freshwater withdrawals—69 percent—are used for agriculture, while industry accounts for 23 percent and municipal use (drinking water, bathing and cleaning, and watering plants and grass) just 8 percent.

### How much water does a person use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. During medieval times a person used only 5 gallons per day.

### Information on the Internet

The U.S. EPA Office of Water ([www.epa.gov/watrhme](http://www.epa.gov/watrhme)) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health.