

ANNUAL
**WATER
QUALITY
REPORT**

WATER TESTING PERFORMED IN 2015

Presented By
Town of Ocean City

Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to your homes and businesses. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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>.



Where Does My Water Come From?

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

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 that 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 dissolves 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;

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.

Information on the Internet

The Town requested an extension for completion of implementation of the Stage Information on the Internet The U.S. EPA (www.epa.gov/Your-Drinking-Water) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Maryland Department of the Environment has a Web site (www.mde.state.md.us/Programs/Water/Pages/index.aspx) that provides complete and current information on water issues in Maryland, including valuable information about our watershed.

Failure in Flint

The national news coverage of water conditions in Flint, Michigan, has created a great deal of confusion and consternation over the past year. The water there has been described as being corrosive; images of corroded batteries and warning labels on bottles of acids come to mind. But is corrosive water necessarily bad?

Corrosive water can be defined as a condition of water quality that will dissolve metals (iron, lead, copper, etc.) from metallic plumbing at an excessive rate. There are a few contributing factors but, generally speaking, corrosive water has a pH of less than 7; the lower the pH, the more acidic, or corrosive, the water becomes. (By this definition, many natural waterways throughout the country can be described as corrosive.) While all plumbing will be somewhat affected over time by the water it carries, corrosive water will damage plumbing much more rapidly than water with low corrosivity.

By itself, corrosive water is not a health concern; your morning glass of orange juice is considerably more corrosive than the typical lake or river. What is of concern is that exposure in drinking water to elevated levels of the dissolved metals increases adverse health risks. And there lies the problem.

Public water systems are required to maintain their water at optimal conditions to prevent it from reaching corrosive levels. Rest assured that we routinely monitor our water to make sure that what happened in Flint never happens here. For more information on how corrosivity affects water quality, download this informative pamphlet: <http://goo.gl/KpTmXv>.

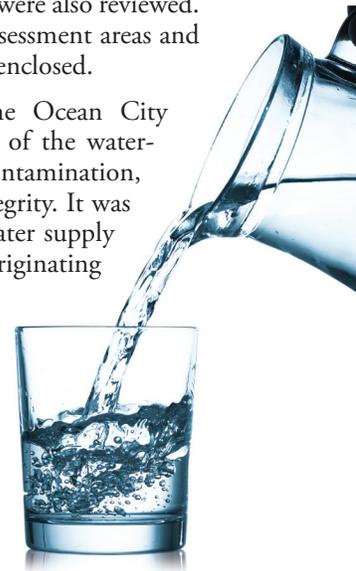
Community Participation

Council meetings are normally held on the 1st and 3rd Mondays of each month beginning at 6 p.m. Council work sessions are usually held at noon on the 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.

Source Water Assessment

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 area 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.

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 haloacetic acids, which are disinfection by-products.



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.

Variations and Exemptions

The Town requested an extension for completion of implementation of the Stage 2 DBPR, (Stage 2 Disinfection Byproduct Rule) From Oct. 1, 2013 to Sept. 30, 2015, and agrees to construct major upgrades to the 15th street water treatment plant and in the distribution system during this period to ensure compliance with the stage 2 DBPR. The town has completed upgrades to its water treatment plant. Also completed the 100th street storage tank upgrades. During the extension period, the town continued quarterly monitoring and reporting for disinfection byproducts and their precursors at the MDE approved Stage 2 monitoring sites. Compliance was calculated using system-wide running annual averages (RAAs) for compliance with the Stage 2 DBPR. Beginning October 1, 2015, the RAAs at each monitoring site will be evaluated for compliance with the Maximum Contaminant Levels (MCLs) for Disinfection Byproducts.

Variations and exemptions are issued by the State or U.S. EPA, which gives a water system permission not to meet an MCL or a treatment technique under certain conditions.

Lead in Home Plumbing

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/lead.



Is tap water cheaper than soda?

Yes! You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.

How long can a person go without water?

Although a person can live without food for more than a month, a person can only live without water for approximately one week.

When was drinking water first regulated?

The Safe Drinking Water Act (SDWA) of 1974 represents the first time that public drinking water supplies were protected on a federal (national) level in the U.S. Amendments were made to the SDWA in 1986 and 1996.

Seventy-one percent of Earth is covered in water: how much is drinkable?

Oceans hold about 96.5 percent of all Earth's water. Only three percent of the earth's water can be used as drinking water. Seventy-five percent of the world's fresh water is frozen in the polar ice caps.

How much water do we 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.) It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.

When was chlorine first used in the U.S.?

In 1908, Jersey City, New Jersey and Chicago, Illinois were the first water supplies to be chlorinated in the U.S.

How much water is in our atmosphere?

Forty trillion gallons of water are carried in the atmosphere across the U.S. each day.

How much water is in our bodies?

Water makes up almost two-thirds of the human body, and 70 percent of the brain.

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 requires 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES

				Manokin Aquifer		Ocean City Aquifer			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2012	2	2	0.025	0.017–0.025	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (ppm)	2015	10	10	0.42	0.406–0.42	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Distribution System

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2015	[4]	[4]	1.1	0 - 1.1	No	Water additive used to control microbes
Haloacetic Acids [HAAs]: January–September (ppb)	2015	60	NA	Highest RAA = 13 ¹	3.4–54.0	No	By-product of drinking water disinfection
Haloacetic Acids [HAAs]: October–December (ppb)	2015	60	NA	Highest LRAA = 2.1 ²	2.6–8.6	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]: January–September (ppb)	2015	80	NA	Highest RAA = 62 ¹	26.97–135.6	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]: October–December (ppb)	2015	80	NA	Highest LRAA = 14 ²	44.9–55.9	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)	2015	1.3	1.3	0.15	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2015	15	0	0	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3)

		Manokin Aquifer		Ocean City Aquifer		Distribution System			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
Chlorate (ppb)	2015	137	101–137	NA	NA	135	99.7–135	By-product of disinfection process	
Chromium (ppb)	2015	0.36	0.3–0.36	0.29	0.21–0.29	0.39	0.33–0.39	Discharge from steel and pulp mills; Erosion of natural deposits	
Strontium ³ (ppb)	2015	216	138–216	234	233–234	258	130–258	Can occur in water drawn from bedrock aquifers; Erosion of natural deposits	

Definitions

AL (Action Level): The concentration of a contaminant that, 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

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).

UNREGULATED SUBSTANCES - OCEAN CITY AQUIFER

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Chloromethane (ppb)	2015	0.32	0.26–0.32

¹ Running annual average (RAA).

² Locational running annual average (LRAA).

³ Strontium is an alkaline earth metal that shares many physical and chemical properties with calcium and barium.