

2015 WATER QUALITY REPORT FOR THE SANDY HOOK WATER SYSTEM PWSID# 210019

Is my water safe?

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The Washington County Department of Water Quality vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard.

Do I need to take special precautions?

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 drinking water from their health care providers. 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 Water Drinking Hotline (800-426-4791).

Where does my water come from?

The Sandy Hook Water System utilizes two wells as its source of water. This water is treated for iron removal, pH adjustment, water softening, and chlorination prior to entering the distribution system. During construction of system upgrades, in order to maintain supply and pressure to our customers, it was necessary to purchase an additional 102,000 gallons of water from the New Design Water Plant in Frederick County.

Source water assessment and its availability

The Maryland Department of the Environment's Water Supply Program (WSP) has conducted a Source Water Assessment for the Sandy Hook water system. The required components of this report as described in Maryland's Source Water Assessment Program (SWAP) are 1) delineation of an area that contributes water to the source, 2) identification of potential sources of contamination, and 3) determination of susceptibility of the water supply to contamination. Recommendations for protecting the drinking water supply conclude this report.

The sources of Sandy Hook's water supply in an unconfined fractured rock aquifer. The Source Water Assessment area was delineated by the WSP using EPA approved methods specifically designed for this source type. Point sources of contamination were investigated within the assessment area from field inspections, contaminant inventory databases, and previous studies. The Maryland Office of Planning's 2000 digital land use map for Washington County was used to identify non-point sources of contamination. Well information and water quality data were also reviewed. An aerial photograph and maps showing potential contaminants sources and land use within the Source Water Assessment area are included in this report.

The susceptibility analysis is based on review of the existing water quality data for the Sandy Hook Water System, the presence of potential sources of contamination in the source water assessment area, well integrity, and the inherent vulnerability of the aquifer. It was determined that the Sandy Hook water supply is not susceptible to contamination by inorganic compounds, radionuclides, volatile organic compounds or microbiological contaminants.

Why are there contaminants in my drinking water?

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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; 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; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; 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 storm water runoff, and septic systems; and 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 that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

For more information on getting involved, please contact our main office at (240) 313-2600.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. 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 vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

<u>Contaminants</u>	<u>MCLG</u> or <u>MRDLG</u>	<u>MCL,</u> <u>TT, or</u> <u>MRDL</u>	<u>Your</u> <u>Water</u>	<u>Range</u> <u>Low</u> <u>High</u>		<u>Sample</u> <u>Date</u>	<u>Violation</u>	<u>Typical Source</u>
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (ppm)	4	4	1.5	0	1.5	2015	No	Water additive used to control microbes
TTHMs [Total Trihalomethanes] (ppb)	NA	80	10	10	10	2014	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	2	2	2	2014	No	By-product of drinking water chlorination
Inorganic Contaminants								
Fluoride (ppm)	4	4	0.18	0.18	0.18	2013	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium (optional) (ppm)		MPL	76.4	NA	76.4	2013	No	Erosion of natural deposits; Leaching
Radioactive Contaminants								
Beta/photon emitters (pCi/L)	0	4	4.4	4.4	4.4	2012	No	Decay of natural and man-made deposits. The EPA considers 50 pCi/L to be the level of concern for Beta particles.
Inorganic Contaminants								
<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your</u> <u>Water</u>	<u>Sample</u> <u>Date</u>	<u># Samples</u> <u>Exceeding AL</u>	<u>Excee</u> <u>AL</u>	<u>Typical Source</u>	
Inorganic Contaminants								
Copper - action level at consumer taps (ppm)	1.3	1.3	0.0	2014	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.	
Lead - action level at consumer taps (ppb)	0	15	3	2014	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Monitoring and reporting of compliance data violations

Samples for the Sandy Hook water system were received by Maryland Department of the Environment 18 days after the required reporting date. Samples were submitted, received, and system returned to compliance. The results of the samples were in compliance with SDWA regulations.

Additional Information for 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. Washington 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 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>.

Additional information for Sodium

The presence of sodium in your water is attributed to the composition of the aquifer. Sodium is a contaminant which is not subject to any proposed or promulgated national primary drinking water regulation by EPA or MDE, but is analyzed and reported for individuals who are on a sodium restricted diet. Sodium is an essential nutrient which FDA reports the average person receives all that is required by eating a regular diet with no salt added.

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L) or one ounce in 7,350 gallons of water.
ppb	ppb: parts per billion, or micrograms per liter ($\mu\text{g/L}$) or one ounce in 7,350,000 gallons of water.
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
Important Drinking Water Definitions	
Term	Definition
MCLG	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.
MCL	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.
AVG	Regulatory compliance with some MCLs are based on running average of monthly samples.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Results of voluntary monitoring

The Washington County Department of Water Quality conducts routine testing on your water system that is not included in the Water Quality Data Table. A list of parameters and their results are listed in the Table of Results of Customer Interest below.

TABLE OF RESULTS OF CUSTOMER INTEREST

PARAMETER	LEVEL/RANGE DETECTED	UNIT OF MEASUREMENT
pH	6.9 to 8.2	Standard Units
Turbidity	0.1 to 0.2	NTU
Hardness	239 to 410	ppm
Alkalinity	71 to 136	ppm
Manganese	0.008 to 0.100	ppm
Iron	0 to 0.150	ppm

During construction of system upgrades, to maintain supply and system pressure to our customers, we purchased an additional 102,000 gallons of potable water from the New Design Water Treatment Plant in Frederick County. The water quality data for that facility is contained in the following tables.

Frederick County New Design Water Treatment Plant Water Quality Data

New Design's primary drinking water source is the Potomac River, a surface water supply. Some residents in the New Market area may receive a portion of their drinking water from the Woodspring Water Treatment plant which utilizes groundwater sources. The Maryland Department of the Environment (MDE) completed the Source Water Assessment for the New Design Road Water Treatment Plant in 2002. Should you care to obtain a copy of this report, the Frederick County Library has a copy, MDE has several, and the Division of Utilities and Solid Waste Management has placed a copy on the Frederick County website. MDE has identified drinking water contaminants of concern found in the Potomac River as natural organic matter and disinfection by-products precursors, Cryptosporidium oocysts and Giardia cysts, taste and odor causing compounds, ammonia, sediment/turbidity, algae, fecal coliform and dieldrin

Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources
Barium	2 ppm	2 ppm	0.085 ppm		NO	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries
Fluoride	4 ppm	4 ppm	1.0 ppm	0.6 - 1.0 ppm	NO	Water additive which promotes strong teeth
Nitrate	10 ppm	10 ppm	1.7 ppm	0.7 - 1.7 ppm	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits
Turbidity (TT)	< 0.3 NTU 95% of the time	0 NTU	0.14 NTU (100% Overall)		NO	Soil runoff
Turbidity	1 NTU maximum	0 NTU	0.03 NTU	0.02 - 0.14 NTU	NO	Soil runoff
Total Organic Carbon Removal (TT)	N/A	N/A	54% (Average)	41 - 76%	NO	Naturally present in the environment; Indicator of trihalomethanes and other disinfection byproduct precursors
REGULATED CONTAMINANTS - Woodspring Water Treatment Plant - Some testing is done every 3 years.						
Fluoride 2013	4 ppm	4 ppm	0.35 ppm		NO	Water additive which promotes strong teeth
Nitrate	10 ppm	10 ppm	7.9 ppm	2.3 - 7.9 ppm	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits
UNREGULATED CONTAMINANTS - New Design Water Treatment Plant - Testing done annually.						

Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources
Sodium	N/A	N/A	20.6 ppm		NO	Erosion of natural deposits
Sulfate	N/A	N/A	31.9 ppm		NO	Erosion of natural deposits
REGULATED CONTAMINANTS - Woodspring Water Treatment Plant - Some testing is done every 3 years.						
Sodium 2013	N/A	N/A	9.4 ppm		NO	Erosion of natural deposits
Sulfate 2013	N/A	N/A	4.1 ppm		NO	Erosion of natural deposits
LEAD AND COPPER - Tested at customer's taps. Testing is done every 3 years and was last completed in 2014.						
Contaminant	EPA's Action Level	Ideal Goal (EPA's MCLG)	90% of Test Levels Were Less Than	# of Tests With Levels Above EPA's Action Level	Violation	Typical Sources
Lead	90% of homes less than 16 ppb	0 ppb	0 ppb	0	NO	Corrosion of household plumbing
Copper	90% of homes less than 1.3 ppm	1.3 ppm	0.286 ppm	0	NO	Corrosion of household plumbing
REGULATED CONTAMINANTS - New Design Distribution System						
Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Annual Average	Range of Test Results	Violation	Typical Sources
Chlorine	4 ppm	4 ppm	1.0 ppm	0.2 - 3.0 ppm	NO	Water additive used to control microbes
DISINFECTION BYPRODUCTS - New Design Distribution System						
Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest LRAA ₁	Range of Test Results	Violation	Typical Sources
Total Haloacetic Acids	60 ppb	N/A	26.9 ppb	9.7 - 36.8 ppb	NO	Byproduct of drinking water chlorination
Total Trihalomethanes	80 ppb	N/A	62.0 ppb	28.8 - 98.0 ppb	NO	Byproduct of drinking water chlorination
BACTERIA IN TAP WATER - New Design Distribution System. Minimum of 40 samples per month.						
Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Monthly Percentage of Samples With Total Coliform Present	Violation	Typical Sources	
Total Coliform	5% of monthly samples positive for Total Coliform	0	3.3%	NO	Naturally present in the environment	

For more information on the Frederick County Division of Utilities and Solid Waste Management please visit their website at www.FrederickCountyMD.gov.

For more information on the Washington County Department of Water Quality, please visit our website at www.washco-md.net/water_sewer.

For more information on the
Sandy Hook Water System
Contact Mr. Kim L. Bowers at
(240) 313-2600