Annual Drinking Water Quality Report

MD0060010 SPRINGFIELD HOSPITAL DISTRIBUTION

Annual Water Quality Report for the period of January 1 to December 31, 2018

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

SPRINGFIELD HOSPITAL DISTRIBUTION is Purchased Surface Water

For more information regarding this report contact:

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Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

Sources of 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

Contaminants 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, 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.

- 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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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/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).

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 http://www.epa.gov/safewater/lead.

Source Water Information

SWA = Source Water Assessment

Source Water Name		Type of Water	Report Status	Location
CC-MD0060002-FREEDOM DISTRICT-	PURCHASED - MD0060002	SW		
INTERCONNECTION- NEAR SPRINGFIELD		SW		

Water Quality Test Results

Definitions:	The following tables contain scientific terms and measures, some of which may require explanation.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
Maximum Contaminant Level or MCL:	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.
Level 1 Assessment:	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Maximum Contaminant Level Goal or MCLG:	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.
Level 2 Assessment:	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Maximum residual disinfectant level or MRDL:	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.
Maximum residual disinfectant level goal or MRDLG:	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.
mrem:	millirems per year (a measure of radiation absorbed by the body)
ppb:	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
ppm:	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2018	1.1	0.7 - 1.1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2018	54	14.3 - 85.6	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	82	59 - 108.4	No goal for the total	80	ppb	Y	By-product of drinking water disinfection.

Violations Table

Total Trihalomethanes (TTHM)			
Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	01/01/2018	03/31/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	04/01/2018	06/30/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER
Total Trihalomethanes (TTHM) MCL Exceedence at Springfield Hospital

The Springfield Hospital water distribution system purchases all of its water from the Carroll County Public water system. Since the Springfield system is a consecutive water system of the Carroll County water system, Springfield must conduct testing for TTHM. That testing recently revealed the TTHM standard had been exceeded at one location. Although this finding does not present an emergency, as our customers, you have a right to be notified of the situation and to be advised what we are doing to correct it.

We monitor for the presence of TTHM's once a quarter in the Auto Shop building and compliance with the maximum contaminant level (MCL) is based on a rolling annual average of the quarterly results. Test results of the last 4 quarters show the average level in the Auto Shop building exceeded the standard or MCL for TTHM. The standard for TTHM is 80 parts per billion (ppb). The rolling annual average level of TTHM at the Auto Shop building for the first quarter of 2018 was 82 ppb.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified immediately. TTHM are trihalomethane compounds which form when disinfectants (like chlorine) react with natural organic matter in the water. When treated water is in motion the reaction forming TTHM is less likely than when that water stands still for an extended period of time. People who drink water containing total trihalomethanes in excess of the MCL over many years may have an increased risk of getting cancer. Therefore the testing protocol is designed to catch and prevent the problem at the first signs of its occurrence.

What should I do?

- There is nothing you need to do. You do not need to boil your water or take other corrective actions. Should a situation ever arise where the water is not safe to drink, you will be notified immediately.
- Customers with severely compromised immune systems; infants; pregnant women; and the elderly are at an increased risk and should consult their health care providers about drinking this water.

What is being done to correct the problem?

The Springfield Hospital water system receives all of its treated water from Carroll County which is responsible for providing an adequate level of disinfection. In addition to monitoring the TTHM level at the water's point of entry from the Carroll County system, we are currently investigating ways the formation of TTHM can be minimized within the system. The Springfield Hospital water system has increased the amount of water and frequency of water main flushing. Flushing reduces standing water in the distribution system, which is one of the factors that leads to the formation of TTHM. We will continue to monitor the TTHM levels until the test results show that the levels are within the acceptable range.

For more information, please contact Jay Janney at 410-729-8350 or mail Maryland Environmental Service, Springfield Hospital, 259 Najoles Road, Millersville, Maryland 21108

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the Springfield Hospital. State Water System ID#: MD006-0010.
Date distributed: April 3, 2018

PWSID: 006-0002

Freedom District 2018 Drinking Water Quality Report

Important Information about your Drinking Water

The Bureau of Utilities is pleased to present to you the Annual Water Quality Report for 2018. This report is designed to inform you about the water quality and services we deliver to you every day. Maryland Environmental Service (MES), an Agency of the State of Maryland, provides operational support and prepared this report on behalf of Carroll County and the Freedom District water treatment plant.

The Environmental Protection Agency (EPA) regulates Public Water Systems and the contaminants found in water through the implementation of the Safe Drinking Water Act (SDWA). The SDWA sets regulations and guidelines for how public water systems operate and identifies several hundred drinking water contaminants, establishes monitoring frequencies and limitations. The Maryland Department of the Environment (MDE) is responsible for the enforcement of the SDWA and routinely complete Sanitary Surveys as part of their ongoing inspection and monitoring program. Carroll County provides safe dependable operations of the water system and is dedicated to consistently providing high quality drinking water that meets or exceeds the SDWA standards.

If you have any questions about this report or have questions concerning your water utility, please contact Andrew Watcher, Chief Carroll County Bureau of Utilities 225 North Center Street, Room 218, Westminster, MD 21157
Phone 410-386-2164

Public Meeting Information:

For the opportunity to ask more questions or participate in decisions that may affect your drinking water quality, the Carroll County Commissioners meet regularly and the weekly agenda is available at: https://ccgovernment.carr.org/ccg/commiss/agenda.pdf

Inside This Issue:

How Water is Treated:

Raw water is pumped from Liberty Reservoir via intake lines located in the reservoir which then travels into Freedom District system #1's dissolved air flotation clarifier. A coagulant is added causing small particles and other suspended matter to attach to one another for easy removal. This clarified water enters a channel which feeds the Membrane Ultra filters before entering the clearwell. The water is then chlorinated for disinfection and fluoridated for dental protection. Caustic soda is used to raise pH making the water less aggressive to pipes and fixtures. Plant #1 also has the potential to remove various minerals and organic compounds that are present in the reservoir at various times of the year. A corrosion inhibitor, poly orthophosphate, is added just before the treated water enters the distribution system. In addition to the Freedom District surface water system #1, ground water is supplied from one well in the Boulder Gineiss Wissahickon formation. This well is called the Fairhaven system #2 and it's water is chlorinated for disinfection and fluoridated for dental protection before it enters the distribution system.

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/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 (1-800-426-4791).**

Freedom District Treated Water Quality Report 2018

Definitions:

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Contaminant Level (MCL) - 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.

Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Turbidity - Relates to a condition where suspended particles are present in the water. Turbidity measurements are a way to describe the level of "cloudiness" of the water.

pCi/l - Picocuries per liter. A measure of radiation.

ppb - Parts per billion or micrograms per liter.

ppm - Parts per million or milligrams per liter.

Mrem - Millirem roentgen equivalent in man. A measure of radiation dose.

Sources of 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, in some cases radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Special Points of Interest:

The water at the Freedom District is tested for over 120 different compounds. Drinking Water, including bottled water, may reasonably be expected to contain at least small amounts of some compounds. The presence of these compounds 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's) Safe Drinking Water Act Hotline (1-800 -426-4791).**

Contaminants that may be Present in Source Water:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. Inorganic Contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming. 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. Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Lead Prevention

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. The Freedom District 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 drinking 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 EPA Safe Drinking Water Hotline at 1-800-426-4791 or at** http://www.epa.gov/safewater/lead.

The Maryland Department of the Environment has performed an assessment of the source water. A copy of the assessment is available by calling or writing the Bureau of Utilities, Carroll County Government, 225 North Center Street, Room 218, Westminster MD 21157, 410-386-2164

Freedom District Treated Water Quality Report 2018

Contaminant	Highest Level Allowed (EPA's MCL)	Highest Level Detected	Ideal Goal (EPA's MCLG)
Regulated at the Treatment Plant (Freedom District Plant 01)	Action Level	Highest Level	Ideal Goal
Gross Beta (2017 Testing)	50 pCi/l*	6.5 pCi/l*	0.0 pCi/l
Typical Source of Contamination: Erosion of natural deposits			
*EPA considers 50 pCi/L to be the level of concern for beta particles. The MCL is 4 mrem/year			
** Because the beta particle results were below 50 pCi/l, no testing for individual beta particle constituents was required			
Combined Radium (226 & 228) (2017 Testing)	5 pCi/l	1.9 pCi/l	n/a
Typical Source of Contamination: Erosion of natural deposits			
Gross Alpha (2017 Testing)	15 pCi/l	8.6 pCi/l*	0.0 pCi/l
Typical Source of Contamination: Erosion of natural deposits			
* Average of Results, please read page 4 of the Consumer Confidence report for more information on Gross Alpha Emitters			
Uranium (2015 Testing)	30 pCi/l	4 pCi/l	0.0 pCi/l
Typical Source of Contamination: Erosion of natural deposits			
Nitrate (2018 Testing)	10 ppm	2.2 ppm	10 ppm
Typical Source of Contamination: Runoff from fertilizer use; erosion			
Fluoride (2018 Testing)	4.0 ppm	0.51ppm	4 ppm
Typical Source of Contamination: Added for dental protection			
Barium (2018 Testing)	2000 ppb	19.4 ppb	2000 ppb
Typical Source of Contamination: Discharge from metal refineries, erosion of natural deposits.			
Arsenic (2018 Testing)	10 ppb	1.4ppb	0 ppb
Typical Source of Contamination: Discharge from metal refineries, erosion of natural deposits.			
Turbidity (Continuously Tested)	0.3 ntu TT*	0.13 ntu	0 ntu
Typical Source of Contamination: Discharge from metal refineries, erosion of natural deposits.			
Turbidity cannot exceed 1.0 NTU and must be less than or equal to 0.3 NTU in at least 95% of the measurements.			
Regulated in the Distribution System	Action Level	Highest Level	Ideal Goal
Chlorine (Water additive used to control microbes)	4 ppm	1.03 ppm*	4 ppm
* Annual average of results		Range (0.18 - 2.1 ppm)	
Total Trihalomethanes (TTHM) (2018 Testing)	80 ppb	81.4 ppb*	n/a
There were two (2) MCL violations in 2018, more informaton on page 4		(Range 12.6 ppb - 150 ppb)	
Typical Source of Contamination: By-product of drinking water disinfection		*Locational Rolling Annual Average	
Haloacetic Acids (HAA5) (2018 Testing)	60 ppb	67.1 ppb*	n/a
There were three (3) MCL violations in 2018, more informaton on page 4		(Range 17 ppb - 122.9 ppb)	
Typical Source of Contamination: By-product of drinking water disinfection		*Locational Rolling Annual Average	
Regulated in the Distribution System	Action Level	90th Percentile	Ideal Goal
Copper (2017 Testing)	1300 ppb	90 ppb	1300 ppb
Typical Source of Contaminant: Corrosion of household plumbing			
Lead (2017 Testing)	15 ppb	0	0.0 ppb
Typical Source of Contaminant: Corrosion of household plumbing			
Regulated at the Treatment Plant (Fairhaven Plant 02)			
Nitrate (2018 Testing)	10 ppm	1.8 ppm	10 ppm
Typical Source of Contamination: Runoff from fertilizer use; erosion			
Fluoride (2018 Testing)	4.0 ppm	0.738 ppm	4 ppm
Typical Source of Contamination: Added for dental protection			
Barium (2018 Testing)	2000 ppb	5.6 ppb	2000 ppb
Typical Source of Contamination: Discharge from metal refineries, erosion of natural deposits.			
Arsenic (2018 Testing)	10 ppb	1.1 ppb	0 ppb
Typical Source of Contamination: Discharge from metal refineries, erosion of natural deposits.			

The table above lists all the drinking water contaminants that were detected during the 2018 calendar year. The presence of these compounds in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the table is from testing done January 1 – December 31, 2018.

The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.

Freedom District Treated Water Quality Report 2018

Public Notice

Our water system recently violated drinking water standards. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did *(are doing)* to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results from the third and fourth quarter of 2018 show that our system exceeds the standard or maximum contaminant level (MCL), for TTHM and HAA5. The standard for TTHM is 80 parts per billion (ppb) and the standard for HAA is 60 parts per billion. Compliance is determined by averaging the samples collected at each sampling location for the past 12 months. The level(s) of TTHM averaged at the sampling location(s) for the third quarter of 2018 were

Monitoring period	System Location	Total Trihalomethanes TTHM (ppb)	Total Haloacetic acids (ppb)
End of 3rd quarter	Southern States, 7625 Main St.	81 (above limit)	57 (below limit)
End of 3rd quarter	Liberty Rd.	54 (below limit)	63 (above limit)
End of 4th quarter	Southern States, 7625 Main St.	81 (above limit)	62 (above limit)
End of 4th quarter	Liberty Rd.	70 (below limit)	67 (above limit)

What should I do?

There is nothing you need to do. You do not need to boil your water or take other corrective actions. Should a situation ever arise where the water is not safe to drink, you will be notified immediately. Certain people may be at an increased risk. Customers with severely compromised immune systems; infants; pregnant women; and the elderly are at an increased risk, and should receive advice from their health care providers about drinking this water.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified immediately. TTHM are total trihalomethane compounds which form when disinfectants react with natural organic matter in the water. *People who drink water containing total trihalomethanes in excess of the MCL over many years may have an increased risk of getting cancer.*

What is being done?

The Freedom District has hired the Maryland Environmental Service (MES) to evaluate the TTHM problem. MES started evaluating the issue in October 2018 and will develop a best management program. The best management program will evaluate all disinfectants added to the water and will develop and implement better control strategies in our effort to return to compliance in 2019.

For more information, please contact Andrew Watcher, Chief Carroll County Bureau of Utilities 225 North Center Street, room 218, Westminster MD 21157 or 410-386-2164 or email awatcher@carrollcountymd.gov

Monitoring Violation

Due to a scheduling error, the system did not complete some of the raw water (untreated water) monitoring for e.Coli. These results are used to determine if the current treatment is working as it should. All results from previous monitoring and monitoring conducted after the samples were missed, were within acceptable levels.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain compounds in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.