2022
Annual Drinking Water Quality Report
Benedict Community – MD0080062
Charles County, Maryland
Prepared by the Department of Public Works
Utilities Division

We are pleased to present the Annual Drinking Water Quality Report for the Benedict Community for the period of January 1, 2022, through December 31, 2022. This report informs you about the quality of the water and services we deliver to you every day. This report is provided in compliance with Federal regulations and is updated annually.

Our constant goal is to provide you with a safe and dependable supply of drinking water. We are committed to protecting water resources, improving the water treatment process, and ensuring the quality of your water meets or exceeds all local, State, and Federal standards and regulations. We are confident the drinking water from the Benedict system is safe and meets all Federal and State requirements.
A source water assessment was performed by MDE and is available on their website, mde.maryland.gov.

Usted puede obterner esta información en español, llamando al Departamento de Obras Públicas División de Utilidades en 301-609-7400.

The source of the drinking water for the Benedict system is the Aquia aquifer. An aquifer is an underground reservoir or deposit of water that is tapped by drilling wells and pumping the water to the surface for distribution. The earth between the surface and the underground aquifer helps to purify the water, making it easier to treat the water supply before it is pumped into the water distribution system. The Benedict system is served by 2 wells.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade, such as microbes, inorganic or organic chemicals, and radioactive substances. 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. The elderly, infants, and immunocompromised persons, such as persons with cancer who are undergoing chemotherapy, persons who have undergone organ transplants, people with Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) or other immune system disorders, can be at a higher risk of infection from contaminants. These people should seek advice about drinking water from

their healthcare providers. The Environmental Protection Agency/Center for Disease Control (EPA/CDC) guidelines to reduce the risk of infection are available from the Safe Drinking Water Hotline at 1-800-426-4791.

The Department of Public Works, Utilities Division, routinely monitors the Benedict system for contaminants in your drinking water according to Federal and State laws. The following table shows the results of our monitoring efforts and identifies the year a contaminant was tested. The results of testing for contaminants which are not regulated are listed in the Unregulated Contaminants section. Definitions of key terms are presented below the table.

Benedict System

Test Results						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Major Sources in drinking water
Disinfectants						
Chlorine (2022)	N	0.6 - 0.9	ppm	MRDLG 4	MRDL 4	Water additives to control microbes
Disinfection By-Products						
HAA5s Haloacetic Acids Distribution (2020)	N	3.5	ppb	No goal for the total	60	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] Distribution (2020)	N	13.8	ppb	No goal for the total	80	By-product of drinking water chlorination
Inorganic Contaminants						
Arsenic (2022) **Range (both wells)** **Annual Average** St. Francis Well Benedict Well **Highest RAA** St. Francis Well Benedict Well	N	0 - 8 5.0 6.5 6.3 7.0	ppb	0	10	Erosion of natural deposits; runoff from glass and electronics production wastes
Barium (2021)	N	0.007-0.01	ppm	2	2	Discharge of drilling waste, discharge from metal refineries, erosion of natural deposits
Fluoride (2020)	N	0.2	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead Distribution (2020)	N	<2.0	ppb	0	AL= 15	Corrosion of household plumbing systems, erosion of natural deposits
Copper Distribution (2020)	N	0.09	ppm	1.3	AL= 1.3	Corrosion of household plumbing system; erosion of natural deposits; leaching from wood preservatives
Radioactive Contaminants						
Beta/ photon emitters (2020)	N	0.6 – 12.1	pCi/L	0	50	Decay of natural and man-made deposits
Combined Radium 226/228 (2020)	N	0 – 0.8	pCi/L	0	5	Erosion of natural deposits
Volatile Organic Contaminants						
Chlorobenzene (2018)	N	0 – 0.57	ppb	100	100	Discharge from Chemical and agricultural chemical factories
Ethylbenzene (2019)	N	1.98	ppb	700	700	Discharge from Petroleum refineries
Xylenes (2019)	N	0.01013	ppm	10	10	Discharge from petroleum & chemical factories

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. Charles County Utilities is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or doing a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Charles County Utilities at 301-609-7400. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.

Definitions of Key Terms

- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a system must follow.
- 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 Residual Disinfection Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.
- Maximum Residual Disinfectant Level Goal (MRDLG) – The level of 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.
- 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.
- Results with a less than "<" symbol preceding the result indicates the contaminant is below the detectable level.
- Non-Detects (ND) – The laboratory analysis indicates the contaminant is non-detectable.
- Parts per billion (ppb) or Micrograms per liter (µg/L) – The equivalent of 1 minute in 2,000 years or a single penny in $10,000,000.00.
- Parts per million (ppm) or Milligrams per liter (mg/L) – The equivalent of 1 minute in 2 years or a single penny in $10,000.00.
- Picocuries per liter (pCi/L) – A measure of the radioactivity in water. The equivalent of one penny in $10,000,000,000.00 or one penny in ten trillion dollars.
- Parts per trillion (PPT) - . The equivalent of one penny in $10,000,000,000.00 or one penny in ten trillion dollars.
- RAA – Running Annual Average.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of experiencing adverse health effects from the contaminant.

The presence of some contaminants in drinking water is unavoidable, but we make every effort to keep your drinking water at or below the levels specified by law as being safe for consumption.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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 Department of Public Works, Utilities Division, 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's Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

PFAS – or per- and polyfluoroalkyl substances – refers to a large group of more than 4,000 human-made chemicals that have been used since the 1940s in a range of products, including stain- and water-resistant fabrics and carpeting, cleaning products, paints, cookware, food packaging, and fire-fighting foams. These uses of PFAS have led to PFAS entering our environment, where they have been measured by several states in soil, surface water, groundwater, and seafood. Some PFAS can last a long time in the environment and in the human body and can accumulate in the food chain.

Beginning in 2020, the Maryland Department of the Environment (MDE) initiated a PFAS monitoring program. PFOA and PFOS are two of the most prevalent PFAS compounds. PFOA concentrations from samples taken from our water system in 2022 were (ND) Non-Detects in parts per trillion (ppt); PFOS concentrations from samples taken from our water system in 2022 were (ND) Non-Detects in ppt (parts per trillion). In March 2023, EPA announced proposed Maximum Contaminant Levels (MCLs) of 4 ppt for PFOA and 4 ppt for PFOS, and a Group Hazard Index for four additional PFAS compounds. Future regulations would require additional monitoring as well as certain actions for systems above the MCLs. EPA will publish the final MCLs and requirements by the end of 2023 or the beginning of 2024. Additional information about PFAS can be found on the MDE website: mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx

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The staff of the Department of Public Works, Utilities Division, works diligently to provide top-quality water and excellent customer service. All customers are urged to protect our valuable water resources and practice conservation to ensure a sustainable water supply for our community. If you have any questions concerning this report or any aspect of your water utility, please contact Sam Simanovsky, Chief of Operations and Maintenance, at 301-609-7400.