Annual Drinking Water Quality Report 2022
Greater Harrison County PSD
151 Peninsula Park Avenue
P.O. Box 190
West Milford, WV 26451
Valley of Good Hope PWSID# WV3301727
May 17, 2023

In compliance with the Safe Drinking Water Act Amendments, the **Greater Harrison County PSD** is providing its customers with this annual water quality report. This report explains where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. The information in this report shows the results of our monitoring for the period of January 1st to December 31st, 2022 or earlier if not on a yearly schedule.

If you have any questions concerning this report, you may contact **Matthew (Matt) Evans, Chief Operator,** Monday through Friday (7:30am – 3:30pm) at 304-745-3463. If you have any further questions, comments or suggestions, please attend any of our regularly scheduled water board meetings held on the **3rd Wednesday of every month at 9:00 AM** in the West Milford Community Building.

Your drinking water is **purchased** from Clarksburg Water Board. The Clarksburg Water Board utilizes **surface water** from the West Fork River as their source of water.

A Source Water Protection Plan was updated in 2019. The intake that supplies drinking water to the **Clarksburg Water Board** has a higher susceptibility to contamination, due to the sensitive nature of surface water supplies and the potential contaminant sources identified within the area. This does not mean that this intake will become contaminated only that conditions are such that the surface water could be impacted by a potential contaminant source. Future contamination may be avoided by implementing protective measures. The Source Water Protection Plan, which contains more information is available for review at www.clarksburgwater.com/ or a copy will be provided to you at Clarksburg Water Boards office during business hours or from the WVBPH 304-558-2981.

All drinking water contains various amounts and kinds of contaminants. Federal and state regulations establish limits, controls, and treatment practices to minimize these contaminants and to reduce any subsequent health effects.

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 of 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).
The source of drinking water (both tap and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of 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.

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, 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 the result of oil and gas production and mining activities.

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 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).

Definitions of terms and abbreviations used in the table or report:

- **AL - Action Level**, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **LRAA** - Locational Running Annual Average is an average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.
- **MCL - Maximum Contaminant Level**, or 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 technique.
- **MCLG - Maximum Contaminant Level Goal**, or 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,** or the highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary to control microbial contaminants.
- **MRDLG - Maximum Residual Disinfectant Level Goal**, or the level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect benefits of use of disinfectants to control microbial contaminants.
- **N/A** - not applicable
- **ND** – Not Detectable, no contaminants were detected in the sample(s) taken.
- **NE** - not established
- **NTU** - Nephelometric Turbidity Unit, used to measure cloudiness in water
- **ppb** - parts per billion or micrograms per liter **(µg/l)**
- **pCi/L** – picocuries per liter (a measure of radioactivity)
- **ppm** - parts per million or milligrams per liter **(mg/l)**
- **TT - Treatment Technique**, or a required process intended to reduce the level of a contaminant in drinking water.

The **Greater Harrison County Public Service District, Valley of Good Hope division** routinely monitor for contaminants in your drinking water according to federal and state laws. The tables below show the results of our monitoring for contaminants.

Table of Test Results - Regulated Contaminants – Valley of Good Hope

Disinfectant						
Contaminant	**Violation Y/N**	**Level Detected**	**Unit of Measure**	**MRDLG**	**MRDL**	**Likely Source of Contamination**
Chlorine	N	RAA 1.23 Range 0.2-2.18	ppm	4	4	Water additive used to control microbes

Disinfection Byproducts	Violation Y/N	Highest LRAA	Range (low/high)	Unit of measure	MCLG	MCL	Likely source of Contamination
*Haloacetic acids (HAA5) 43 Recreation Dr (Site 1)	N	38	16 / 73	ppb	NA	60	By-product of drinking water disinfection
**Total trihalomethanes (TTHMs) 1570 Cabin Run Rd (Site 2)	N	82	21 / 163	ppb	NA	80	By-product of drinking water chlorination

*Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

**Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or nervous system, and may have an increased risk of cancer.

Lead and Copper - Copper and Lead samples were collected from 20 area residences on July 19th, 2021							
Contaminant	**Monitoring Period**	**90th Percentile**	**Range**	**Unit of Measure**	**AL**	**Sites Over AL**	**Likely Source of Contamination**
Copper, Free	2021	0.0728	0.0011 - 0.214	ppm	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits.
Lead	2021	1.0	<0.5 – 1.6	ppb	15	0	Corrosion of household plumbing systems; erosion of natural deposits

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 **Greater Harrison County PSD (Valley of Good Hope)** 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 Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

During the 2022 calendar year, we had the below noted violation(s) of drinking water regulations.

Date Issued	Number	Code / Type	Monitoring Period
12/6/2022	544434	75 / Public Notice Rule linked to violation	7/1/2021-12/31/2021
8/13/2022	544432	52 / Follow-Up or Routine Tap M/R (LCR)	1/1/2022-6/30/2022
11/3/2022	544433	02 / MCL, LRAA	7/1/2022-9/30-2022
1/5/2023	544435	75 / Public Notice Rule linked to violation	7/1/2022-9/30-2022
2/16/2023	544436	66 / Lead Consumer Notice (LCR)	9/29/2022-1/10/2023

The violations listed are all paper work. None of the violations were related to water quality. The system operation specialists know that the paperwork issues can lead to other problems, therefore they **have made every effort and taken every precaution to return to compliance.**

Some or all of our drinking water is supplied from another water system. The tables below list some of the drinking water contaminants which were detected in 2022. The entire list can be found at www.clarksburgwater.com/

Table of Test Results - Regulated Contaminants – Clarksburg Water Board

EPA's surface water treatment rules require conventional water treatment plants like Clarksburg Water Boards to monitor Turbidity. The NTU must never exceed 1.0 at any time. The samples for turbidity must be less than or equal to 0.3 NTU in at least 95% of the samples in one month. Clarksburg's turbidity samples are in the table below. EPA considers these limits as a TT or Treatment Technique. A Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.

Turbidity			
Monthly % < 0.3 NTU	Yearly High	Violation	Likely Source of Contaminant
100 %	0.09 NTU in July 2022	No	Soil runoff

The removal of Total Organic Carbon (TOC) is an important process to help control Disinfection By Products created when Chlorine is used as a disinfectant. TOC testing measures the level of organic molecules or contaminants present. TOC tests will not determine which compounds are present, but only the amount of compounds. Specific ultraviolet absorbance (SUVA) provides a general characterization of the nature of natural organic matter (NOM) in a water sample and is typically performed for the purpose of determining disinfection by-product (DBP) formation potential.

The results of these tests are in the table below.

Total Organic Carbon (TOC) & Dissolved Organic Carbon(DOC)						
Contaminant	RAA	Range (low/high)	Unit	Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Likely Source of Contaminant
TOC (Source)	2.63	1.8/3.6	ppm	N/A	TT	Naturally occurring in the environment
DOC (Source)	3.11	1.8/7.6	ppm	N/A	TT	Naturally occurring in the environment
SUVA (Source)	3.38	1.4/6.3	L/mg-m	N/A	TT	Naturally occurring in the environment
UV Absorbance @254 nm (Source)	0.1	0.025/0.14	Cm^{-1}	N/A	TT	Naturally occurring in the environment
TOC (Finished)	1.9	1.4/2.6	ppm	N/A	TT	Naturally occurring in the environment
DOC (Finished)	2.19	1.3/3.3	ppm	N/A	TT	Naturally occurring in the environment
SUVA (Finished)	1.59	<0/2.5	L/mg-m	N/A	TT	Naturally occurring in the environment
UV Absorbance @254 nm (Finished)	0.04	<0/0.058	Cm^{-1}	N/A	TT	Naturally occurring in the environment

Clarksburg Water Board collects 240 samples per year to test for bacteria. These samples are collected, not only because it's on the sampling schedule put out by the primacy agency, but to make sure the disinfectant process is working throughout the distribution system. The Water Treatment Operation Specialists at Clarksburg Water Board are some of the best around and work tirelessly to distribute the best water possible within all the parameters set forth by the Environmental Protection Agency. The system collects 24 Chlorine samples every day in the treatment plant and 1 in the distribution system. The results of the Chlorine sampling for 2022 are in the table below.

Disinfectant							
Contaminant	Violation	Level Detected	Range (low/high)	Unit of Measure	MRDLG	MRDL	Likely Source of Contamination
Chlorine (water plant)	No	RAA 1.5	1.2 / 1.8	ppm	4	4	Water additive used to control microbes
Chlorine (distribution)	No	RAA 1.4	1.2 / 1.6	ppm	4	4	Water additive used to control microbes

Disinfection Byproducts	Location	Highest LRAA	Range (low/high)	Highest Level Allowed (MCL)	Likely Source of Contaminant	Violation
Haloacetic acids (HAA5)	Rich Oil	47.88 ppb	18 / 55 ppb	60 ppb	By-product of drinking water disinfection	No
*Total trihalomethanes (TTHMs)	Rich Oil	50.4 ppb	20 / 97 ppb	80 ppb	By-product of drinking water disinfection	No
**Haloacetic acids (HAA5)	Tri County Pit	47.75 ppb	26 / 69 ppb	60 ppb	By-product of drinking water disinfection	No
*Total trihalomethanes (TTHMs)	Tri County Pit	77 ppb	27 / 146 ppb	80 ppb	By-product of drinking water disinfection	No
**Haloacetic acids (HAA5)	FBI	44.5 ppb	21 / 69 ppb	60 ppb	By-product of drinking water disinfection	No
*Total trihalomethanes (TTHMs)	FBI	64.5 ppb	25 / 130 ppb	80 ppb	By-product of drinking water disinfection	No
**Haloacetic acids (HAA5)	Mtn. State Electric	45 ppb	22 / 67 ppb	60 ppb	By-product of drinking water disinfection	No
*Total trihalomethanes (TTHMs)	Mtn. State Electric	73.75 ppb	28 / 140 ppb	80 ppb	By-product of drinking water disinfection	No

*Some people who drink water containing trihalomethanes above the MCL over many years may experience problems with their liver, kidneys, or nervous system, and may have an increased risk of cancer.

** Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of cancer.

Inorganic Contaminants						
Contaminant	Violation	Level Detected	Unit of Measure	MCLG	MCL	Likely Source of Contamination
Barium	No	0.027	ppm	2	2	Discharge from drilling wastes, discharge from metal refineries, erosion of natural deposits.

Chromium	No	0.27	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	No	0.63	ppm	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from aluminum and fertilizer plants
Nitrate	No	0.26	ppm	10	10	Runoff from fertilizer use; erosion of natural deposits
Selenium	No	0.39	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

National Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply.

Secondary Contaminants			
Contaminant	Level Detected	Unit of Measure	SMCL
Sulfate	84.5	ppm	250
PH	Range 8.16 - 8.8	SU	6.5-8.5
SU	Standard Unit		

Lead & Copper - samples were collected from 60 area residences in 2022 1st set on 2/6/22 and the 2nd set on 11/15/22						
Contaminant	90% of Test Levels Were Less Than	Ideal Goal (MCLG)	EPA's Action Level	Number of Tests With Levels Above EPA's Action Level	Typical Sources	Violation
Copper, Free	0.0679 ppm	1.3 ppm	90% of homes less than 1.3 ppm	0 - out of 120	Corrosion of household plumbing	No
Lead	6.1 ppb	0.64 ppb	90% of homes less than 15 ppb	0 - out of 120	Corrosion of household plumbing	No

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 **Clarksburg Water Board** 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 Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

In the 2022 calendar year, Clarksburg Water Board had the below noted violation(s) of drinking water regulations.

Date	Number	Type / Name	Compliance Period
11/16/2022	133645	03 / Monitoring, Routine Major (Sampling)	1/1/2022-12/31/2022
2/15/2023	133646	72 / CCR Adequacy/Availability/Content	10/1/2022

We have made every effort and taken every precaution to return to compliance.

Unregulated Contaminants					
Contaminant	Date Collected	High	Range Low/High	Highest Level Allowed (MCL)	Likely Source of Contamination
Alkalinity, Total	8/3/2022	94 ppm	45/94	10000	Erosion of natural deposits
Calcium	6/13/2022	63.6 ppm	31.2/63.6	N/A	N/A
Calcium Hardness	6/13/2022	159 ppm	78/159	N/A	N/A
Conductivity @25C	8/26/2022	414 µmhos/cm	0.212/414	N/A	N/A
Cryptosporidium	3/20/2018	1	0-1	N/A	N/A
Giardia Lamblia	9/18/2018	1	0-1	N/A	N/A
Unregulated Contaminants continued					
Hardness, Calcium Magnesium	7/12/2021	133 ppm	78/133	N/A	N/A
Nickle	1/6/2022	0.46 ppb	One Sample Taken	100	Erosion of natural deposits
Contaminant	Date Collected	High	Range Low/High	Highest Level Allowed (MCL)	Likely Source of Contamination
Sodium	1/6/2022	10.4 ppm	One Sample Taken	1000	Erosion of natural deposits
Temperature	7/24/2022	81 F	34/81	N/A	N/A
µmhos/cm	one millionth of an Ohm (Electrical measurement of conductivity) per centimeter. US rivers range from 50 to 1500 µmhos/cm				

Additional Information
Sodium is an unregulated contaminant. Anyone having a concern over sodium should contact their primary care provider.

The Clarksburg Water Board had an on-site visit, from the WV Bureau of Public Health, for a Sanitary Survey on June 29, 2022 and no deficiencies were reported.

The Clarksburg Water Board conducted monitoring of contaminants included in the Unregulated Contaminant Monitoring Rule (UCMR) issued by the US Environmental Protection Agency (USEPA). Unregulated Contaminants are those that don't yet have a drinking water standard set by the USEPA. The purpose of monitoring for these contaminants is to help USEPA to decide whether or not the contaminants should have a standard.

USEPA - Unregulated Contaminants Monitoring Rule (UCMR) Schedule

Title	UCM-State Rounds 1&2	UCMR 1	UCMR 2	UCMR 3	UCMR 4	UCMR 5
Testing Periods	(1988-1997)	(2001-2005)	(2007-2011)	(2012-2016)	(2017-2021)	(2023-2025)

Clarksburg Water Board - Unregulated Contaminants Monitoring Rule (UCMR) Results

UCMR 1-Sampled 2002	No Detects on any samples
UCMR 2-Sampled 2010	No detects on any samples

UCMR 3-Sampled 2013 & 2014				
Date	Site	Contaminant	Level detected	Unit of Measure
2013	Plant Effluent	Chlorate	32	µg/l
		Strontium	163.1	µg/l
	Distribution Site	Strontium	157.1	µg/l
		Chromium 6	0.03	µg/l
		Chlorate	33	µg/l
Feb-14	Plant Effluent	Chlorate	69	µg/l
		Chromium 6	0.05	µg/l
		Strontium	105	µg/l
	Distribution Site	Chlorate	92	µg/l
		Chromium 6	.05	µg/l
		Strontium	123.3	µg/l
May-14	Plant Effluent	Chromium	0.05	µg/l
		Molybdenum	1	µg/l
		Strontium	124.4	µg/l
		Vanadium	0.3	µg/l
	Distribution Site	Chromium	0.2	µg/l
		Chromium 6	0.03	µg/l

		Strontium	212	µg/l
Aug-14	Plant Effluent	1,4-Dioxane	0.41	µg/l
		Chlorate	27	µg/l
		Chromium	0.04	µg/l
		Chromium 6	0.06	µg/l
		Strontium	157.2	µg/l
	Distribution Site	Chlorate	27	µg/l
		Chromium	24	µg/l
		Chromium 6	0.08	µg/l
		Strontium	153.4	µg/l
		Vanadium	0.2	µg/l
*UCMR 4-Sampled 2018 & 2019	No Detects on any samples			

Additional Information

Valley of Good Hope had *One Significant Deficiency* on the last Sanitary Survey performed by the West Virginia Bureau for Public Health on December 6, 2022.

1. Good Hope Tank coating is in poor condition.

Greater Harrison County PSD is in the planning stage of replacing the water tank.

Greater Harrison County PSD – Valley of Good Hope is working towards identifying service line materials throughout the water distribution supply. The service line inventory is required to be submitted to the state by October 16, 2024. The most up to date inventory is located at **the Main Office located at 151 Peninsula Park Ave.**, West Milford. If you have any questions about our inventory, please contact Matt Evans at 304-745-3463.

All other water test results for the reporting year 2022 were all non-detects.

PLEASE SHARE THIS REPORT WITH OTHER PEOPLE WHO DRINK THIS WATER, ESPECIALLY THOSE WHO DO NOT RECEIVE THIS INFORMATION DIRECTLY. (FOR EXAMPLE, RESIDENTS IN APARTMENT BUILDINGS, NURSING HOMES, SCHOOLS, AND BUSINESSES).

This report will not be mailed. A copy will be provided to you upon request at our office during regular business hours.