

CORPORATION OF SHEPHERDSTOWN

WV3301933

Consumer Confidence Report - 2024 Covering Calendar Year 2023

Why am I receiving this report?

In compliance with the Safe Drinking Water Act Amendments, the Shepherdstown Water Department 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, 2023.

This brochure is a snapshot of the quality of the water that we provided last year. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. If you would like to observe the decision-making process that affects drinking water quality or if you have any questions, comments or suggestions, please attend any regularly scheduled water board meeting held on the 4th Thursday of each month at 1pm in the Shepherdstown townhall or call Charles Coe 304-876-2394.

Where does my water come from?

Your water comes from a surface water:

Source Name	Source Water Type
INTAKE-POTOMAC RIVER	Surface water

In addition to the Potomac River as our primary source water, Town Run, which flows through the center of Shepherdstown is a secondary/emergency source. In the past it has been occasionally but rarely used (NOT in 2023) as the water source when the Potomac River was unusable, generally because of a short-term contamination issue. Please note that as Town Run flows through the center of the Town it is particularly vulnerable to stormwater impacts, and it is incumbent on all to help protect its water quality.

A Source Water Assessment Plan (SWAP) report has been developed by the Town under a program sponsored by the West Virginia Bureau of Public Health (WVBPH). This report characterizes the contributing watershed areas for both the Potomac River and Town Run upstream of the water intakes, including a review of potential sources of contamination. Specifics for some of the potential sources are redacted in the report version available to the public for security reasons. The report is available for review, or a copy will be provided to you at our office during business hours or from the WVBPH 304-558-2981.

Why must water be treated?

Federal and state regulations establish limits, controls, and treatment practices to minimize these contaminants and to reduce any subsequent health effects. 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 EPA's Safe Drinking Water Hotline (800-426-4791).

In the Shepherdstown system treatment consists of addition of some coagulant chemicals to aid in settling and filtration for removal of solid particulate materials, addition of fluoride as a preventative for dental cavities in the community, and addition of chlorine disinfectant for removal of potential pathogens, including bacteria and viruses.

Contaminants in Water

The sources of drinking water (both tap water and bottled water) included 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.

Contaminants that may be present in sources water before we treat it include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, 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 storm water run-off, agriculture, and residential users.

Radioactive contaminants, which can be naturally occurring or the result of mining activity.

Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

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

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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). Our water system has an estimated population of 4300 and is required to test a minimum of 5 sample(s) per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

Water Quality Data

The following tables list the drinking water contaminants which were detected during the 2023 calendar year. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1- December 31 2023. 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. Thus, some of the data, though representative of the water quality, is more than one year old.

Terms & Abbreviations

These terms and abbreviations are used in the federal and state regulations that govern the drinking water systems.

Maximum Contaminant Level Goal (MCLG): the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): the "Maximum Allowed" is the highest level of a contaminant that is permitted by regulation in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Secondary Maximum Contaminant Level (SMCL): recommended level for a contaminant that is not regulated and has no MCL.

Action Level (AL): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

Treatment Technique (TT): a required process intended to reduce levels of a contaminant in drinking water.

Maximum Residual Disinfectant Level (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.

Non-Detects (ND): lab analysis indicates that the contaminant is not present at concentrations above accepted laboratory limits of detection,

Parts per Million (ppm): or milligrams per liter (mg/L). This is measure of concentration.

Parts per Billion (ppb): or micrograms per liter ($\mu\text{g/L}$) Also a measure of concentration. (If an Olympic sized swimming pool were filled with ping-pong balls, a ppb would be equivalent to one ping ball in that pool. One ppm would be equivalent to a thousand ping pong balls in that pool.)

Picocuries per Liter (pCi/L): a measure of the radioactivity in water.

Millirems per Year (mrem/vr): measure of radiation absorbed by the body.

Monitoring Period Average (MPA): An average of sample results obtained during a defined time frame, common examples of monitoring periods are monthly, quarterly, and yearly.

Nephelometric Turbidity Unit (NTU): a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is not regulated for groundwater systems.

Running Annual Average (RAA): an average of sample results obtained over the most current 12 months and used to determine compliance with MCLs for some contaminants.

Locational Running Annual Average (LRAA): Average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Testing Results for: CORPORATION OF SHEPHERDSTOWN

Disinfection by products - As noted above, the Shepherdstown water treatment process ends in the addition of chlorine disinfectant for removal of potential disease-causing pathogens (including cholera, typhoid, etc.) However, the disinfection process must be controlled so that the chlorine disinfectant does not combine with organic matter in the water to produce disinfection byproducts in the distribution system. To assess the effectiveness of this control, two locations in the distribution system are monitored for two regulated disinfection byproduct species: TTHM (total trihalomethanes) and HAA5 (total haloacetic acids). For regulatory purposes, it is not the individual measured concentrations that are compared to the MCL standard, but rather the running annual average (RAA) of the measurements at the particular sampling site. In the table below, the highest value for the TTHM parameter exceeded the MCL; however, the regulatory RAA values were all below the MCLs.

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 system, and may have an increased risk of getting cancer.

Disinfection by products	Sample Point	Collection Period	Highest Value	Range (low/high)	RAA	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	CRESS CREEK-SHEPHERD GRADE	2023	30	16 - 30	20	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	SHEETZ RT. 45	2023	37	19 - 37	27	ppb	60	0	By-product of drinking water disinfection
TTHM	CRESS CREEK-SHEPHERD GRADE	2023	92	14 - 92	39	ppb	80	0	By-product of drinking water chlorination
TTHM	SHEETZ RT. 45	2023	98	29 - 98	49	ppb	80	0	By-product of drinking water chlorination

Regulated Contaminants	Collection Date	Highest Value	Range Low-High	Unit	MCL	MC LG	Typical Source
ARSENIC	8/7/2023	ND	ND	ppb	10		Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM	8/9/2023	0.0492	0.0492	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
BENZO(A)PYRENE	8/7/2023	20	20	ppt	200	0	Leaching from linings of water storage tanks and distribution lines
CHROMIUM	8/9/2023	1.3	1.3	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits
FLUORIDE	8/16/2023	0.53	0.53	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE	8/8/2023	0.42	0.42	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
NITRITE	8/7/2023	ND	ND	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Lead and Copper

Lead and copper are typically not present in objectionable levels in the water leaving the treatment plant or the public distribution system. However, they can be released from materials used in the customer premise plumbing or in the service line to the premises, depending on the chemistry of the water. This water chemistry issue is

addressed in the water treatment process at the plant before release into the distribution system. To assess the effectiveness of this treatment control, individual premise plumbing samples are taken, with the 90th percentile value of these samples compared with the Action Level (15 ppb for lead and 1.3 ppm for copper.) Due to the small population size served, Shepherdstown is required to conduct such premise sampling once every three years (the last monitoring period being for 2020 – 2022). In the table below, the 90th percentile values for both parameters were below the regulatory “Action Level” (AL), although one premise had a concentration above the lead Action Level.

Infants and children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791)

Lead and Copper	Monitoring Period	90TH Percentile	Range (low/high)	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2020 - 2022	0.0821	0.0011 - 0.177	ppm	1.3		Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2020 - 2022	2.9	0.1 - 67.5	ppb	15	1	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. Your water system 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>.

CORPORATION OF SHEPHERDSTOWN 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 water treatment plant, if you have any questions about our inventory, please contact Charles Coe 304-876-2394.

Chlorine/Chloramines Maximum Disinfection Level	MPA	MPA Units	RAA	RAA Units
2/1/2023 - 2/28/2023	1.20000	MG/L	0.90000	MG/L

Total Organic Carbon Lowest Month for Removal	Collection Date	Highest Value	Range	Unit		Typical Source
CARBON, TOTAL	8/1 /2023	3.3	1.1 - 3.3	MG/L		Naturally present in the environment
Analyte	Facility		Highest Value	Unit of Measure	Month Occurred	
Turbidity	TREATMENT PLANT		0.18	NTU	September	

During the 2023 calendar year, The Shepherdstown Water department had **NO** violation(s) of drinking water regulations. There were **NO** required health effects notices or violation notices.

Your CCR is also available at WWW.Shepherdstown.us.