

# **EXHIBIT N4**

**2020 ANNUAL DRINKING WATER QUALITY REPORT**

PWSID #: 3840044 NAME: Municipal Authority of the Borough Shenandoah

*Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo o hable con alguien que lo entienda bien.* (This report contains very important information about your drinking water. Translate it, or speak with someone who understands it.)

**WATER SYSTEM INFORMATION:**

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact **Dan Salvadore, Chief Plant Operator**, at **Shenandoah Water Plant P.O. Box 110 Shenandoah, Pa 17976 570-462-4918**. We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings. They are held bi-monthly every third Friday, at the Shenandoah Water Office Board Room.

**SOURCE(S) OF WATER:**

MABS Water comes entirely from surface sources starting at Rintown #8 Reservoir, continuing through Ringtown #5, Raven Run #3, and Raven Run #2 and enters our state of the art Water Filtration Plant, where it removes harmful materials to ensure your water meets or exceeds all drinking water standards. Skilled and Certified Treatment Plant operators monitor your water at the source, and test the water during the treatment process and continue testing as the water flows throughout the distribution system.

A Source Water Assessment of our source(s) was completed in 2002 by the PA Department of Environmental Protection (PADEP). The Assessment has found that our source(s) are potentially most susceptible to storm water runoff, accidental spills along roads and Erosion from illegal use of all terrain vehicles. Overall, our source(s) have little risk of significant contamination. Summary reports of the Assessment are available by writing to MABS P.O. Box 110 Shenandoah, Pa 17976, and will be available on the PADEP website at [www.dep.state.pa.us](http://www.dep.state.pa.us) (Keyword: "DEP source water"). Complete reports were distributed to municipalities, water supplier, local planning agencies and PADEP offices. Copies of the complete report are available for review at the PADEP Pottsville District Office, Records Management Unit at 570-622-3118.

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)**.

**Information about 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. SHENANDOAH WATER AUTHORITY 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>.

*Share This Report*

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not billed customers of the Shenandoah Water Authority and therefore do not receive this report directly.

**MONITORING YOUR WATER:**

We routinely monitor for contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2019.

**DEFINITIONS AND ABBREVIATIONS:**

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

**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.

**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 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.

**Maximum Residual Disinfectant Level Goal (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.

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

**Mrem/year** = millirem per year (a measure of radiation absorbed by the body) **ppm** = parts per million, or milligrams per liter (mg/L)

**pCi/L** = picocuries per liter (a measure of radioactivity) **ppq** = parts per quadrillion, or picograms per liter

**ppb** = parts per billion, or micrograms per liter (µg/L) **ppt** = parts per trillion, or nanograms per liter

**DETECTED SAMPLE RESULTS: 2020**

Chemical Contaminant	MCL in CFR Units	MCLG	2019 Highest Level Detected	Range of Detections	Units	Violations Y/N	Sources of Contamination
Chlorine	4	4	2.31	1.45 - 2.31	Ppm	N	Water additive used to control microbes
Trihalomethanes (THM)	80	N/A	51	22-51	Ppm	N	By product of drinking water disinfection
Haloacetic Acids (HAAs)	60	N/A	58	17 - 58	Ppm	N	By product of drinking water disinfection

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

Entry Point Disinfectant Residual							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violations Y/N	Sources of Contamination
Chlorine	0.2	1.45	1.45 - 2.31	Ppm		N	Water additive used to control microbes

Lead and Copper							
Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Violations Y/N	Sources of Contamination
Lead	15	0	.002	ppm	0 of 20	N	Corrosion of household plumbing
Copper	1.3	1.3	.244	ppm	0 of 20	N	Corrosion of household plumbing

Turbidity							
Contaminant	MCL	MCLG	Level Detected	Sample Date	Violations Y/N	Sources of Contamination	
Turbidity	1 NTU for a single measurement	0	.099	4/16/20	N	Soil runoff	
	TT = at least 85% of monthly samples ≤ 0.3 NTU		100%		N		

Total Organic Carbon (TOC)					
Contaminant	Range of % Removal Required	Range of % Removal Achieved	Number of quarters out of compliance	Violations Y/N	Sources of Contamination
TOC	35%	38%	0	N	Naturally present in the environment

Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects and may lead to an increased risk of getting cancer.