Buckhannon Water Board

WV3304902

Consumer Confidence Report – 2024

Covering Calendar Year

2023

In compliance with the Safe Drinking Water Act, the Buckhannon Water Board is providing customers with our Annual Water Quality Report.

This report is a snapshot of the quality of the water provided in 2023. Included is information about where your water comes from, its contents, 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 2nd Thursday of each month at *7:30am* at City Hall or call KELLY ARNOLD at 304-472-1651 Ext: 1000

The Buckhannon Water Treatment Plant treated 741,902,229 gallons of high-quality potable water in 2023. Our water source is the Buckhannon River, which categorizes our system as a surface water system. Our water system serves an estimated population of 8098 within our service area utilizing 6 storage tanks, 39 miles of water mains up to 24 inches in diameter, 4 booster stations, 1,200 valves and 250 hydrants. Fourteen dedicated employees operate and maintain the system. Including purchaser systems, the Buckhannon Water Treatment Plant serves over 22,000 customers in Upshur County and surrounding areas.

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).

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).

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 regulation 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 limits for contaminants in bottled water, which must provide the same protection for public health. With the EPA regulations as a baseline, the Buckhannon Water Department has been utilizing a concept called Area Wide Optimization Program (AWOPs), which was developed to improve plant performance. Goals stricter than those by the EPA have been set and are being achieved.

Water Quality Data

The following tables list all the drinking water contaminants which were detected during recent testing. 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. Some of the data, though representative of the water quality, is more than one year old.

Terms & Abbreviations

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" MCL is 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.

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 detected at or above the MDL(Method Detection Limit).

Parts per Million (ppm) or milligrams per liter (mg/l)

Parts per Billion (ppb) or micrograms per liter (µg/l)

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

Millirems per Year (mrem/yr): 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.

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: BUCKHANNON WATER BOARD

The Buckhannon Water Treatment Plant is required by the EPAs surface water treatment rule to monitor turbidity. The NTU must never exceed 1.0 NTU 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.

Turbidity			
Monthly % < 0.3NTU	**Yearly High**	**Violation**	**Likely Source of Contaminant**
100%	0.100 NTU in October 2023	No	Soil Runoff

Being a surface water system, organics (TOCs) in our source water is a common concern. Interactions between the TOCs and the required disinfection process can produce disinfection by-products. Disinfection by-product precursor removal is a treatment technique to reduce the amount of TOCs that may react with the disinfection process.

Total Organic Carbon (TOC)						
Total Organic Carbon	**Collection Date**	**Highest Value**	**Range**	**Unit**	**TT**	**Typical Source**
CARBON, TOTAL (Raw)	10/12/2023	1.95	1.08-1.95 1.5 RAA	ppm	TT	Naturally present in the environment
CARBON, TOTAL (Finished)	7/12/2023	1.45	0.586 – 1.45 1.0 RAA	ppm	TT	Naturally present in the environment

Total Organic Carbon (TOC) Removal					
Year Sampled	**Compliance Achieved**	**Required Removal RAA**	**Achieved Removal RAA**	**TT**	**Typical Source**
2023	Yes	35%	36%	TT	Naturally present in the environment

Disinfectant						
Treatment	**Violation**	**Level Detected**	**Maximum Detected**	**Unit of Measure**	**MRDLG**	**MRDL**
Chlorine (Water Plant)	No	1.3 RAA	1.8	ppm	4.0	4.0
Chlorine (Distribution)	No	1.5 RAA	2.2	ppm	4.0	4.0

Disinfection Byproducts	Sample Point	Violation	Monitoring Period	Highest LRAA	Range (low/high)	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	AIRPORT BPS	No	2023	23.7	14.7-31.1	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	E-17 DEER CREEK	No	2023	19.5	14.1-23.0	ppb	60	0	By-product of drinking water disinfection
TTHM	AIRPORT BPS	No	2023	31.8	16.7 – 53.0	ppb	80	0	By-product of drinking water chlorination
TTHM	E-17 DEER CREEK	No	2023	28.6	20.3 – 32.8	ppb	80	0	By-product of drinking water chlorination

Note: 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.

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

Our water system has an estimated population of 8098 and is required to test a minimum of 9 samples 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. In 2023, a total of 120 bacteriological sample were collected from the ten designated locations. All results were non-detects.

Microbiological				
Location	**Result**	**MCL**	**MCLG**	**Typical Source**
No Detected Results were Found in the Calendar Year of 2023				

Inorganics						
Regulated Contaminants	**Violation**	**Level Detected**	**Unit**	**MCLG**	**MCL**	**Typical Source**
BARIUM	No	0.0329	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	No	0.593	ppm	0.7	2	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories

Note: Antimony, beryllium, cadmium, chromium, cyanide, mercury, nickel, nitrate, nitrite, thallium, and selenium were also analyzed for but were non-detectable.

Lead And Copper							
Lead and Copper	**Monitoring Period**	**90th Percentile**	**Range (low/high)**	**Unit**	**AL**	**Sites Over AL**	**Typical Source**
COPPER, FREE	2020 - 2022	0.0698	<0.00221 - 0.398	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2020 - 2022	0.542	<0.172 - 19.7	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.

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 (800-426-4761).

BUCKHANNON WATER BOARD 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 **Buckhannon Water Treatment Plant**, if you have any questions about our inventory, please contact KELLY ARNOLD at 304-472-1651 Ext: 1000.

Radionuclides							
Radiological Contaminants	**Collection Date**	**Highest Value**	**Range (low/high)**	**Unit**	**MCL**	**MCLG**	**Typical Source**
GROSS ALPHA, EXCL. RADON & U	4/9/2019	2.13	2.13	pCi/L	15	0	Erosion of natural deposits

Note: Radionuclides are analyzed every six years.

Secondary Contaminants: Non-Health Based Contaminants No Federal Maximum Contaminant Level (MCL) Established						
Contaminant	**Collection Date**	**Highest Value**	**Range (low/high)**	**Unit**	**SMCL**	**Typical Source**
Sodium	4/17/2023	12.1	N/A	ppm	1000	Erosion of natural deposits

During the **2023** calendar year, we had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Comments
No Violations Occurred in the Calendar Year of 2023		

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

Compliance Period	Analyte	Comments
1/1/2020 - 12/31/2022	Synthetic Organic Chemicals	MONITORING, ROUTINE MAJOR

Note: The Synthetic Organic Chemicals were collected properly, from the correct location, and submitted within the prescribed time period with regulation compliant results, however, a clerical error resulted in non-compliance.

There are no additional required health effects violation notices.

Your CCR is available at WWW:// www.buckhannonwv.org.

CCR will not be mail unless requested. To receive a paper copy in the mail, please contact us at 304-472-2530.