Annual Drinking Water Quality Report
HIGH KNOB WATER SYSTEM – PWSID 2187522

INTRODUCTION

We are pleased to present to you the Annual Water Quality Report (Consumer Confidence Report) for the calendar year 2024 as required by the Safe Drinking Water Act (SDWA). This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. Water quality distributed to you must meet Federal and State requirements administered by the U.S. Environmental Protection Agency (EPA) and the Virginia Department of Health (VDH).

(Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien).

If you have questions about this report, want additional information about any aspect of your drinking water, or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Quintin Rubio Water Operator (540)635-6131 or wateroperator@hkoai.com Carol Phillips President, High Knob Utilities, Inc. (540)635-6131

GENERAL INFORMATION

The sources of drinking water (both tap water and bottled water) include 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 can pick up substances resulting from the presence of animals or from human activity. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban storm water runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

SOURCES AND TREATMENT OF YOUR DRINKING WATER

Your drinking water is groundwater obtained from four springs and seven drilled wells. Treatment is provided at springs 1, 3, 5, and 6, and well numbers 1, 2, 3, 4, 5, 6 and 7. Springs 1 and 3, and wells 1, 2, 3, 4, 5, 6, and 7 are each equipped with a solution chlorinator that injects a chlorine solution to disinfect the water prior to distribution. Spring 4 (currently offline) is equipped with a solution chlorinator that injects a chlorine solution to disinfect the combined flows of springs 5 and 6.

After treatment, water is stored and distributed to the community with the following infrastructure: Seven (7) booster pump stations, four (4) pressure storage tanks, four (4) gravity storage tanks and various sized distribution pipes.

SOURCE WATER ASSESSMENT

A source water assessment has been completed by the Virginia Department of Health. The assessment determined that the wells serving our community may be susceptible to contamination because they are in an area that promotes migration of contaminants from certain land use activities of concern such as residential septic systems. Some of our sources are protected by watershed areas set aside when our community was developed. More specific information may be obtained by contacting the water system representative referenced within this report.

QUALITY OF YOUR DRINKING WATER

All drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of

some contaminants. In this report, you will find tables listing contaminants that have been detected in your drinking water. The presence of contaminants does not necessarily indicate that water poses a health risk. 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 for contaminants in bottled water which must provide the same protection for public health. More information can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 stormwater 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 agriculture, urban stormwater 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 stormwater runoff, and septic systems.
- Radioactive Contaminants – which can be naturally-occurring or be 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. Immune-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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. High Knob 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 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.

High Knob Utilities has prepared an inventory of the materials used in water service lines in our system, as part of compliance with the Lead and Copper Rule Revisions. This inventory can be viewed by we have a program that monitors what we use that we can inventory what we have in our system. If you are concerned about lead in your water and wish to have your water tested, contact Quintin Rubio Water Operator (540)635-6131 or wateroperator@hkoai.com . 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.

Some contaminants found in drinking water may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. Contaminants that may cause aesthetic problems but do not have a limit based on health concerns are known as Secondary Contaminants.

In the tables below, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

DEFINITIONS

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

Level 1 Assessment: A Level 1 Assessment is a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 Assessment is a very detailed study of the water system to identify potential problems and determine, if possible, why an E-coli MCL violation has occurred and / or why total coliform bacteria have been found in our water system on multiple occasions.

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 contamination.

Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Non-detects (ND): Lab analysis indicates that the contaminant is not present

Parts per billion (ppb) or Micrograms per liter (µg/L): One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per million (ppm) or Milligrams per liter (mg/L): One part per million corresponds to one minute in two years or a single penny in $10,000.

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

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

Variances and exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WATER QUALITY RESULTS

We regularly monitor for various contaminants in the water supply to meet all regulatory requirements. The tables list only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Maximum Contaminant Levels (MCLs) are set at very stringent levels by the U.S. Environmental Protection Agency. The Virginia Department of Health allows us to monitor for some contaminants less than once per year because the concentration of the contaminants does not change frequently. Some of our data, though representative, are more than one year old.

Disinfectant Residual						
Contaminant / Unit of Measurement	MRDLG	MRDL	Level Found (range)	Violation	Date of Sample	Typical Source of Contamination
Chlorine ppm	4	4	0.694 (0.1 – 2.2)	No	Monthly	Added during treatment process to provide disinfection

Disinfection By-Products						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found (range)	Violation	Date of Sample	Typical Source of Contamination
TTHMs (total trihalomethanes) ppb	N/A	80	2.7			By-product of drinking water disinfection

Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found (range)	Violation	Date of Sample	Typical Source of Contamination
Barium ppm	2	2	ND - 0.025	No	4/2020 – 11/2021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate ppm	10	10	1.64 – 4.77	No	03/2025	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Beta emitters pCi/L	0	50*	ND – 2.8	No	11/2015 – 01/2021	Decay of natural and man-made deposits
Combined Radium (226 and 228) pCi/L	0	5	0.1 – 0.5	No	11/2015 – 01/2021	Erosion of natural deposits

*The MCL for beta particles is 4 mrem/yr. EPA considers 50 pCi/L to be the level of concern for beta particles.

Lead and Copper							
Contaminant / Unit of Measurement	MCLG	MCL	Dates of Samples	90th Percentile	Range of Results	90th percentile Exceedence?	Typical Source of Contamination
Lead ppb	0	AL=15	08/2023	4.23	ND – 4.55 0 samples exceeded AL	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper ppm	1.3	AL=1.3	08/2023	0.89	0.022 – 0.902 0 samples exceeded AL	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY CONTAMINANT

Contaminant/Unit of Measurement	MCLG	MCL	Level Found (Range)	Violation	Date of Sample
Sodium ppm	N/A	N/A	4.16 - 8.43	No	04/2020 – 11/2021

There is no MCL for sodium, but consumers on a sodium-restricted diet may wish to know the level of sodium present

in our drinking water.

VIOLATION INFORMATION

We were in full compliance with all water quality , monitoring and reporting requirements, and no violations occurred during the calendar year 2024.