

King George County Service Authority King George, Virginia 2016 Annual Drinking Water Quality Report

CIRCLE WELL SYSTEM

INTRODUCTION

This Annual Drinking Water Quality Report is designed to provide you with information regarding the quality of the water we provide you, the consumer. It is our goal to provide you a safe and dependable water supply. This report will help to help inform you of the quality of your water, and the steps taken by your water department to continually provide you a safe water supply with the best possible service.

Circle well consumers are provided water from two ground water sources. These two wells are identified as Circle # 1 and Circle #2. Circle #1 well is located on Carleton Drive in the Edge Hill area and has a depth of 447 feet. Circle #2 well is located off of Vernon Wood's drive directly behind Vernon Wood Apartments and has a depth of 470 feet. Storage for the Circle system consists of a 5,000 gallon atmospheric tank and a 3,000 gallon hydroneumatic tank. Both storage tanks are located at the Circle #1 well site.

If you 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 Mr. Christopher Thomas, General Manager, King George County Service Authority at 540 - 775 - 2746. Regular office hours are Monday through Friday 8:00 am. to 5:00 p.m. You are always welcome to attend any King George County Service Authority regularly scheduled meeting. They are held the first and third Tuesday of each month at 6:30 p.m. in the administration building at 10459 Courthouse Drive.

GENERAL INFORMATION

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.

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency'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 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).

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table on the next few pages shows the most recent results of our monitoring. In the tables and elsewhere in this report you will find terms and abbreviations you might not be familiar with. The following definitions are provided:

Non-detects (ND) - lab analysis indicates that the contaminant is not present.

Parts per million (ppm) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.

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

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

Maximum Contaminant Level, or 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, or 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.

WATER QUALITY RESULTS

I. Microbiological Contaminants – Were there any detection's? () Yes, as described below. (X) No

Contaminant	MCLG	MCL	Level Found	Range	Violation	Date of sample	Typical source of contamination
Total Coliform	0	1	0	N/A	No	N/A	Natural – present in the environment

* MCL is presence of coliform bacteria in one sample each month

II. Lead and Copper Contaminants - Were there any detection's? (X) Yes, as described below. () No

Contaminant	Units of Measurement	Action level	MCLG	Results of samples for the 90 th Percentile Value	Action Level Exceeded	Sampling Year	# of Sampling Sites Exceeding Action level	Typical Source of Contamination
Lead	ppb	15	0	1 <2.0	No	2012 2016	0	Corrosion of household plumbing systems.
Copper	ppm	1.3	0	.02 .15	No	2012 2016	0	Corrosion of household plumbing systems.

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. King George County Service Authority is responsible for providing high quality drinking water, but it 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 cold water tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in you 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://ee.epa.gov/safewater/lead>.

III. Other Chemical and Radiological Contaminants – Were there any detection's? (X) Yes, as described below () No

Contaminant	Units of Measurement	MCL G	MC L	Level Detected	Violation	Range of Detection at Sampling Points	Sampling Year	Typical Source of Contamination
Gross Alpha	pCi/L	0	15	2.4	No	2.4 – 2.3	2011	Decay of natural and man made deposits
Barium	ppm	2	2	.017	No	.018 - .036	2015	Erosion of natural deposits
Fluoride	ppm	4	4	.77	No	.66 - .71	2015	Erosion of natural deposits

We constantly 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. Most of our water quality data is from testing done in 2016. However, the State allows us to monitor for some contaminants less than

once per year because the concentrations of these contaminants do not change frequently. Even though some of our data may be more than one year old, it is accurate and current.

Are there other drinking water constituents we want to inform you about in this report? () Yes, as described below. (X) No.

MCL's are set at very stringent levels by the U.S. Environmental Protection Agency. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-a-million chance of having the described health effect for other contaminants.

VIOLATION INFORMATION

Did any monitoring, reporting, or other violations occur during the year? (X) Yes () No

Failure to collect lead and copper samples in the calendar year 2015 and also the omission of that violation within the 2015 Consumer Confidence Report. Violation date (11/12/15)

Failure with Consumer Confidence Report and content, distribution and certifications.
11/12/2015

Failure to monitor for Disinfection By-Products in the calendar year 2015 and also the omission of that violation within the 2015 Consumer Confidence Report. Violation date (11/12/15)

See attachments:

Action Plan

King George County Service Authority in working with The Office Of Drinking Water has merged the collection of required sampling for all (8) county water systems to fall within the required testing year. Because of the varying ages of the water systems the required collection of sampling was not consistent with the other well's or water systems. KGCSA feels the improvements in the scheduling along with the redundancy of staff collecting these samples will allow us resolve future oversights.

Is there other drinking water health information you should be made aware of in this report? (X) Yes, as described below. () No

Source name	Susceptibility to contamination	Explanation
Well 1	High	Groundwater source is unknown or inadequate with land use activities of concern in the zone 1 assessment area and potential sources of contamination in zone 1 or zone 2 assessment areas.
Well 2	High	Groundwater source is unknown or inadequate with land use activities of concern in the zone 1 assessment area and potential sources of contamination in zone 1 or zone 2 assessment areas.

The Virginia Department of Health completed a source water assessment for your water source in 2002. Additional information is available at the King George County Service Authority office.

This Drinking Water Quality Report was prepared by King George County Service Authority.

Paper copies of the Consumer Confidence Reports upon request.

Christopher F. Thomas

Christopher Thomas
General Manager
King George County Service Authority

**NOTICE TO THE CUSTOMERS
OF THE
CIRCLE WATER SYSTEM**

In keeping with the national primary drinking water regulations we are obliged to inform you that we were in violation with state regulations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are and indicator of whether or not our drinking water meets health standards. During 2015 we did not monitor or test for Disinfection By- Products and therefore cannot be sure of the quality of water during that time.

There is nothing you need to do at this time.

We are attempting to prevent further violations by ensuring that all required sampling in our distribution system in done in accordance with state drinking water regulations. Future violations will be reported as required by state regulations in order to increase consumers' awareness of conditions that exist in their public water system.

Please share this information with all the people who drink this water, especially those who may not have received this notice in public places or distributed by hand or mail.

For more information, please contact Christopher Thomas, General Manager at 540– 775-2746.

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There is nothing you need to do at this time.

We are attempting to prevent further violations by ensuring that all required sampling in our distribution system in done in accordance with state drinking water regulations. Future violations will be reported as required by state regulations in order to increase consumers' awareness of conditions that exist in their public water system.

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