

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

DAHLGREN 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.

The consumers of the Dahlgren water system are provided water from six (6) ground water sources. **Soft Well** which is located at 16966 Dahlgren Rd and has a total depth of 973 feet. **Payne** well is located off the extension of Payne Drive and has a total depth of 1,077 feet. **Bumbry** Well is located directly behind 5116 James Madison Parkway, (Route 301) and has a total depth of 660 feet. **Bayberry** Well is located behind 4390 Danube Drive and has a total depth of 670 feet. **Monmouth Woods I** Well is located off Navigator Lane and has a total depth of 706 feet. **Monmouth Woods IIA** Well is located off Navigator Lane and has a total depth of 740 feet. Which has a combined system average daily production of 350,000 gallons. Storage consists of two elevated storage tanks. The first one is located on Dahlgren Road in the Owens area and the second is located at Navigator Lane in the Monmouth Village subdivision. They have a combined storage of 750,000 gallons.

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

The sources of drinking water (both tap and Bottled) include wells, rivers, lakes and springs. As water travels over the surface of land or through the ground, it may pick up substances, including microbial contaminants (bugs) inorganic chemical contaminants (salt and metals), organic chemical contaminants (natural and synthetic), and/ or radioactive and contaminants. To ensure that tap water is safe to drink, the US EPA prescribes and the Virginia Department of Health enforces regulations, which limit the amount of certain contaminants in water provided by public water systems. The food and Drug administration and Virginia Department of Agriculture address bottled water. 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 detections? () Yes, as described below. (X) No

| Contaminant | MCLG | MCL | Level Found | Range | Violation | Date of sample | Typical source of contamination |
|----------------|------|-----|-------------|-------|-----------|----------------|--------------------------------------|
| Total Coliform | 0 | | 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 detections? (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 | Range Exceeding Action Level (AL) | Typical Source of Contamination |
|-------------|----------------------|--------------|------|--|-----------------------|---------------|-----------------------------------|--|
| Lead | ppb | 15 | 0 | ND < 2.0 | No | 2012 2016 | 0 | Corrosion of household plumbing systems. |
| Copper | ppm | 1.3 | 0 | 0.2 0.19 | No | 2012 2016 | 1 0 | Corrosion of household plumbing systems. |

The sources of drinking water (both tap and Bottled) include wells, rivers, lakes and springs. As water travels over the surface of land or through the ground, it may pick up substances, including microbial contaminants (bugs) inorganic chemical contaminants (salt and metals), organic chemical contaminants (natural and synthetic), and/ or radioactive and contaminants. To ensure that tap water is safe to drink, the US EPA prescribes and the Virginia Department of Health enforces regulations, which limit the amount of certain contaminants in water provided by public water systems. The food and Drug administration and Virginia Department of Agriculture address bottled water. 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).

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

| Contaminant | Units of Measurement | MCLG | MCL | Level Detected | Violation | Range of Detection at Sampling Points | Sampling Year | Typical Source of Contamination |
|-------------|----------------------|------|-----|----------------|-----------|---------------------------------------|---------------|---------------------------------|
| Gross Alpha | pCi/L | 0 | 15 | 5.8 | No | .09 | 2015 | Erosion of natural deposits |
| Fluoride | ppm | 4 | 4 | 2.0 | No | 1.06 – 1.06 | 2016 | 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? (X) Yes, as described below. () 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? **Yes** **No**

Failure with Consumer Confidence Report and content, distribution and certifications.

11/12/2015

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.

Date of Violation - (11/12/15)

Failure to monitor for Disinfection By-Products in the calendar year 2014 and also the omission of that violation within the 2015 Consumer Confidence Report.

Date of Violation. – (11/13/14)

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 same required testing year. Because of the varying ages of the water systems the required collection of sampling was not consistent with other wells or water systems. KGCSA feels the improvements in the scheduling along with the redundancy of staff used in collecting these samples will allow us resolve future oversights.

ADDITIONAL HEALTH INFORMATION

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

| Source name | Susceptibility to contamination | Explanation |
|------------------|---------------------------------|---|
| Monmouth 1 Well | High | Groundwater source constructed in an area that tends to promote migration of contaminations with land use activities of concern in the Zone 1 or Zone 2 assessment area, |
| Monmouth 2A well | High | Groundwater source constructed in an area that tends to promote migration of contaminants with land use activities of concerns in Zone 1 or assessment area and potential sources of contamination in the Zone 1 or Zone 2 assessment area. |
| Bumbry well | High | Groundwater source constructed in an area that tends to promote migration of contaminations with land use activities of concern and potential sources of contaminations in Zone 1 or Zone 2 assessment areas. |
| Bayberry Well | High | Groundwater source constructed in an area that tends to promote migration with potential conduits to groundwater of in Zone 1 assessment area and potential sources of contamination in the Zone 1 or Zone 2 assessment area. |

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. Paper copies of current and past Consumer Confidence Reports are available upon request at the Service Authority
 This Drinking Water Quality Report was prepared by King George County Service Authority.
 Paper copies of thee Consumer Confidence Report available upon request.



Christopher Thomas
 General Manager
 King George County Service Authority

**NOTICE TO THE CUSTOMERS
OF THE
DAHLGREN
WATER SYTEM**

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 complete all monitoring or testing for lead and copper 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.

NOTICE TO THE CUSTOMERS OF THE DAHLGREN 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 an 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 is 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.

