2020 Annual Drinking Water Quality Report for the Town of Smithfield

This Annual Drinking Water Quality Report for calendar year 2020 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have any questions about this report, want 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: Department of Public Works and Utilities at 757-365-4258.

The times and location of regularly scheduled Town Council meetings are the 1st Tuesday of each month at 7:30 p.m. at The Smithfield Center located at 220 North Church Street, Smithfield, Virginia.

This annual "Consumer Confidence Report", required by the Safe Drinking Water Act (SDWA), explains where your water comes from, results from lab analyses, and other things you should know about your drinking water. We are committed to ensuring the quality of your water. Our constant goal is to provide you and your family with a safe and dependable supply of drinking water.

Mr. Tim Richards, and Mr. Dale Wall serve as the Licensed Waterworks Operators for the Town of Smithfield who operate the reverse osmosis water treatment plant. Mr. Jessie Snead serves as the Public Works Superintendent. Mr. Jack Reed serves as Director of Public Works and Utilities.

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.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells.

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 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 agriculture, urban storm water runoff, and residential uses.

- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

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. The Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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. Immunocompromised 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).

Source(s) and Treatment of Your Drinking Water:

The source of your drinking water is groundwater from drilled wells that are pumped into the Reverse Osmosis Plant where it is treated, sampled, and sent to distribution. The plant was put online in September 2011. The Water Treatment Plant employs reverse osmosis to remove naturally occurring fluoride from the groundwater**. The facility produces treated water with a fluoride concentration averaging 1.18 ppm (parts per million**). The treated water is dosed with sodium hypochlorite and lime for taste and corrosion control.

VDH conducted a Source Water Assessment of the Town of Smithfield Waterworks in 2002. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the Source Water Assessment area, an inventory of known Land Use Activities and Potential Conduits to Groundwater, utilized at Land Use Activity sites in Zone 1 and documentation of any known contamination within the last five years, Susceptibility Explanation Chart, and Definitions of Key Terms. The report is available by contacting your waterworks system owner/operator at the phone number or address included in this report.

Definitions:

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table on the last page shows the results of our monitoring for calendar year 2020. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

- Non-detects (ND) – Lab analysis indicates that the contaminant is not present.
- Parts per million (ppm) or Micrograms per liter (mg/l) - One part per million corresponds to one minute in 2,000 years, or a single penny in $10,000.
- Parts per billion (ppb) or Micrograms per liter – One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- 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.
- Level 1 Assessment - An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment.
- Level 2 Assessment - An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment in a more comprehensive investigation than a Level 1 assessment.
- Sanitary Defect - A defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists 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 the results in the table are from testing done in 2020. 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.

In developing standards, the EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. MCL's are set at very stringent levels by the U.S. Environmental Protection Agency. In developing the standards 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.

Lead and Copper:

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. The Town of Smithfield 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 two minutes or until it becomes cold or reaches a steady temperature 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.

Level 1 or Level 2 Assessments under the Revised Total Coliform Rule:

Violation Information:

There were no violations, Level 1, or Level 2 Assessments in 2020**.**

This Drinking Water Quality Report was prepared by:

The Department of Public Works and Utilities
Town of Smithfield
P.O. Box 246
Smithfield, Virginia 23431

Contaminant (unit of measurement)	MCLG	MCL	LEVEL FOUND	RANGE	VIOLATION	DATE	SOURCE
Copper (ppm)	1.3	1.3 (AL)*	0.16	ND – 0.3	NO	2020	Erosion of household plumbing
Chlorine (ppm)	MRDL = 4**	MRDL = 4**	1.04	0.79 – 1.47	NO	2020	Water additive used to control microbes
TTHMs (ppb)	N/A	80	10	N/A	NO	2020	Byproduct of disinfection
Lead (ppb)	0	15 (AL)*	ND	ND-14.1	NO	2020	Corrosion of household plumbing.
Fluoride (ppm)	4	4	1.18	0.93-1.50	NO	2020	Erosion of natural deposits

* 90th percentile value of the sample results. Compliance with the AL is based on the 90th percentile value of the sample results under the Lead and Copper Rule.
**Compliance is based on the quarterly running annual average of the sample results.
N/A = Not Applicable or not required for our water system.

Although sodium is an unregulated substance in drinking water, the level of sodium found in your drinking water is 100 ppm. There is presently no established standard for sodium in the drinking water. Water containing more than 270mg/l of sodium should not be used as drinking water by those persons whose physician has placed them on moderately restricted sodium diets. Water containing more than 20 mg/l should not be used as drinking water by those persons whose physicians has placed them on severely restricted sodium diets.

- The 2020 CCR will not be directly mailed to each customer, it will be posted on the Town of Smithfield's website. Copies of the 2020 CCR are available upon request.