

## 2017 ANNUAL DRINKING WATER QUALITY REPORT

### Edgehill Water System

PWSID 3175340

#### INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2017 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 questions about this report, or 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:

Southampton County Dept of Public Utilities (757) 653-9269

The times and location of regularly scheduled board of supervisors meetings are as follows:

Southampton County Office Center, 4<sup>th</sup> Monday of each month, Call (757) 653-3015 for times

#### GENERAL INFORMATION

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. 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, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. 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, 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).

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 Southampton County Department of Public Utilities 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 – 2 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>.

## SOURCES and TREATMENT OF YOUR DRINKING WATER

The sources of your drinking water is groundwater as described below:

The Edgehill Water System receives its water from two wells. The wells are 360 feet deep and 335 feet deep.

Is there any treatment of your drinking water supply? (X) Yes ( ) No The drinking water supply is treated using chlorination.

The Virginia Department of Health conducted a Source Water Assessment of the Edgehill Subdivision Waterworks in 2001. 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, 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 the CCR.

### DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table included shows the results of our monitoring for the period of **2013 - 2017**. In the table and elsewhere in this report you will find many terms and abbreviations with which you might not be familiar. 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 Milligrams per liter (mg/L)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*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.

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

*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.

*Maximum Residual Disinfection 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 Disinfection 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.

### WATER QUALITY RESULTS

CONTAMINANT	MCLG/ MRDLG	MCL/ MRDL	LEVEL FOUND	RANGE	VIOLATION	DATE OF SAMPLE	TYPICAL SOURCE OF CONTAMINATION
Chlorine Residuals( ppm)	4.0	4.0	1.12	0.04 – 1.79	No	Monthly	Byproduct of drinking water chlorination
TTHM (ppb)	NA	80	5.1	NA	No	08/01/2017	Byproduct of drinking water chlorination

Fluoride (ppm)	4	4	2.13	N/A	No	05/27/2015	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Copper (ppm)**	1.3	AL=1.3	0.083	ND 0.097	No	08/02/2017	Corrosion of household plumbing systems.; erosion of natural deposits
Lead (ppb)***	0	AL = 15	1.5	ND 2.93	No	08/02/2017	Corrosion of household plumbing systems.; erosion of natural deposits
Gross Beta (pCi/L)	0	50**	3.3	NA	No	4/25/16	Decay of natural and manmade deposits

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

\*\* Zero of five (5) samples exceeded the copper AL.

\*\*\* Zero of five (5) samples exceeded the lead AL.

**Other drinking water constituents you may be interested in are as follows:**

UNREGULATED CONTAMINANT	SMCL	LEVEL FOUND	RANGE	VIOLATION	DATE OF SAMPLE	TYPICAL SOURCE OF CONTAMINATION
Total Dissolved Solids (ppm)	500	322	NA	No	05/27/15	Erosion of natural deposits widely distributed in nature contamination from oil wells, nearby drainage ponds, or domestic or industrial waste.
Chloride (ppm)	250	25.4	NA	No	05/27/15	Erosion of natural deposits widely distributed in nature, discharge from softeners, human or animal waste disposal, leachate from landfill or seawater intrusion
Sodium (ppm)	NA	113	NA	No	05/27/15	Erosion of natural deposits widely distributed in nature, discharge from softeners, human or animal waste disposal, leachate from landfill or seawater intrusion
Total Alkalinity (ppm)	NA	234	NA	No	05/27/15	Erosion of natural deposits widely distributed in nature
Zinc (ppm)	5	0.016	NA	No	05/27/15	Erosion of natural deposits widely distributed in nature

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.

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

There is presently no established standard for sodium in drinking water. Water containing more than 270 ppm should not be used as drinking water by those persons whose physician has placed them on a moderately restricted sodium diet. Water containing more than 20 ppm should be used as drinking water by those persons whose physician has placed them on severely restricted sodium diets. For informational purposes, the last analysis shows a level of 113 ppm of sodium in your water.

The Secondary Maximum Contaminant Level for Total Dissolved Solids is 500 ppm. Total Dissolved Solids in excess of 500 ppm can cause hardness, deposits, colored water, staining, and a salty taste.

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

System Assessment for Total Coliform - Coliforms are bacteria that are present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. There was one total coliform detection found during the 2016 sampling period and no E.coli detection. All follow up analysis was negative; therefore, there were no assessments required. There have been no detections since.

**Public Notice to Consumers of  
Edgehill Waterworks  
Elevated Fluoride Levels Detected**

Dear User,

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by the Edgehill community water system has a fluoride concentration of 2.13 milligrams per liter (mg/L).

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in development teeth before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we are required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

For more information, please call **Dennis Beale** of the Southampton County Dept of Public Utilities at **757-653-9269**. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-NSF-HELP.

This notice is being sent to you by Southampton Dept of Public Utilities.

State Water System ID# 3175340

Date Distributed: