Annual Drinking Water Quality Report
For the Town of Warrenton
PWSID # 6061600

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2010 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 taken by the Town of Warrenton 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:

Edward B. Tucker, Jr., Director of Public Works/Utilities, at 347-1858
or
Glenn Coppage, Superintendent of Water Treatment, at 347-1103

The times and location of regularly scheduled Town Council meetings are the second Tuesday of each month at 7:00 p.m. at Town Hall, 18 Court Street in the Town of Warrenton.

GENERAL INFORMATION

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).

Some people who drink water containing trihalomethanes in excess of the Maximum Contaminant Level (MCL) over many years could experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Some people who use water containing chlorine well in excess of the Maximum Residual Disinfectant Level (MRDL) could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Total Organic Carbon (TOC) has no health effects. However, Total Organic Carbon provides a medium for the formation of disinfection byproducts. These byproducts include Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous systems effects, and may lead to an increased risk of getting cancer.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of

animals or from human activity. Contaminants that may be present in source water include: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. (2) 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. (3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. (4) 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 stormwater runoff, and septic systems. (5) 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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

SOURCE(S) and TREATMENT OF YOUR DRINKING WATER

The sources of your drinking water are from both surface water and groundwater as described below:

Warrenton Reservoir: Located north of town with a capacity of approximately 120 million gallons.

Airlie Reservoir: Located northwest of town with approximately 183 million gallons for town use.

Well # 5: Located northwest of town producing approximately 52,000 gallons per day.

Well # 6: Located north of town producing approximately 20,000 gallons per day.

Your drinking water supply is treated as described below:

The water from the reservoirs is treated by the Water Filtration Plant located at 7240 Blackwell Road, Warrenton, Va. The water from the two wells does not require treatment and is sampled and monitored on a periodic basis to verify its quality.

A source water assessment of our system was conducted by the Virginia Department of Health. The Reservoirs were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

Town staff is aware of the potential contamination sources identified by the Virginia Department of Health and monitor those areas to prevent and/or limit any negative impacts to the system.

The assessment report consists of maps showing the source water assessment areas, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system representative at the phone number or address given elsewhere in this drinking water quality report.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2010. 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:

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

MCL – Maximum Contaminant Level – 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.

MCLG – Maximum Contaminant Level Goal – 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

MRDL- Maximum Residual Disinfectant Level

MRDLG – Maximum Residual Disinfectant Level Goal

ND – Non-detect - lab analysis indicates that the contaminant is not present

NTU – Nephelometric Turbidity Unit – 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.

Ppm – Parts per million - one part per million corresponds to one minute in two years or a single penny in $10,000.

Ppb – Parts per billion - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Ppt – Parts per trillion - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

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

SMCL – Secondary Maximum Contaminant Level, or – Maximum contaminant levels may be either "primary" (PMCL), meaning based on health considerations or "secondary" (SCML) meaning based on aesthetic considerations.

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

WATER QUALITY RESULTS

I. Microbiological Contaminants – Were there any detections? ( ) Yes, as described below. (**X**) No

Contaminant	MCLG	MCL	No. of Samples Indicating Presence of Bacteria	Violation (Y/N)	Sampling Year	Typical Source of Contamination
Total coliform bacteria	0	1 positive monthly sample	None	No	2010	Naturally present in the environment.
Fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal positive.	None	No	2010	Human and animal fecal waste.

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 90th Percentile Value	Action Level Exceedance (Y/N)	Sampling Year	# of Sampling Sites Exceeding Action level	Typical Source of Contamination
Lead	ppb	15	0	5	N	2009	3	Corrosion of household plumbing systems.
Copper	ppm	1.3	1.3	0.251	N	2009	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. The Town of Warrenton 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 15 to 30 seconds 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

III. Turbidity – Were there any detections? (**X**) Yes, as described below ( ) No.

Contaminant	Treatment Technique Limits	Level detected	Violation (Y/N)	Sampling Year	Typical Source of Contamination
Turbidity	5 NTU maximum	highest single measurement = 0.28 NTU	No	2010	Soil runoff
	≤0.3 NTU 95% of the time	lowest monthly percentage = 100%	No	2010	

Cryptosporidium is a microbial pathogen found in surface water throughout the US. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.
The Town of Warrenton is currently conducting a 2-year sampling and testing program for Cryptosporidium in the source water.
The data collected during 2009 indicates no further treatment will be required.

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

Contaminant	Units of Measurement	MCLG	MCL	Level Detected	Violation (Y/N)	Range of Detection at Sampling Points	Sampling Year	Typical Source of Contamination
Combined Radium	pCi/L	0	5	1.0	N	ND-1.0	2010	Erosion of natural deposits.
Beta Emitters	pCi/L	0	50	1.0	N	ND-1.0	2010	Decay of natural and man-made deposits.
Nitrate	mg/L	10	10	3.5	N	ND-3.5	2010	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Fluoride	mg/L	4	4	1.13	N	0.83-1.13	2010	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium	mg/L	2	2	0.044	N	0.012-0.044	2010	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits

V. Disinfection By-Products, Precursors, and Residuals – Were there any detections? (**X**) Yes, as described below. ( ) No

Contaminant	Units of Measurement	MCLG	MCL	Level Detected	Violation (Y/N)	Range of Detection at Sampling Points	Sample Year	Typical Source of Contamination
Total Trihalomethanes	ppb	N/A	80	68	N	21-86	2010	By-product of drinking water chlorination
Haloacetic Acids	ppb	N/A	60	37	N	11-42	2010	By-product of drinking water disinfection
Total Organic Carbon	mg/L	N/A	TT	< 1.0	N	< 1.0	2010	Naturally present in the environment
TOC Ratio	mg/L	N/A	TT	1.0	N	1.0	2010	Naturally present in the environment
Chlorine	mg/L	4	4	1.13	N	0.02-1.9	2010	Water additive used to control microbes

The Town constantly monitors 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 the results in the table are from testing conducted in 2010. However, the state allows the Town to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though accurate, is more than one year old.

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

We are pleased to report that MTBE (Methyl Tertiary Butyl Ether - a gasoline additive) has been tested for and found to be non-detectable.

The U.S. Environmental Protection Agency sets MCL's at very stringent levels. 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: Your water system did not have any violations during 2010.

The staff of the Town of Warrenton takes its responsibilities to the citizens of the community who are serviced by the water system very seriously. To ensure the safe and efficient operation of the Town's municipal water supply system and provide healthy, safe and aesthetically pleasing water to our customers is a service we are proud to perform. Should you have any questions, want additional information, or feel that a particular health effect has not been addressed, please contact Edward B. Tucker, Jr., Director of Public Works/Utilities at 347-1858 or Glenn Coppage, Superintendent of Water Treatment at 347-1103.

This Drinking Water Quality Report was prepared by: Glenn Coppage