

## ***2006 Annual Drinking Water Quality Report for the Town of Warsaw***

### **INTRODUCTION**

This Annual Drinking Water Quality Report 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).

**Spanish notice: Este informe contiene informacion muy importante. Traduscalo o preguntele a alguien que lo entienda bien.**

If you have questions about this report, 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. John Slusser, Town Manager @ (804) 333-3737 Town of Warsaw, 78 Belleville Lane, P. O. Box 730, Warsaw, VA 22572

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

7:00 P.M. on the second Thursday of each month in the Town of Warsaw council chambers located at 78 Belleville Lane.

### **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). You may also visit EPA's web site at [www.epa.gov/safewater/](http://www.epa.gov/safewater/).

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).

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 and TREATMENT OF YOUR DRINKING WATER**

The Town is served by four wells. Well No. 1 is located at the end of Sunset Lane, which is off Ridgeway Road. Well No. 2 is located off Belleville Lane behind the Town Office. Well No. 3 is located on Richmond Road near the 200,000-gallon elevated storage tank. Well No. 4 is located near the end of Scott Town Rd along with a 500,000-gallon elevated storage tank. Chlorination is provided to prevent bacteriological growth in the system.

As a first step toward protection of our sources of drinking water, the VDH evaluated the susceptibility of Virginia's water supplies to contamination. Contamination sources and pathways were reviewed using maps, known & observed activities, water quality data and information about the water source. Using criteria developed by the State in its EPA-approved Source Water Assessment Program, it was determined that, on a relative basis, Well Nos. 2, 3, and 4 are of low susceptibility to contamination. However, Well No. 1 is of high susceptibility to contamination. This does not mean that your drinking water is currently unsafe. Your current water quality described in the rest of this report. A copy of the source water assessment report is available by contacting Jane Mahan 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 tables on the next page show the results of our monitoring. In the tables 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 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 - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.*

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

*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.*

*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.

### **WATER QUALITY RESULTS**

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The following 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. Some of the water quality results in tables are from testing done prior to this calendar year. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

#### **I. Lead and Copper Contaminants**

Contaminant	Units of Measurement	Action level	MCLG	Results of samples for the 90 <sup>th</sup> Percentile Value	Action Level Exceedance (Y/N)	Month of Sampling	# of Sampling Sites Exceeding Action level	Typical Source of Contamination
Copper	ppm	1.3	1.3	0.117	N	7/05	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

#### **II. Other Chemical and Radiological Contaminants**

Contaminant	Units of Measurement	MCLG	MCL	Level Detected	Violation (Y/N)	Range of Detection at Sampling Points	Date of Samples	Typical Source of Contamination
Total Trihalomethanes (TTHM)	ppb	N/A	80	8	N	N/A	9/16/04	By-product of drinking water chlorination
Fluoride	ppm	4	4	2.26	N	1.97 – 2.26	2/2/04 1/11/05	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Combined Radium	pCi/L	0	5	0.7	N	ND – 0.7	1/8/03	Erosion of natural deposits.
Gross Alpha	pCi/L	0	15	0.6	N	ND – 0.6	1/8/03	Erosion of natural deposits.
Gross Beta (1)	pCi/L	0	50	4.4	N	2.0 – 4.4	1/8/03	Decay of natural and man-made deposits.

(1) The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

#### **III. Disinfectants**

Disinfectant	Units of Measurement	MRDLG	MRDL	Level Detected (Annual Average)	Violation (Y/N)	Range of Detection at Sampling Points	Sampling Year	Typical Source
Chlorine	ppm	4	4	0.27	N	0.03 – 0.99	2006	Water additive used to control microbes

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

The average sodium concentrations in the water samples collected during 2004 and 2005 was 117.5 mg/l. This concentration exceeds the recommended maximum contaminant level of 20 mg/l for persons on a "strict" sodium intake diet. The State Health Department has provided a copy of the sodium test

results to the Richmond County Health Department so that they may advise physicians in the area should they so desire.

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.

#### **ADDITIONAL HEALTH INFORMATION**

Elevated lead levels in drinking water do not usually indicate a public health concern for most adults. However, young children and pregnant women are at higher risk for adverse health effects from exposure to lead. Other sources for lead exposure may include air pollution, contaminated soil, and certain types of pottery, porcelain, and pewter. The biggest source of lead in children nationwide is ingestion of lead-based paint and lead-contaminated house dust. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. You can take precautions at home to reduce the amount of lead in their drinking water by:

- Running the faucet for 60-90 seconds if the home water supply has been idle for more than six hours
- Cooking only with cold water
- Using a filter approved by the National Sanitation Foundation <http://www.nsf.org/consumer/>.

For more information about lead in drinking water, visit <http://www.vdh.virginia.gov/dw/Lead.asp>. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

#### **VIOLATION INFORMATION**

As you can see from the data presented in the tables, our system had no violations during the past year. We're proud that your drinking water meets or exceeds all federal and state requirements.

#### **FLUORIDE PUBLIC NOTICE**

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 your water system has an average fluoride concentration of 2.26 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 developing 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're 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.

Some home water treatment units are available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

This Drinking Water Quality Report was prepared by:

Jane H. Mahan, Clerk of Council (804) 333-3737 and the assistance of the Office of Drinking Water
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