

TOWN OF WINDSOR ANNUAL DRINKING WATER QUALITY REPORT

The Town of Windsor's Annual Water Quality Report for the calendar year 2011 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).

Except for fluoride levels, the analysis of tests by the Virginia Department of Health indicate that Windsor's water meets the Primary and Secondary Maximum Contaminant Levels for the contaminants we are required to test for under the Commonwealth's Waterworks Regulations.

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

At the end of this report is a public notice on the effects of excessive fluoride in drinking water. Parents should take note of the possible staining and pitting of permanent teeth of children less than nine years of age that could result from exposure to excessive amounts of fluoride. 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 Kenneth W. Sims, Maintenance Supervisor/ Water Operator at 757-242-4288.

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 for 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 source of your drinking water is groundwater from two (2) interconnected deep wells. The well on E. Griffin Street is located in the Upper Potomac Aquifer and the well on Courthouse Highway is located in the Middle Potomac Aquifer. These wells discharge into a 150,000-gallon elevated tank on East Griffin Street and a 300,000-gallon tank on Courthouse Highway. These tanks maintain an operating pressure of 50–60 pounds per square inch throughout the distribution system. The wells are located within the Town of Windsor.

The Virginia Department of Health conducted a Source Water Assessment of the Town of Windsor 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 Sources of Contamination, Potential Conduits to Groundwater, Best Management Practices Utilized at Land Use Activity sites, 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 below shows the results of our monitoring. 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.

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.

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

Action Level – The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which 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.

WATER QUALITY RESULTS

Contaminant	MCLG	MCL	Range	Level found	Date	Violation	Source
Fluoride (ppm)	4	4	NA	4.0	2011	No*	Erosion of natural deposits
Nitrate (mg/l)	0	10	ND – 0.05	0.05	2009	No	Fertilizer, sewage systems
Gross Beta (pCi/l)	0	50**	3.4-4.1	4.1	2011	No	Erosion of natural deposits
Radium 228 (pCi/l)	0	5	ND-0.8	0.8	2011	No	Erosion of natural deposits
Lead (ppb)	0	15 (AL)	ND – 35.3	3.2 ***	2009	No	Erosion of home plumbing fixtures
Copper (ppm)	1.3	1.3 (AL)	ND – 0.275	0.153	2009	No	Erosion of home plumbing fixtures
Total Coliform bacteria	0	1	0 - 6	6	November 2011	Yes****	Dust, dirt, everywhere in nature

* Compliance is based on the running annual average.

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

*** Compliance is based on the 90% value. One sample exceeded the Action level for lead. A resample of that site was below the action level.

****There was one positive Total coliform bacteria sample for the calendar year of 2011 which resulted in a violation. The Town flushed all water lines and did repeat samples which came back negative for Total coliform bacteria.

Health effects:

MCLs 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.

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.

There is presently no established standard for sodium in drinking water. Those persons whose physician has placed them on moderately restricted sodium diets should not use water containing more than 270 mg/L of sodium as drinking water. Those persons whose physician has placed them on severely restricted sodium diets should not use water containing more than 20 mg/L as drinking water. For informational purposes only, we wish to point out that the analysis of this sample indicates that your water system has sodium content of 150 mg/L.

Some people who drink water-containing fluoride in excess of the MCL for many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth. Fluoride in children's drinking water at levels of approximately 1 mg/l reduces the number of dental cavities. However, some children exposed to levels of fluoride greater than about 2.0 mg/l may develop dental fluorosis. Dental fluorosis in its moderate and severe forms is a brown staining and/or pitting of the permanent teeth. Because dental fluorosis occurs only when developing teeth (before they erupt from the gums) are exposed to elevated fluoride levels, households without children are not expected to be affected by this level of fluoride. Families with children under the age of nine are encouraged to seek other sources of drinking water for their children to avoid the possibility of staining and pitting.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and children who drink water-containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Town of Windsor 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>.

We hope this drinking water quality report has been informative and useful to you.

This Drinking Water Quality Report was provided by:

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