Annual Drinking Water Quality Report for the year 2014

Town of Hamilton

INTRODUCTION
This Annual Drinking Water Quality Report for calendar year 2014 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: **David Simpson, Mayor (540) 338-2811**

The times and location of regularly scheduled Town Council meetings are on the second Monday of the month at 7:00 p.m. in the Town Office.

GENERAL INFORMATION
The sources of drinking water (both tap and bottled) 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 materials and can pick up substances resulting from the presence of animals or from human activity. Water from surface sources is treated to make it safe to drink while groundwater may or may not have any treatment.

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 stormwater 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 stormwater runoff, and residential uses
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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, U. S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) 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.

SOURCES AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater. The waterworks consists of 8 wells constructed to commercial well standards with dedicated lots. The wells are located throughout Hamilton. Two of the eight wells are designated as "emergency" wells and are not operated on a regular basis, however, the wells are routinely monitored for contaminants according to Federal and State regulations.

All wells are treated by continuous chlorination and iron and manganese removal.

The Virginia Department of Health conducted a source water assessment of our system in 2003. The system was 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 of concern, and documentation of any known contamination. Additional information is available by contacting the Town at (540) 338-2811.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. While most of our results are from 2012, we are allowed to monitor some contaminants less than once per year. Where that is the case, the most recent results are reported. 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) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) - 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.

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 goal or 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.

Maximum residual disinfectant level or 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.

WATER QUALITY RESULTS

While some monitoring was conducted in 2014, we are allowed to monitor some contaminants less than once per year.

Microbiological Contaminants -

We are pleased to report that the town of Hamilton had no detections of total coliform or *E. coli* in the treated water for the 2014 calendar year. All monthly samples complied with EPA standards.

Lead and Copper Contaminants – The Town of Hamilton monitors for lead and copper contaminants in your drinking water every three years to ensure our drinking water meets all State and Federal standards.

Contaminant	Units of Measurement	Action level	MCLG	Results of samples for the 90th Percentile Value	Action Level Exceedance?	Sampling Year	# of Sampling Sites Exceeding Action level	Typical Source of Contamination
Lead	ppb	15	0	ND	No	2012	0	Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	ppm	1.3	1.3	0.3	No	2012	0	Corrosion of household plumbing systems. Erosion of natural deposits.

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 Hamilton 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 our 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.

Other Chemical and Radiological Contaminants –

Contaminant	Units of Measurement	MCLG	MCL	Level Detected	Violation	Range of Detection at Sampling Points	Sampling Year	Typical Source of Contamination
Radium 228	pCi/L	0	5	1.2	No	ND - 1.2	2010 & 2012	Erosion of natural deposits
Fluoride	ppm	4	4	0.494	No	0.203 - 0.494	2012 & 2013	Erosion of natural deposits.
Barium	ppm	2	2	0.121	No	0.0109 - 0.121	2012 & 2013	Erosion of natural deposits.

Disinfection and Disinfection Byproducts –

Contaminant	Units of Measurement	MCLG	MCL	Level Detected*	Violation	Range of Detection at Sampling Points	Sampling Year	Typical Source of Contamination
Free Chlorine	ppm	MRDLG=4	MRDL=4	1.16	No	0.7 - 1.5	2014	Water additive used to control microbes.
TTHM	ppb	N/A	80	4.1	No	ND-4.1	2014	By-product of drinking water disinfection.

* The level detected for free chlorine is based on a quarterly running annual average.

We constantly monitor 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.

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.

ADDITIONAL INFORMATION - A SCADA (Supervisory Control and Data Acquisition) system was installed in November 2012 in order to integrate the water system for the Town of Hamilton. This important addition for the Town has enabled the new water treatment plant located at Harmony Intermediate School, and well 14, to be successfully integrated into our original water system which supplies the Town of Hamilton. The SCADA system also allows the water system to be monitored continuously, and is equipped with alarms to alert the operators of any potential problems with the water system, thus enabling prompt action and remediation.

The Town of Hamilton waterworks did not have any violations during 2014.

This Drinking Water Quality Report was prepared by: J. Scott Englund, Water and Wastewater Supervisor, Town of Hamilton