

## 2004 Annual Drinking Water Quality Report

### Town of Glasgow

#### INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2004 is designed to provide you with valuable information about your drinking water quality. The Town of Glasgow is committed to providing 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 meets all state and federal requirements administered by the Virginia Department of Health (VDH).

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. Jeff Rankin at (540) 258-2246

#### GENERAL INFORMATION

The sources of drinking water (both tap water and bottled water) includes, 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 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.

Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

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).

#### SOURCES AND TREATMENT OF YOUR DRINKING WATER

Your drinking water is groundwater obtained from four drilled wells. Well number one is located on the west side of Route 684 approximately 1.1 miles north of its intersection with Route 130 in the Town of Glasgow. Well number two is located about 100 feet above well number one and on the same side of the road, although closer to the road. Well number three is approximately 1/2 mile east on a gravel road entering on the east side of Route 684 across from the reservoir. Well number four is located on a lot in the Town of Glasgow approximately 200 feet south along gravel road T-1102 entered at the corner of 7<sup>th</sup> and Gordon streets. This system also consists of a deep well pump, a submersible pump, two turbine pumps, a gas chlorinator, a steel water storage tank, a hypochlorinator, and a distribution system. Well number one is currently not in use; thus the data presented in the Water Quality Result tables is from wells two, three, and four.

Treatment is provided for the wells. With the exception of well number four, all wells pump into the storage tank before entering the distribution system. All water that enters the storage tank is chlorinated by a solution feed hypochlorinator. Water from well number four is chlorinated individually with a gas chlorinator.

The Virginia Department of Health has established a design capacity for the Town of Glasgow equal to 1,710 Equivalent Residential Connections.

## **SOURCE WATER ASSESSMENTS**

A source water assessment has been completed by VDH. The assessment determined that our sources may be susceptible to contamination because they are located in an area that promotes migration of contaminants from land use activities of concern. More specific information may be obtained by contacting the water system representative listed above.

## **QUALITY OF YOUR DRINKING WATER**

Your drinking water is routinely monitored according to Federal and State Regulations for a variety of contaminants. The tables that follow show the results of our monitoring for the period of January 1<sup>st</sup> through December 31<sup>st</sup>, 2004.

## **DEFINITIONS**

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:

*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.

*Parts per trillion (ppt) or Nanograms per liter (nanograms/l)* - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

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

*Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

*Action Level* - 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.

*Variances and exemptions* - state or EPA permission not to meet an MCL or a treatment technique under certain conditions

**WATER QUALITY RESULTS**

<b>Inorganic Contaminants</b>						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Nitrate ppm	10	10	Highest- 1.09 Range ND to 1.09	No	March 2004	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Fluoride ppm	4	4	0.25 Range: ND to 0.25	No	May 2002	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
<b>Radiological Contaminants</b>						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Combined Radium pCi/l	0	5	Highest – 1.5 Range: 0.5 - 1.5	No	May 2002	Erosion of natural deposits
Alpha emitters pCi/l	0	15	Highest – 3.7 Range: 1.6 to 3.7	No	May 2002	Erosion of natural deposits
Gross Beta pCi/l	0	50	Highest – 1.8 Range: 0.4 to 1.8	No	May 2002	Decay of natural and man-made deposits
<b>Lead &amp; Copper</b>						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Exceedance	Date of Sample	Typical Source of Contamination
Copper ppm	1.3	AL=1.3	1.029 (90 <sup>th</sup> percentile) Range: less than 0.05 to 1.740 One of the five samples collected exceeded the AL.	No	September 2004	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead ppb	0	AL=15	Less than 5 (90 <sup>th</sup> percentile) Range: less than 5 to 16.6. One of the five samples collected exceeded the AL.	No	September 2004	Corrosion of household plumbing systems; Erosion of natural deposits

The results in the table are from testing done in 2002 and 2004. 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.

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.

Maximum Contaminant Levels (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 MCL's 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**

We did not have any violations during the year 2004.

**ABOUT THE PRESENCE OF LEAD**

**Lead** – 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. We only had one of five samples indicate the presence of lead. This is not a violation.