Microbiological Contaminants

Cryptosporidium

- MCLG: 0.1 (90th percentile) ppb
- MCL: 1 ppb
- Range: 0 to 1 ppb
- Violations: No
- Date of Violation: 12/31/10

Radioactive Contaminants

- Beta/photon emitters*: pCi/L
  - MCLG: 50 pCi/L
  - MCL: 0.3 pCi/L
  - Range: 0.1 to 1.5 pCi/L
  - Violations: No
  - Date of Violation: 1/08

- Radium-228, pCi/L
  - MCLG: 5 pCi/L
  - MCL: 0.3 pCi/L
  - Range: 0.1 to 3 pCi/L
  - Violations: No
  - Date of Violation: 1/08

- Copper, ppm
  - MCLG: 1.3 AL = 1.3
  - MCL: 0.153 ppm

  - Violations: No
  - Date of Violation: 6/10/2008

- Lead, ppb
  - MCLG: 0 AL = 15 ppb
  - MCL: 3 ppb
  - Range: < 1 to 3 ppb

  - Violations: No
  - Date of Violation: 1/10

Inorganic Contaminants

- Fluoride, ppm
  - MCLG: 4 ppm
  - MCL: 1 ppm
  - Range: 0.75 ppm

  - Violations: No
  - Date of Violation: 1/10

- Nitrate ppm
  - MCLG: 10 ppm
  - MCL: 0.13 ppm
  - Range: N/A

  - Violations: No
  - Date of Violation: 4/10

- Barium ppm
  - MCLG: 2 ppm
  - MCL: 0.0178 ppm
  - Range: N/A

  - Violations: No
  - Date of Violation: 4/10

- Sodium ppm
  - MCLG: 20 ppm
  - MCL: 20.7 ppm
  - Range: N/A

  - Violations: No
  - Date of Violation: 4/10

Disinfection By-Products

- Chlorine, ppm
  - MCLG: 4.0 ppm
  - MCL: 0.3 ppm
  - Range: 0.3-1 ppm

  - Violations: No
  - Date of Violation: 12/31/10

EMPLOYMENT: Employees of the Town and applicants for employment shall be afforded equal opportunity in all aspects of employment without regard to race, color, religion, political affiliation, national origin, disability, marital status, gender or age.

SODIUM: According to results of the chemical analyses for METALS based on a sample collected in April 2010, the SODIUM in the treated water is 20.7 ppm for entry point EP002. This is above the recommended optimal level of less than 20 ppm for SODIUM in drinking water, which is established for those individuals on a "strict" SODIUM intake diet.
INTRODUCTION
This Annual Drinking Water Quality Report for the calendar year 2010 is designed to inform you about your drinking water quality. The Town’s goal is to provide you with a safe, dependable and affordable supply of drinking water, and to help you understand its efforts to protect your drinking water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

GENERAL INFORMATION
As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up other substances as well, all of which are referred to as contaminants. In source water, these may come from septic tank systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban storm water runoff, residential uses and many other types of activities. Water from surface sources is treated to make it drinkable, while groundwater may or may not require any treatment.

Various contaminants may be present in source water. They include microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural or livestock operations and wildlife; inorganic contaminants, such as salts and metals, which may be naturally occurring or a result of urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming; pesticides and herbicides, which may come from a variety of sources, including agricultural operations, urban storm water runoff and residential uses; organic chemical contaminants, including synthetic and volatile organic compounds, which are often byproducts of industrial processes and petroleum production and may also come from gas stations, urban runoff and septic systems; and radioactive contaminants, which may be naturally occurring or the result of oil and gas productions and mining activities.

In order to ensure that tap water is safe to drink, the US Environmental Protection Agency (EPA) prescribes regulations to limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection of public health.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly, and infants can all be particularly at risk from infections. These persons should seek advice about drinking water from their health care providers. Information about EPA/CDC guidelines on drinking water contaminant regulations and appropriate means to lessen the risk of cryptosporidium and other microbiological contaminants is available from the EPA’s Safe Drinking Water Hotline at 1-800-426-4791.

SOURCE AND TREATMENT OF YOUR DRINKING WATER
The source of the Town’s drinking water is the Buffalo River, a surface water source located in the upper middle basin of the James River. In a source water assessment of our system conducted in April 2003 by the Virginia Department of Health, the Buffalo River was determined to be of high susceptibility to contamination based on the criteria developed by the state in its approved Source Water Assessment Program. The assessment consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination.

Information regarding the report can be obtained as explained under Contact Information in this report. The Town’s Water Plant is a conventional surface water filtration plant. At various points in the treatment process, chemicals are added to the water. Aluminum sulfate and soda ash are added to remove contaminants dissolved in the water; chlorine is added for disinfection; fluoride is added to promote strong teeth; carbon is added when necessary to improve the taste and odor of the water; and lime and orthophosphate are added to reduce the corrosivity of the finished water. The water travels through a combination of mixing chambers, then into settling chambers where contaminants and suspended matter settle out. The water is then filtered before being pumped into the distribution system. If you would like to tour the water treatment plant, contact Tom Fore as explained under Contacts Information in this report for an appointment.

Lead and Copper
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 Amherst is 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.

DEFINITIONS
Contaminants in your drinking water are routinely monitored according to federal and state regulations. The table on the other side of this page shows the results of the Town’s monitoring for the period 1/1/10-12/31/10. In the table and elsewhere in this report, you will find many abbreviations that you may not be familiar with. The following definitions are provided to help you understand these terms.

Action Level (AL): concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum Contaminant Level (MCL): the highest allowable level of a contaminant in drinking water.

Maximum Contaminant Level Goal (MCLG): the level of a contaminant in drinking water, below which there is no known or expected health risk.

Nephelometric Turbidity Units (NTU): a measure of concentration, corresponds to one minute in two years or a single penny in $10,000.00.

Parts Per Billion (ppb): a measure of concentration, corresponds to one minute in two years or a single penny in $10,000,000.00.

PicoCuries Per Liter (pCi/L): a measure of radiation absorbed by the body.

Running Annual Average (RAA): An annual average based on quarterly results taken during the year.

QUALITY MONITORING
The Town of Amherst constantly monitors various contaminant levels in the water supply to meet all regulatory requirements. The table included in this report 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.