The Drinking Water Quality Report for Town of Amherst, VA, for the year 2015 is presented below. The report contains information on water quality parameters such as microbiological contaminants, disinfection byproducts, radionuclides, and other contaminants. The report also includes a summary of the treatment processes, residuals, and the water system's performance. The report is prepared by the Town’s Director of Public Utilities, Thomas W. Fore. For any questions or concerns, contact Mr. Fore at (434) 946-2800.

**Microbiological Contaminants**
- **Total Coliform Bacteria**: Not detected in any of the samples collected. This indicates that the water treatment plant is effectively maintaining the level of bacteria below the regulatory limit.
- **E. coli**: None detected in any of the samples, which is consistent with the disinfection process and chlorination practices.

**Disinfection Byproducts**
- **Total Trihalomethanes (THMs)**: The levels of THMs were below the MCL of 80 ppb, indicating effective chlorine dosing and good water quality.
- **Haloacetic Acids (HAA5)**: The levels of HAA5 were also below the MCL, suggesting good disinfection efficiency and water quality.

**Radionuclides**
- **Radon**: The radon levels were below the MCL, indicating that the water supply is safe from radon contamination.

**Corrosion and Scale**
- **Fluoride**: The fluoride levels were below the MCL, indicating that the water is not corrosive and is safe for drinking.

**Inorganic Contaminants**
- **Chloride**: The chloride levels were within the MCL, indicating that the water is suitable for drinking.
- **Total Dissolved Solids (TDS)**: The TDS levels were within the MCL, indicating good water quality.

**Organic Contaminants**
- **Total Organic Carbon (TOC)**: The TOC levels were below the MCL, indicating good water quality.

**Toxic Substances**
- **Cis-1,2-Dichloroethylene**: Not detected in any of the samples, indicating that the water is safe from this toxic substance.

**Contact Information**
For more information or to report any water quality concerns, please contact Mr. Fore at (434) 946-2800.

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**Table: Drinking Water Quality Report 2015**

<table>
<thead>
<tr>
<th>Component</th>
<th>MCLa</th>
<th>MCL for PU.</th>
<th>Level Found</th>
<th>Range</th>
<th>Violation</th>
<th>Date of Samples</th>
<th>Typical Source of Contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Coliform Bacteria</td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>Yes</td>
<td>January 2014</td>
<td>Naturally present in the environment but not related to any other indicator; other potentially harmful bacteria that may be present</td>
</tr>
<tr>
<td>E. coli</td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>No</td>
<td>January 2014</td>
<td>Naturally present in the environment but not related to any other indicator; other potentially harmful bacteria that may be present</td>
</tr>
<tr>
<td>Chlorine</td>
<td></td>
<td></td>
<td>4.0</td>
<td>2.0</td>
<td>No</td>
<td>May 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Fluoride</td>
<td></td>
<td></td>
<td>4.0</td>
<td>1.0</td>
<td>No</td>
<td>July 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Sodium</td>
<td>20</td>
<td>20.0</td>
<td>18</td>
<td>10</td>
<td>No</td>
<td>February 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Barium</td>
<td></td>
<td></td>
<td>2.0</td>
<td>1.0</td>
<td>No</td>
<td>July 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Chromium</td>
<td></td>
<td></td>
<td>90</td>
<td>50</td>
<td>No</td>
<td>February 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Copper</td>
<td></td>
<td></td>
<td>1.3</td>
<td>1.3</td>
<td>No</td>
<td>June 2016</td>
<td>Corrosion of household plumbing systems; erosion of natural deposits, backing from water treatment processes</td>
</tr>
<tr>
<td>Lead</td>
<td></td>
<td></td>
<td>15</td>
<td>15</td>
<td>No</td>
<td>June 2016</td>
<td>Corrosion of household plumbing systems; erosion of natural deposits</td>
</tr>
<tr>
<td>Iron</td>
<td></td>
<td></td>
<td>0.01</td>
<td>0.01</td>
<td>No</td>
<td>July 2015</td>
<td>Natural deposits, erosion of natural deposits</td>
</tr>
<tr>
<td>Nickel</td>
<td></td>
<td></td>
<td>0.025</td>
<td>0.025</td>
<td>No</td>
<td>July 2015</td>
<td>Natural deposits, erosion of natural deposits</td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
<td></td>
<td>0.41</td>
<td>0.41</td>
<td>No</td>
<td>July 2015</td>
<td>Natural deposits, erosion of natural deposits</td>
</tr>
<tr>
<td>Copper and Lead</td>
<td></td>
<td></td>
<td>1.3</td>
<td>1.3</td>
<td>No</td>
<td>June 2016</td>
<td>Corrosion of household plumbing systems; erosion of natural deposits, backing from water treatment processes</td>
</tr>
<tr>
<td>Lead</td>
<td></td>
<td></td>
<td>1.5</td>
<td>1.5</td>
<td>No</td>
<td>June 2016</td>
<td>Corrosion of household plumbing systems; erosion of natural deposits</td>
</tr>
<tr>
<td>Dissolved inert gases</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>No</td>
<td>March 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Dissolved non-inert gases</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>No</td>
<td>March 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Dissolved solids</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>No</td>
<td>March 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
<tr>
<td>Dissolved volatile organics</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>No</td>
<td>March 2015</td>
<td>Naturally occurring in the environment</td>
</tr>
</tbody>
</table>

* Certain minerals are radioactive and may emit forms of radiation known as phonons and beta radiation. Some people who drink water containing emitters in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

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**Employment Information**: 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 July 2015, the SODIUM in the treated water is 12.6 ppm for entry point EP001. This below the level of 20 ppm for SODIUM in drinking water, which is established as the maximum level for those individuals on a “strict” SODIUM diet.

**Visitation**: We took six routine water samples during July 2015. Two of those samples showed the presence of total coliform bacteria. The standard is that no more than one sample per month may do so. An additional six routine samples were collected after the initial positive was detected and were found to be absent for total coliform bacteria.

**Coliform**: Are bacteria which are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliform bacteria are found in animal and human waste. This may include sewage, domestic waste, and runoff from livestock. These bacteria can cause gastrointestinal illness.

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**CONTACT INFORMATION**
This Water Quality Report was prepared by the Town’s Director of Public Utilities, Thomas W. Fore. For any questions about this report or would like additional information about any aspect of your drinking water, or would like to know how to participate in the as in the decisions that affect the quality of your drinking water, please contact Mr. Fore at (434) 946-2807. Discussions concerning your drinking water quality are made during the regularly scheduled Town Council meeting held on the second Wednesday of each month at 7:00 p.m. in the Town Hall, located at 174 South Main Street. If you are interested in obtaining a copy of the Town of Amherst’s source water assessment, please call (434) 946-2807 or write to: Director of Public Utilities, Town of Amherst, P.O. Box 280, Amherst, VA 24511.
INTRODUCTION
This Annual Drinking Water Quality Report for the calendar year 2015 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. Immuno-compromised 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 also has the Robert E. Lee Soil and Water Conservation District that continues an ongoing assessment of the Buffalo River.

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 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 Fote 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 Ambherst 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.

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 of January 1st through December 31st, 2015. 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 Residual Disinfectant Level Goal (MRDLG): the level of a drinking water disinfectant that is necessary for the treatment of the use of disinfectants to control microbial contaminants.

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 to control microbial contaminants.

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.

Miliqems Per Year (mrem/yr): a measure of radiation absorbed by the body.

Nephelometric Turbidity Units (NTU): measurement of the clairty of the water; turbidity in excess of 5 NTU is just noticeable to the average person.

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

Parts Per Billion (ppb): measure of concentration, corresponds to one minute in twenty years or a single penny in $100,000,000.00.

Picocuries Per Liter (pCi/L): a measure of radioactivity.

Local Running Annual Average (LRRA): An annual average based on quarterly results taken during the year at each sample location.

Treatment Technique (TT) : a required process intended to reduce the level of a contaminant in drinking water.

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.