THE HISTORY OF DRINKING WATER REGULATIONS

The United States Public Health Service (USPHS) adopted the first federal drinking water standards in 1914. Only bacteriological contaminants were monitored under the standards and only in water supplied to interstate carriers, such as trains. The regulation of public water systems was at the discretion of individual states. In 1962, the USPHS standard was revised to cover 28 contaminants, but the standard was still only applied to water systems that supplied common carriers in interstate commerce. Not until 1972, when the US Environmental Protection Agency (EPA) was formed, were bills introduced to give the federal government the authority to set enforceable drinking water standards.

Numerous studies conducted between 1969 and 1974 indicated that many people throughout the country were being supplied poor quality drinking water. A report published in 1974 showed that people drinking treated Mississippi River water (which had been shown to contain many organic contaminants) were at a greater risk of developing cancer than people in the same area that drank ground water. Reactions to these studies by the public and the government culminated the passing of the 1974 Safe Drinking Water Act. Regulations based on this Act became effective in 1977 and essentially covered the same contaminants as the 1962 USPHS standard except they were applied to all public water systems.


This is the consumer confidence report (CCR) for year 2016.

WHERE DOES YOUR WATER COME FROM?

York County has purchased and will continue to purchase all of its potable water for the eastern distribution system from the City of Rock Hill.

The City of Rock Hill owns and operates the water filter plant (WFP) on Cherry Road. This WFP filters and treats the majority of the drinking water customers receive from the County’s eastern distribution system.

The City of Rock Hill WFP filters and treats surface waters that are drawn from Lake Wylie. Lake Wylie is located on the Catawba River and within the Catawba-Wateree River sub-basin. The lake has been classified as good to fair in previous water quality assessment reports.

Raw water is pumped from the lake to the WFP where it is filtered and treated in accordance with state and federal drinking water standards. In order to maintain raw water quality, the City of Rock Hill has established and maintains a 200 foot wide buffer around the raw water intake structure. Protection of the buffer area is enforced by the South Carolina Wildlife Commission.
The York County Water and Sewer Department routinely monitors for contaminants in its water distribution system according to federal and state regulations. The following tables show monitoring results for the period of January 1 to December 31, 2016:

### 2016 WATER QUALITY REPORT DATA

#### Inorganic Contaminants

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Violation</th>
<th>Level Detected</th>
<th>Unit of Measurement</th>
<th>MCLG</th>
<th>MCL</th>
<th>Date of Testing</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride</td>
<td>N</td>
<td>Rock Hill WFP 0.72</td>
<td>ppm</td>
<td>4</td>
<td></td>
<td>2016</td>
<td>Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.</td>
</tr>
<tr>
<td>Nitrate (as Nitrogen)</td>
<td>N</td>
<td>Rock Hill WFP 0.42</td>
<td>ppm</td>
<td>10</td>
<td>10</td>
<td>2016</td>
<td>Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits.</td>
</tr>
</tbody>
</table>

#### Violation Y/N Action Level 90th Percentile Value Number of Sampling Sites Exceeding The Action Level Date of Testing Likely Source of Contamination

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Violation</th>
<th>Action Level</th>
<th>90th Percentile Value</th>
<th>Number of Sampling Sites Exceeding The Action Level</th>
<th>Date of Testing</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>N</td>
<td>0.015 mg/l</td>
<td>3</td>
<td>1</td>
<td>2015*</td>
<td>Corrosion of household plumbing systems; Erosion of natural deposits.</td>
</tr>
<tr>
<td>Copper</td>
<td>N</td>
<td>1.3 mg/l</td>
<td>0.044</td>
<td>0</td>
<td>2015*</td>
<td>Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.</td>
</tr>
</tbody>
</table>

#### Regulated Contaminants

<table>
<thead>
<tr>
<th>Disinfectants and Disinfection By-Products</th>
<th>Collection date</th>
<th>Highest Level Detected</th>
<th>Range of Levels Detected</th>
<th>MCLG</th>
<th>MCL</th>
<th>Units</th>
<th>Violation</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halocetic Acids (HAA5)</td>
<td>2016</td>
<td>17</td>
<td>13.9-19.1</td>
<td>No goal for the total</td>
<td>60</td>
<td>ppb</td>
<td>N</td>
<td>By-product of drinking water disinfection</td>
</tr>
<tr>
<td>Total Trihalomethanes</td>
<td>2016</td>
<td>40</td>
<td>26.0-48.4</td>
<td>No goal for the total</td>
<td>80</td>
<td>ppb</td>
<td>N</td>
<td>By-product of drinking water disinfection</td>
</tr>
</tbody>
</table>

Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.
In the previous table, you may have found several terms and abbreviations you might not be familiar with. To help you better understand these terms, we’ve provided the following definitions:

**DEFINITIONS**

**Action Level** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Maximum Contaminant Level (MCL)** - The “Maximum Allowed” (MCL) is 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 (MCLG)** - The “Goal” (MCLG) is 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 (MRDLG)**: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG’s do not reflect the benefits 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 for control of microbial contaminants.

**Non-Detects (ND)** - Laboratory analysis indicates that the constituent is not present.

**Parts per billion (ppb) or micrograms per liter (ug/l)** - One part per billion corresponds to one minute in 1,903 years or a single penny in $10,000,000.

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York County is proud that the water distribution system that provides drinking water to you meets or exceeds federal and state requirements. York County has learned through its monitoring and testing that very few contaminants were detected, all of which were below the maximum allowable limit. The EPA has determined that the water supplied to your residence or establishment is SAFE at these levels.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person drinking 2 liters of water every day at the MCL level for a lifetime will have a one-in-a-million chance of experiencing a health effect.

**Nitrates**: As a precaution, if there is ever a higher than normal level of nitrates in the water supply, York County will notify the proper authorities in the area of the concern.

**Lead**: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person’s total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

**Pesticides and herbicides**: May come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

**Radioactive Contaminants**: Can be naturally-occurring or be the result of oil and gas production and mining activities.

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 and Center for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Please call our office at 803-628-3211 if you have any questions. We, at York County, work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.
If you have any questions regarding this report or your water utility, please contact David Hughes, York County Water and Sewer Department Supervisor, at 628-3211. If you want to learn more, please attend any of our regularly scheduled York County Council meetings, which are held the first and third Mondays of each month, beginning at 6:00 p.m. in the Council Chambers located in the York County Agricultural Building. For more information on these meetings, please call the York County Manager’s Office at 684-8511.