Revised Treatment Process and Sampling Coming Soon

It is standard practice that a phosphate chemical be added to drinking water supplies during treatment in order to reduce corrosion of the metal pipes in the distribution system and in customer plumbing. The chemical forms a protective layer on the inside of the pipes, reducing corrosion, and thus reducing the possibility of mainly lead and copper entering the water.

For over 30 years, the RWSA has used a polyphosphate product for corrosion control and has been very effective in keeping lead and copper out of customer water supplies. As a purely precautionary measure, the City of Charlottesville, working with RWSA, has decided to upgrade its corrosion inhibitor to ensure the highest level of current water treatment technology is being utilized to protect the public.

Our public drinking water has a long history of being significantly below federally regulated lead and copper levels. This upgrade will use a blended phosphate product to better protect water pipes and plumbing fixtures from internal corrosion.

To confirm there won’t be any adverse effects from the transition to the new corrosion inhibitor, RWSA has completed extensive testing to verify the new product will be more effective and will not affect customers. The transition to the new inhibitor began with the Town of Crozet system in December, 2019. Due to COVID-19, the transition for the Urban system will begin at a later date that has yet to be determined. The City of Charlottesville will send notifications to customers with information on the new transition timeline as it is developed.

RWSA has developed a Q&A to answer any questions related to the new water treatment program. It can be found at https://www.rivanna.org/rwsa-projects-map/corrosion-controll-program/. If you wish to speak to a City representative directly, please contact Anthony Allard at (434) 970-3805.

How do I get more information?

The City of Charlottesville and the Rivanna Water & Sewer Authority are committed to providing you, the customer, with this information because informed customers are our best allies. We hope that this report was easy to read and easy to understand. We encourage you to contact us and let us know what you think about your Consumer Confidence Report (CCR). Suggestions on how to make your CCR better are welcomed.

For more information about your water and for any comments, you can contact Lauren Hildebrand at (434) 970-3805 or at hildebrand@charlottesville.org.

Where does my water come from?

RWSA operates two water treatment plants (WTP) that provide water to the City of Charlottesville. The plants are the South Rivanna WTP and the Observatory WTP. Each plant employs both chemical and physical treatment processes before releasing water into the distribution system. Sodium hypochlorite is used at both South Rivanna and Observatory for disinfection. Fluoride is added at all treatment plants to promote good dental health. The water treatment plant that provides water to your tap may vary from day to day depending on the daily production of water at each plant, the level of storage in the system and your location.

The North Rivanna WTP draws water from the North Fork Rivanna River and serves customers located in Northern Albemarle County. The South Rivanna WTP draws water from the South Fork Rivanna Reservoir. The Observatory WTP draws water from both the Ragged Mountain and Sugar Hollow Reservoirs.

Under a program developed by Virginia Department of Health (VDH), a source water assessment for the Albemarle/Charlottesville Urban Area was completed by the VDH on March 25 and September 4, 2002. This assessment determined that the raw water sources named above may be susceptible to contamination. All surface water sources are exposed to a wide array of contaminants at varying concentrations and changing hydrologic, hydraulic and atmospheric conditions that promote migration of contaminants from land use activities of concern within the assessment area. More specific information may be obtained by contacting the water system representative listed at the end of this insert.

Continuing our Commitment

Rivanna Water and Sewer Authority (RWSA), and the City of Charlottesville (City), in partnership with the Virginia Department of Health (VDH), work to ensure that you receive a safe and reliable supply of drinking water.

As part of that ongoing commitment, we are providing you with this report on the quality of your drinking water. While this annual report is currently required by the United States Environmental Protection Agency (US EPA), we wish to use this opportunity to assure you that the quality of your drinking water meets and exceeds all regulatory requirements and your expectations for safety, reliability and quality. RWSA collects, stores, and treats the water; then the City buys the treated water from RWSA and distributes it to you through their distribution system.

What standards does my water have to meet?

The information in this report has been collected and reported in accordance with the drinking water standards established by the USEPA and the VDH. In the year 2019, the labs collected and tested hundreds of hourly, daily, weekly, monthly, quarterly, and annual samples to ensure the quality of your water. Sample sites were located throughout the rivers and reservoirs from which the WTPs draw water, the WTPs themselves, and numerous locations in the City’s distribution system.

The sources of drinking water may 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 material, as well as substances resulting from the presence of animals or human activity. 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline (800-426-4791) or visit their website (www.epa.gov/safewater).

Unregulated Contaminant Monitoring Rule (UCMR4) Sampling

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and if future regulation is required. The UCMR4 results are a primary source of information on occurrence and levels of contaminant exposure that the EPA uses to develop regulatory decisions for contaminants in the public drinking water supply.

As part of the rule, the City of Charlottesville began sampling for these contaminants, including haloacetic acids and various metals, pesticides, and alcohols. Sampling for cyanotoxins will tentatively begin in June of 2020 and will be reported in the 2021 report.

For more information regarding the UCMR4 program, please visit the EPA’s website to learn more (https://www.epa.gov/ucmr4-fourth-unregulated-contaminant-monitoring-rule).

For the Spanish-speaking members of our community: Esta información puede encontrarse en español y en español. Tradúzcalo o hable con un amigo que lo entienda bien.

Where does my water come from?

Rivanna Water and Sewer Authority Board of Directors holds a monthly meeting in which there is a public comment period. These meetings are held every fourth Tuesday at 2:15pm in the Rivanna Water & Sewer Authority’s Administration Building conference room, 2nd floor, 695 Moores Creek Lane, Charlottesville. Please feel free to attend. Contact (434) 977-2970 for directions or the date of the next meeting.
### What were the results from last year’s testing?

The table in this report shows which contaminants were detected in your drinking water. Before trying to read and understand the table, there are a few terms which need to be defined.

<table>
<thead>
<tr>
<th>CONTAMINANT OF CONCERN</th>
<th>MCLG</th>
<th>MCL</th>
<th>CITY WATER RESULTS</th>
<th>FOR SAMPLES &gt;AL</th>
<th>RANGE OF DETECTIONS</th>
<th>VIOLATION?</th>
<th>TYPICAL SOURCE OF CONTAMINANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecal Coliform Bacteria &amp; E. coli</td>
<td>0</td>
<td>0</td>
<td>1 See footnote</td>
<td>0-0.10 per month</td>
<td>n/a</td>
<td>0-0.10 per month</td>
<td>Human and animal fecal waste</td>
</tr>
<tr>
<td>Turbidity (Maximum permissible level)</td>
<td>i</td>
<td>i</td>
<td>0.3 NTU</td>
<td>0.3 NTU</td>
<td>n/a</td>
<td>0.3 NTU</td>
<td>n/a</td>
</tr>
<tr>
<td>Turbidity (90% of samples below 0.1 NTU)</td>
<td>i</td>
<td>i</td>
<td>95%</td>
<td>100%</td>
<td>n/a</td>
<td>100%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**What are these contaminants and their potential health risks?**

**Turbidity** is a measure of the cloudiness of the water and has no health effects. However, turbidity can interfere with disinfection and may provide a medium for microbial growth. Elevated turbidity may indicate the presence of disease-causing organisms.

**Total Coliform and E. coli Bacteria**. Bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. coli in particular may indicate the presence of human or animal waste. Microbes in these waters can cause short-term effects such as diarrhea, cramps, nausea, headaches, or other symptoms.

**Lead**. EPA considers 50 ppb to be the level of concern for lead. If your water contains lead, the amount can be reduced by using lead-free solder and service lines and by using lead-free plumbing items when doing repairs and renovations to your home. It is also important to maintain your home’s lead service line by ensuring that it is properly maintained.

**Barium**. Copper is an essential nutrient, but some people who drink water containing copper in excess of the MCL may experience an increase in their blood pressure.

**Nitrate**. Water containing nitrate in excess of the MCL may develop bone disease with pain and tenderness of the bones. The level of a drinking water nitrate above 4.0 mg/L is of concern to optimize the filtration processes at all of the WTPs to ensure the greatest degree of removal. The level of nitrate in drinking water above 4.0 mg/L is of concern to optimize the filtration processes at all of the WTPs to ensure the greatest degree of removal. The level of nitrate in drinking water above 4.0 mg/L is of concern to optimize the filtration processes at all of the WTPs to ensure the greatest degree of removal.

**Flouride**. Flouride is a water additive used to control disease-causing microbes. Some people who use water containing chlorine well in excess of the inorganic compounds

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<th>TYPICAL SOURCE OF CONTAMINANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>1.3 ppm</td>
<td>1.3 ppm</td>
<td>barium</td>
<td>0.02 ppm</td>
<td>0</td>
<td>0.02 ppm</td>
<td>n/a</td>
</tr>
<tr>
<td>Lead</td>
<td>0 ppm</td>
<td>15 ppm</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Flouride</td>
<td>4 ppm</td>
<td>4 ppm</td>
<td>flouride</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Barium</td>
<td>2 ppm</td>
<td>2 ppb</td>
<td>flouride</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Nitrate</td>
<td>10 ppm</td>
<td>10 ppm</td>
<td>flouride</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**What do all these numbers mean?**

Most importantly, this information shows that your drinking water met and exceeded all regulatory requirements during 2019. We are fortunate to have reliable sources for our drinking water needs and well-operated treatment facilities. Additional information is provided below that will explain each of these details.

**CYPRESSPORIDUM IN DRINKING WATER**

CYPRESSPORIDUM is an intestinal parasite that causes enteritis, which may be characterized by nausea, diarrhea, and abdominal cramps. Some people who drink water containing CYPRESSPORIDUM may experience gastrointestinal upset, including nausea, vomiting, abdominal pain, cramps, and diarrhea that may last for days. The effects of CYPRESSPORIDUM exposure are similar to the symptoms of traveler’s diarrhea and other types of traveler’s diarrhea. The symptoms can range from mild to severe and may include prolonged fever, bloody diarrhea, and dehydration. The most severe cases can result in hospitalization and death.

**Cryptosporidium**. Cryptosporidium is an intestinal parasite that causes enteritis, which may be characterized by nausea, diarrhea, and abdominal cramps. Some people who drink water containing Cryptosporidium may experience gastrointestinal upset, including nausea, vomiting, abdominal pain, cramps, and diarrhea that may last for days. The effects of Cryptosporidium exposure are similar to the symptoms of traveler’s diarrhea and other types of traveler’s diarrhea. The symptoms can range from mild to severe and may include prolonged fever, bloody diarrhea, and dehydration. The most severe cases can result in hospitalization and death.

**E. coli**. E. coli is the most commonly used indicator organism for fecal contamination. E. coli is a water additive used to control disease-causing microbes. Some people who use water containing chlorine well in excess of the inorganic compounds

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<tr>
<td>Copper</td>
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<td>barium</td>
<td>0.02 ppm</td>
<td>0</td>
<td>0.02 ppm</td>
<td>n/a</td>
</tr>
<tr>
<td>Lead</td>
<td>0 ppm</td>
<td>15 ppm</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Flouride</td>
<td>4 ppm</td>
<td>4 ppm</td>
<td>flouride</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Barium</td>
<td>2 ppm</td>
<td>2 ppb</td>
<td>flouride</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Nitrate</td>
<td>10 ppm</td>
<td>10 ppm</td>
<td>flouride</td>
<td>0 ppm</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**What if I am immuno-compromised?**

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 are particularly vulnerable to infections from contaminants. These people should seek advice about drinking water from their healthcare providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants can be found at http://www.epa.gov/safewater/cryptosporidium. A second round of Cryptosporidium sampling was conducted monthly for two years in 2015–2017, to date no Cryptosporidium has been detected in any of the source waters as part of that monitoring program.

**Fluoride**. Fluoride is highly supported by the Virginia Department of Health, the American Medical Association, American Dental Association, Centers for Disease Control (CDC), and the majority of health professionals in the United States. Ingestion of Cryptosporidium may cause an intestinal infection characterized by nausea, diarrhea, and abdominal cramps that healthy individuals can experience some within a few weeks. However, immunocompromised people are at risk of developing a potentially life-threatening illness. In November 2003, RW3A began a two year study to determine the occurrence of this parasite in the raw source. Müller, K. et al., 2005. Results of monitoring reveal its occasional presence in very small concentrations (< 0.05 organisms per liter) in our reservoirs. Although filtration removes Cryptosporidium, the most commonly used filtration removal methods do not guarantee 100% removal. The RW3A makes every effort to optimize the filtration process at all of the WTPs to ensure the greatest degree of Cryptosporidium removal. Based on the results of this study, RW3A has been placed in the lowest risk category for exposure to Cryptosporidium. A second round of Cryptosporidium sampling was conducted monthly for two years in 2015–2017, to date no Cryptosporidium has been detected in any of the source waters as part of that monitoring program.

**What is Water Hardness?**

If substantial amounts of either calcium or magnesium (both nontoxic minerals) are present in your drinking water, the water is described as hard. If there is a lack of these minerals, the water is described as soft. Fluorided water is safe to drink even for people with fluoride-sensitive teeth. The level of fluoride in your drinking water is determined by the water source and not by your city or town. The level of fluoride in your drinking water can range from 0.0 to 4.0 mg/L. The level of fluoride in your drinking water can range from 0.0 to 4.0 mg/L. The level of fluoride in your drinking water can range from 0.0 to 4.0 mg/L. The level of fluoride in your drinking water can range from 0.0 to 4.0 mg/L. The level of fluoride in your drinking water can range from 0.0 to 4.0 mg/L. The level of fluoride in your drinking water can range from 0.0 to 4.0 mg/L. The level of fluoride in your drinking water can range from 0.0 to 4.0 mg/L.