



MEMORANDUM

To: Albemarle County Board of Supervisors
From: Gary O'Connell, Executive Director
Date: July 15, 2020
Re: Albemarle County Service Authority (ACSA) Quarterly Briefing
cc: Mr. Jeff Richardson, County Executive; ACSA Board of Directors; ACSA Leadership Team and Managers

Thank you for the continuing opportunity to share with the Board of Supervisors what is happening at your water agency, the Albemarle County Service Authority. We pride ourselves on safe, clean, reliable Albemarle water. In this time of uncertainty with the Covid-19 Coronavirus spreading, we at the ACSA have been focused on keeping the water flowing, keeping operations going, and staying safe. Here are some updates from the ACSA:

1. **Emergency Operations and COVID Plan** – We can assure you that the ACSA and our water partner, RWSA, have done all in our power to continue to provide safe drinking water and meet customer service expectations. We believe we have been successful. We will reopen our offices to customers for on-site visits on July 6th, while practicing social distancing.
2. **Customer Accounts and Customer Service** – We recognize this has also been a difficult time for many of our customers financially. Beginning Monday, March 23rd we stopped any service disconnections, stopped sending out final notices, gave credit on on-line credit card payments, and waived some other fees and will continue that policy until October 15th. We are trying to be sensitive to customer concerns over job loss and business closings. We have encouraged customers to pay their bills on-line, as well as by postal mail and phone, and we still have a customer payment drop box at our offices. We continue to maintain a very responsive customer service call center and on-line response, 24/7. We have staffed to be able to very timely respond to customer calls and water and sewer emergencies as essential services. The Board recently approved a no interest/no late fee customer 12-month payment plan to assist customers in economic distress. We are beginning to offer this program to customers who are behind in their monthly bill payment, which we estimate to be about 2% of our customers.

3. **MyWater** – We are introducing MyWater with our summer newsletter (copy attached), which is a series of customer service improvements we will start introducing this fall. These were often requested in our recent customer survey. As we make infrastructure improvements, we are modernizing our use of technology innovations so our customers can gain ACSA related water use and customer account management. So as we launch MyWater, we want to provide the most convenient methods of payment and the ability to provide information to ACSA customers in ways they prefer.
4. **AMI (Advanced Metering Infrastructure)** – One of our Strategic Plan major initiatives is to utilize the various AMI technologies that are available in the water metering world. Most medium and large sized water utilities have already converted to the AMI technology. A tremendous advantage with AMI is near real time leak detection inside the customer’s home or business, or water service line, a tremendous water conservation and cost savings tool. In our Customer Survey, over 97% of the respondents found it important to have leak notification. We also will be adding a new customer “portal” online feature for a customer to track their water use. We continue to work on this project to move it forward. The initial phase is underway to test the communications and software. The next phase will be in the fall and is to roll out 450 new meters and communications devices. The final phase (20,000 customers) will begin in early 2021. The meter/communications device is a quick 15 to 20 minute change-out for each customer. We will be offering an “Opt Out” for customers who do not wish to participate.
5. **CMMS – Computerized Maintenance Management System** – This system for customer service requests, work orders, inventory and asset management is part of our Strategic Plan to improve how we manage our day to day operations and will utilize the CityWorks software program. This is one of those projects that is not so visible but has the potential to greatly improve our operations to deliver better customer service, productivity and scheduling. We will also have a web portal for customer requests in place at the completion of the project, which we expect to finish by the fall. We are in the final phase of this project.
6. **On-Line Bill Payment** – We will introduce a modern on-line electronic bill payment platform this fall to take advantage of the latest technology. More of our customers have begun using on-line bill payment, and we want to improve our offering. This is one area from our customer survey customers requested we make. We also will be eliminating our credit card fee, in an effort to encourage electronic bill payment which is more convenient for our customers.
7. **Budget and Rates** – The ACSA Board has approved the FY 2021 Budget effective July 1st. The approved budget totals \$32.57 million. The rates will remain the same, recognizing economic hardships going on in the community due to COVID-19 we thought it important not to increase rates this year.

8. **Annual Water Quality Report** – Annual testing results of over 400,000 tests last year, shows water safe and clean and meets or exceeds all regulatory requirements.
9. **ACSA Capital Projects Update** – The adopted FY 2021 Capital Improvements Program (CIP) started July 1st and is a \$6.9 million program. Highlights and current major projects are detailed below:
 - **Operations Center Expansion Study (Master Plan)** – A study has been completed to look at the short and long-term future of ACSA properties (Crozet, Avon Street, and Pantops), and develop a master plan for the long-term needs of the organization as we continue to grow and add customers.
 - **Camelot Water Main Replacement** – Replacement of nearly 50-year-old water mains that are also undersized and deteriorating and becoming unreliable. Project is under contract.
 - **Scottsville Water Main Replacements** – Replacement of an aging water main along East Main Street. Work is nearly complete with all the water main installed and in service. Final pavement repair and some restoration remains to be completed.
 - **Peter Jefferson Place Pump Station Improvements** – This pump station is operating inefficiently. The pumps have been replaced, as has piping and electrical work. A new generator was also part of the project for reliability. This project is complete.
 - **Madison Park Pump Station Upgrade** – Constructed 37 years ago, by a private development, and the original equipment is wearing down, building undersized, and not able to install SCADA (computerized monitor). The plan is to replace this pump station on-site. Design work is at the 90% stage.
 - **Oak Forest Sewer Pump Station Abandonment** – This is an aging pump station in need of rehabilitation. With the adjacent Stonefield development, we now have the opportunity to extend a sewer main via micro-tunnel and eliminate this aging pump station and avoid an expensive upgrade. Project is under contract with work to start in early July.
 - **Jefferson Village Water Main Replacement** – Replacing older (49 years) water mains made of inferior pipe product. Since originally part of a former well system, many of the mains are undersized. Design is at 95% completion. In the midst of acquiring easements.
 - **Meriwether Hill Water Main Replacement** – This water main is reaching the end of its useful life and is in need of replacement. This is another of the former well system mains. Project is complete along with new paving in coordination with VDOT.
 - **Pantops Sewer Study** – Area study to reduce wet weather infiltration and inflow (I/I). This study will likely lead to targeted sanitary sewer system rehabilitation. Flow monitoring and manhole inspections have been completed, and the investigation portion of this project, including robotic televising of the sewer lines, has been completed. A final report has been submitted on needed rehabilitation.

- **SCADA (computerized monitoring)** – A three phased project is nearing completion for over 40 water and wastewater facilities in the ACSA system. This is another of our projects to provide emergency alerting and monitoring to assure reliable water and wastewater service. We have completed the second phase of work, with the third phase design being completed. Easement acquisition is underway.
- **Crozet Phase IV Water Main Replacement** – Our Strategic Plan calls for the eventual replacement of all asbestos-cement water mains in our system, as they are older and made of a weaker material than the current industry norm. This project continues our systematic program to replace the aging and undersized water mains in the Crozet Water System. This is the fourth of five phases that have been defined to carry out these improvements and is currently in design phase at the 50% stage.
- **Hessian Hills Water Main Replacement** – The water mains in the Hessian Hills area have major deterioration, and they are also undersized throughout most of the subdivision. This project follows our Strategic Plan goal to replace aging and undersized water mains throughout our system. It will also eliminate a small amount of plastic pipe installed in the early 1980's. Design work is at the 90% stage, with project completion planned for 2021. A community meeting was held in late November. Work along Barracks Road and Georgetown Road will have to take place at night due to high traffic volumes during the day. Easement acquisition is underway.
- **Hollymead Sewer Study** – ACSA staff has identified other large drainage basins to be evaluated for infiltration and inflow (I/I) to continue our efforts to maintain the integrity of our wastewater collection system. This study area includes the oldest portions of the Hollymead Subdivision, as well as, the offsite portion of the sewer main that serves the westernmost area of Forest Lakes South. The Forest Lakes Offsite Sewer will be the primary collector for the upcoming Brookhill development, and an evaluation of this trunk main will provide an excellent baseline of pipe integrity in advance of the future construction activities around this sewer. All of the manholes have been inspected, flow monitoring continues, and smoke testing to be completed. About 45% of the work has been completed.
- **Redfields Sewer Pump Station Abandonment** – This wastewater pump station was constructed 23 years ago by private development and the parcel is too small to add an emergency standby generator. The Maintenance Department must rely on a portable pump to operate this station during power outages. With the development of Wintergreen Farm Subdivision, ACSA staff saw an opportunity for a sewer main extension that could eliminate this pump station. Now that the sewer main extension is in place the timing is perfect for abandoning this wastewater pump station. The pump station has been bypassed with a gravity sewer and has been deactivated. Demolition of the existing building is all that remains. Albemarle County has approved the demolition permit.

- **Vulnerability Assessment** – As part of an on-going emergency preparedness program, the ACSA is in a multi-phase effort to reduce risk and increase resilience. Projects include additional security measures, fencing and access gate enhancements, cybersecurity measures, additional tank protection, etc. The design of Priority 1 Improvements is underway.
- **Sewer Force Main Condition Assessment** – This project utilizes a computerized “SmartBall” that is flowed through the force main capturing assessment data (via acoustic monitoring technology) to determine any problem areas that require correction or further detailed investigation. Final report submitted showing some gas pockets in three force mains. Recommended pipe wall thickness measurements in these areas have been completed.
- **Energy Audit** - This project will consist of a comprehensive energy audit of the Operations Center and all pump stations (20). It will evaluate current energy consumption and the factors that drive it, as well as, an analysis of utility rate structures to identify potential cost savings. Surveys will be conducted of all systems, including operation and maintenance procedures to determine where energy conservation can be improved.
- **Avon Street Maintenance Yard** - The Avon Street property has long been held as a future location to build additional facilities in a central location, as needed. The current Maintenance Yard at our Pantops Operations Center is becoming overcrowded with equipment and materials, causing us to relocate some equipment and larger materials to the former ACSA Maintenance Yard at the Crozet Water Treatment Plant, which we lease from RWSA. This project will begin to develop the ACSA owned Avon Street property into a much larger vehicle and materials storage facility. Design of the site is underway.
- **Ragged Mountain Phase 1 Water Main Replacement** - This project will replace the oldest active water main remaining in our system, which was part of the water main that served customers out Reservoir Road. This cast iron pipe is over 90 years old and is severely tuberculated, which greatly reduces the flow capacity in this section. Design is underway with consultant coordinating with VDOT where their road improvement project overlaps with ours.
- **Northfields Water Main Replacement** - This project addresses the goal in our Strategic Plan for the eventual replacement of all asbestos-cement water mains in our system. The existing water mains are approximately 54 years old and have reached the end of their useful life. As a former well system that was connected to public water, most of the mains are also undersized. Field surveying is currently underway.
- **Ednam Water Storage and Northfields Tank Recoating** - As part of our regular water storage tank cleaning and inspections it was determined that these tanks were exhibiting generalized degradation of the paint coating on either the interior or exterior surfaces. The Ednam Tank was constructed in 1977 and was last painted in 1997. The

original Northfield Tank was replaced in 2000 when the pump station was renovated. Ednam Tank recoating is completed, and back in service in early December. The Northfields Tank recoating project is completed.

- **Exclusion Meters Replacement** - In the mid 1990's with the development of Glenmore, many new customers installed irrigation systems for their properties and wanted to have their sewer bills reduced by the amount of water that was diverted to irrigate their properties. Private meters were installed behind their ACSA meter to record this volume and it was "excluded" from the calculation of their sewer charges and these became known as exclusion meters. On January 1, 2006 the ACSA Rules and Regulations were modified to no longer allow exclusion meters and required that all future irrigation meters would be tapped separately off our water mains, to be owned and controlled by the ACSA. This project is a multi-year replacement program by our in-house CIP Crew to install dedicated, ACSA owned irrigation meters that will eliminate all remaining private exclusion meters in our system. The number of exclusion meters in the ACSA system has been reduced to 447, with about 50 replaced thus far.
- **Pipe Saddles Replacement** - The ACSA Maintenance Department has discovered in recent years that pipe saddles used to make water service line connections to PVC water mains have been failing. Either the zinc-coated straps or the cast iron saddle bodies are deteriorating. This project is a multi-year replacement program to be undertaken with our in-house CIP Crew.

Let us know if you have further questions or comments. We are more than glad to meet with you or hold a virtual meeting to talk about any of our projects, or facilities, or provide a tour if that would be useful.

Attachments:

- MyWater provided by ACSA;
- ACSA Summer Customer Newsletter;
- Urban Water Quality Reports;
- PowerPoint Presentation.



Introducing...

MyWater

Provided by ACSA

The ACSA's New Utility Innovation Program

We're investing in you & our water system.

The MyWater program will provide you & the ACSA with several essential benefits:



Enhanced
Customer
Service



Customer
Cost
Control



Proactive
Leak
Alerts



Added
Efficiency &
Sustainability

news & updates

Introducing MyWater Provided by ACSA

Dear Customer,

“There’s a way to do it better. Find it.” – Thomas Edison

As COVID-19 has radically impacted our lives, our work at the ACSA to maintain and improve our infrastructure in a timely, cooperative, and financially responsible manner continued on. So, with Mr. Edison in mind, I'm proud to announce the launch of MyWater, an ACSA innovation program that will improve upon the high-quality services we currently provide through a series of customer service and infrastructure-related improvements.

One of our goals with MyWater is to make your lives easier while making our water system more resilient and efficient. Over the coming weeks, months, and years, you as a customer will benefit from a series of improvements to your water system and our customer service operations. At the same time, the ACSA will gain valuable information about our infrastructure so we can keep it strong for decades to come.

The first MyWater innovation that will both benefit you and the ACSA is the start of our Advanced Metering Infrastructure (AMI) project. Later this year, we will begin upgrading all of our 20,000-plus water meters with ones incorporating the latest technology. The entire project will take 18 months to complete.

With AMI, you will gain 24/7 access to your account enabling you to review your usage in near real-time, giving you more control over your costs than ever before. (See reverse side.) The ACSA gains a major operational advantage: the increased ability to remotely manage our systems. This will significantly save on energy costs, lower our carbon footprint, and cut employee risk from auto accidents.

It's hard to find a better program to launch under MyWater. In the coming months, we will announce more innovations, including a new customer payment and communication system that will provide the most convenient methods of payment and the ability to receive information from the ACSA in the ways you prefer.

I look forward to keeping you updated about MyWater's progress. Before I close, I want to thank you all for your patience and understanding as we have dealt with COVID-19-related changes to our operations here at the ACSA. Because of your resilience and the dedication of our hard-working employees, we have been able to manage the challenges of this pandemic with little impact on our services or our operations.

Thank you.



Gary O'Connell, Executive Director



ACSACONnect



ACSA_connect

www.serviceauthority.org



What It Means for You. For All of Us.

MyWater will expand the ACSA's use of advanced technology to continually provide you with the highest levels of customer service, both at your home or business and at our offices. As part of MyWater, the ACSA will upgrade all of our water meters with Advanced Metering Infrastructure to safely and securely deliver customer data to the ACSA and provide the following benefits:



**Enhanced
Customer
Service**



**Proactive
Leak
Alerts**



**Customer
Cost
Control**



**Added
Efficiency &
Sustainability**

The upgraded meters will allow both you and the ACSA to proactively view usage data in near-real time, enabling you to manage your account more effectively as we service it with greater efficiency. AMI will enable alerts about leaks, high usage, outages and other events, helping you avoid costly repairs and higher bills while we all cut water waste. Here's how it all works:

How AMI Works



Usage data from your water meter is sent to the ACSA.



The data is relayed across the ACSA's communications network to its offices.



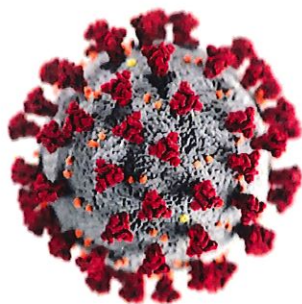
The ACSA reviews the water usage data for customer billing & leak detection.



The ACSA's new Customer Portal & updated bill make the information always available & easy to read.



After reviewing our options and the results of our Customer Survey, the ACSA decided improvement of our billing and payment systems was a top priority. Under MyWater, we will enable you to make payments in a variety of customer-friendly ways without incurring fees: Credit Card, Venmo, PayPal, PayPal Credit, and echeck/ACH. Our new system will also enable you to receive important ACSA information a variety of ways, and exactly the way you want. We'll have more on this in the near future.



Your health and well-being remain the ACSA's highest priorities. COVID-19 has not impacted your water quality and our staff is dedicated to ensuring your services stay safe and reliable.

We will continue to assess our Customer Service policies to make sure they balance the need for us to maintain our operations with the economic realities we ALL face together.



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Urban Area

2020 Annual Drinking Water Report

Includes Testing for 2019

Dedicated to Delivering Clean Water

Dear Customer,

This year, perhaps more than any other because of the impacts of COVID-19, the safety of your drinking water has never been more important. The people of the Albemarle County Service Authority (ACSA) work hard to ensure you drink safe, dependable water by conducting thousands of water quality tests annually to assure that it is always of the highest quality. Your drinking water again met or exceeded all regulatory requirements in 2019.

The ACSA and the Rivanna Water and Sewer Authority (RWSA), in partnership with the Virginia Department of Health (VDH), work cooperatively to ensure that you receive a safe and reliable supply of drinking water. The RWSA collects, stores and treats the water, while the ACSA purchases the treated water and delivers it to you through our distribution system.

The ACSA is committed to providing you, the customer, with this information since informed customers are indeed our best allies. We encourage you to contact us and tell us what you think of this report; your suggestions are always welcomed. If you wish to receive a “hard-copy” of the report, please contact Tim Brown at 977-4511, Ext. 119, or at tbrown@serviceauthority.org.

Thank you,

A background image of a hand holding water, with water splashing around it, symbolizing clean water.

Gary B. O'Connell
Executive Director
Albemarle County Service Authority



Our Customer Service representatives are available Monday-Friday from 8am to 5pm to assist you in person, via email, or by phone. Information is also available on our website, www.serviceauthority.org.

168 Spotnap Road
Charlottesville, Virginia 22911
(434) 977-4511
custserv@serviceauthority.org

Important Information about Your Water

ACSA Board of Directors

Clarence Roberts, Chair - Rivanna District
Jennifer Sulzberger, Vice Chair - Samuel Miller District
John Parcels - White Hall District
Charles Tolbert - Jack Jouett District
Nathan Moore - Rio District
Richard Armstrong - Scottsville District

The ACSA Board of Directors holds meetings on the third Thursday of each month at 9am at 168 Spotnap Road. Call (434) 977-4511 or visit www.serviceauthority.org for more information.

The Rivanna Water & Sewer Authority (RWSA) Board of Directors holds meetings on the fourth Tuesday of each month at 2pm at 695 Moore's Creek Lane. Call (434) 977-2970 or visit www.rivanna.org for more information.

Your Water Supply & Treatment

The RWSA operates three water treatment plants (WTP) to provide water to the City of Charlottesville and the urban "ring" served by the ACSA. The South Rivanna WTP is sourced by the South Rivanna Reservoir; the Observatory WTP is sourced by the Ragged Mountain and Sugar Hollow Reservoirs; and the North Rivanna WTP is sourced by the North Fork Rivanna River.

All are surface water supplies, replenished by precipitation, stream flow, overland flow, and groundwater flow. All supplies have a low mineral content, are low in hardness or scale ("soft"), and there is little of the iron or manganese commonly found in the area's groundwater. The treated water doesn't have any iron or manganese.

Each plant employs both physical and chemical treatment processes before releasing water into the distribution system. Sodium hypochlorite is used at all three plants to disinfect the treated water. Fluoride is added at each plant to promote good dental health. The water provided to your tap may vary from time to time depending on demand, the level of storage in the system, and your location.

Significant upgrades to all three plants were completed in 2018 related to the Stage 2 Disinfection Byproducts Rule. An advanced treatment process that employs granular activated carbon (GAC) was installed to result in higher quality water. In particular, the concentration of disinfection byproducts (TTHMs and HAAs; see discussion of contaminants) has been significantly reduced. Average TTHMs were down 20% and average HAAs were down 37% in 2019 compared to 2018. In addition to lowering these chemical compounds, GAC serves as a barrier to other potential contaminants and improves certain taste and odor issues.

Water Treatment for Corrosion Control

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 the possibility of mainly lead and copper from entering the water.

For more than 30 years, the RWSA has used a polyphosphate product for corrosion control, and it has been very effective in keeping lead and copper out of customer water supplies. The RWSA evaluated for implementation a new, blended, orthophosphate product to optimize distribution system lead and copper corrosion control. Due to the focus on the coronavirus pandemic, implementation of this new product has been postponed until late 2020 or 2021.

Important Information about Your Water

Advanced Treatment Using Granular Activated Carbon (GAC)

in 2012, with the essential support of our customers, the ACSA joined the City of Charlottesville, Albemarle County, and the Rivanna Water & Sewer Authority to approve the installation of granular activated carbon (GAC) systems on the water treatment for our Urban Area, Scottsville, and Crozet service areas. GAC is very effective in improving water quality in distribution systems. It was added to our treatment processes to aid in the additional removal of organics that, when combined with chlorine, create disinfection byproducts (DBPs) regulated by the EPA.

GAC also provides improved water taste and odor, and it is proven to be highly effective at removing a series of man-made and naturally occurring contaminants that are being found in a growing number of water supplies across the county. While testing has shown our service areas are not impacted by these contaminants, GAC provides an added level of treatment for the future protection of our drinking water.

Installation of the GAC systems was completed in 2018 and the reduction of DBPs has been dramatic. We are extremely proud of the results that have been achieved because they demonstrate how community support and investment in our water treatment will result in excellent drinking water quality now and for years to come.

Water Quality Standards

The information in this report has been collected and reported in accordance with the drinking water standards established by the USEPA and the VDH. The RWSA conducts extensive testing of the source waters and the treated water before it ever leaves the plants, as well as testing weekly, monthly and quarterly samples within the distribution system.

In addition to the data contained in this report, other testing includes such parameters as the “heavy” metals, volatile organic compounds, and pesticides of the treated water. They are not listed here since none of these parameters was detected. More specific information can be obtained by contacting Tim Brown at 977-4511, ext. 119, or at tbrown@serviceauthority.org.

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, and human activities. In other words, all surface water supplies are exposed to a wide array of “contaminants” at varying concentrations. The presence of these contaminants, however, does not necessarily indicate that water poses a health risk, and even bottled water may reasonably be expected to contain at least minimal amounts of some contaminants.

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline (800-426-4791) or by visiting their website (www.epa.gov/safewater). See also the discussion of *Cryptosporidium* contained in this report.

Internal Issues of Mold

The most common water-related complaint we have received from our customers over the years is the occasional appearance of a black growth on toilets, and in fixtures like faucets and shower heads. **This is a harmless form of mold; the water is completely safe to drink.** The mold is not coming into your home through our water pipes. Instead, the mold is the result of airborne spores and there not being enough chlorine in the water to prevent mold growth. The spores come from hardwood forests, construction sites, and mulch piles. In particular, we have seen a very clear link between mold and mulch supplies for several years.

Testing in 2018 and 2019 identified the mold as very common types. More information, including tips on control, can be obtained by visiting our website at www.serviceauthority.org/watersupplyfaq.html.

Important Information about Your Water

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface waters throughout the U.S. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection characterized by nausea, diarrhea, and abdominal cramps. Cryptosporidium may be spread through means other than drinking water. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at risk of developing a potentially life-threatening illness.

Although filtration removes the pathogen, the most commonly used filtration methods cannot guarantee 100% removal. The RWSA 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 recent studies, our water sources have been placed in the lowest risk category for exposure to Cryptosporidium.

Fluoride

The naturally-occurring fluoride content of our source waters (reservoirs and streams) is quite low. Therefore, fluoride is added to your water at the treatment plants to promote good dental health. Fluoridation of drinking water was first introduced in the U.S. in the 1940s, and the Centers for Disease Control and Prevention named it one of the ten great public health achievements of the 20th century.

In 2011, the U.S. Department of Health and Human Services (HHS), jointly with the U.S. Environmental Protection Agency (EPA), recommended that the level of fluoride added to drinking water be reduced from a range of 0.7-1.2 ppm to 0.7 ppm. The RWSA immediately put this change into effect at all treatment plants.

The main reason for this proposed action is that Americans have access to more sources of fluoride than they did decades ago. In addition to the fluoride added to many public water supplies, it is found in toothpastes and mouth rinses, and is routinely applied to children's teeth by dental professionals. HHS officially decreased the recommended level of fluoride in drinking water to 0.7 ppm in 2015. The range of fluoride added to your water in 2019 was 0.54-0.82 ppm.

Lead in Drinking Water

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 internal plumbing. RWSA and the ACSA are responsible for providing high-quality drinking water; it is non-corrosive, has a corrosion inhibitor added to the water to coat the pipes, and is delivered to you in pipes that are free of lead.

However, we cannot control the variety of materials used in the plumbing components of houses and businesses. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before drinking or cooking. If you are concerned about lead in your water you may wish to have your water tested. The periodic lead and copper testing at select, high-risk households last occurred in the summer of 2019. (See the data chart.)

A trace amount of lead was found in only one of the 30 samples. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at www.epa.gov/safewater/lead.

Important Information about Your Water

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 those with cancer undergoing chemotherapy; people who have undergone organ transplants; persons with HIV/AIDS or other immune system disorders; and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. EPA and CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from EPA's Safe Drinking Water Hotline (800-426-4791) or by visiting their website - www.epa.gov/safewater.

2019 Water Quality Test Results

| Primary Standards - Potential Health Risk | MCLG | MCL | ACSA Water Result | # Samples > AL | Range of Detections | Violation? | Typical Source of Contaminant |
|---|------------|-------------------------------------|--|----------------|---------------------|------------|--|
| MICROBIOLOGICAL ORGANISMS; RELATED MEASUREMENTS | | | | | | | |
| Total Coliform Bacteria (1) | 0 | Presence in 5% of samples per month | 1 per mth. (Sept., Nov., Dec.) 5 per mth. (Aug) (2) | N/A | 0-5 per month | No (2) | Naturally present in the environment |
| Fecal Coliform Bacteria (1) | 0 | See footnote (3) | 3 (Aug.) 1 (Dec.) (4) | N/A | 0-3 per month | No (4) | Human and animal fecal waste |
| Turbidity (max. single value) | N/A | 1 (5) | 0.3 NTU | N/A | N/A | No | Soil runoff |
| Turbidity (% of monthly samples below 0.3 NTU) | N/A | At least 95% (5) | 100% | N/A | 100% | No | Soil runoff |
| RADIOACTIVE COMPOUNDS | | | | | | | |
| Combined Radium (6) | 0 pCi/l | 5 pCi/l | 0.7 pCi/l | N/A | <0.5-0.7 pCi/l | No | Erosion of natural deposits |
| Gross Alpha (6) | 0 pCi/l | 15 pCi/l | <0.38 pCi/l | N/A | <0.3-<0.38 pCi/l | No | Decay of natural deposits |
| Gross Beta (6,7) | 0 pCi/l | 50 pCi/l | 1.7 pCi/l | N/A | 1.1-1.7 pCi/l | No | Erosion of natural deposits |
| INORGANIC COMPOUNDS | | | | | | | |
| Lead (8) | 0 ppb | 15 ppb (AL) | <2.00 ppb (9) | 0 | <2.00-3.09 ppb | No | Corrosion of household plumbing |
| Copper (8) | 1.3 ppm | 1.3 ppm (AL) | 0.065 ppm (9) | 0 | <0.020-0.108 | No | Corrosion of household plumbing; erosion of natural deposits |
| Barium | 2 ppm | 2 ppm | 0.018 ppm (9) | N/A | <0.010-0.018 | No | Erosion of natural deposits; drilling waste discharges |
| Fluoride | 4 ppm | 4 ppm | 0.67 ppm | N/A | 0.54-0.82 ppm | No | Water additive that promotes strong teeth |
| Nitrates | 10 ppm | 10 ppm | 0.42 ppm | N/A | 0.06-0.42 ppm | No | Fertilizer runoff |
| DISINFECTION & DISINFECTION BYPRODUCT CONTAMINANTS | | | | | | | |
| Free Residual Chlorine | MRDL=4 ppm | MRDLG=4 ppm | 1.13 ppm (10) | N/A | 0.4-1.94 ppm | No | Water additive to control microbes (disinfectant) |
| Total Trihalomethanes (TTHMs) | 0 | 80 ppb | 39 ppb (11) | N/A | <1-52 ppb | No | Disinfection byproduct |
| Haloacetic Acids (HAAs) | 0 | 60 ppb | 24 ppb (11) | N/A | 1-26 ppb | No | Disinfection byproduct |

Important Information about Your Water

2019 Water Quality Test Results (continued)

| Secondary Standards/Aesthetic Factors | MCLG | MCL | ACSA Water Result | # Samples > AL | Range of Detections | Violation? | Typical Source of Contaminant |
|---------------------------------------|------|-------------|----------------------|----------------|----------------------|------------|---------------------------------------|
| Chloride | N/A | 250 ppm | 7.3-15.0 ppm | N/A | 7.3-15.0 ppm | No | Runoff/leaching of natural deposits |
| Iron | N/A | 0.3 ppm | <0.05 ppm | N/A | N/A | No | Runoff/leaching of natural deposits |
| Manganese | N/A | 0.05 ppm | <0.01 ppm | N/A | N/A | No | Runoff/leaching of natural deposits |
| pH | N/A | 6.5-8.5 ppm | 7.5-7.6 (mth. avg.) | N/A | 7.5-7.6 (mth. avg.) | No | Runoff/leaching of natural deposits |
| Sulfate | N/A | 250 ppm | <5.0-27.0 ppm | N/A | <5.0-27.0 ppm | No | Runoff/leaching of natural deposits |
| Total Dissolved Solids | N/A | 500 ppm | 56-108 ppm | N/A | 56-108 ppm | No | Runoff/leaching of natural deposits |
| OTHER PARAMETERS OF INTEREST | | | | | | | |
| Alkalinity | N/A | N/A | 18-63 ppm (mth avg.) | N/A | 18-63 ppm | N/A | Runoff/leaching of limestone minerals |
| Conductivity | N/A | N/A | 100-170 micromhos/cm | N/A | 100-170 micromhos/cm | N/A | Runoff/leaching of natural deposits |
| Hardness | N/A | N/A | 14-37 ppm | N/A | 14-37 ppm | N/A | Runoff/leaching of limestone minerals |
| Sodium | N/A | N/A | 6.49-29.2 ppm | N/A | 6.49-29.2 ppm | N/A | Runoff/leaching of natural deposits |

(1) Unit of measurement for total and fecal coliform bacteria is the presence or absence of bacteria in a 100 ml sample.

(2) Of the 960 routine samples collected in 2019, eight (8) samples indicated the presence of total coliform bacteria. Four (4) of these samples indicated the presence of fecal coliform bacteria. These were likely due to operator error in August.

(3) Fecal coliform MCL: A routine sample and a repeat sample are total coliform positive, and at least one is also fecal coliform positive.

(4) No repeat sample indicated a positive result for fecal coliform bacteria or total coliform bacteria.

(5) The MCL for turbidity is for no single measurement to exceed 1 NTU, and for 95% of all measurements to be below 0.3 NTU.

(6) Last sampled in 2017. To be sampled again in 2023.

(7) The EPA considers 50 pCi/l to be the level of concern for beta particles.

(8) Sampled in July 2019 from select, high-risk residences. To be sampled again in 2022.

(9) The value reported is the 90th percentile of all data (30 samples) collected.

(10) The value reported is the highest quarterly, system-wide average.

(11) TTHM and HAA results are averaged over four quarters at each sampling location to determine compliance with the MCL. Range of detections is from 2019, but "Result" includes late 2018 and 2019.

UCMR-4

The 1996 Safe Drinking Water Act amendments established the Unregulated Contaminant Monitoring Rule (UCMR) program. This program mandates that the U.S. Environmental Protection Agency (EPA) issue a list every five years of some thirty (30) unregulated contaminants. Data are collected throughout the country over a two-year period, and then analyzed to determine whether any of these contaminants should be classified as regulated (i.e., a potential health risk) and, if so, at what level should the regulation be set.

Contaminants are in the general categories of pesticides, herbicides, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, hormones, and more. Testing is mandated for all systems serving a population greater than 10,000, and for select smaller systems.

Important Information about Your Water

UCMR-4 (continued)

Currently, testing is underway for the fourth list of contaminants (UCMR-4). The current list includes metals, pesticides, VOCs, SVOCs, alcohols, various disinfection byproducts (originating from disinfection of the water), and cyanotoxins (chemicals that are released into surface water supplies by algae).

The Rivanna Water and Sewer Authority began testing for UCMR-4 contaminants in the Urban system in February 2019 according to a schedule delivered to them by the EPA. Testing will continue in 2020 for several cyanotoxin contaminants. Compounds that were detected in 2019 include the following disinfection byproducts:

Bromochloroacetic acid – Urban, Crozet, Scottsville – 0.71 - 2.5 ppb
Bromodichloroacetic acid – Urban, Crozet, Scottsville – 0.67 - 2.4 ppb
Chlorodibromoacetic acid – Urban only – 0.34 ppb

And the following metal:

Manganese – Urban and Scottsville – 0.43-1.6 ppb

Each of the above contaminants has been detected in a large majority of water systems across the country. The results of the cyanotoxin testing later this year will be reported to you in the 2021 Water Quality Report.

For more information regarding the UCMR-4 program, please visit the following website:
<https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule>.

What Do All the Numbers Mean?

First, they show your drinking water met or exceeded all regulatory requirements during 2019. We are fortunate to have reliable sources for your drinking water needs, and well-operated treatment facilities. The information provides you with details on each potentially harmful contaminant or compound detected in your drinking water.

Definitions

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are as close to the MCLGs as possible using the best available treatment technology.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. The addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to public health.

ppb: Parts per billion or micrograms per liter (ug/l). One part substance per billion parts of a solution.

ppm: Parts per million or milligrams per liter (mg/l). One part substance per million parts of a solution.

pCi/l: Picocuries per liter. This is a measure of radioactivity.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL): The concentration of a contaminant, which, if exceeded, trigger treatment of other actions by the water provider. This term is typically limited to discussions of lead and copper concentrations.

N/A: Not applicable. <: Less than.

Important Information about Your Water

The Potential Health Risks Associated with These Contaminants

Total and Fecal Coliform Bacteria. Coliforms are a large group of bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Fecal coliform bacteria and *E. coli*, in particular, indicate a likely contamination from human or animal wastes. These microorganisms can result in short-term effects such as nausea, headache, cramps and diarrhea, and they pose a special health risk for infants, young children, the aged, and those with severely compromised immune systems.

Turbidity is a measure of the clarity of water. On its own, elevated turbidity has no health effects. However, turbid water can interfere with disinfection and may provide a medium for microbial growth. Elevated turbidity may also indicate the presence of disease-causing organisms, including bacteria, viruses or parasites that can cause such symptoms as nausea, headache, cramps and diarrhea.

Combined Radium, Gross Alpha and Gross Beta. These are naturally-occurring forms of radiation, resulting from certain minerals that are radioactive. When these minerals are eroded into the source water, radiation in the water may result. Some people who drink water containing radium, or alpha or beta emitters, over many years may have an increased risk of getting cancer.

Lead and Copper. The USEPA Lead and Copper Rule mandates a household testing program for these metals, and the values reported in the chart are from samples that were collected from select households. Infants and children who drink water containing lead in excess of the Action Level could experience delays in physical or mental development. Children could show deficits in attention span and learning abilities.

Adults who drink this water over many years could possibly develop kidney problems or high blood pressure. See the box for additional information on lead. Copper is an essential nutrient, but some who drink water containing copper in excess of the Action Level could experience gastrointestinal distress in a relatively short period of time. Some who drink this water over many years could develop kidney or liver damage. Individuals with Wilson's disease should consult their doctor.

Barium is a metal that is naturally-occurring in rock and the soil. Some people who drink water containing barium in excess of the MCL over many years may experience an increase in their blood pressure.

Fluoride is an element added at the water treatment plants to promote strong teeth. Some people who drink water containing fluoride in excess of the MCL over many years could develop bone disease, with pain and tenderness of the bones. Children who drink water containing fluoride in excess of the MCL may develop mottled teeth. See the box for additional information on fluoride.

Nitrate is a form of nitrogen found primarily in fertilizers, sewage, and runoff from natural deposits. Infants below the age of six months who drink water containing nitrate in excess of the MCL could develop "blue baby syndrome" in which there is a bluish coloration of the skin and shortness of breath. The infant can become seriously ill and, if untreated, may die.

Chlorine is added at the treatment plant to inactivate disease-causing microbes. Some people who use water containing chlorine in excess of the MRDL could experience irritation of the eyes, nose and skin. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Trihalomethanes and Haloacetic Acids are compounds formed by the interaction of chlorine with naturally-occurring organic matter, and they are sometimes referred to as disinfection by-products. Chlorine is added at the treatment plant to inactivate disease-causing microbes, and organic matter is naturally present from leaves and decaying plants in the reservoirs and streams.

Some people who drink water containing these compounds in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous system, and may have an increased risk of getting cancer.



PRESENTATION TO BOARD OF SUPERVISORS

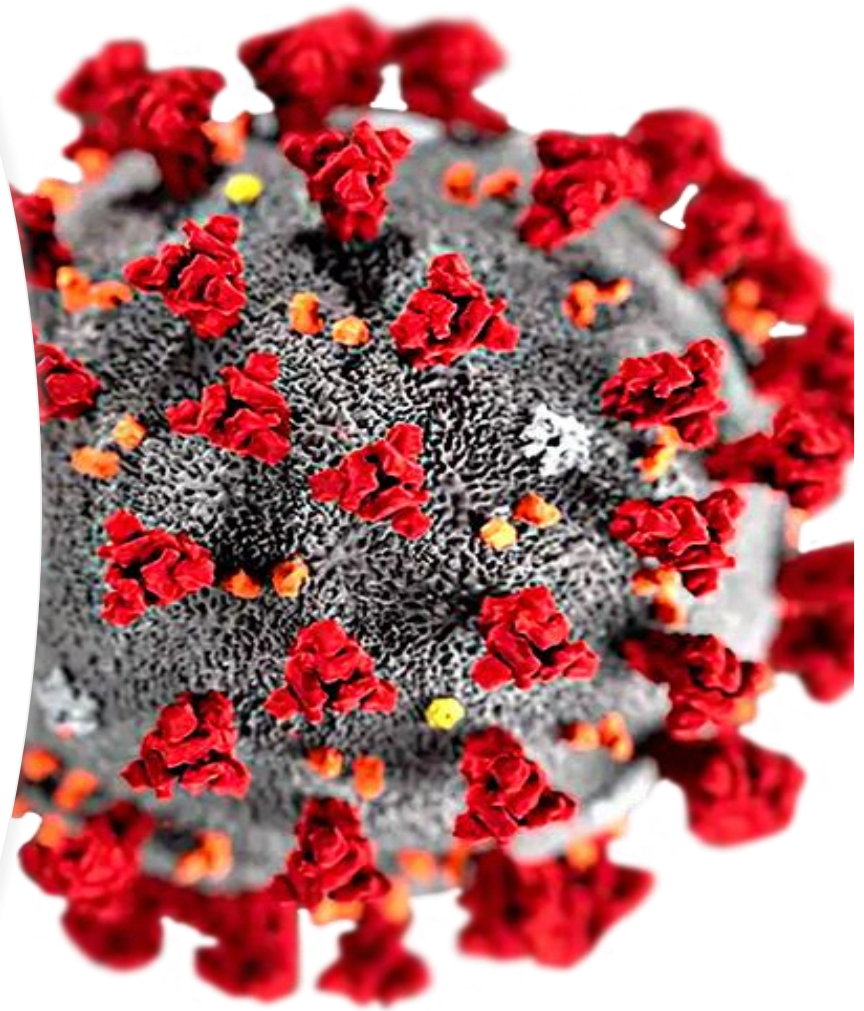
July 15, 2020

Clean, Safe,
Reliable

◆ **Vision:** Serve and conserve today, sustain for tomorrow, and protect our resources forever.

◆ **Mission:** With pride and dedication we serve our customers by providing clean, safe water, exemplary wastewater services, and fire protection infrastructure. Together with our community partners we maintain and improve our utility system in a timely, cooperative, and financially responsible manner.

-
- COVID-19 has not impacted Water Quality.
 - Safe to drink!



During the Pandemic ACSA:

- Keeps water flowing;
- Keeps operations going;
- Stays safe;
- Provides high-level customer service.





2020 - 2022 Strategic Plan

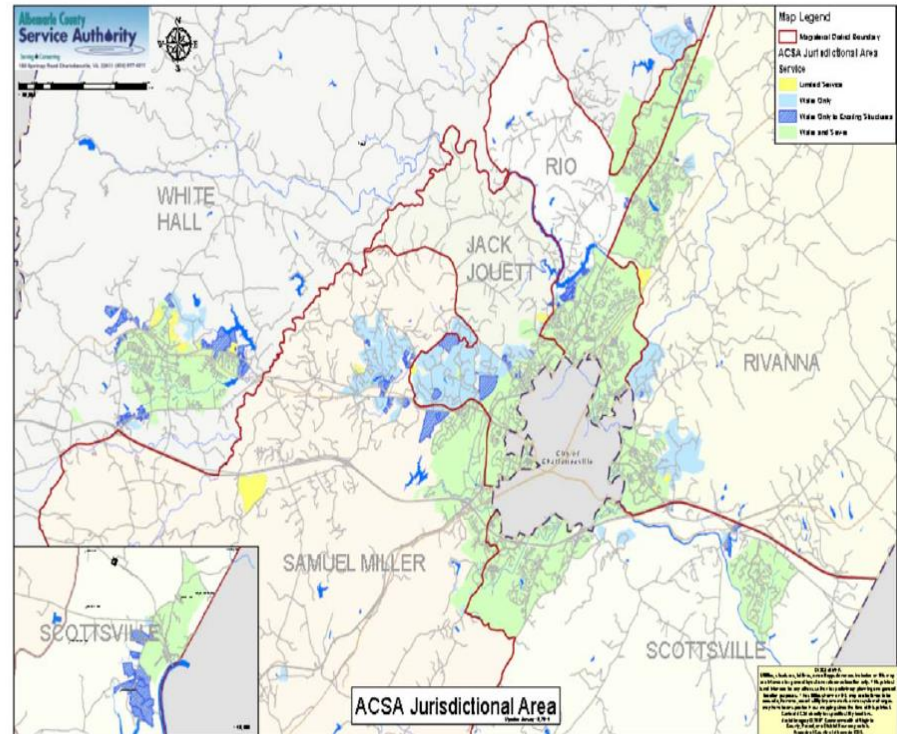
Serve & Conserve Today.
Sustain Tomorrow.
Protect Our Resources Forever.

www.serviceauthority.org

My Water
Provided by ACSA

Albemarle County Service Authority (ACSA)

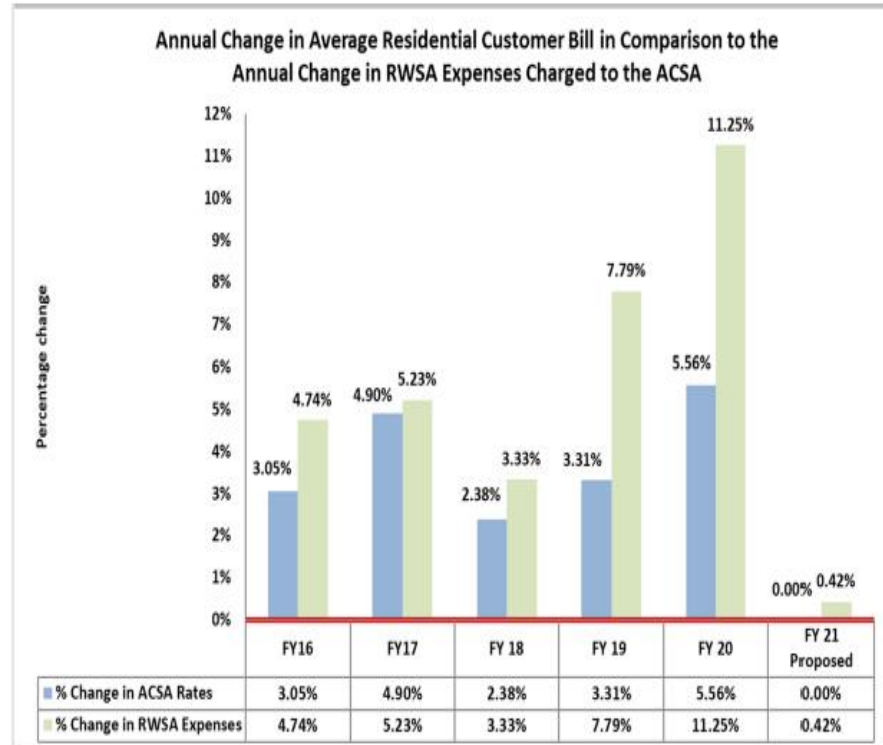
- ◆ Founded in 1964
- ◆ Serving 78,000+ customers
- ◆ 20,600+ water accounts and growing
- ◆ 78 Dedicated Employees
- ◆ 353 Miles of Water Lines
- ◆ 298 Miles of Sanitary Sewer Lines
- ◆ 21 Pump Stations
- ◆ 8 Water Storage Tanks
- ◆ 2,747 Fire Hydrants



FY 2021 Budget Development, Post COVID-19 Pandemic

Calculated Post-COVID-19 Pandemic Rate Impact to Authority Customers:

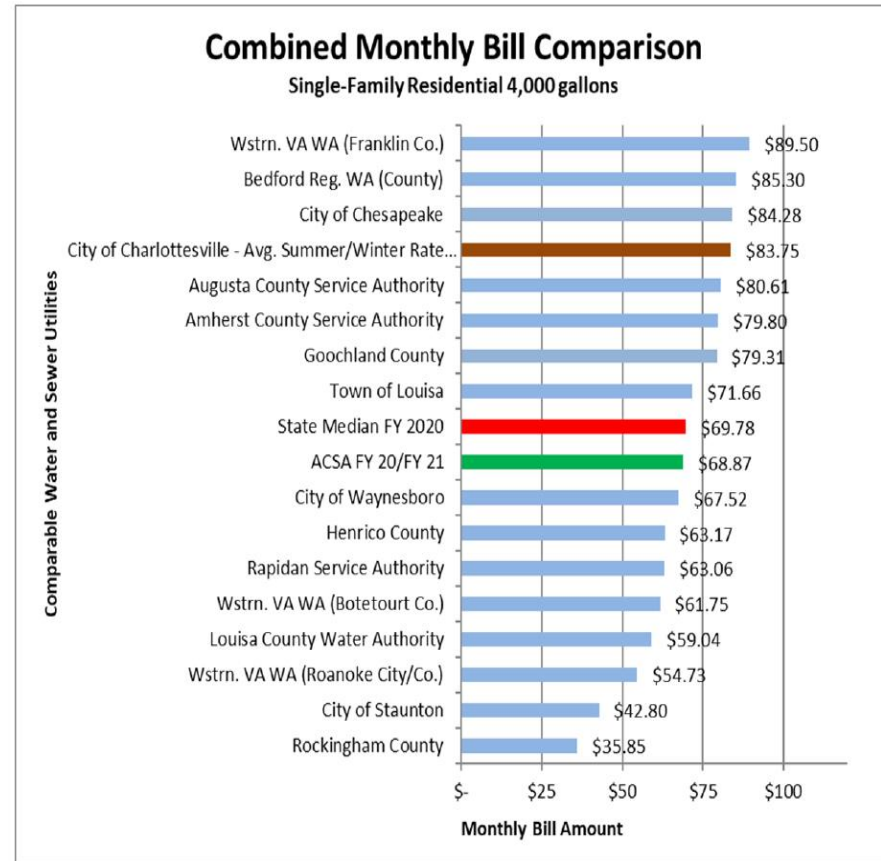
- ◆ Increase of 0.00% in customer rates
- ◆ Anticipated increase in RWSA treatment costs of 0.42%



Value of Water



ACSA Monthly Bill Comparison to Comparable Utilities



Source: The 31st Annual Virginia Water and Wastewater Rate Report 2019, <http://daa.com/wp-content/uploads/2019/Report-2019-for-digital-WW.pdf>

FY 2021 Expenses

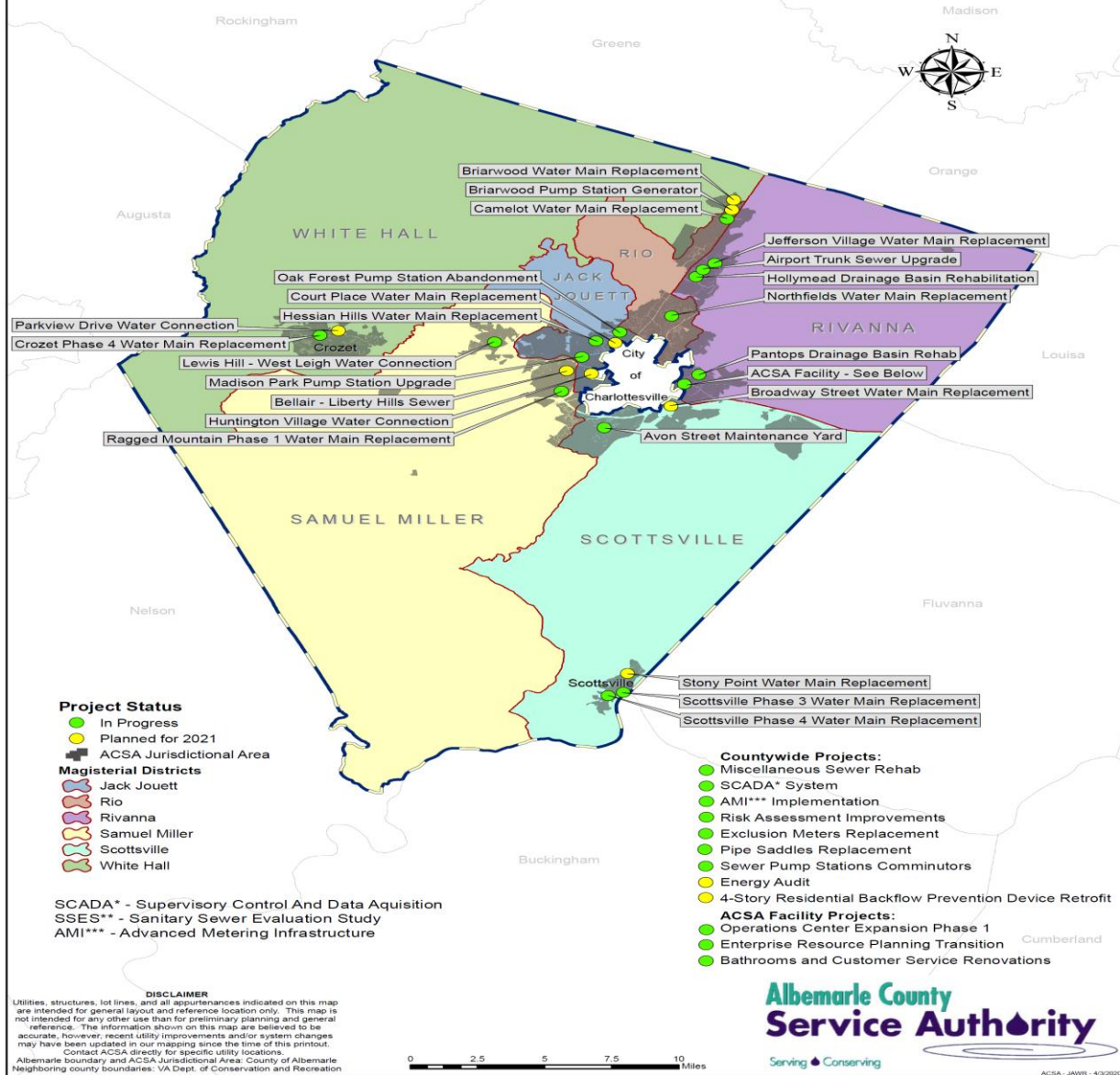
Total Budget: \$32,570,000

- ◆ Purchased Water/Wastewater Treatment:
 - ◆ \$19,168,100
- ◆ Operating Departments
 - ◆ \$9,705,200
- ◆ Transfers for Capital Improvements/Non-Operating Expenses
 - ◆ \$3,696,700

WHERE THE DOLLARS GO



Albemarle County Service Authority Capital Improvement Projects by District



Budget Next Steps

- ◆ May 2020
 - ◆ Budget insert in customer bills
- ◆ June 18, 2020
 - ◆ Public Hearing
 - ◆ 2nd Budget Workshop
 - ◆ Budget Adoption
 - ◆ Rate Adoption
- ◆ October 15, 2020
 - ◆ 1st Quarter Review/6 months into the Pandemic
 - ◆ Long-Term Financial Trends
 - ◆ Review of RWSA Capital Project Forecasts



serviceauthority.org
 Customer Service: 434-977-4511
 custserv@serviceauthority.org

FY'21 Budget & Rates

Strategic Use of Reserves Eliminate Rate Increase During Pandemic

Dear Customer,

Before the COVID-19 Pandemic reached our community, the ACSA was prepared to propose an increase in our rates for the next fiscal year due to the needs of our partner, the Rivanna Water and Sewer Authority (RWSA), who had planned to address several essential infrastructure initiatives. The pandemic changed all that and continues to adversely affect all aspects of our daily lives, placing great financial strain on our community.

Working collaboratively with the RWSA, we have reevaluated current and future operations and capital projects to ensure that no increase would be passed on to customers in this proposed budget starting July 1. Over the years, we've responsibly established reserves for just this purpose. The proposed budget will leverage these reserves to fund our work.

As always, we thank you for your consideration. We will get through these difficult times together.

Gary O'Connell
 Executive Director,
 Albemarle County Service Authority



More than 60% of your bill
 pays for RWSA's services



One Penny buys
 2.2 GALLONS of Water

Proposed ACSA Water & Sewer Monthly User Rates

| Rates and Charges | FY'20 | FY'21 |
|--|---------|---------|
| Service Charge | \$8.57 | \$8.57 |
| Volume Charge: Single-Family Residential (per 1,000 gallons) | | |
| Level 1: Up to 3,000 gallons | \$4.48 | \$4.48 |
| Level 2: 3,001 to 6,000 gallons | \$8.98 | \$8.98 |
| Level 3: 6,001 to 9,000 gallons | \$13.46 | \$13.46 |
| Level 4: More than 9,000 gallons | \$17.96 | \$17.96 |
| Multi-Family/Non-Residential (per 1,000 gallons) | \$8.66 | \$8.66 |
| Sewer: All Users (per 1,000 gallons) | \$9.47 | \$9.47 |

Monthly Bill Comparison





- Technology Innovation
- Customer Service Improvements
- AMI – Advanced Metering
- Customer Service Requests
- Online Bill Payment

AMI BENEFITS



*Enhanced
Customer
Service*



*Proactive
Leak
Alerts*



*Customer
Cost
Control*



*Added
Efficiency &
Sustainability*

AMI SYSTEM

How AMI Works



Usage data from your water meter is sent to the ACSA.



The data is relayed across the ACSA's communications network to its offices.



The ACSA reviews the water usage data for customer billing & leak detection.



The ACSA's new Customer Portal & updated bill make the information always available & easy to read.



serviceauthority.org
Customer Service: 434-977-4511
custserv@serviceauthority.org

news & updates

Introducing MyWater Provided by ACSA

Dear Customer, **“There’s a way to do it better. Find it.” – Thomas Edison**

As COVID-19 has radically impacted our lives, our work at the ACSA to maintain and improve our infrastructure in a timely, cooperative, and financially responsible manner continued on. So, with Mr. Edison in mind, I’m proud to announce the launch of MyWater, an ACSA innovation program that will improve upon the high-quality services we currently provide through a series of customer service and infrastructure-related improvements.

One of our goals with MyWater is to make your lives easier while making our water system more resilient and efficient. Over the coming weeks, months, and years, you as a customer will benefit from a series of improvements to your water system and our customer service operations. At the same time, the ACSA will gain valuable information about our infrastructure so we can keep it strong for decades to come.

The first MyWater innovation that will both benefit you and the ACSA is the start of our Advanced Metering Infrastructure (AMI) project. Later this year, we will begin upgrading all of our 20,000-plus water meters with ones incorporating the latest technology. The entire project will take 18 months to complete.

With AMI, you will gain 24/7 access to your account enabling you to review your usage in near real-time, giving you more control over your costs than ever before. (See reverse side.) The ACSA gains a major operational advantage: the increased ability to remotely manage our systems. This will significantly save on energy costs, lower our carbon footprint, and cut employee risk from auto accidents.

It’s hard to find a better program to launch under MyWater. In the coming months, we will announce more innovations, including a new customer payment and communication system that will provide the most convenient methods of payment and the ability to receive information from the ACSA in the ways you prefer.

I look forward to keeping you updated about MyWater’s progress. Before I close, I want to thank you all for your patience and understanding as we have dealt with COVID-19-related changes to our operations here at the ACSA. Because of your resilience and the dedication of our hard-working employees, we have been able to manage the challenges of this pandemic with little impact on our services or our operations.

Thank you.

Gary O’Connell, Executive Director



ACSACONNECT



ACSA_connect

www.serviceauthority.org



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Urban Area

2020 Annual Drinking Water Report

Includes Testing for 2019

Your Water Quality

Providing You with High-Quality Drinking Water

This year, as we joined together to help flatten the curve of COVID-19, the dependability of your drinking water was never more important. Because of the treatment processes used by our partner, the Rivanna Water and Sewer Authority (RWSA), and other water utilities around the world, the coronavirus did not impact our water. Your water continues to be safe to drink.

The ACSA and the RWSA are committed to making sure your drinking water is of the highest-quality. This year, we continued to implement improvements that added protection against disinfection by-products and lead and copper corrosion. We are also pleased to state, as detailed in our Annual Drinking Water Quality reports coming in June, that your drinking water met or exceeded all federal and state drinking water standards.

Delivering safe, clean drinking water to your faucets is a public trust. We will continue our work to earn that trust from you every day.



Gary O'Connell
Executive Director, Albemarle County Service Authority

Water Treatment Process Improvements

Last December, ACSA and our water partner RWSA improved our already high-quality water treatment processes. RWSA proactively upgraded its corrosion inhibitor to ensure the latest technology was being used to protect the public. The inhibitor provides added protection for pipes and fixtures from internal corrosion, which can cause lead and copper to leach into drinking water.

Extensive testing verified the new inhibitor would be more effective while not adversely affecting our customers. The transition began with the Crozet Water Treatment Plant, and will be followed by the Scottsville and Urban Area water treatment plants throughout 2020. (The implementation is being delayed slightly by the impacts of the COVID-19 pandemic.)



Annual Drinking Water Reports Available June 1

On June 1st, the ACSA's latest annual Drinking Water Reports - which cover the calendar year 2019 - will be available on our website at <https://serviceauthority.org/customerservices/waterqualitysupply/water-quality/>. You can click on the report specific to your water system. In addition to the test results, there is important information about your source water; treatment changes, including the addition of granular activated carbon; and upgrades in corrosion control. If you wish to receive a paper copy of the report, contact Tim Brown at tbrown@serviceauthority.org or 434-977-4511, ext. 119.



QUESTIONS