


MEMORANDUM

To: Albemarle County Board of Supervisors
From: Gary O'Connell, Executive Director 
Date: January 19, 2022
Re: Albemarle County Service Authority (ACSA) Quarterly Briefing
cc: Mr. Jeff Richardson, County Executive; ACSA Board of Directors;
ACSA Leadership Team and Operations Council

We do thank you for the continuing opportunity to share with the Board of Supervisors and the broader community what is happening at your water agency, the Albemarle County Service Authority. We pride ourselves on safe, clean, reliable Albemarle water. Happy New Year! Here are some recent updates from the ACSA:

- 1. 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. 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 January 2019 Customer Survey, over 97% of the respondents found it important to have leak notification. We also will be adding in the future a new customer "portal" online feature for a customer to track their water use. The initial phase has been successfully completed to install 500 new meters and communications devices. The next phase (of 500 meters) will begin in early 2022. The remaining 19,500 meters are the final phase. With the global chip shortages, our meter deliveries have been delayed. In the meantime, all our antenna installations are being completed. Notices will go out to each customer 30 days prior to installation, and then a mailer card 5 days prior to the meter install. 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.
- 2. New Financial System** – Our new financial and human resources system went live on January 1st. This modernizes all our financial transactions. This a huge project to accomplish for an organization our size.
- 3. Imagine a Day Without Water** – Water Partner Program to promote water conservation through a student art contest. A copy of the award winners is attached.

4. **ACSA Capital Projects Update** - The approved FY 2022 Capital Improvements Program totals \$11.1 million. Highlights and current major projects are detailed below:

- **Madison Park Pump Station Upgrade** - Constructed 37 years ago, by a private development, and the original equipment is wearing down, building is undersized, and we are not able to install SCADA (computerized monitor). The plan is to replace this pump station on-site. Design work is at the 100% stage. Easement acquisition is complete with bidding to occur in 2022.
- **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. Work on the construction is under way with about 70% completion. A major underground tunnel bore has been completed for the sewer piping for this project.
- **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 100% completed. We have completed easement acquisition. The project is planned to be bid in early 2022.
- **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. Rehabilitation work is under way, and about 95% complete.
- **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 now complete, and project to be bid in 2022.
- **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. The design phase is complete and easement acquisition is under way. The VDOT Lickinghole Creek Bridge Replacement must be completed before we start this water main replacement.
- **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. Work along Barracks Road and Georgetown

Road is continuing to take place at night due to high traffic volumes during the day. Construction on this project is about 75% complete. Paving is taking place on the neighborhood streets as weather permits.

- **Hollymead Sewer Rehabilitation** - 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 and smoke testing have been completed. Rehabilitation work has begun and work is at the 5% stage.
- **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 and a portion of the Woodbrook Pump Station force main has been identified for replacement.
- **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 are being conducted of all systems, including operation and maintenance procedures to determine where energy conservation can be improved. An evaluation of infrastructure needed to convert our fleet to electric vehicles has been added to the scope of the audit. The project is at 85% completion.
- **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 develop the ACSA owned Avon Street property into a satellite facility for larger vehicle and materials storage. The Planning Commission has approved the Comprehensive Plan Compliance review. Design of the site is under way at the 60% stage, and the initial site plan has been submitted to the Albemarle County Planning staff.
- **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 work is 90%

complete. We are coordinating with VDOT where their road improvement project overlaps with ours. Easement acquisition is under way.

- **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 complete, with design under way at the 50% stage. The design of some sanitary sewer extensions as part of this project, specifically in areas along the road, has been added to our consultant's scope of work.
- **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 396, with about 100 replaced thus far, or about 20%.
- **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.
- **Scottsville Phase IV (James River Road) Water Main Replacement** - Continues our systematic program to replace undersized and deteriorating water mains in the ACSA system. At the 50% design stage.
- **Briarwood Water Main Replacement** – Our Strategic Plan calls for the eventual replacement of PVC (pre-1990) water mains in our system, as they are older and made of weaker material than the current industry norm. This project will replace the PVC water mains that have been in service since the early 1980's. The field surveying work has been completed. Design work is nearing the 25% stage.
- **Broadway Street Water Main Replacement** – This project will replace the ductile iron water main that was installed in the early 1970's and has been found to be in deteriorating condition based upon recent excavations. With the redevelopment of the Woolen Mills Factory and Albemarle County's increased attention on economic revitalization of this corridor, replacement of this water main is crucial to transforming this area. Project is at the 50% design stage.
- **Bellair – Liberty Hills Sewer** – Over the past several years there has been an increase in residents of the Bellair Subdivision seeking to connect to

public sanitary sewer service since most residents are currently served by private septic fields. In an effort to gauge community interest for such a project, ACSA staff mailed out a survey to the residents seeking feedback on their interest. Based on initial feedback received, a majority of the property owners are interested in connecting to public sewer if it was made available. The project is in the preliminary design phase with additional field surveying under way.

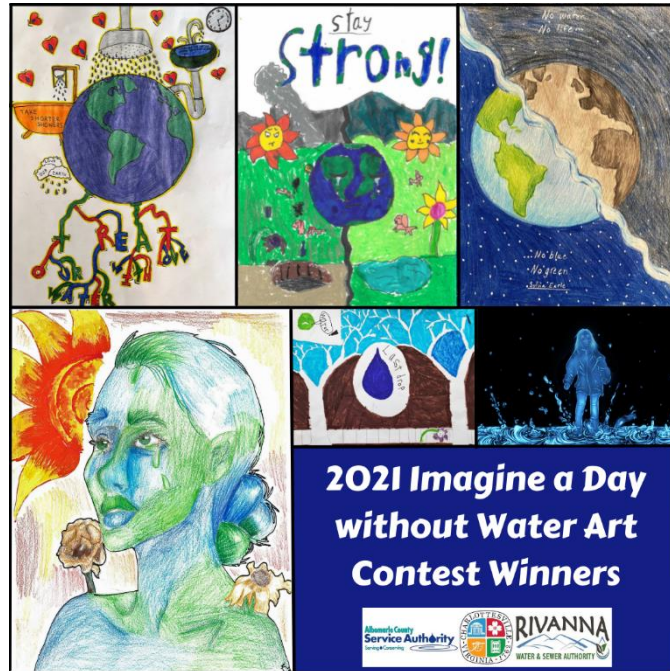
Let us know if you have further questions or comments. We are more than glad to meet with you or hold a virtual meeting to talk about any of our projects, or facilities, or provide a tour if that would be useful.

Attachments:

- Imagine a Day Without Water Student Art Award Winners
- Winter Customer Newsletter

FOR IMMEDIATE RELEASE
DECEMBER 8, 2021

2021 Imagine a Day without Water Art Contest Winners Announced



CHARLOTTESVILLE, VA – THE CITY OF CHARLOTTESVILLE, THE ALBEMARLE COUNTY SERVICE AUTHORITY (ACSA), AND THE RIVANNA WATER & SEWER AUTHORITY (RWSA) PARTNERED IN THEIR SEVENTH ANNUAL “IMAGINE A DAY WITHOUT WATER” CAMPAIGN TO EDUCATE AND INSPIRE THE COMMUNITY ABOUT THE VALUE AND IMPORTANCE OF WATER. THE GOAL OF THIS CAMPAIGN IS TO ENCOURAGE WATER CONSERVATION IN OUR EVERYDAY LIVES.

The national campaign consists of public awareness, as well as an art contest inviting youth from throughout the City and County to illustrate why they “Love Our Water.” This year, to accommodate COVID-19 precautions, the competition accepted traditional as well as digital submittals. Judges from the City, ACSA, and RWSA evaluated the artwork for creativity, originality, and incorporation of the contest’s theme. Of the 224 poster entries received from youth in Charlottesville and Albemarle County, one winner was chosen from each of five grade divisions. In addition, the top 63 entries were available to the public to view online and vote for a favorite art entry; with 1033 total online votes, a fan favorite was selected. All six winners will receive a \$200 gift card and a water conservation goodie bag.

The winners for the 2021 Imagine a Day without Water Art Contest are:

- **K – 2nd Grade:** Grant Smith, Mountaintop Montessori, 2nd Grade
- **3rd – 4th Grade:** Ruby Buchanan, Mountaintop Montessori, 4th Grade
- **5th – 6th Grade:** Nora Neathery, Henley Middle School, 6th Grade
- **7th – 8th Grade:** Jane Friesen, Village School, 7th Grade
- **9th – 12th Grade:** Isabella Sorrentio, Albemarle High School, 12th Grade
- **Fan Favorite:** Leilani Durette, Henley Middle School, 6th Grade

In addition, teachers were encouraged to promote student participation, and four teachers were selected to receive a \$200 gift card to be used for classroom projects: Ginnie Daugherty (Mountaintop Montessori), Julia Sapir (Tandem Friends School), Dana Snead (Henley Middle School), and Megan Greenwood (Venable Elementary).

“We were so excited to see such great participation in this year’s Imagine a Day without Water Art Contest,” said Jill Greiner, the City’s Water Efficiency Program Coordinator. “The Charlottesville youth really showed their love for our water and why we should only use what we need.”

In addition to the art contest, the campaign brings awareness and useful information on how to conserve water. The City and ACSA offer rebates for installing WaterSense labeled toilets and rain barrels, as well as offer water saving devices available for pick up at their respective offices. Lastly, they stress the importance of finding and fixing leaks in homes, as even a small drip can waste 3,000 gallons of water each year.

For more information about the Imagine a Day without Water Art Contest including full contest rules and official entry form, visit www.charlottesville.gov/artcontest. More background information about the Imagine a Day without Water campaign can be found here: <http://imagineadaywithoutwater.org>.

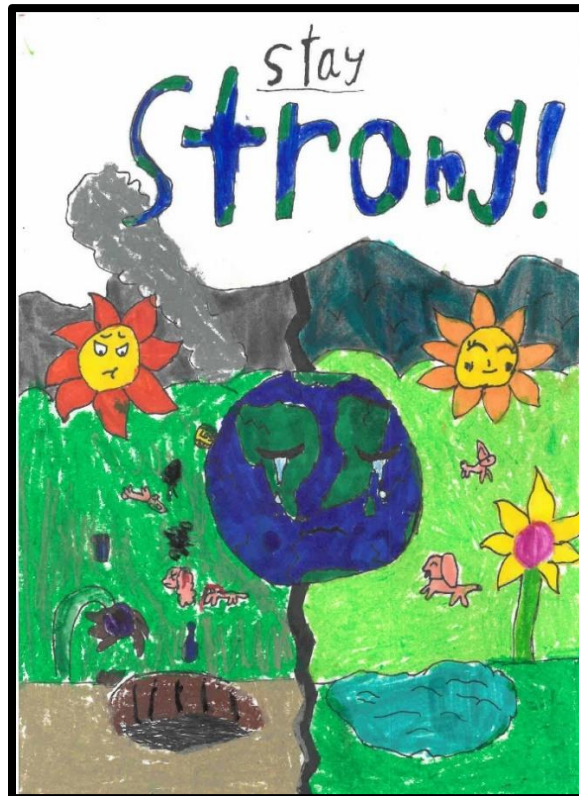
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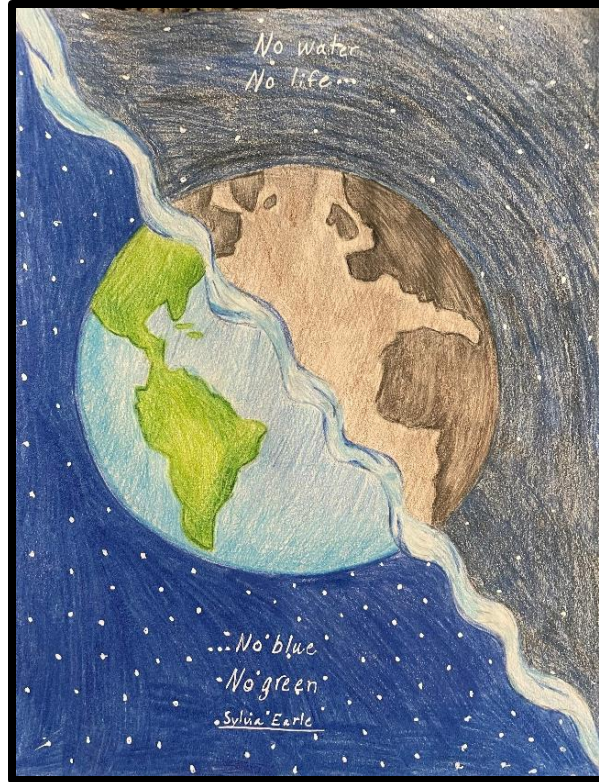
2021 Imagine a Day without Water Art Contest Winners



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Fan Favorite Winner: Leilani Durette, Henley Middle School, 6th Grade

news & updates

High-Quality Water Every Single Day

Dear Customer,

Throughout Covid and this January's winter storm, the ACSA's dedicated staff has been proud to provide you with high-quality water and wastewater services you could count on when just about everything else in our lives was negatively impacted. As we make our way into 2022, our employees' water quality work never ends.

The EPA has updated its regulations regarding two of our country's most-pressing water quality issues: lead pipes in our nation's water systems and the discoveries of PFAS chemicals - which are used to make our clothing, carpets, and couches water and stain resistant - in water supplies and drinking water.

In December, the EPA released the latest Lead and Copper Rule (LCR), a set of regulations governing how water providers must operate their systems so their customers are protected from exposure to lead through their drinking water. The LCR directs us to update our testing processes, search for lead service lines, add schools and childcares to our testing efforts, and improve customer communications.

When it comes to PFAS, the EPA will require testing for 29 more of these chemicals starting in 2023, with the results reported to you through our water quality reports. While we will provide more details to you in the coming months, I can tell you today the ACSA, along with our water provider Rivanna Water and Sewer Authority, are uniquely confident about both the lack of lead and of PFAS chemicals in our drinking water systems.

Several rounds of water sampling have confirmed we are well in compliance with the EPA's LCR before it even takes effect, and that previously conducted PFAS testing shows we are not detecting these chemicals in our drinking water.

This does not mean we will rest on our laurels. We will continue to work every day toward delivering to your taps the safest and cleanest drinking water.



Gary O'Connell, Executive Director



Top Tips to Protect Your Pipes This Winter

As the winter continues, the ACSA wants to give you a few tips to help you avoid costly, cold-weather damage to your plumbing.



- Tightly close doors & windows
- Insulate pipes in unheated & drafty areas
- Shut off & drain pipes leading to your outside faucets
- Know where your main shutoff valve is
- Open cabinets to allow heat to circulate
- Allow the faucet farthest from your shutoff valve to drip & keep the water moving
- To thaw a frozen pipe, turn up your heat, open your cabinets, run a warm hair dryer, & use hot, wet towels on the pipe
- If you can't figure out the problem, call a licensed plumber.

WATCH THE WINNERS!

2021 Youth Art Contest

*Imagine a Day
without Water*



Along with the City of Charlottesville & the Rivanna Water & Sewer Authority, the ACSA is proud to announce the winners of our 2021 "Imagine a Day Without Water" Youth Art Contest.

Please take a moment to watch the amazing work of our young people. Search "Cville Communications Imagine" on YouTube for the city's video announcing the winners.

Albemarle County
Service Authority
Serving • Conserving



RIVANNA
WATER & SEWER AUTHORITY