BOARD OF DIRECTORS' MEETING

May 18, 2023
9:00 A.M.

AGENDA

This meeting is being held pursuant to and in compliance with Va. Code Section 2.2-3708(3). The ACSA Board of Directors is responsible for receiving public comment. The opportunities for the public to access and participate in the electronic meeting are as follows: Join the meeting virtually through Zoom by visiting our website at www.serviceauthority.org; call in and leave a message prior to the meeting at (434) 977-4511, or email the Board prior to the meeting at board@serviceauthority.org.

9:00 a.m.	**1.** Call to Order and Establish a Quorum –Statement of the Board Chair
9:05 a.m.	**2.** Recognitions – Debbie Grady – 45 Years of Service; William Defibaugh – 25 Years of Service
9:15 a.m.	**3.** Approve Minutes of April 20, 2023
9:30 a.m.	**4.** Matters from the Public
9: 40 a.m.	**5.** Response to Public Comment
9:50 a.m.	**6.** Consent Agenda
	a. Monthly Financial Reports
	b. Monthly Capital Improvement Program (CIP) Report
	c. Monthly Maintenance Update
	d. Rivanna Water and Sewer Authority (RWSA) Monthly Update
	e. ACSA Board Policy Future Issues Agenda 2023
	f. Advanced Metering Infrastructure (AMI) Project Update
	g. Annual Water Quality Report – CCRs
10:05 a.m.	**7.** FY 2024 Proposed Budget and Rates Workshop & Presentation
10:35 a.m.	**8.** Resolution Authorizing Easement Acquisition- Crozet Phase 4 Water Main Replacement Project
10:50 a.m.	**9.** Scottsville Water Infrastructure Transfer
11:05 a.m.	**10.** Items Not on the Agenda
11:10 a.m.	**11.** Executive Session – Executive Director Annual Review- Part II
	12. Adjourn

ALBEMARLE COUNTY SERVICE AUTHORITY

STATEMENT OF CHAIR TO OPEN MAY 18, 2023 MEETING

This meeting today is being held pursuant to and in compliance with Va. Code Section 2.2-3708.3.

The opportunities for the public to access and participate in the electronic meeting are posted on the ACSA's website. Participation will include the opportunity to comment on those matters for which comments from the public will be received.

R E S O L U T I O N

***WHEREAS** Deborah M. Grady began her career on May 15, 1978, and has served the Albemarle County Service Authority for*

45 Y E A R S; and

***WHEREAS** her efforts and service to the Albemarle County Service Authority in the Customer Service, Engineering and Administration departments have contributed to the growth and reliability of the public water and sewer systems in Albemarle County; and*

***WHEREAS** she was instrumental in the development of the Administration Department, particularly through her administrative support in the implementation of the Water Conservation and Safety Programs; as well as her commitment to providing responsive customer service; and*

***WHEREAS** the Albemarle County Service Authority and its customers have greatly benefited from her dedicated, reliable service and invaluable historical knowledge; and*

***WHEREAS** the Board of Directors of this Authority believes that such recognition should be publicly made;*

***NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Albemarle County Service Authority expresses its sincere gratitude to*
Deborah M. Grady
for her service to the customers of the
Albemarle County Service Authority.

* *

I hereby certify the foregoing to be a true and exact copy of a resolution adopted by the Board of Directors of the Albemarle County Service Authority in a regularly scheduled meeting held May 18, 2023, by a vote of __ to __.

_____

Gary B. O'Connell, Secretary-Treasurer

R E S O L U T I O N

***WHEREAS** William "Billy" Defibaugh began his career on May 22, 1998, and has served the Albemarle County Service Authority for*

2 5 Y E A R S; and

***WHEREAS** his efforts and service to the Albemarle County Service Authority, in the Facilities Maintenance department, have contributed to the reliability of the public water and sewer systems in Albemarle County; and*

***WHEREAS** his ability and willingness to collaborate with other departments has been integral in the success of numerous projects and special events, as well as the continuity of business and operations of the ACSA; and*

***WHEREAS** the Albemarle County Service Authority, its customers, and employees have greatly benefited from his dedication, reliable service, and "can-do" attitude; and*

***WHEREAS** the Board of Directors of this Authority believes that such recognition should be publicly made;*

***NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Albemarle County Service Authority expresses its sincere gratitude to*
William "Billy" Defibaugh
for his service to the customers of the
Albemarle County Service Authority.

* *

I hereby certify the foregoing to be a true and exact copy of a resolution adopted by the Board of Directors of the Albemarle County Service Authority in a regularly scheduled meeting held May 18, 2023, by a vote of __ to __.

_____

Gary B. O'Connell, Secretary-Treasurer

Albemarle County Service Authority Board of Directors

The Board of Directors of the Albemarle County Service Authority (ACSA) met in a regular session on April 20, 2023, at 9:00 a.m. at the Administration and Operations Center at 168 Spotnap Road in Charlottesville, Virginia.

Members Present: Mr. Richard Armstrong, Chair; Mr. Nathan Moore; Dr. Lizbeth Palmer; Mr. John Parcells; Mr. Clarence Roberts (virtual); Mr. Charles Tolbert, Vice-Chair.

Members Absent: None.

Staff Present: Mike Derdeyn, Brendan Ganz, Terri Knight, Jeremy Lynn, Roland Bega, Quin Lunsford, Alex Morrison, Gary O'Connell, Emily Roach, Danielle Trent, April Walker, Justin Weiler, Deanna Davenport, Jennifer Bryant, Tonya Foster.

Staff Absent: Michael Lynn.

Public Present: None.

1. Call to Order and Establish a Quorum – Statement of Board Chair

Mr. Armstrong called the meeting to order, and a quorum was established. He then read the opening Board Chair statement (Attached as Page _____). He stated that Clarence Roberts, Board member, was electronically present for the meeting. Mr. Roberts stated that he was joining the meeting from his home due to a temporary medical condition. Mr. Armstrong added that Mr. Roberts did notify him of his planned remote participation in advance, and the Board would now vote on approving his remote participation.

Mr. Parcells moved to approve Mr. Robert's remote participation in the April 20, 2023, ACSA Board of Directors meeting, seconded by Dr. Palmer. All members voted aye.

2. Approve Minutes of March 16, 2023

Mr. Parcells stated that he had several corrections to the minutes. He stated that the first correction is on page 10, line 1. He noted that the

word "can" should be "can't." He stated that the second correction is on page 11, line 1. He stated that it should read "Dr. Palmer" not "Dr. Parcells." He stated that on page 12, line 15, the word "began" should be "begun." He stated that the fourth correction is on page 14, line 22. He noted that the letter "y" is missing from the word "battery." He asked, in terms of the batteries for the AMI radio units, will there be some sort of mechanism within the group to ensure they are aware and ready to replace them at the end of their 20-year life span. Mr. Lunsford replied yes, absolutely. Mr. Parcells moved to the fifth correction on page 15, line 13. He stated that the number is missing, which should be one.

Mr. Parcells moved to approve the minutes as amended, seconded by Dr. Palmer. All members voted aye.

3. Matters from the Public

There were no matters from the public.

4. Response to Public Comment

There was no response to public comment.

5. Consent Agenda

a. Monthly Financial Reports – Mr. Parcells stated that the Maintenance department looks to be 20% behind in operating expenses. He stated that it seems late in the cycle to be so behind. Mr. Lunsford replied that a lot of that has been driven by vacancies in the Maintenance department. He stated that additionally, procuring equipment and materials has been a struggle due to supply chain issues, thus the staff has not been able to purchase and spend the funds that were anticipated. Mr. Parcells stated that Mrs. Roach mentioned at the last Board meeting that offers were made for those vacant positions, and he asked if they had been filled. Mrs. Roach replied that they have all been filled except for one. She added that an

offer for the last vacancy has been extended, and they are waiting on a start date. Mr. O'Connell added that the organization has been short on maintenance personnel the entire year, and those salaries can add up in terms of the budget.

Mr. Parcells stated that he had another question about the ACSA's investments. He asked if PFM Asset Management was working on getting some of the 4% options. Mr. Lunsford replied that PFM is constantly and actively trading the portfolio, with several trades a day. He stated that he would be happy to provide the trading activity from any given month. He mentioned that it is about 10-15 pages of buys and sells. He noted that that PFM is active and engaged, specifically in the U.S. Treasury, in various markets to leverage as much of the interest rate change as they can. He added that the ACSA is seeing positive returns in its portfolio, contrary to last year when the organization struggled to earn.

Mr. Parcells stated that the third item he wanted to look at was the receivables arrearages. He stated that the graph dropped to zero and asked if that was because the staff was successful in negotiating all those payments or is it due to a write-off. Mr. Lunsford replied that there are still a number of payment plans that are not reflected in that graph, but the customers are making payment in accordance with the terms they established with the ACSA. He mentioned that there are only a few disconnections every other day or so, and those customers are reconnecting. He noted that in a pre-COVID environment, there would be a negative balance in the greater than 90 days category due to customers paying for service in advance which creates a credit situation. He added that the organization will be in credit territory again soon. Mr. Parcells asked if the LIHWAP assistance was still an option. Mr. Lunsford replied that the ACSA is still actively participating in the project and encouraging customers that are in danger of disconnection to participate. He mentioned that the staff has contacted all the

customers on a payment plan to urge them to apply. He stated that the number of customers taking advantage of the program has slowed, thus it seems that most of the customers that were eligible have participated.

b. Monthly CIP – Mr. Parcells asked about the status of the easement offer mentioned on page 70, as part of the Crozet Phase 4 Water Main Replacement project. Jeremy Lynn replied that certified letters have been sent to the P.O. box and the physical address of the property owner, but they have yet to accept them. He stated that the staff is trying to explore other delivery methods to get the offer letter in their hand before beginning the condemnation process. Mr. Parcells asked if the property owner is aware of this. Mr. Lynn replied that the owner is aware that the ACSA is attempting to secure the easement, but he does not know if they are aware of the final offer because they have yet to pick up the letter. He stated that the easement is already encumbered by other easements, so it has limited value.

Mr. Parcells stated that he had a question about the Lewis Hills – West Leigh Water Connection project on page 79. He asked if the ACSA was waiting on the HOA to decide on the necessary easement. Mr. Lynn replied that the ACSA is waiting on the HOA's next Board meeting so they can discuss whether they want to grant a new easement or accept the fact that the ACSA can utilize the existing easement. Mr. Parcells asked when that meeting will be and if it affects the timing of the project. Mr. Lynn replied that this project will be constructed under the upcoming repair and replacement project which has yet to be advertisement, so the easement is not currently holding up construction.

Mr. Parcells stated that he had another question about the Active Private Development Projects on page 83. He stated that there are 1,385 units total listed as new development. He mentioned that the list changes a little from month to month but asked if overall, the units

listed are expected to be the new connections being made over the course of the year. Mr. Lynn replied that each year, the engineers are tasked with projecting equivalent residential connections, or ERCs, for the upcoming fiscal year. He stated that they do this by looking at all the projects and anticipating what will come on service in the upcoming fiscal year. He mentioned that a lot of the projects will span multiple fiscal years, so all 1,385 will not necessarily come on service at the same time.

Mr. Tolbert stated that he had a question about the Four-Story Backflow Prevention Assembly Retrofit project. He asked how many more retrofits were left to be done. Mr. Lynn replied that the project is about 1/3 complete. He stated that the staff has begun communicating with customers in Phases 2 and 3 and installs will begin in early May. Mr. Tolbert asked if there are new structures being discovered that need retrofitting or is the staff sure they have identified them all. Mr. Lynn replied that the staff is quite sure they have identified all the existing structures and are actively tracking this with new construction going forward.

Mr. Tolbert stated that he had another question about the Miscellaneous Sewer Rehabilitation project on page 75. He asked what a “pump and haul” effort was. Mr. Lynn replied that flow continues to come to a pump station, but they do not want to utilize the pumps and the force main because the sewers must be relined downstream. He stated that during a pump and haul operation, a truck is at the pump station that will pump the fluid from the wet well and haul it to another location downstream of where the relining efforts are taking place.

Mr. Tolbert stated that page 77 refers to an E/One system and asked what that is. Mr. Lynn replied that an E/One system is an individual pump owned by the property owner that pumps wastewater into a common force main along the road. He stated that every pump

from every lot would pump into a common force main, and each pump can get that individual property's wastewater all the way to the gravity system. He stated that this way, the properties are not dependent upon each other. Dr. Palmer stated that the thing that has always bothered her about these systems is the maintenance on the pump. She asked if Mr. Lynn could speak to how that will be handled. Mr. Lynn replied that the ACSA does not own any of the E/One systems so it would be the customer's responsibility to maintain them. He mentioned that the pumps should last about 10-15 years, but he has found customers that did not know they had individual private pumps on their property. He added that when the ACSA reviews and approves a set of private development plans, the staff will have identified what lots will be served by private grinder pumps. Dr. Palmer asked how much it costs to replace a failed pump. Mr. Lynn replied that new one is in the range of $10,000, while a replacement is around a couple thousand dollars.

c. CIP Authorizations –

d. Monthly Maintenance Update –

e. Rivanna Water and Sewer Authority (RWSA) Update – Dr. Palmer stated that the update mentioned "productive meetings" with UVA on easement negotiation regarding two major water pipeline projects. She asked what "productive" means. Mr. O'Connell replied that the major takeaway was that everyone agreed to have the matter settled by June at the latest. He stated that Tim Rose, head of the UVA Foundation, has been involved in those meetings as well. He noted that some of the discussion is about money, but some of it is about location. He added that this is more progress than what has been seen in the past.

f. ACSA Board Policy Future Issues Agenda 2023 –

g. Advanced Metering Infrastructure (AMI) Project Update –

h. National Drinking Water Week – Resolution

i. 2023-2025 Strategic Plan Update and Amendment –

Dr. Palmer moved to approve the consent agenda, seconded by Mr. Parcells. All members voted aye.

6. Proposed FY 2024 Capital Improvement Program (CIP)

Jeremy Lynn, Director of Engineering, stated that he wanted to thank several employees that have been involved in the development of the FY 2024 CIP program, including Gary O'Connell and the entire Engineering department. He mentioned that the Maintenance department's involvement with the CIP was expanded this year because of Mike Lynn's upcoming retirement and to get knowledge and input from personnel who perform this work daily. He noted that the IT department played a key role on several projects as well.

Mr. Lynn began his Power Point presentation (Attached as Pages _____). He stated, as the first slide showed, that the FY 2024 CIP budget is $11,552,000. He stated that there are two graphs on the slide, one showing the budget breakdown in terms of water vs. sewer projects, and the other showing the breakdown of existing vs. new projects.

Mr. Lynn stated that the next slide shows CIP rate model projections for the next ten years. He stated that typically, the staff feels it will be in the $11-$16 million a year range, with an uptick in FY 2025-2027 due to larger water main replacement projects that will reach construction by that time.

Mr. Lynn stated that a few years ago, in conjunction with its community partners, the ACSA completed a vulnerability assessment, out of which came several recommendations. He stated that construction of Priority 1 is currently underway with fencing and door hardening improvements. He stated that the staff would move into Priority 2 within the coming year, with funding already budgeted. He mentioned that Priorities 3 and 4 are out in the future, which include some new fencing at some of the pump station sites and lightening protection. He noted that there is no money in the FY 2024 budget for this project.

Mr. Roberts asked if there were security cameras at the pump stations. Mr. Lynn replied yes. He stated that the IT staff has installed security cameras at all the sites. He mentioned that the staff became aware of some illegal activity at one of the pump station sites, so additional security measures were put into place and the staff coordinated with the local police department. He noted that this activity has since ceased.

Dr. Palmer stated that a while back, there was a presentation on some projects that included lighting. She stated that she asked the question of whether the ACSA could switch from the bright, blue LED light to a softer light and someone on the staff was going to investigate it. Mr. Lynn replied that part of the ACSA's Energy Audit efforts has been transitioning to LED lighting at the pump stations and the ACSA Operations Center. Dr. Palmer stated that she is not talking about the transition to LED lighting, but rather the type of LED lighting that is being used, or the brightness. She mentioned that it has an environmental impact, and it would be better to switch to a softer luminance but was not sure if it would affect security. Mr. Lynn replied that he would have to speak to the ACSA Facilities team to see if any of those lights have been implemented or if there are plans to do so.

Mr. Lynn stated that there are a few projects in the CIP that are directly connected with the ACSA's Strategic Plan, like the Data Management and Dashboarding project on the next slide. He stated that this project was a recommendation that came out of the IT Security Assessment and will create dashboards that allow employees to access summarized data without accessing the source data. He stated that $20,000 has been budgeted for FY 2024, which will be split between the water and sewer funds.

Mr. Lynn stated that the next project is another Strategic Plan item. He stated that the Customer Information System (CIS) will replace the current billing system, which is more than 30 years old. He stated that this will coincide with a website redesign and phone system replacement, all of

which the ACSA will integrate with the AMI and ERP systems. He mentioned that there is $150,000 in the budget for FY 2024, which would be split between water and sewer. He noted that the total budget for the CIS project is $400,000.

Mr. Lynn stated that the next slide was of the ESRI Utility Network Implementation, which is another IT-focused CIP project. He stated that the ACSA is looking to develop and implement a utility network. He mentioned that in the event of a water main break, the system will tell staff what valves to close to isolate the break. He stated that with customers connected in the GIS, the system will also provide staff with an outage report to determine which customers will be impacted by a service disruption. He noted that there is $150,000 in the FY 2024 budget for this project, split evenly between water and sewer.

Mr. Lynn stated that the next project was the Energy Audit, which has been completed. He stated that the audit looked at the energy usage at the Operations Center and all the pump stations. He stated that the item in the audit that the ACSA is proceeding with in FY 2024 is the installation of vehicle charging stations at the Spotnap facility. He mentioned that the Engineering department's budget includes the ACSA's very first electric vehicle, thus the charging station needs to be in place before the vehicle arrives. He stated that $50,000 has been included in the FY 2024 budget, which will be split between water and sewer. Mr. Parcells asked if the budget for the Avon Street project includes solar panels and charging stations for that facility. Mr. Lynn replied yes.

Mr. Lynn stated that the Avon Operations Center was the next slide. He stated that this project is the largest one in the CIP budget and is a Strategic Plan item. He stated that RWSA is beginning to explore expansion of GAC at the ACSA's Crozet facility, which is where the overflow storage area is for the Maintenance department. He stated that the Avon Street property will replace the space that will be lost at the Crozet maintenance yard. He mentioned that the Avon Street property will

also provide a training area for the ACSA's equipment operators. He stated that the hope is for construction to begin in FY 2024, carrying over to FY 2025. He stated that there is $4.4 million budgeted for FY 2024, split between water and sewer. He noted that the overall budget for this project is almost $12 million.

Mr. Parcells asked if the $4.4 million for FY 2024 included all the grading work that needs to be done. Mr. Lynn replied yes. He stated that there is more than $10 million worth of grading and site work to be done. He stated that hopefully the site work and grading will be completed in the first year, and the building will begin in the second year. Mr. Parcells asked if this will all be on the back lot, or if any of the lots that are on Avon Street are involved. Mr. Lynn replied that all the construction will be on the back parcel. He mentioned that currently, nothing will be done with the individual lots along Avon Street. He added that one of those lots is not owned by the ACSA. Mr. Parcells asked if there was any effort to own it. Mr. O'Connell replied that the staff has had conversations with the property owner, and he is not interested in selling. He added that he is aware of what the ACSA will be doing.

Mr. O'Connell stated that RWSA received a grant for GAC in Crozet and they are moving faster than the ACSA anticipated. He mentioned that the timing will be tight to complete the facility on Avon Street and get things moved from Crozet. He added that Avon will also be an overflow facility for the Spotnap Road maintenance facility. He stated that the ACSA will grow into it as time goes on, and he suspects there may even be some staff assigned there in the future.

Mr. Parcells asked if there is a backup plan for temporary storage of equipment if the Avon Street facility is not done in time. Mr. Lynn replied that the ACSA has two buildings in Crozet currently, with one being more in need of the space for GAC. He stated that the ACSA will lose that building sooner than the second one, so there may be an option of consolidating some of the items into the second building.

Dr. Palmer asked when the ACSA acquired the property on Avon Street. Mr. O'Connell replied that the property was acquired as part of the land for the water tank, which was somewhere around 1980. He stated that it was a condemnation, and it was filed that it would be a tank site and the ACSA maintenance facility. He stated that it has been siting vacant since, and the tank is an RWSA tank that serves the Avon area. He added that there is room for a second tank to accommodate future growth as well.

Mr. Lynn stated that the next project is the ACSA Facilities-Fire Suppression System Replacement project. He stated that this is one of the four new projects that have been added to the FY 2024 CIP. He stated that, due to some recent repairs and inspections, the system has been found to be in poor condition and in need of replacement. He mentioned that the staff is pursuing a design-build contract that will allow them to collaborate with the contractor to find the best design and move right into construction. He stated that $750,00 has been estimated for this project, which will be split between water and sewer.

Mr. Lynn stated that the Records Management Project is the second new project, outlined on the next slide. He stated that the ACSA needs to reduce its physical storage needs and improve its record compliance. He stated that this project will involve scanning all paper documents and then destroying them. He noted that $300,000 is budgeted in FY 2024 for this project, split between water and sewer.

Mr. Lynn moved to the next slide which illustrated the Advanced Metering Infrastructure (AMI) project. He mentioned that this is the second largest project in the CIP budget currently. He stated that the full deployment stage of this project is underway, with almost 2,700 meters in the ground. He stated that $800,000 in FY 2204, split between water and sewer, should bring this project to the finish line.

Mr. Lynn stated that moving into some water projects, the next slide shows the Scottsville Phase 4 Water Main Replacement project. He stated that this project will replace aging cast iron and asbestos cement (AC)

water mains, as well as a section of RWSA water main between the filter plant and the water storage tank along James River Road. He stated that easement acquisition will probably take most of FY 2024. He mentioned that assuming all goes well with acquiring easements, construction should begin in FY 2025-2026. He noted that there are no funds budgeted in FY 2024 for this project.

Mr. Lynn stated that the next project was the Ragged Mountain Phase 1 Water Main Replacement project. He stated that this is the oldest water main in the system, at over 90 years old. He stated that the ACSA has been coordinating closely with VDOT on their bridge replacement project. He mentioned that he reached out to them earlier this week to get an update but has not heard back yet. He stated that the hope is to partner with them to get the project constructed in conjunction with the bridge work. Mr. Parcells asked why the map of the project shows the line that will be abandoned (yellow) connected to the line that will be replaced (pink). Mr. Lynn replied that currently, water comes from the Urban system through that yellow line to the pink one. He stated that the ACSA will connect into the Buckingham Circle neighborhood (orange line) which is much closer, install a PRV to reduce pressure, and then just feed the properties to the west. He noted that this will allow them to get rid of the water main represented by the yellow line on the map. Mr. Parcells asked where the bridge is on the map that is causing the issue. Mr. Lynn replied that the bridge would be located above where the yellow and pink line meet, just west of the entrance to Buckingham Circle. He noted that there is $342,000 budgeted for FY 2024.

Mr. Lynn moved to the next slide, which represented the Crozet Phase 4 Water Main Replacement project. He stated that this is the fourth out of five total water main replacement projects identified in the Crozet area. He stated that the focus is to replace AC and older PVC water mains, with most of the work being along Crozet Avenue and Rockfish Gap Turnpike. He noted that there is one remaining easement that has not been resolved,

which has delayed construction. Mr. Parcells asked where that easement is located. Mr. Lynn replied that it is near the Lickinghole Creek crossing of Crozet Avenue. Mr. Parcells asked if there would be any sense in starting the project with the expectation that the easement will be acquired. Mr. Lynn replied that the staff did discuss that option. He noted that, unfortunately, the ACSA needs a water protection ordinance from the County which they will not grant until all the easements have been obtained. Mr. Parcells asked how much lead time is required to get pipe materials for all this work. Mr. Lynn replied that it would be up to the contractor as to whether they want to order as they go or try to order it all at once. He stated that the ACSA staff is a bit concerned about what the supply challenges will be, with the amount of pipe required for this project. He noted that $2.175 million is budgeted for FY 2024. He added that the overall budget for the project is $6,534,400.

Mr. Lynn stated that the next project is the Northfields Water Main Replacement project. He stated that this neighborhood is a former well system that was later connected to public water. He mentioned that all the water mains are AC from the 1960s. He stated that design efforts are currently underway and there are no funds included in the FY 2024 budget for this project. He mentioned that construction is expected to take place during the FY 2026-2027 timeframe. He noted that this is another big project at an overall budget of $8.5 million. Mr. Parcells asked what the size of the project was in terms of miles. Mr. Lynn replied that he could get the exact size to him, but it was around a couple of miles at least. Mr. Parcells asked if the road is going to be dug up. Mr. Lynn replied that most of the work will be in the roadway. He stated that the good part is that Huntington and Northfield roads are parallel to each other, so residents should be able to find a way out.

Mr. Lynn stated that the next slide was the Huntington Village Water Connection. He stated that the sole water supply for this neighborhood currently runs under a large retaining wall. He stated that this project will

provide a second feed at the entrance of the neighborhood. He mentioned that the staff is hoping to utilize the ACSA's annual water repair and replacement contract to perform this work, which is expected to occur in FY 2024. Dr. Palmer stated that the Albemarle County Board of Supervisors (BOS) just approved a large apartment complex in that area and the plans call for a sidewalk. She stated that she wondered how they would put in a sidewalk with the wall there. Mr. Lynn stated that there is a ditch line between the edge of the pavement and the smaller retaining wall. He stated that there is a shelf and then the larger wall begins. Dr. Palmer stated that she wanted to mention it as an FYI for the ACSA's project.

Mr. Lynn moved to the Exclusion Meters Replacement project on the next slide. He stated that in the mid-1990s, the ACSA began allowing private exclusion meters which were predominantly in the Glenmore subdivision. He stated that a few years ago, the ACSA set out a program to eliminate all of them. He mentioned that the thought was it would be a five-year program to get rid of all 495 meters, but the project is four years in and there are still over 300 meters left. He mentioned that the staff is starting to explore alternative approaches, which was a recommendation that came out of the Best Practices Review Panel. He noted that there is no money included in the FY 2024 budget for this project, and the staff will continue to update the Board on the progress.

Mr. Lynn stated that the next project is the Pipe Saddles Replacement. He stated that a pipe saddle is a device used to connect the main to the individual water service line. He mentioned that over the past few years, these have started to fail primarily due to corrosive soil in the area. He stated that the staff has identified a couple of neighborhoods where they want to replace the saddles. He noted that money was previously budgeted for this project, thus there are no funds included in the FY 2024 budget. He added that the work will either be done by in-house crews or through the annual services contract.

Mr. Tolbert asked if the saddles are located near the meter. Mr. Lynn replied that they are typically in the road. He stated that the main runs down the road and the pipe saddle is located where it connects to the service line. Mr. Tolbert asked if that portion of the service line belongs to the ACSA. Mr. Lynn replied yes. He noted that until the line reaches the meter, it is the responsibility of the ACSA. Mr. Parcells asked how many saddles will have to be replaced. Mr. Lynn replied that he is unsure at this point. He stated that the goal is to target neighborhoods that have less dense service connections, where it makes sense to replace the saddle as opposed to the entire pipe. He noted that he would get into a few projects, such as Briarwood and Townwood, where it makes more sense to replace the entire pipe because there are too many saddles to dig up and replace individually.

Mr. Parcells stated that the interruption to the homeowner must be at least a day, if not several. Mr. Lynn replied that the Engineering department coordinates with the maintenance staff, and they try to tackle multiple saddles in one day. He stated that there are multiple crews that dig the day before and get everything ready to go, followed by a shutdown to switch over multiple saddles on the same day. He noted that it will be about a 6–8 hour shutdown.

Mr. Lynn stated that as he mentioned, Briarwood Water Main Replacement is another project in the FY 2024 CIP. He stated that this area has had both pipe and saddle failures, with at least five breaks since 2017. He stated that this project will replace older PVC water mains, with construction planned for FY 2027. He stated that the staff is currently working through the design phase now and have not begun easement acquisition, thus no funds are requested in the FY 2024 budget. He added that this project also allows for the abandonment of the water main on the map represented by the yellow line. He stated that it runs through the backyard of several properties, which will connect to the new line along the front of the properties.

Mr. Lynn stated that the next project is the Barracks West Water Main Replacement, formally Old Salem Apartments. He stated that this project will replace cast iron and galvanized water mains from the 1960s and improve fire protection. He mentioned that design on this project is moving along quickly, currently at 90% complete. He stated that there is only one easement to obtain, and construction could begin as early as FY 2024. He noted that there is $450,000 included in the FY 2024 budget, with additional funds in FY 2025 to wrap up construction.

Mr. Lynn moved to the Townwood Water Main Replacement project on the next slide. He stated that this is another area where there have been a number of saddle issues, with three main breaks in the past two years. He stated that the design phase is underway, and the field surveying efforts have been completed. He mentioned that $30,000 has been included in the FY 2024 budget to cover some additional soil borings and testing that will assist in the design process. He noted that the total project budget is $1.3 million. He added that the staff is looking to make the interconnect to Webland Drive, which should improve redundancy and reliability to both neighborhoods.

Mr. Lynn stated that the Broadway Street Water Main Replacement project will replace an aging cast iron water main that was found to be in poor condition. He stated that the ACSA has also taken this opportunity to coordinate with Albemarle County's Economic Development Office to look at their Broadway Blueprint. He mentioned that the ACSA is going to increase the pipe diameter to accommodate projected future development.

Mr. Parcells asked, going back to the Townwood project, if the interconnect to Webland Drive will be a different water main than what is on Hydraulic Road and if there are pressure differences. Mr. Lynn replied that they are the same pressure zone, but there are valves between the entrance to Townwood and Webland on RWSA's line. He stated that if there is a section along RWSA's line that has to go down, the ACSA can still feed through between the neighborhoods.

Mr. Lynn stated that $625,000 has been included in the FY 2024 budget for the construction of the Broadway project, and staff hopes to get construction underway this upcoming fiscal year.

Mr. Lynn stated that another PVC water main replacement project is Raintree and Fieldbrook, shown on the next slide. He stated that the pipes were installed in the 1980s and there have been several failures. He mentioned that the construction timeframe is FY 2027-2028, so there are no funds included in the FY 2024 budget for this project. He noted that this project seems to continue growing, at a total budget amount of $6,432,300.

Mr. Moore asked how many more areas are out there that have pipe in the ground from the 1980s or before, that are not in the CIP. Mr. Lynn replied that there are a lot of projects that are on the list Mr. Lunsford pulled together, which shows projects ten years out. He stated that one of the things the staff is working on is Operational Insights, which pulls data from maintenance inspections and work orders in Cityworks and tries to determine the priorities. He noted that the staff is doing an excellent job of staying ahead of issues, and they just have to keep being aggressive in their efforts.

Mr. Lynn stated that the next project, Annual Water Repair and Replacement Contract, is a new project that was shared with the Board last month. He stated that it is similar to what is done on the sewer side. He mentioned that smaller jobs that are not conducive to the design-build process can be given to the on-call contractor, as the design process can be expensive. He noted that $200,000 has been included in the FY 2024 budget for this project.

Mr. Lynn moved to the next slide, which outlined the Pump Stations – Rehabilitation Project. He stated that this is the last of the new projects that he presented last month. He stated that the ACSA facilities personnel was challenged this year with looking at needs over the next ten years at all the pump stations, including pumps, motors, grinders, and generators. He stated that the need identified for FY 2024 was climate control upgrades at

eight pump stations total – three water and five sewer. He mentioned that $120,000 has been budgeted for FY 2024 costs, and future funds will fluctuate on an annual basis depending on the needs. Mr. Parcells asked how many pump stations there are in total. Mr. Lynn replied there are about twenty. Mr. Parcells asked if the eight in this project are the priority in terms of making the upgrades. Mr. Lynn replied that a lot of the other stations are newer stations and already incorporated climate control measures, so these eight are the last of them to be done.

Mr. Lynn stated that he would next move on to a couple of sewer projects, beginning with the Airport Trunk Sewer Upgrade project. He stated that with continued development at the Hollymead Town Center and increased densities with the Places29 Comprehensive Plan, the existing sewer is not sized to handle full build-out. He stated that the design is underway, and staff is in the easement acquisition phase, with 8 of the 24 obtained. He mentioned that the construction timeframe is FY 2025-2026. He noted that there is some private development activity in the Kohl's area that may expedite this project and reduce the ACSA's involvement.

Mr. Tolbert stated that since this is an upgrade of an existing sewer line, there must already be some easements across all the properties. Mr. Lynn replied yes but noted that some of the design includes a parallel replacement as opposed to an in-trench replacement. He mentioned that allowing the contractor to go parallel reduces the amount of pumping and is advantageous but does require an easement. Mr. Parcells asked if the pond would be problematic when performing the trenching. Mr. Lynn replied that the ACSA will have to be cognizant of ground water in that area as well as determine if there is any rock. He noted that the advantage of going in-trench is that it has already been excavated.

Mr. O'Connell asked if Mr. Lynn could speak to the ongoing development in that area. Mr. Lynn replied that most of the development the ACSA is hearing of is on the west side. He stated that there is an apartment complex with a couple hundred units, as well as redevelopment

of the Forest Springs Mobile Home Park. He mentioned that Breeden Construction is the ACSA's partner in both developments and, if their rezoning and site plan goes through, they may want to break ground in the next year or so. He stated that the ACSA has broken this project down into three segments based on capacity. He stated that the first segment is the one closest to the Hollymead Dam. He stated that there is a second segment that will have to be upgraded if the apartment development were to exceed a certain number of units, which would leave the ACSA with the upper stretch that includes the crossing under Route 29. He mentioned that the existing pipe is about a 10", which will be upgraded to an 18" pipe. Mr. Parcells asked if that would be big enough for all the development. Mr. Lynn replied that there was a study to size the pipe and 18" is where they landed. Mr. Parcells asked if it would be a force main or strictly gravity. Mr. Lyn replied that it would be a gravity main.

Mr. Lynn mentioned that the next project was the Northfields Phase 5 Sewer project. He stated that as the staff dove into the Northfields Water Main Replacement project, several areas were identified where sanitary sewer could be installed along the roadway to serve customers that are currently on drainage fields. He stated that the plan is to construct the sewer project in conjunction with the water project to minimize the impact to customers. He noted that there is no money included in the FY 2024 budget for this project, with an overall budget of $650,000. Mr. Tolbert asked if this project depended on whether the customers decide to connect to public sewer. Mr. Lynn replied that most of the customers have expressed an interest in connecting, but it is not required that they do so. Mr. Tolbert asked if there was a financial advantage for the customer to connect when the project is completed, as opposed to doing it later. Mr. Lynn replied no unless connection fees increase in the future.

Dr. Palmer asked if some of this work was covered under federal grant money. Mr. O'Connell replied that there is some funding available for individual homeowners having septic system issues, but he does not think

that applies here. Mr. Lynn added that the ACSA provided the County with a number of parcels that have readily available access to existing sanitary sewer. Mr. O'Connell added that the County did seed a fund with ARPA money to connect homeowners with failing septic systems, to public sewer.

Mr. Lynn stated that the next project is the Madison Office Park Pump Station Upgrade. He stated that the pump station is a fairly small structure built in the early 1980s. He mentioned that it is undersized, the equipment needs to be replaced, and there is no room to connect this station to the SCADA system. He stated that a contract with Anderson Construction is underway, with construction scheduled to start later this year. He noted that $390,000 has been included in the FY 2024 budget, and the total budget is approaching $2 million.

Mr. Lynn stated that the next project has been in the ACSA's budget for at least the last ten years. He stated that the Miscellaneous Sewer Rehabilitation is an annual services contract where the ACSA staff identifies defects in the sanitary sewer system and can then efficiently issue those work orders to a contractor. He mentioned that the budget has traditionally been $400,000, but the staff is proposing an increase to $500,000 for FY 2024. Mr. Parcells asked if the increase was due to current work orders exceeding the budget. Mr. Lynn replied that the staff has identified some clay pipe that needs to be relined and they want to ensure there are sufficient funds to do so. Mr. Parcells asked how much pipe diameter is lost when it is relined. Mr. Lynn replied that most of the liners are in the 4-6 mm thickness range. He noted that there is less friction in the relined pipe, so there is no loss in pipe capacity. Mr. Roberts asked what it costs to reline the pipe, per foot. Mr. Lynn replied that he would say about $35-$40 for an 8" pipe.

Mr. Lynn stated that the last sewer project in the CIP is the Bellair-Liberty Hills Sewer project. He stated that the ACSA was approached by the community a few years ago with an interest to connect to public sewer. He stated that the design process has started, and the construction

timeframe is FY 2025-2026, assuming the ACSA can acquire all the necessary easements. He mentioned that this is one of the neighborhoods where an E/One system will likely take place, due to the topography of the area. He mentioned that the current projected overall budget is $6.3 million with no funds budgeted for FY 2024. Mr. Parcells asked if the community members are aware that they will have to pay for the E/One system. Mr. Lynn replied that the ACSA has not begun those conversations with the community yet. He stated they are still trying to figure out if there is a cost savings to the ACSA to install the E/One systems as opposed to a deeper, more expensive gravity option, and a way to share that cost savings with the community.

Mr. Lynn stated that the last slide is Developer Participation. He stated that each year, the ACSA budgets $100,000 for the oversizing of water and sewer utilities for new developments. He stated that a recent example is Southwood Village Block 1. He mentioned that their development need was an 8” water main, however, the ACSA felt the 12” would better serve other areas of the system. He noted that the budgeted amount of $100,000 for FY 2024 will be split between water and sewer.

Mr. Lynn stated that the next and final slide outlines the next steps in the CIP budget process. Mr. Parcells asked if it makes sense to accelerate any of the projects in the projected FY 2025-26 CIP budget, which is much higher, to this year’s budget to smooth it out. Mr. Lynn replied that the staff has tried to be realistic in what is feasible each year. He mentioned that they want to avoid the practice of pulling money into a budget year for projects that they will not get to that year. He noted that the staff has tried to make the budget smoother in the past, but the goal this time around was to be as accurate as possible.

7. Public Hearing – Proposed FY 2024 Capital Improvement Program (CIP)

Mr. Armstrong opened the floor for the public hearing on the CIP presentation. There were no members of the public present and thus, the public hearing was closed.

8. PAFR (Popular Annual Financial Report) Presentation

Mr. Lunsford stated that there have been some changes in the Board since the last PAFR presentation, so he would begin his presentation (Attached as Pages_____) by giving a brief overview of the what the PAFR is, followed by content overview, highlighted information from the FY 2022 PAFR, and finally a summary.

Mr. Lunsford stated that a PAFR is a report that outlines financial and operational information in a friendly way. He stated that the Annual Comprehensive Financial Report (ACFR) can contain long and technical footnote disclosures that are not easily understood. He mentioned that the intent of the PAFR is to take that information and present it in a way that someone without a background in public finance can understand. He noted that it is also an opportunity to share the Authority's values, vision, and strategy, as well as highlight key operational projects and community initiatives.

Mr. Lunsford stated that in terms of content overview, the PAFR shares the ACSA's values, vision, as well as the new Strategic Plan. He stated that the PAFR will also provide an opportunity to illustrate who the ACSA serves with appealing graphics. He stated that the PAFR also allows the ACSA to highlight some of its key projects like AMI and initiatives such as MyWater. He stated that the PAFR does provide financial highlights, all taken from the audited financial reports.

Mr. Lunsford stated that, in summary, the PAFR is a document that is on the ACSA website and available to any customer. He stated that it summarizes information in a readable format and gives people an idea of

who we are, what we do, and the organization's financial capacity currently and ten years from now. He stated that it is another way to interact with customers in a useful way. He noted, as a piece of historical information, that the ACSA participated with the Government Finance Officers Association (GFOA) and ICMA in a fellows program two years ago. He noted that the gentleman they worked with was from the University of Oregon, and he took the financial information the ACSA provided and built a template. He stated that building on what he did, the ACSA was able to take that template and keep using it in the future. He added that the ACSA is grateful for that program to help it get off the ground, as this will be the second PAFR submitted for consideration with the GFOA for award.

Mr. Moore asked if the PAFR is distributed to customers via email. Mr. Lunsford replied that it was not, as the staff wanted to present it to the Board first. He noted that it is on the website but emailing it would be something we can do in the future.

9. Proposed FY 2024 Budget and Rates – Overview Presentation

Mr. O'Connell stated that one of the goals with this year's budget was to try and show the connection to the new Strategic Plan. He stated that he would begin the presentation (Attached as Pages_____) with four general areas that he felt were important to highlight.

Mr. O'Connell stated that the first area is the ACSA's collaboration with RWSA to improve water and wastewater infrastructure to meet modern standards, upgrades, and capacity. He noted that this is evident when looking at the budget and rates. He stated that it is a major investment and the largest part of the ACSA's budget, and their rates have gone up considerably this fiscal year due to their CIP projects.

Mr. O'Connell stated that the next area he wanted to highlight was the specific pieces of the Strategic Plan, which are data optimization, business resilience, customer experience, and employee experience.

Mr. O'Connell stated that the third area he wanted to highlight, and a huge thrust in the upcoming fiscal year budget, is supporting the ACSA workforce during a period of inflation and job marketplace changes. He stated that the ACSA's pay consultants made recommendations, which are included in the budget. He noted that strategically, this will be something the organization will try to look at every year.

Mr. O'Connell stated that the final area he wanted to highlight was translating strategic priorities into customer rates and being cognizant about providing good value. He mentioned that the ACSA has a good product, and the goal is to follow that up with good customer service.

Mr. Lunsford stated that before he began his portion of the presentation, he wanted to direct the Board's attention to the budget cover. He stated that Danielle Trent designed the cover and used the ACSA's mission and vision statement as the inspiration, and he would encourage the Board to read the back of the cover, which communicates that in detail.

Mr. Lunsford stated that he would now move to the Budgeted Revenues and Use of Reserves slide, which is one that he has been shown in years past. He stated that the pie chart shows almost 70% of the ACSA's revenues coming from water and sewer rate charges to customers. He mentioned that the next biggest piece of the pie is connection charges, which make up about 15% of the funds supporting the FY 2024 budget, followed by 14% in reserves, and 2% in other revenues. Mr. Armstrong asked if there was any alteration in the "growth pays for growth" philosophy in the breakdown of the budgeted revenues and use of reserves. Mr. Lunsford replied no. He stated that any time the ACSA collects system capacity and connection charges in excess of what is budgeted for, less of the reserves are used.

Mr. Parcells stated that system connection fees are projected to be at $8 million for FY 2024, and then rate stabilization reserves make up $7.5 million of the budget, but the net position change at the end of the year is going to be $10 million. He asked if this is good stewardship of the ACSA's

money. Mr. Lunsford replied that gross net position change includes contributions from developers of physical infrastructure which is recorded as a capital contribution. He noted that this drives the final net position was well.

Dr. Palmer stated that it is probably in the numbers somewhere, but it might be helpful to see the individual reserves and what they are at the end of this year and the following year, and how they are repopulated over the course of the year. Mr. Lunsford replied that they will certainly do that.

Mr. Roberts asked if the 14% in reserves shown on the pie chart will reduce the balance by 14% at the end of the year. Mr. Lunsford replied that it would be highly unlikely. He stated that the 14% means that if the ACSA collects exactly what it projected in revenues, spends exactly what it says departmentally and with RWSA, and the $11.5 million is spent for the CIP program, then the reserve balance will go down 14%. He noted that all these things are very unlikely to happen as there too many variables.

Mr. Lunsford stated that the next slide shows a graph of the budgeted expenses and capital costs for FY 2024, and really shows how much of the ACSA's budget is driven by what RWSA charges the organization for water and sewer treatment, as well as water and sewer debt service. He noted that the nearly $28 million in charges from RWSA is about a $3.5 million increase over what was budgeted last year. He mentioned that the ACSA can expect similar increases for the next few years, thus it is critical that the ACSA maintain pace on customer rates to be able to fund these known future increases.

Mr. Lunsford moved to the next slide outlining the proposed water and sewer rates for FY 2024. He mentioned that the ACSA had a formal rate study last year that was incorporated into the budget in FY 2023. He stated that the rate model was updated during the budget and rates process with current information. He stated that through that analysis, the ACSA has proposed new rates for Board consideration for FY 2024. He

noted that the 13.5% increase in charges from RWSA is a large driver of the ACSA's proposed customer rates.

Mr. Lunsford moved to the following slide, showing the proposed system development and capacity charges for FY 2024. He stated that for the first time since FY 2017, the ACSA is requesting the Board to approve an increase in these charges. He stated the increase will help to recoup additional costs related to changes in expected RWSA and ACSA growth-related projects. He noted that the ACSA's philosophy remains "growth pays for growth."

Mr. Lunsford stated that the next slide shows the total CIP budget by water and wastewater projects. He noted that Mr. Lynn already did a wonderful job presenting the CIP program for FY 2024, but he wanted to add that growth-related projects make up $3.6 million of the total water projects and $2.9 million of the wastewater projects.

Mr. Lunsford stated that, as shown on the next slide, the staff expects to give a comprehensive presentation on May 18th, as part of the budget workshop. He stated that the current areas of focus for that workshop are how the Strategic plan aligns resources through the budget, revenue and expense expectations based on historical patterns, proposed rate changes, evaluation of charges from RWSA, ACSA departmental initiatives, and the strategic use of ACSA reserves.

Mr. Parcells asked if the ACSA works with RWSA to make its projections for consumption and expenses. Mr. Lunsford replied that RWSA is a starting point for the ACSA. He stated that RWSA is less concerned with the allocation of charges than the ACSA. He stated that the ACSA uses RWSA numbers as a starting point, but then will look at consumption of the current fiscal year and some of the outliers before that. He stated that the ACSA comes up with a range and the budget is usually somewhere in the middle of that range. Mr. Parcells asked if the ACSA feeds this information back to RWSA, and do they then adjust. Mr. Lunsford replied that he does not know of them using ACSA's information

to make any adjustments on their side. He noted that he does not think it is particularly useful to them, as they are only concerned about being made whole.

Dr. Palmer stated that both entities get their information from the County in terms of new demand and asked if Infiltration and Inflow (I&I) is the cause of discrepancy. Mr. Lunsford replied that on the wastewater side, RWSA calculates what gets allocated to the ACSA and the City based on what both entities report as consumption.

Mr. Roberts asked if the $30 hydrant meter usage fee includes the $10.40 service fee, or if it was separate. Mr. Lunsford replied that the service charge is related to the ¾ inch meter. He stated that the $30 charge is strictly related to the hydrant meter program.

Mr. Moore asked if RWSA had any incentive to keep its costs to the ACSA down. Mr. O'Connell replied that the charges from RWSA are really driven by their capital projects. He noted that during COVID, there was no increase which pushed off some projects. He mentioned that inflation has also caused some projects to be much higher than anticipated.

Mr. Tolbert stated that he had a question about RWSA's projection for the increases over the next five years. He stated that it would be nice to see something similar for the ACSA's charges to its customers. Mr. Lunsford replied that he believes this is something that could be done. He stated that RWSA missed its projection of cost to the ACSA this year by almost 50%. He mentioned that if he were to do a projection of rates to ACSA customers based off RWSA projected costs to the ACSA, the opportunity for those numbers to vary will be great.

10. Resolution scheduling Budget and Rates Public Hearing for June 15, 2023

Mr. Moore moved to approve the resolution as presented to the Board (Attached as Page_____), seconded by Mr. Parcells. The

Chair asked for a roll-call vote: Dr. Palmer, aye; Mr. Parcells, aye; Mr. Tolbert, aye; Mr. Armstrong, aye; Mr. Roberts, aye; Mr. Moore, aye.

11. Items Not on the Agenda

Dr. Palmer asked if she could get a hard copy of the budget and rates. Ms. Trent stated that she would provide Dr. Palmer with a copy after the meeting. She stated that she also may need to leave the Executive Session early because she will be leaving to drive out of town.

12. Executive Session – Executive Director Annual Review – Part I – Discussion

The Chair read a Resolution to enter Executive Session pursuant to Virginia Code §2.2-3711 A (1) to discuss a personnel matter concerning the Executive Director's Annual Performance Review (Attached as Page_____).

Mr. Parcells moved to approve the Resolution as presented to the Board; seconded by Dr. Palmer. All members voted aye.

The Board of Directors came back into regular session. Ms. Trent read into record a Resolution stating that only matters so previously stated and exempted from open discussion in regular session were discussed in Executive Session (Attached as Page _____).

Mr. Parcells moved to approve the Resolution as presented to the Board, seconded by Dr. Palmer. All members voted aye.

13. Adjourn

There being no further business, Mr. Tolbert moved that the meeting be adjourned, seconded by Mr. Parcells. All members voted aye.

_____

Gary B. O'Connell, Secretary-Treasurer

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Monthly Financial Reports **STAFF CONTACT/PREPARER:** Quin Lunsford, Director of Finance	**AGENDA DATE:** May 18, 2023 **ACTION:** Informational **ATTACHMENTS:** Yes

BACKGROUND: Water and sewer financial reports and check registers for the month of April are attached for your review.

DISCUSSION:

- Water consumption for the month of March increased 5.9% compared to February. Water consumption for the month of March 2023 compared to March 2022 increased 2.1%.
- RWSA's invoice of $2,006,071 for the month of March was paid on April 7, 2023.
- Unearned water and sewer connection charges totaled $1,266,545 at month end.
- System connection charges were above budgeted expectations with $413,405 recognized in March. Total system connection charges for FY 2023 are more than those in FY 2022 by 12%.
- Water and Wastewater revenues for FY 2023 are below budgeted expectations by 2.4%. Please see the water/wastewater trend analysis included illustrating that when adjustment for expected variations in seasonal consumption are considered, revenues are 1.9% lower than budgeted expectations.
- Water and Sewer customer receivables have improved over the last quarter and are in-line with balances prior to the pandemic Our team continues to work with customers as they approach possible disconnection for non-payment, but we are pleased to report progress in this area.

BUDGET IMPACT: Informational only.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

.ATTACHMENTS:

1. Statement of Net Position
2. Year-to-Date Budget to Actual Comparison/Commentary
3. Investment Summary
4. Capacity/System Development Reserves
5. Connection Charges/ERC Analysis
6. Monthly Water and Sewer Charges from the RWSA
7. Monthly Water Consumption
8. Water and Sewer Report; Customer Class Report
9. Major Customer Analysis
10. Water/Wastewater Revenue Trend Analysis
11. Aged Receivables Analysis
12. Check Register

ALBEMARLE COUNTY SERVICE AUTHORITY

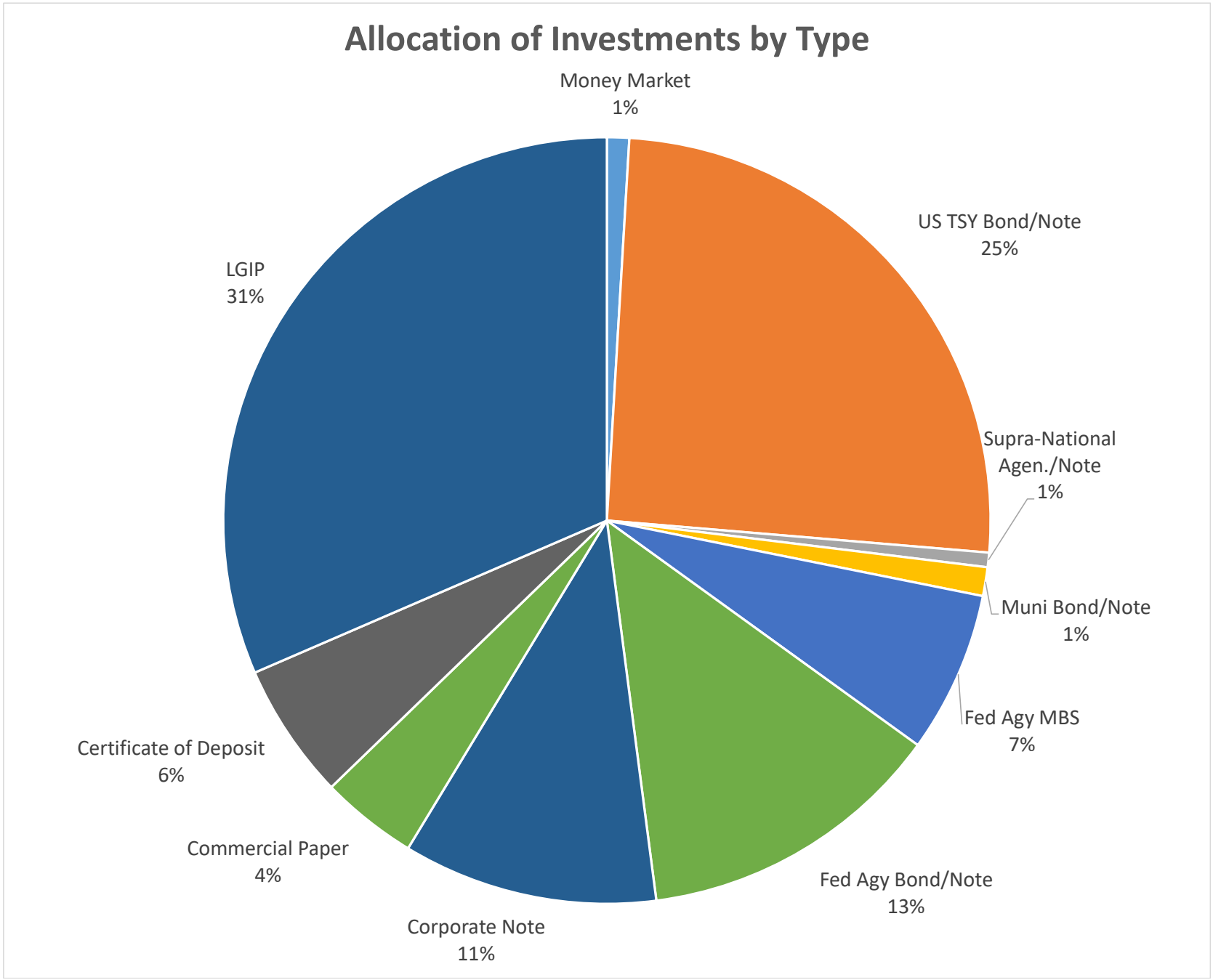
STATEMENT OF NET POSITION
April 30, 2023

ASSETS		
Cash and cash equivalents	$	11,547,830
Accounts receivable		6,183,296
Investments		43,566,457
Capital assets: (net of accumulated depreciation)		178,537,799
Inventory		532,577
Prepaids		198,288
Cash and cash equivalents, restricted		590,503
Total assets		241,156,750
DEFERRED OUTFLOWS OF RESOURCES		
Combined deferred outflows of resources		1,174,141
LIABILITIES		
Accounts payable		2,600,976
Accrued liabilities		349,898
Compensated absences		763,469
Net pension liability		695,494
Other post-employment benefits		1,144,368
Unearned connection fees		1,266,545
Long-term debt		4,669,118
Total liabilities		11,489,868
DEFERRED INFLOWS OF RESOURCES		
Combined deferred inflows of resources		2,880,258
NET POSITION		227,960,765

	Budget FY 2023	Budget Year-to-Date 2023	April Actual Year-to-Date	Actual vs. Budget	Variance Percentage	
Revenues						
Water Sales	19,285,000.	16,070,833.	15,343,654.	(727,180.)	(4.52%)	
Sewer Service	15,137,000.	12,614,167.	12,647,712.	33,545.	0.27%	
Total operating revenues	**34,422,000.**	**28,685,000.**	**27,991,365.**	**(693,635.)**	**(2.42%)**	**A**
Operating Expenses						
Purchase of bulk water	(13,774,000.)	(11,478,333.)	(11,627,621.)	(149,287.)	1.30%	**B**
Purchase of sewer treatment	(10,776,000.)	(8,980,000.)	(8,554,841.)	425,159.	(4.73%)	**B**
Administration	(1,306,475.)	(1,088,729.)	(1,031,763.)	56,966.	(5.23%)	**C**
Finance	(2,516,082.)	(2,096,735.)	(1,957,350.)	139,385.	(6.65%)	**C**
Information Technology	(1,521,900.)	(1,268,250.)	(1,112,738.)	155,512.	(12.26%)	**C**
Engineering	(2,289,721.)	(1,908,101.)	(1,842,967.)	65,134.	(3.41%)	**C**
Maintenance	(4,726,083.)	(3,938,403.)	(3,123,312.)	815,091.	(20.70%)	**C**
Total operating expenses	**(36,910,261.)**	**(30,758,551.)**	**(29,250,591.)**	**1,507,960.**	**(4.90%)**	
Operating gain(loss)	**(2,488,261.)**	**(2,073,551.)**	**(1,259,226.)**	**814,325.**	**(39.27%)**	
Nonoperating Revenues						
System connection charges	5,926,800.	4,939,000.	10,151,146.	5,212,146.	105.53%	**D**
Investment/Interest Income	100,000.	83,333.	950,667.	867,334.	1040.80%	**E**
Rental income	16,000.	13,333.	15,987.	2,654.	19.90%	
Miscellaneous revenues	455,000.	379,167.	534,457.	155,290.	40.96%	**F**
Total nonoperating revenues (expenses)	**6,497,800.**	**5,414,833.**	**11,652,257.**	**6,237,424.**	**115.19%**	
Nonoperating Expenses						
Miscellaneous expenses	(434,200.)	(361,833.)	(224,736.)	137,097.	(37.89%)	**G**
Bond interest charges	(162,272.)	(135,227.)	(106,600.)	28,627.	(21.17%)	**H**
Depreciation	0.	0.	(3,507,130.)	(3,507,130.)	0.00%	**I**
Total nonoperating revenues (expenses)	**(596,472.)**	**(497,060.)**	**(3,838,466.)**	**(3,341,406.)**	**672.23%**	
Capital contributions	**0.**	**0.**	**1,316,981.**	**1,316,981.**	**0.00%**	
Change in Net Position	**3,413,067.**	**2,844,222.**	**7,871,546.**	**5,027,324.**	**176.76%**	

Albemarle County Service Authority
Actual-to-Budget Year to Date Commentary

- **A.** Water and sewer revenues were less than budgeted amounts by 2.42%. Consumption through April (gallons) appears reasonable considering the ACSA's normal seasonal consumption pattern. Further information related to seasonal revenue expectations can be found later in the Board packet.
- **B.** Expenses related to purchases of bulk water and sewer treatment from the RWSA are less than budgeted amounts by 1.35%. Monthly billings prepared by the RWSA allocate total water/wastewater flows to the ACSA/City based on the consumption of each for the quarter immediately preceding.
- **C.** Departmental operating budgets through the current month remain below budgeted expectations for the fiscal year.
- **D.** System connection charges are higher than the prorated budgeted amount. Connection charges are often difficult to project and can fluctuate from year to year. These charges are dependent upon new customers connecting to the system.
- **E.** Investment income, which includes both interest income and adjustments to fair market value are recorded in these accounts. Investment earnings are ahead of budgeted expectations through the current month.
- **F.** Miscellaneous revenues consist of multiple lines and include inspection fees, plan review, reconnections/initial bill fees, invoiced water usage, and gains associated with sales of capital assets retired from service.
- **G.** The budgeted amount includes expected outlays for capital equipment and losses on disposal of capital assets. Equipment is capitalized when placed in service.
- **H.** Bond interest charges are recorded as incurred.
- **I.** Depreciation is not a budgeted line-item accounting for the variance. Depreciation expense is considered during the annual budgeting process as this expense is utilized to calculate the required contribution to the 3r reserve.


Allocation of Investments by Type
Money Market
1%
US TSY Bond/Note
25%
Supra-National
Agen./Note
1%
Muni Bond/Note
1%
Fed Agy MBS
7%
Fed Agy Bond/Note
13%
Corporate Note
11%
Commercial Paper
4%
Certificate of Deposit
6%
LGIP
31%

pfm asset management

Portfolio Summary and Statistics

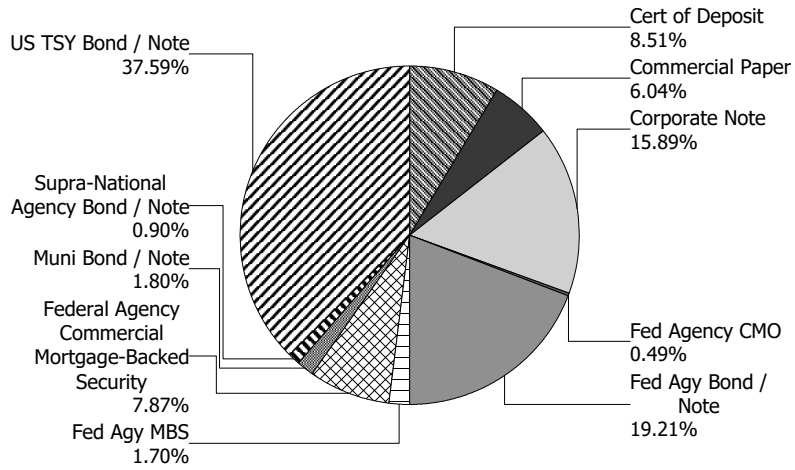
For the Month Ending **April 30, 2023**

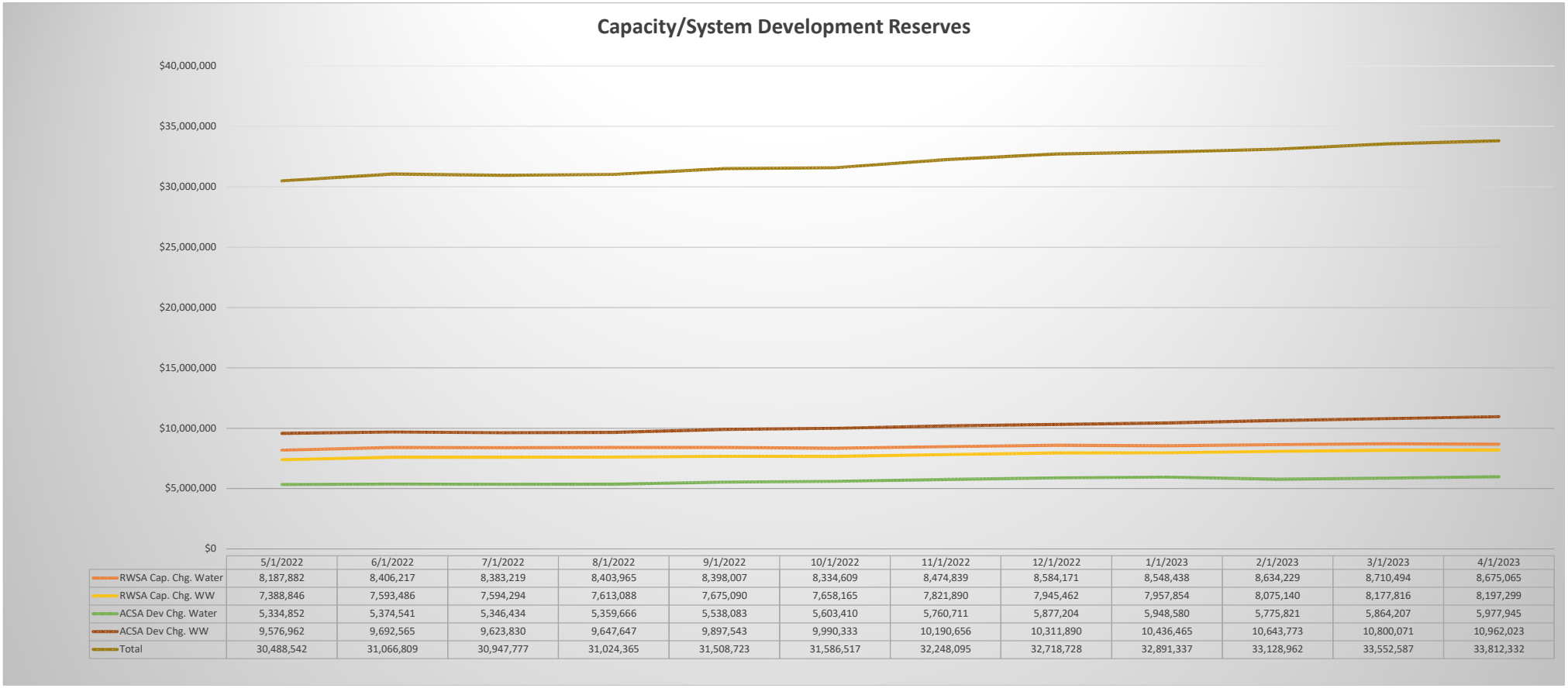
ACSA OPERATING FUNDS - 03100100

Account Summary

Description	Par Value	Market Value	Percent
U.S. Treasury Bond / Note	11,585,000.00	11,139,560.17	37.59
Supra-National Agency Bond / Note	265,000.00	267,448.87	0.90
Municipal Bond / Note	550,000.00	534,234.50	1.80
Federal Agency Mortgage-Backed Security	533,493.25	503,380.72	1.70
Federal Agency Commercial Mortgage-Backed Security	2,401,383.16	2,332,414.10	7.87
Federal Agency Collateralized Mortgage Obligation	150,000.00	146,391.44	0.49
Federal Agency Bond / Note	5,780,000.00	5,693,112.87	19.21
Corporate Note	4,785,000.00	4,709,355.03	15.89
Commercial Paper	1,800,000.00	1,789,914.60	6.04
Certificate of Deposit	2,525,000.00	2,521,683.61	8.51
Managed Account Sub-Total	**30,374,876.41**	**29,637,495.91**	**100.00%**
Accrued Interest		174,628.68	
Total Portfolio	**30,374,876.41**	**29,812,124.59**	
Unsettled Trades	**300,000.00**	**290,740.34**	

Sector Allocation





	5/1/2022	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	12/1/2022	1/1/2023	2/1/2023	3/1/2023	4/1/2023
RWSA Cap. Chg. Water	8,187,882	8,406,217	8,383,219	8,403,965	8,398,007	8,334,609	8,474,839	8,584,171	8,548,438	8,634,229	8,710,494	8,675,065
RWSA Cap. Chg. WW	7,388,846	7,593,486	7,594,294	7,613,088	7,675,090	7,658,165	7,821,890	7,945,462	7,957,854	8,075,140	8,177,816	8,197,299
ACSA Dev Chg. Water	5,334,852	5,374,541	5,346,434	5,359,666	5,538,083	5,603,410	5,760,711	5,877,204	5,948,580	5,775,821	5,864,207	5,977,945
ACSA Dev Chg. WW	9,576,962	9,692,565	9,623,830	9,647,647	9,897,543	9,990,333	10,190,656	10,311,890	10,436,465	10,643,773	10,800,071	10,962,023
Total	30,488,542	31,066,809	30,947,777	31,024,365	31,508,723	31,586,517	32,248,095	32,718,728	32,891,337	33,128,962	33,552,587	33,812,332

Note: Additions to Capacity/System Development Reserves are from monthly connection charges, reductions to the reserves are from monthly growth related expenses/capital costs.

Albemarle County Service Authority
Connection Fee Analysis
March 2023

Area	March 2023 Monthly Connection Fees	March 2022 Monthly Connection Fees	$ Change	% Change
Crozet	$ 80,820	$ 283,920	$ (203,100)	-72%
Urban	332,585	630,802	(298,217)	-47%
Scottsville	-	-	-	-
Total Connection fees	$ 413,405	$ 914,722	$ (501,317)	-55%

Through March

Area	YTD FY 2023 Connection Fees	YTD FY 2022 Connection Fees	$ Change	% Change
Crozet	$ 1,097,805	$ 1,261,290	$ (163,485)	-13%
Urban	5,849,656	4,937,217	912,439	18%
Scottsville	-	-	-	-
Total Connection fees	$ 6,947,461	$ 6,198,507	$ 748,954	12%

Area	March 2023 ERC's	March 2022 ERC's	Change	% Change
Crozet	6	21	(15)	-71%
Urban	25	47	(22)	-47%
Scottsville	-	-	-	-
Total ERC's	31	68	(37)	-54%

Through March

Area	YTD FY 2023 ERC's	YTD FY 2022 ERC's	Change	% Change
Crozet	82	94	(12)	-13%
Urban	434	367	67	18%
Scottsville	-	-	-	-
Total ERC's - YTD	516	461	55	12%

Note: This analysis shows, both in dollars and ERC's, connections by month and YTD for the period under review. As noted above, connection fees are comparable to the prior year. See the "Three Year Connection Fee Comparison" for further discussion related to this change.

Albemarle County Service Authority
Three Year Connection Fee Comparison
March 2023

Area	March 2023 ERC's	March 2022 ERC's	March 2021 ERC's
Crozet	6	21	17
Urban	25	47	32
Scottsville	-	-	-
Total ERC's	31	68	49

Through March

Area	YTD 2023 ERC's	YTD 2022 ERC's	YTD 2021 ERC's
Crozet	82	94	160
Urban	434	367	362
Scottsville	-	-	-
Total ERC's - YTD	516	461	522

Note: The information above present ERCs by month and YTD for the current and past two fiscal years. As noted in the YTD portion of the analysis, YTD ERCs in Fiscal Year 2023 appear reasonable considering continued development within the ACSA's service area.

Albemarle County Service Authority
Water and Sewer Charges from the RWSA
Fiscal Year 2023

	FY 2023 RWSA Charges	FY 2022 RWSA Charges	Increase (Decrease)	
July	$ 2,041,957	$ 1,813,287	$ 228,670	12.61%
August	$ 2,042,399	$ 1,826,679	$ 215,720	11.81%
September	$ 2,083,284	$ 1,818,536	$ 264,748	14.56%
October	$ 2,021,265	$ 1,854,295	$ 166,970	9.00%
November	$ 1,987,793	$ 1,789,319	$ 198,474	11.09%
December	$ 2,025,214	$ 1,743,520	$ 281,694	16.16%
January	$ 1,990,411	$ 1,808,835	$ 181,576	10.04%
February	$ 1,956,978	$ 1,764,098	$ 192,880	10.93%
March	$ 2,006,071	$ 1,847,231	$ 158,840	8.60%
April	$ 2,013,296	$ 1,820,145	$ 193,151	10.61%
May		$ 1,863,638		-100.00%
June		$ 1,812,590		-100.00%
	$ 20,168,669	$ 21,762,173		
YTD	$ 20,168,669	$ 18,085,945	$ 2,082,724	11.52%

Note: The charges noted above from the RWSA include operating and debt service charges for water and sewer treatment by month.

Albemarle County Service Authority
Consumption Analysis
Fiscal Year 2023

				Monthly Precipitation (In.)	
	FY 2023 Consumption	**FY 2022 Consumption**		**FY 2023**	**FY 2022**
July	155,932,214	162,247,194	-3.89%	6.42	2.30
August	159,969,362	183,549,927	-12.85%	4.10	4.60
September	155,676,979	167,986,757	-7.33%	2.79	5.46
October	152,513,014	159,438,005	-4.34%	2.24	5.26
November	148,761,821	148,641,595	0.08%	4.52	1.01
December	134,997,083	140,551,064	-3.95%	4.60	0.26
January	138,803,649	142,192,560	-2.38%	2.32	4.04
February	126,909,570	127,434,073	-0.41%	2.87	1.81
March	134,395,216	131,636,356	2.10%	1.36	3.50
April		135,122,656	-100.00%		3.23
May		144,519,955	-100.00%		6.04
June		150,608,842	-100.00%		4.11
	1,307,958,908	1,793,928,984		31.22	41.62
YTD	1,307,958,908	1,363,677,531	-4.09%	31.22	28.24

Note: Consumption through March 2023 is 4.09% less than the same period in fiscal year 2022. Monthly precipitation figures have been included for comparison purposes. Trends in rainfall can sometimes correlate with trends in consumption however, depending on the intensity, days between rain events, or other factors, this may not always be the case.

Note: Precipitation data obtained from National Oceanic and Atmospheric Administration (NOAA): https://www.ncdc.noaa.gov/cdo-web/search.

Albemarle County Service Authority

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Water and Sewer Report

(Volumes in Gallons)

March 2023

Billed by Area:	Water	Sewer
Crozet	15,788,767	14,972,932
Scottsville	952,431	713,542
Urban	117,611,544	106,099,515
Red Hill	42,474	0
Total	***134,395,216***	***121,785,989***

Billing by Sewer Plant:	
AWT	121,072,447
less Glenmore	(3,213,433)
Urban Total	117,859,014
Scottsville	713,542
Total	***118,572,556***

Number of Installed Meters:	
Urban	40
Crozet	9
Scottsville	0
Total	49

Metered Consumption (billed by invoice):	
Urban	217,300
Crozet	6,700
Scottsville	0
Total	***224,000***

Unmetered Consumption:		
ACSA Fire Flow Consump.	Crozet	5,232
	Urban	16,684
Total		21,916

Unmetered Leak Consumption:		
	Urban	2
1640 Brightfield Pl	Urban	200
Total		**202**

Billed Consumption for Selected Customers

	Water	Sewer
Virginia Land Holding	359,868	359,868
Southwood Mobile Homes	1,693,890	2,030,000
Turtle Creek Apts.	1,367,181	1,366,781
Barracks West Apartments	1,353,800	1,353,800
Monroe Health & Rehab.	928,766	928,766
Sunrise Senior "Colonnades"	746,727	726,527
ACRJ	894,570	860,570
Westminster Canterbury	1,129,360	1,129,360
SEMF Charleston	1,649,276	1,649,276
Martha Jefferson Hospital	1,685,692	1,357,516
Crozet Mobile Home Village	282,600	282,600
The Home Depot	123,478	123,478
County of Albemarle	1,508,064	1,280,932
University of Virginia	2,126,689	2,124,019
Wegmans	328,815	328,815

	Water	Sewer
Boar's Head Inn	342,727	295,527
Farmington Inc.	469,243	284,072
Westgate Apts.	1,121,363	1,121,363
Abbington Crossing	1,760,103	1,760,103
Four Seasons Apts	1,741,411	1,741,411
Ch'ville/Alb Airport	109,571	110,103
State Farm Ins	1,199,650	1,196,650
Hyatt @ Stonefield	345,055	345,055
Doubletree	702,151	702,151
Arden Place Apts	469,783	469,783
Hilton Garden Inn	248,441	248,441
The Blake & Charlottesville	348,278	348,278
The Lodge @ Old Trail	254,856	254,856
Gov't-Defense Complex	478,203	478,201
Harris Teeter Stores	116,744	116,744

* indicates Industrial Discharge Permit Holders

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Albemarle County Service Authority

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Customer Class Report

March 2023

WATER

Class Type	Number of Connections by Area			
	Urban	Crozet	Scottsville	Total
Single-Family Residential	15,864	3,767	196	19,827
Multi-Family Residential	560	43	3	606
Commercial (Offices)	203	12	5	220
Commercial (Other)	927	76	52	1,055
Industrial	36	11	4	51
Institutional	171	32	12	215
Total Water Accounts	**17,761**	**3,941**	**272**	**21,974**
Plus Multiple Units	12,987	748	89	13,824
Total Water Units	**30,748**	**4,689**	**361**	**35,798**

SEWER

Class Type	Number of Connections by Area			
	Urban	Crozet	Scottsville	Total
Single-Family Residential	13,552	3,490	158	17,200
Multi-Family Residential	529	41	4	574
Commercial (Offices)	187	12	5	204
Commercial (Other)	721	52	44	817
Industrial	15	5	1	21
Institutional	133	25	10	168
Total Sewer Accounts	**15,137**	**3,625**	**222**	**18,984**
Plus Multiple Units	12,570	745	56	13,371
Total Sewer Units	**27,707**	**4,370**	**278**	**32,355**

POPULATION SERVED

Population served is the total Single-Family and Multi-Family units using an occupancy of 2.5 residents per unit:

	Urban	Crozet	Scottsville	Total
Total Water Customers	72,128	11,288	713	84,128
Total Sewer Customers	65,305	10,588	535	76,428

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Albemarle County Service Authority
Major Customer Analysis
March 2023 and February 2023

	March 2023		February 2023		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
University of Virginia	2,126,689	2,124,019	1,095,862	1,093,732	94.07%	94.20%
Martha Jefferson Hospital	1,685,692	1,357,516	1,341,551	1,252,951	25.65%	8.35%
Westmisnster Canterbury	1,129,360	1,129,360	938,100	938,100	20.39%	20.39%
County of Albemarle	1,508,064	1,280,932	1,319,797	1,224,471	14.26%	4.61%
Four Seasons Apts.	1,741,411	1,741,411	1,558,467	1,558,467	11.74%	11.74%
Southwood Mobile Homes	1,693,890	2,030,000	1,542,830	2,220,000	9.79%	-8.56%
Turtle Creek Apts.	1,367,181	1,366,781	1,265,028	1,264,428	8.08%	8.09%
ACRJ	894,570	860,570	830,490	809,490	7.72%	6.31%
SEMF Charleston	1,649,276	1,649,276	1,560,305	1,560,305	5.70%	5.70%
Barracks West Apartments	1,353,800	1,353,800	1,377,900	1,377,900	-1.75%	-1.75%
Westgate Apts.	1,121,363	1,121,363	1,212,592	1,212,592	-7.52%	-7.52%
Abbington Crossing	1,760,103	1,760,103	1,913,970	1,913,970	-8.04%	-8.04%

Note: Only major customers of the ACSA have been analyzed above. For purposes of this analysis, major customers are those who, on average, consume over one million gallons per month. Variations can occur for a variety of reasons including but not limited to: conscious conservation efforts, expansion, weather, vacancies, etc.

*** -- Consumption/usage in gallons.**

Albemarle County Service Authority
Major Customer Analysis
March 2023 and March 2022

	March 2023		March 2022		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Martha Jefferson Hospital	1,685,692	1,357,516	1,135,550	919,550	48.45%	47.63%
County of Albemarle	1,508,064	1,280,932	1,311,686	1,195,297	14.97%	7.16%
Four Seasons Apts.	1,741,411	1,741,411	1,532,000	1,532,000	13.67%	13.67%
Westmisnster Canterbury	1,129,360	1,129,360	1,019,930	1,019,930	10.73%	10.73%
SEMF Charleston	1,649,276	1,649,276	1,552,100	1,552,100	6.26%	6.26%
Southwood Mobile Homes	1,693,890	2,030,000	1,607,000	4,501,423	5.41%	-54.90%
University of Virginia	2,126,689	2,124,019	2,049,671	1,835,705	3.76%	15.71%
Turtle Creek Apts.	1,367,181	1,366,781	1,373,500	1,369,000	-0.46%	-0.16%
Abbington Crossing	1,760,103	1,760,103	1,808,000	1,808,000	-2.65%	-2.65%
Westgate Apts.	1,121,363	1,121,363	1,249,000	1,248,100	-10.22%	-10.15%
Barracks West Apartments	1,353,800	1,353,800	1,627,400	1,627,400	-16.81%	-16.81%
ACRJ	894,570	860,570	1,131,890	1,107,890	-20.97%	-22.32%

Note: Only major customers of the ACSA have been analyzed above. For purposes of this analysis, major customers are those who, on average, consume over one million gallons per month. Variations can occur for a variety of reasons including but not limited to: conscious conservation efforts, expansion, weather, vacancies, etc.

*** -- Consumption/usage in gallons.**

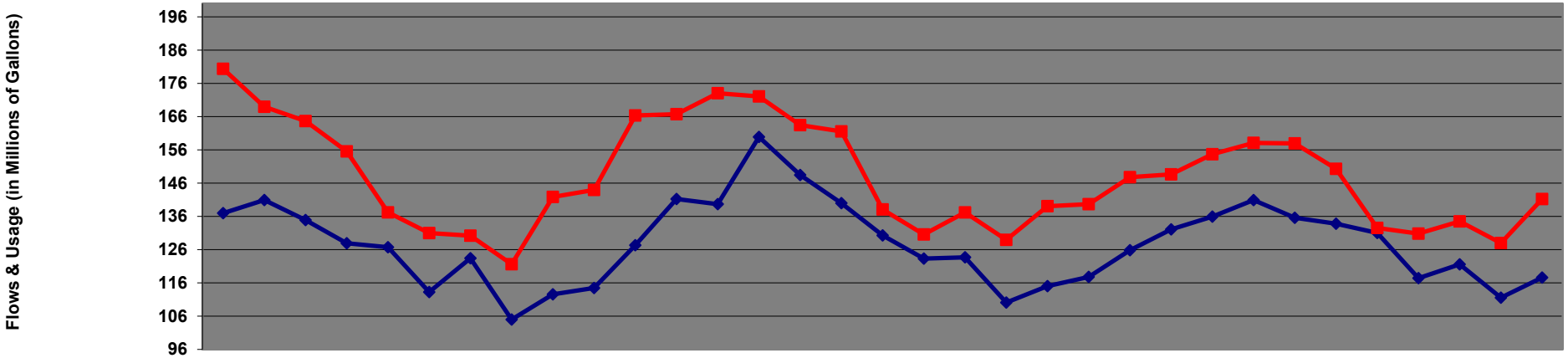
Albemarle County Service Authority
Major Customer Analysis
Year-to-date Comparison: Current Year/Prior Year -- March

	YTD FY 2023		YTD FY 2022		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Four Seasons Apts.	15,244,880	15,244,880	14,068,000	14,068,000	8.37%	8.37%
Martha Jefferson Hospital	17,593,574	10,613,594	16,382,099	9,527,999	7.40%	11.39%
Abbington Crossing	16,750,094	16,750,094	15,802,600	15,802,600	6.00%	6.00%
County of Albemarle	12,254,033	10,167,270	12,240,041	9,766,380	0.11%	4.10%
Westgate Apts.	11,105,385	11,099,085	11,178,000	11,168,100	-0.65%	-0.62%
Turtle Creek Apts.	11,450,918	11,423,018	11,684,700	11,669,000	-2.00%	-2.11%
Barracks West Apartments	13,158,300	13,158,300	13,448,700	13,448,700	-2.16%	-2.16%
Southwood Mobile Homes	15,670,745	19,260,000	16,685,000	36,508,842	-6.08%	-47.25%
Westmisnster Canterbury	12,378,110	11,794,110	13,653,850	12,081,850	-9.34%	-2.38%
University of Virginia	16,030,470	15,994,346	20,809,411	20,113,698	-22.97%	-20.48%
ACRJ	9,434,270	8,363,270	12,829,710	11,766,710	-26.47%	-28.92%
SEMF Charleston	13,345,001	13,345,001	18,163,950	18,163,950	-26.53%	-26.53%

Note: Only major customers of the ACSA have been analyzed above. For purposes of this analysis, major customers are those who, on average, consume over one million gallons per month. Variations can occur for a variety of reasons including but not limited to: conscious conservation efforts, expansion, weather, vacancies, etc.

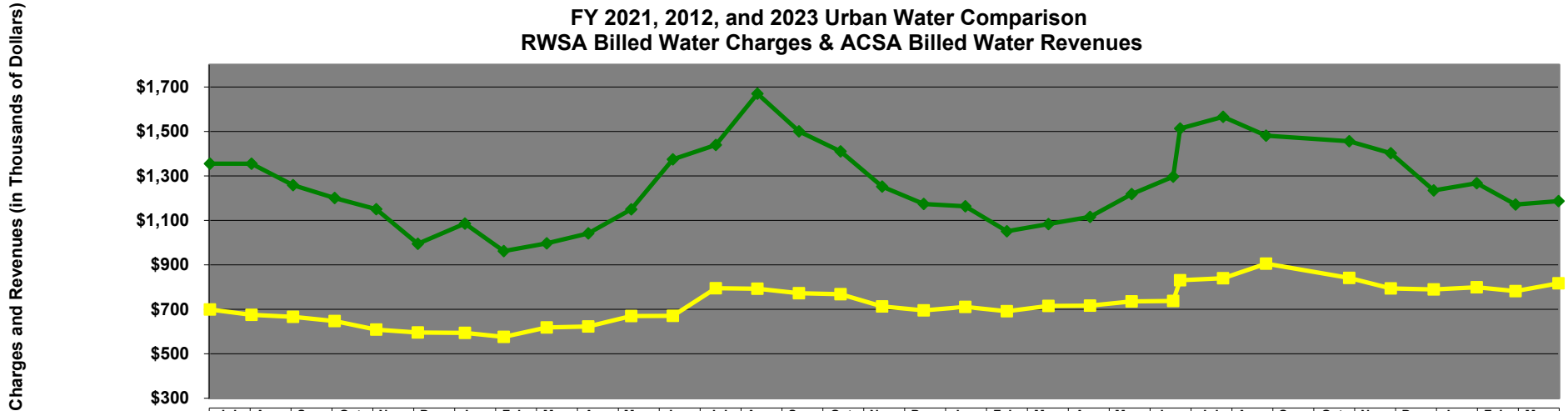
*** -- Consumption/usage in gallons.**

FY 2021, 2022, and 2023 Urban Water Comparison
RWSA Flows & ACSA Customer Usage



	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Usage	137	141	135	128	127	113	123	105	113	114	127	141	140	160	148	140	130	123	124	110	115	118	126	132	136	141	136	134	131	117	122	112	118
RWSA Flows	180	169	165	156	137	131	130	122	142	144	166	167	173	172	163	162	138	131	137	129	139	140	148	149	155	158	158	150	133	131	134	128	141
Variance	32%	20%	22%	22%	8%	16%	5%	16%	26%	26%	31%	18%	24%	8%	10%	15%	6%	6%	11%	17%	21%	19%	17%	13%	14%	12%	16%	12%	1%	11%	11%	15%	20%

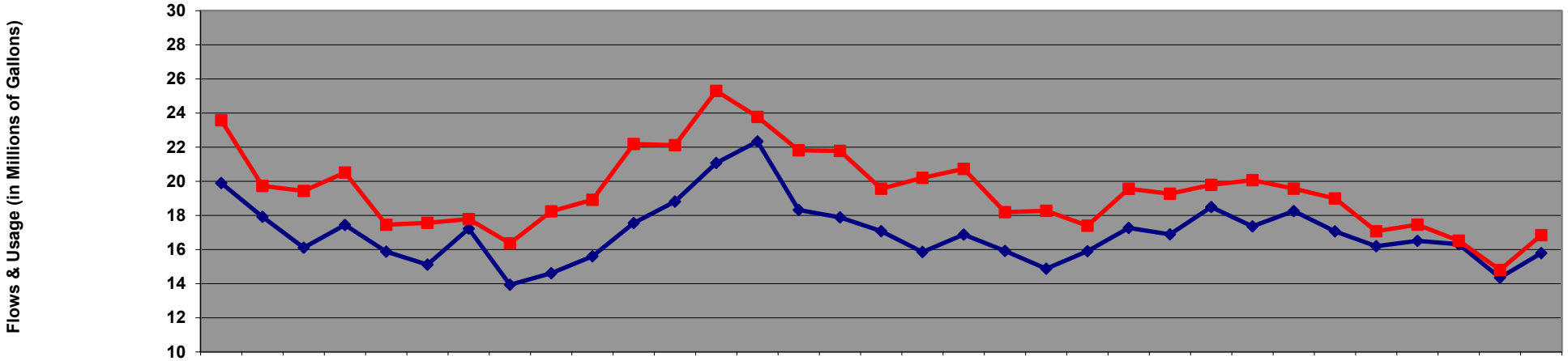
FY 2021, 2012, and 2023 Urban Water Comparison
RWSA Billed Water Charges & ACSA Billed Water Revenues



	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Revenue	$1,35	$1,35	$1,25	$1,20	$1,15	$995	$1,08	$962	$997	$1,04	$1,15	$1,37	$1,43	$1,67	$1,50	$1,41	$1,25	$1,17	$1,16	$1,05	$1,08	$1,11	$1,21	$1,29	$1,51	$1,56	$1,48	$1,45	$1,40	$1,23	$1,26	$1,17	$1,18
RWSA Charges	$699	$675	$666	$647	$609	$596	$594	$576	$618	$623	$670	$671	$795	$793	$772	$768	$713	$695	$711	$691	$715	$717	$736	$738	$831	$840	$905	$841	$794	$789	$799	$782	$817
Difference	$656	$680	$592	$554	$542	$399	$492	$386	$378	$419	$480	$704	$645	$877	$728	$642	$539	$479	$453	$360	$368	$399	$483	$559	$683	$726	$576	$615	$608	$445	$468	$390	$370
Fiscal YTD Difference	$0.66	$1.34	$1.93	$2.48	$3.02	$3.42	$3.91	$4.30	$4.68	$5.10	$5.58	$6.28	$0.64	$1.52	$2.25	$2.89	$3.43	$3.91	$4.36	$4.72	$5.09	$5.49	$5.97	$6.53	$0.68	$1.41	$1.98	$2.60	$3.21	$3.65	$4.12	$4.51	$4.88

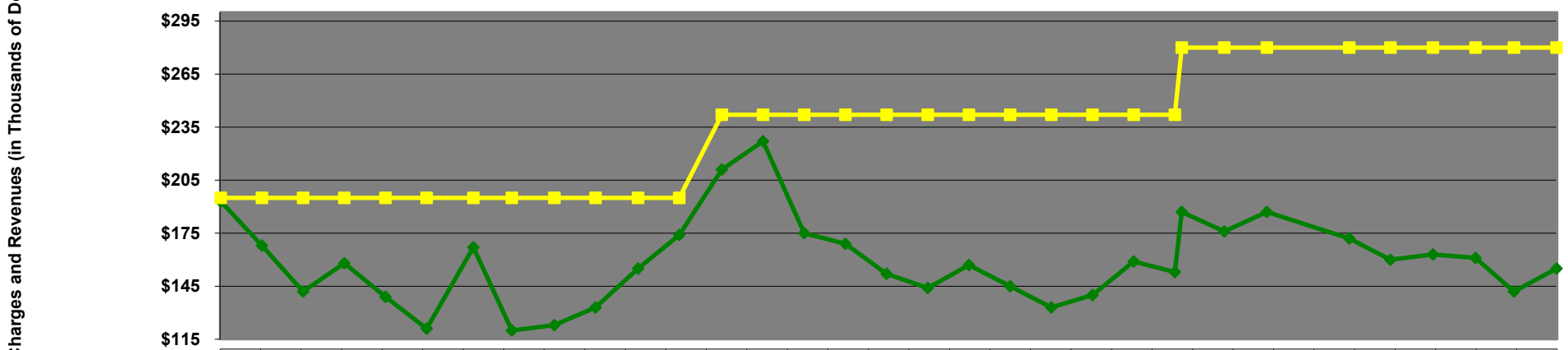
Note: Fiscal YTD Difference (ONLY) in Millions of Dollars

FY 2021, 2022, and 2023 Crozet Water Comparison
RWSA Flows & ACSA Customer Usage



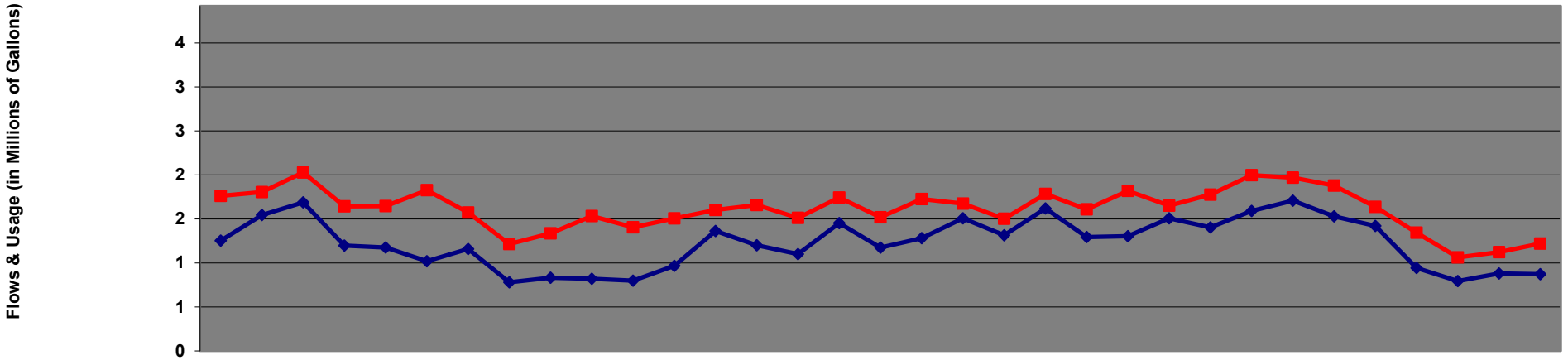
	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Usage	20	18	16	17	16	15	17	14	15	16	18	19	21	22	18	18	17	16	17	16	15	16	17	17	18	17	18	17	16	17	16	14	16
RWSA Flows	24	20	19	21	17	18	18	16	18	19	22	22	25	24	22	22	20	20	21	18	18	17	20	19	20	20	20	19	17	17	17	15	17
Variance	18%	10%	21%	18%	10%	16%	3%	17%	25%	21%	26%	18%	20%	6%	19%	22%	15%	27%	23%	14%	23%	9%	13%	14%	7%	16%	7%	11%	5%	6%	1%	3%	7%

FY 2021, 2022, and 2023 Crozet Water Comparison
RWSA Billed Water Charges & ACSA Billed Water Revenues



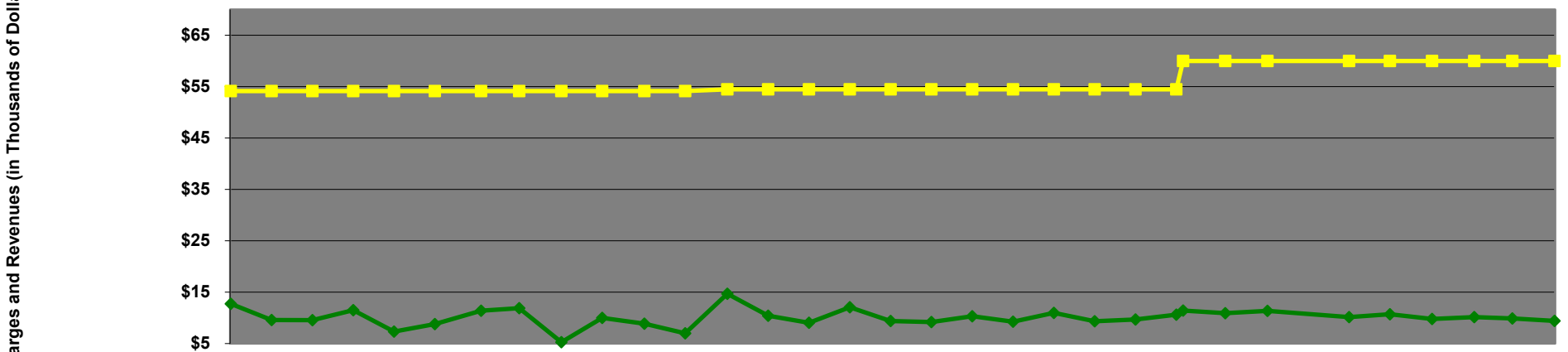
	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Revenue	$193	$168	$142	$158	$139	$121	$167	$120	$123	$133	$155	$174	$211	$227	$175	$169	$152	$144	$157	$145	$133	$140	$159	$153	$187	$176	$187	$172	$160	$163	$161	$142	$155
RWSA Charges	$195	$195	$195	$195	$195	$195	$195	$195	$195	$195	$195	$195	$242	$242	$242	$242	$242	$242	$242	$242	$242	$242	$242	$242	$280	$280	$280	$280	$280	$280	$280	$280	$280
Difference	($2)	($27)	($53)	($37)	($56)	($74)	($28)	($75)	($72)	($62)	($40)	($21)	($31)	($15)	($67)	($73)	($90)	($98)	($85)	($97)	($109	($102	($83)	($89)	($93)	($104	($93)	($108	($120	($117	($119	($138	($125
Fiscal YTD Difference	$0.00	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	($0.0	($0.1	($0.1	($0.2	($0.3	($0.4	($0.5	($0.6	($0.7	($0.8	($0.9	($0.0	($0.2	($0.2	($0.4	($0.5	($0.6	($0.7	($0.8	($1.0

FY 2021, 2022, and 2023 Scottsville Water Comparison
RWSA Flows & ACSA Customer Usage



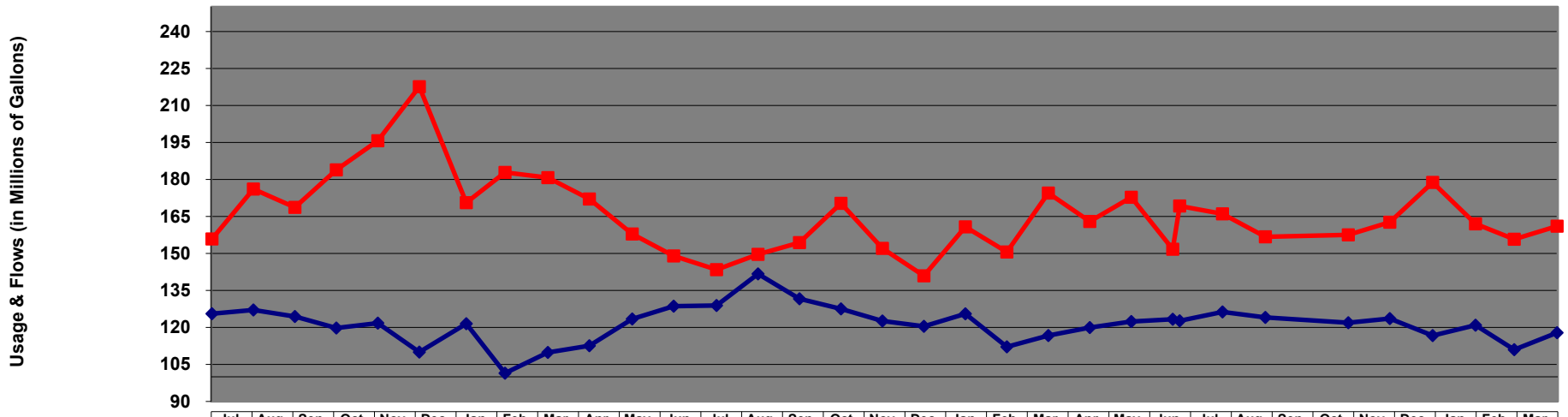
	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Usage	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	2	1	1	2	1	2	2	2	2	1	1	1	1
RWSA Flows	1.8	1.9	2.1	1.7	1.7	1.9	1.7	1.3	1.4	1.6	1.5	1.6	1.7	1.7	1.6	1.8	1.6	1.8	1.8	1.6	1.9	1.7	1.9	1.7	1.9	2.1	2.0	2.0	1.7	1.4	1.1	1.2	1.3
Variance	38%	16%	19%	35%	38%	73%	33%	51%	55%	79%	69%	51%	17%	36%	35%	19%	28%	33%	10%	13%	10%	23%	37%	9%	25%	24%	15%	22%	14%	39%	31%	25%	36%

FY 2021, 2022, and 2023 Scottsville Water Comparison
RWSA Billed Water Charges & ACSA Billed Water Revenues



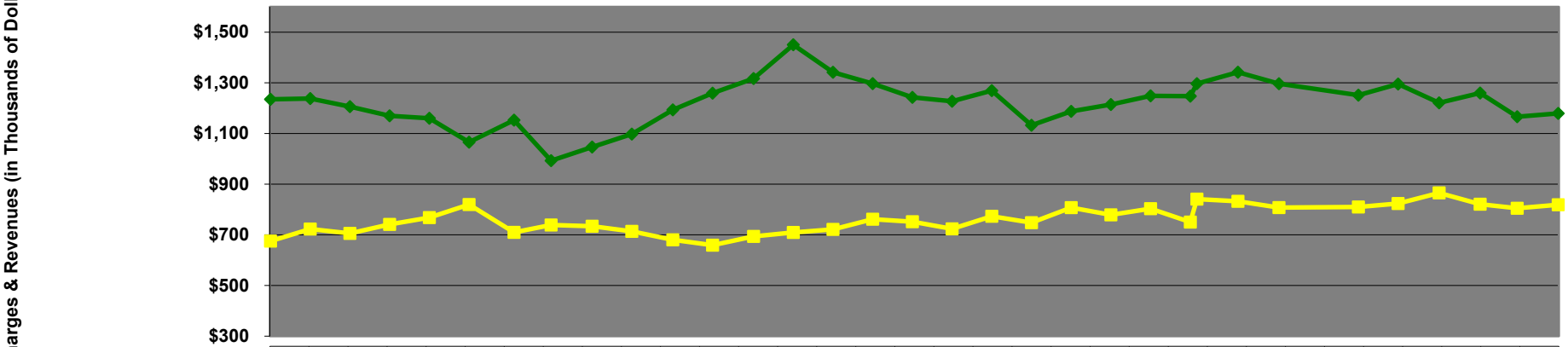
	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Revenue	$13	$10	$10	$11	$7	$9	$11	$12	$5	$10	$9	$7	$15	$10	$9	$12	$9	$9	$10	$9	$11	$9	$10	$11	$11	$11	$11	$10	$11	$10	$10	$10	$9
RWSA Charges	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$54	$60	$60	$60	$60	$60	$60	$60	$60	$60
Difference	-$41	-$45	-$45	-$43	-$47	-$45	-$43	-$42	-$49	-$44	-$45	-$47	-$40	-$44	-$45	-$42	-$45	-$45	-$44	-$45	-$44	-$45	-$45	-$44	-$49	-$49	-$49	-$50	-$49	-$50	-$50	-$50	-$51
Fiscal YTD Difference	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	($0.0	($0.1	($0.1	($0.2	($0.2	($0.3	($0.3	($0.3	($0.4	($0.4	($0.5	($0.0	($0.1	($0.1	($0.2	($0.2	($0.3	($0.3	($0.4	($0.4

FY 2021, 2022, and 2023 Urban (including Glenmore) & Crozet Sewer Comparison
ACSA Customer Usage & RWSA Flows



	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Usage	126	127	124	120	122	110	122	101	110	113	123	129	129	142	132	128	123	120	126	112	117	120	122	123	123	126	124	122	124	117	121	111	118
RWSA Flows	156	176	169	184	196	218	171	183	181	172	158	149	143	150	154	170	152	141	161	151	174	163	173	152	169	166	157	158	163	179	162	156	161
Variance	24%	39%	36%	54%	61%	98%	40%	80%	65%	53%	28%	16%	11%	6%	17%	34%	24%	17%	28%	34%	50%	36%	41%	23%	38%	32%	26%	29%	32%	53%	34%	40%	37%

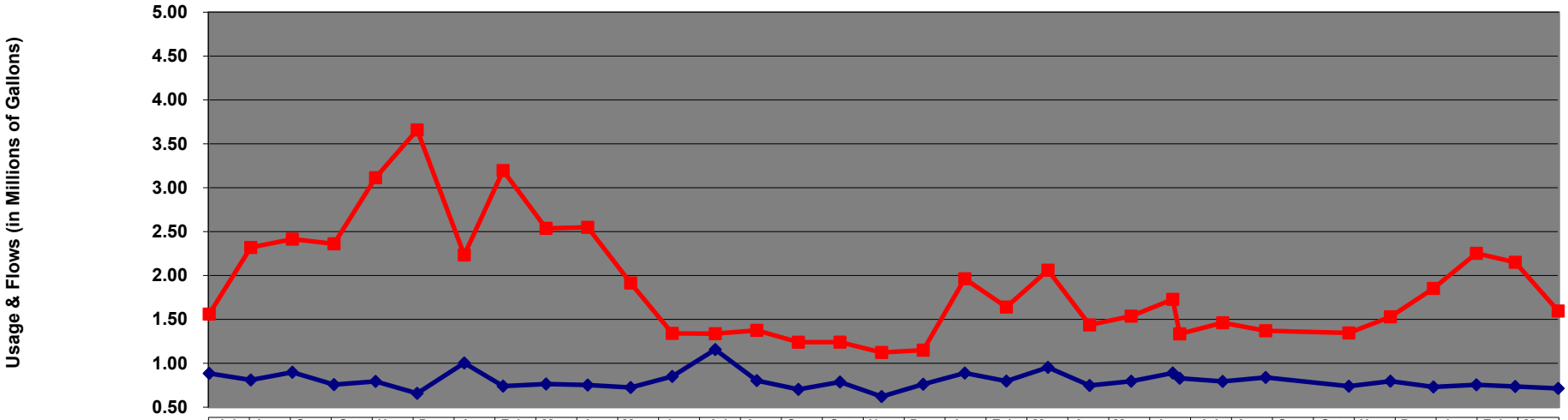
FY 2021, 2022, and 2023 Urban (including Glenmore) & Crozet Sewer Comparison
ACSA Billed Sewer Usage & RWSA Billed Sewer Charges



	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Revenue	$1,23	$1,23	$1,20	$1,16	$1,16	$1,06	$1,15	$992.	$1,04	$1,09	$1,19	$1,25	$1,31	$1,45	$1,34	$1,29	$1,24	$1,22	$1,26	$1,13	$1,18	$1,21	$1,24	$1,24	$1,29	$1,34	$1,29	$1,25	$1,29	$1,22	$1,25	$1,16	$1,17
RWSA Charges	$675	$723	$706	$741	$768	$820	$710	$739	$734	$714	$680	$659	$694	$709	$721	$762	$752	$724	$773	$748	$807	$779	$803	$750	$841	$832	$807	$810	$823	$865	$821	$805	$819
Difference	$560	$515	$500	$429	$392	$246	$443	$254	$313	$384	$513	$600	$623	$741	$620	$535	$491	$504	$496	$384	$380	$435	$445	$497	$456	$510	$489	$441	$472	$356	$439	$361	$360
Fiscal YTD Difference	$0.56	$1.07	$1.58	$2.00	$2.40	$2.64	$3.09	$3.34	$3.65	$4.04	$4.55	$5.15	$0.62	$1.36	$1.98	$2.52	$3.01	$3.51	$4.01	$4.39	$4.77	$5.21	$5.66	$6.15	$0.46	$0.97	$1.45	$1.90	$2.37	$2.72	$3.16	$3.52	$3.88

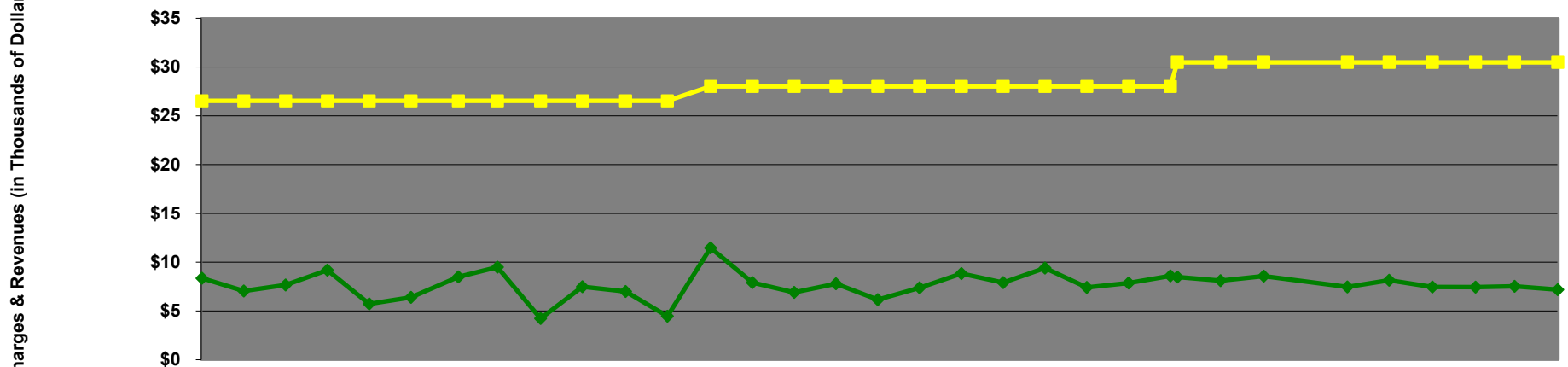
Note: Fiscal YTD Difference (ONLY) in Millions of Dollars

FY 2021, 2022, and 2023 Scottsville Sewer Comparison
ACSA Customer Usage & RWSA Flows



	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Usage	0.89	0.81	0.90	0.76	0.79	0.66	1.00	0.74	0.76	0.75	0.72	0.85	1.16	0.80	0.70	0.79	0.62	0.76	0.89	0.80	0.95	0.75	0.80	0.89	0.83	0.79	0.84	0.74	0.80	0.73	0.75	0.74	0.71
RWSA Flows	1.56	2.32	2.41	2.36	3.11	3.66	2.23	3.20	2.54	2.55	1.91	1.34	1.34	1.38	1.24	1.24	1.12	1.15	1.96	1.64	2.06	1.44	1.54	1.73	1.34	1.46	1.37	1.35	1.53	1.85	2.25	2.15	1.60
Variance	76%	187%	169%	212%	293%	457%	123%	332%	232%	239%	164%	58%	16%	71%	77%	58%	81%	51%	121%	106%	116%	92%	93%	94%	61%	84%	63%	82%	92%	154%	198%	192%	124%

FY 2021, 2022, and 2023 Scottsville Sewer Comparison
ACSA Billed Sewer Usage & RWSA Billed Sewer Charges



	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
ACSA Revenue	$8.36	$7.05	$7.66	$9.18	$5.72	$6.40	$8.49	$9.50	$4.23	$7.49	$7.00	$4.46	$11.4	$7.91	$6.91	$7.79	$6.16	$7.38	$8.83	$7.91	$9.40	$7.41	$7.87	$8.60	$8.48	$8.11	$8.57	$7.47	$8.15	$7.46	$7.44	$7.53	$7.19
RWSA Charges	$27	$27	$27	$27	$27	$27	$27	$27	$27	$27	$27	$27	$28	$28	$28	$28	$28	$28	$28	$28	$28	$28	$28	$28	$30	$30	$30	$30	$30	$30	$30	$30	$30
Difference	-$18	-$19	-$19	-$17	-$21	-$20	-$18	-$17	-$22	-$19	-$20	-$22	-$17	-$20	-$21	-$20	-$22	-$21	-$19	-$20	-$19	-$21	-$20	-$19	-$22	-$22	-$22	-$23	-$22	-$23	-$23	-$23	-$23
Fiscal YTD Difference	-$0.0	-$0.0	-$0.0	-$0.0	-$0.0	-$0.1	-$0.1	-$0.1	-$0.1	-$0.1	-$0.2	-$0.2	-$0.0	-$0.0	-$0.0	-$0.0	-$0.1	-$0.1	-$0.1	-$0.1	-$0.1	-$0.2	-$0.2	-$0.2	-$0.0	-$0.0	-$0.0	-$0.0	-$0.1	-$0.1	-$0.1	-$0.1	-$0.2

Note: Fiscal YTD Difference (ONLY) in Millions of Dollars

Single-Family Residential Water Usage

(Including irrigation through exclusion, irrigation, and auxiliary meters)

	FY 2021											
	July	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**
Level 1 (0 - 3,000 gallons)	45,910,300	45,665,700	45,167,300	44,787,100	45,134,400	44,331,500	45,900,400	43,314,333	43,786,600	44,618,100	45,900,923	46,255,313
Level 2 (3,001 - 6,000 gallons)	21,030,200	19,112,200	17,329,000	16,285,100	16,315,200	14,519,300	18,251,700	12,572,600	13,283,000	14,314,500	17,440,134	19,373,374
Level 3 (6,001 - 9,000 gallons)	7,266,400	5,921,900	4,575,900	4,441,300	3,890,700	2,817,300	4,255,500	2,201,100	2,371,500	2,609,300	4,280,004	6,283,886
Level 4 (over 9,000 gallons)	9,237,400	7,302,100	4,762,100	4,978,000	3,886,400	1,744,700	2,307,000	1,477,100	1,583,000	1,631,400	3,370,714	7,573,293
Total	**83,444,300**	**78,001,900**	**71,834,300**	**70,491,500**	**69,226,700**	**63,412,800**	**70,714,600**	**59,565,133**	**61,024,100**	**63,173,300**	**70,991,775**	**79,485,866**

	FY 2022											
	July	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**
Level 1 (0 - 3,000 gallons)	45,715,768	46,650,649	45,763,766	45,032,204	45,171,862	45,419,967	45,519,835	43,528,147	44,213,375	44,847,991	45,928,802	46,038,996
Level 2 (3,001 - 6,000 gallons)	18,273,794	20,170,499	17,049,266	15,725,032	15,151,382	14,875,487	15,122,551	12,929,554	12,730,722	13,260,281	16,086,013	16,576,525
Level 3 (6,001 - 9,000 gallons)	6,123,440	7,439,890	5,100,810	4,617,427	3,808,811	2,996,781	3,076,904	2,659,279	2,230,016	2,424,233	3,744,303	4,334,397
Level 4 (over 9,000 gallons)	8,544,212	14,373,474	7,815,394	7,173,929	4,280,811	2,811,464	3,100,290	2,921,259	1,746,818	1,865,133	3,644,494	5,309,110
Total	**78,657,214**	**88,634,512**	**75,729,236**	**72,548,592**	**68,412,866**	**66,103,699**	**66,819,580**	**62,038,239**	**60,920,931**	**62,397,638**	**69,403,612**	**72,259,028**

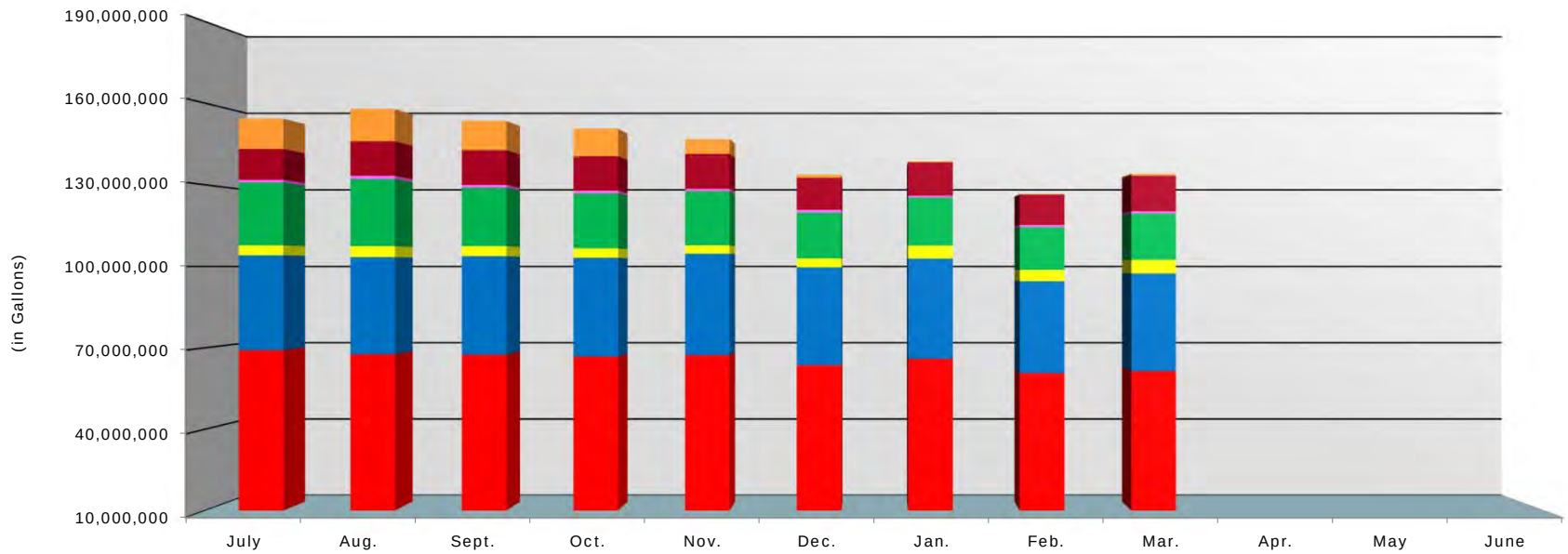
	FY 2023											
	July	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**
Level 1 (0 - 3,000 gallons)	45,599,911	45,505,082	45,632,349	45,357,143	45,992,076	45,339,022	45,820,263	44,448,040	45,016,715			
Level 2 (3,001 - 6,000 gallons)	16,363,636	15,612,084	15,525,446	15,374,370	15,677,968	13,744,408	14,908,443	12,546,428	13,038,674			
Level 3 (6,001 - 9,000 gallons)	4,849,724	4,363,645	4,161,371	4,369,132	3,918,235	2,545,163	2,943,662	2,117,866	2,182,828			
Level 4 (over 9,000 gallons)	7,208,522	6,639,465	6,037,842	6,071,945	4,079,700	2,079,589	2,271,075	1,540,953	1,196,536			
Total	**74,021,793**	**72,120,276**	**71,357,008**	**71,172,590**	**69,667,979**	**63,708,182**	**65,943,443**	**60,653,287**	**61,434,753**	**-**	**-**	**-**

System-Wide Irrigation Water Usage

(All usage measured through exclusion, irrigation, and auxiliary meters)

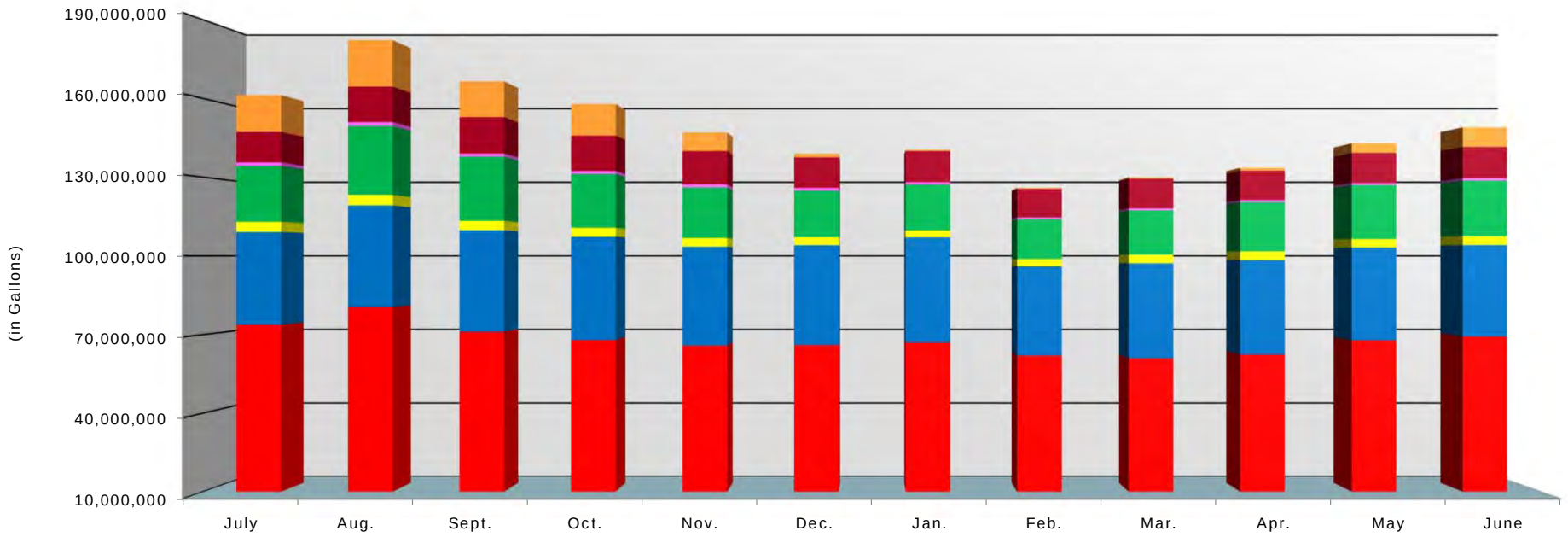
FY 2022	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**
Level 1 (0 - 3,000 gallons)	186,665	182,392	180,649	172,364	89,160	3,845	918	1,399	2,668			
Level 2 (3,001 - 6,000 gallons)	827,558	825,362	768,256	786,824	459,256	27,723	7,571	6,929	6,300			
Level 3 (6,001 - 9,000 gallons)	990,172	970,507	887,729	916,873	528,981	25,500	6,572	1,593	3,566			
Level 4 (over 9,000 gallons)	9,170,743	9,922,557	8,931,018	8,221,764	4,435,683	1,143,312	355,092	215,698	676,882			
Total	**11,175,137**	**11,900,819**	**10,767,652**	**10,097,825**	**5,513,080**	**1,200,380**	**370,153**	**225,619**	**689,416**	**-**	**-**	**-**

Monthly Water Consumption Fiscal Year 2023

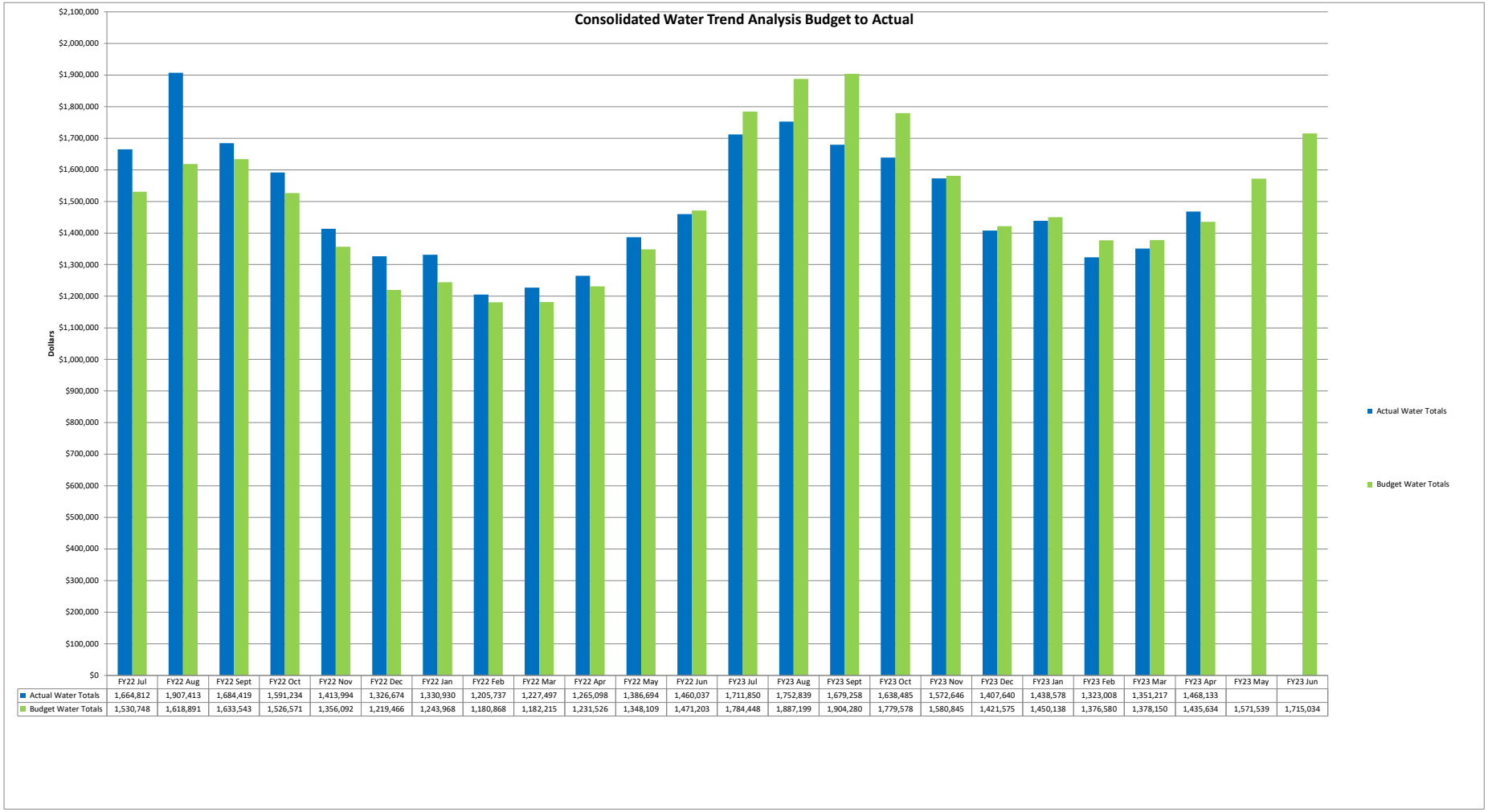


	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	7.24%	7.54%	7.02%	6.70%	3.75%	0.90%	0.27%	0.18%	0.51%	0.00%	0.00%	0.00%
Total Irrigation	11,175,137	11,900,819	10,767,652	10,097,825	5,513,080	1,200,380	370,153	225,619	689,416			
Institutional - Domestic Consumption	11,319,291	12,674,993	12,747,929	12,683,947	12,771,652	11,778,793	12,305,045	11,134,031	13,057,616			
Industrial	939,061	1,164,077	948,893	933,427	833,612	906,243	709,399	816,705	829,201			
Comm. (Other) - Domestic Consumption	23,118,746	24,680,610	21,554,311	20,295,040	20,004,641	16,893,115	17,593,408	15,700,570	17,024,057			
Offices - Domestic Consumption	3,674,283	4,083,421	3,700,076	3,470,304	3,043,916	3,329,037	4,809,082	4,181,660	5,081,625			
MFR - Domestic Consumption	34,974,805	35,804,051	36,296,110	36,410,800	37,401,009	36,056,416	36,927,115	33,914,329	35,931,334			
SFR - Domestic Consumption	69,126,793	67,577,187	67,479,481	66,746,613	67,286,795	63,599,125	65,965,821	60,663,343	61,452,363			

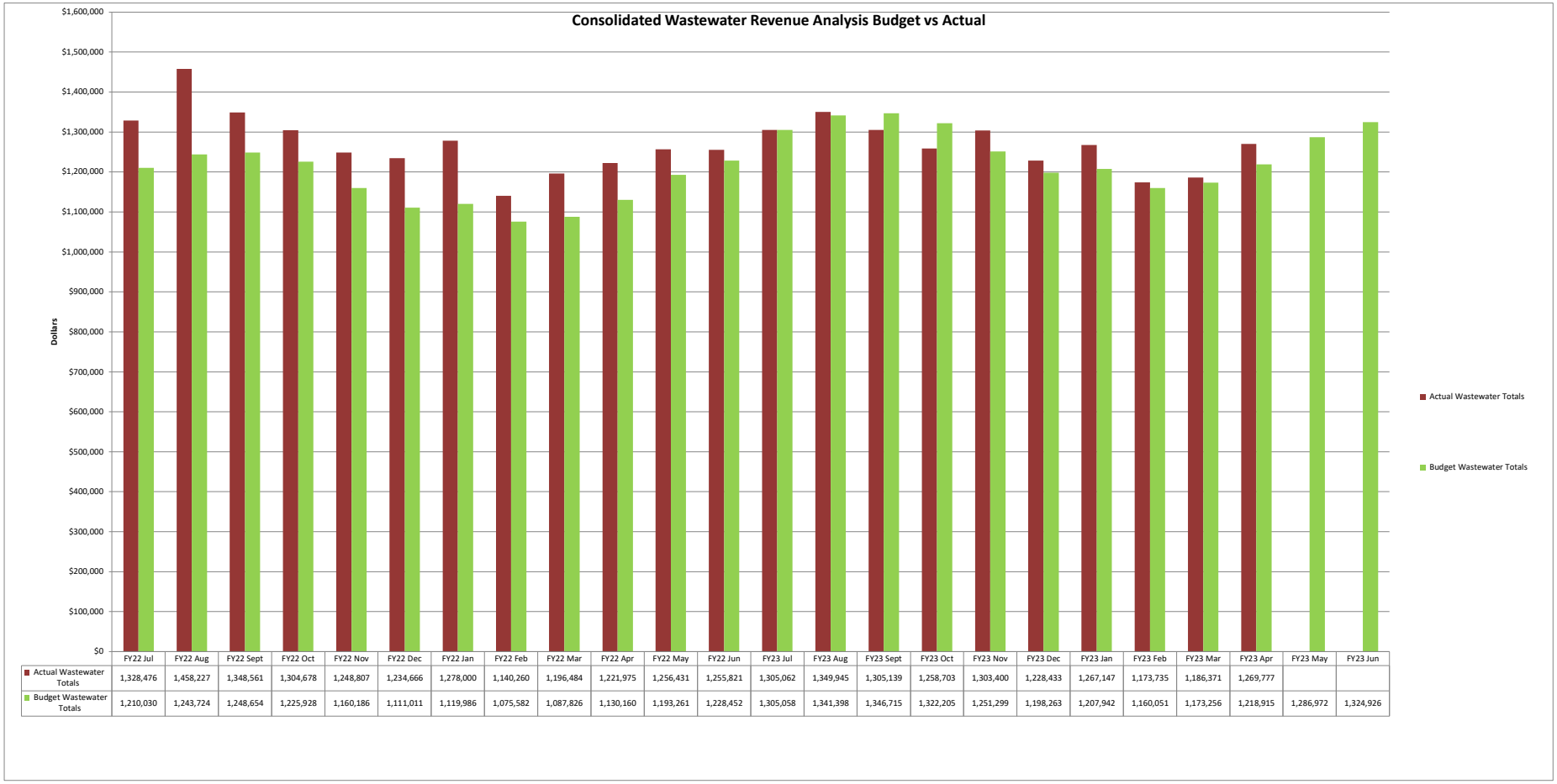
Monthly Water Consumption Fiscal Year 2022



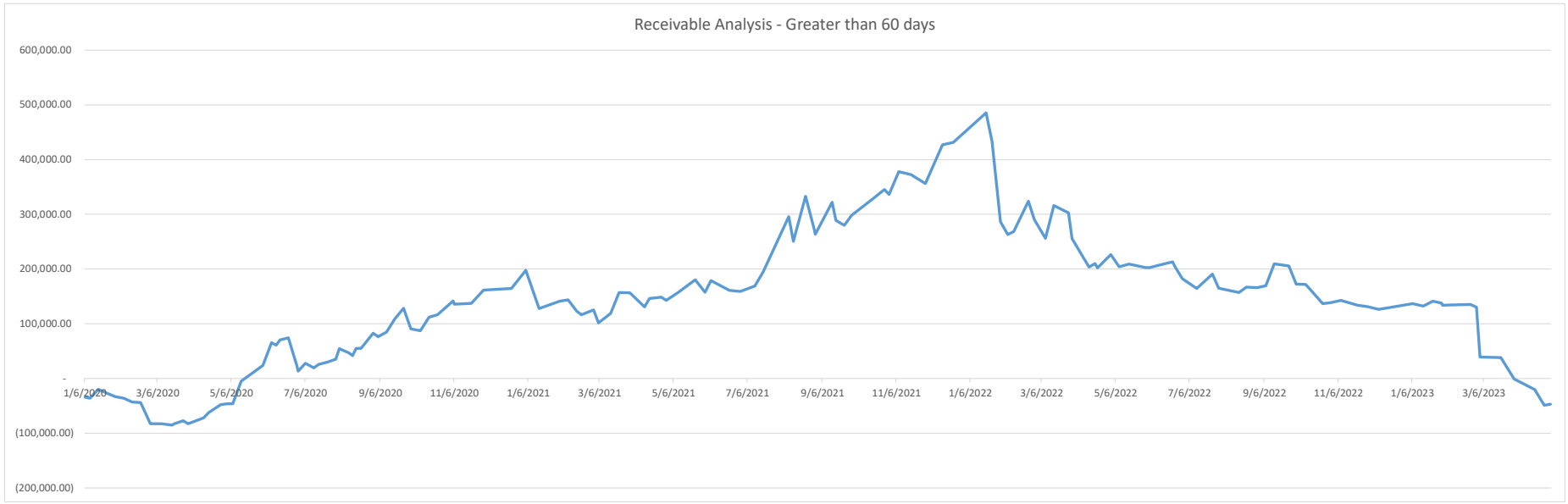
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	8.73%	9.74%	8.19%	7.63%	4.82%	1.01%	0.34%	0.28%	0.38%	0.79%	2.57%	5.03%
Total Irrigation	14,081,507	17,746,655	13,631,436	12,050,529	7,093,317	1,406,778	470,655	357,324	497,487	1,058,531	3,669,728	7,491,053
Institutional - Domestic Consumption	11,582,738	13,489,815	13,865,774	13,494,096	12,724,964	11,630,981	11,883,862	10,962,679	11,319,135	11,212,974	11,454,262	11,915,469
Industrial	1,262,587	1,519,053	1,193,165	1,128,786	1,121,916	1,050,113	810,668	718,305	787,267	845,945	751,304	951,318
Comm. (Other) - Domestic Consumption	21,372,075	26,208,337	24,479,570	20,510,511	19,291,182	17,778,992	17,574,070	15,092,224	16,832,508	18,691,391	20,575,249	21,115,992
Offices - Domestic Consumption	3,879,956	4,069,097	3,591,164	3,441,196	3,335,735	3,025,301	2,634,609	2,778,047	3,334,693	3,305,569	3,261,990	3,439,334
MFR - Domestic Consumption	35,402,612	38,868,005	38,709,217	39,341,545	37,682,580	38,067,253	40,137,903	34,042,165	36,211,107	36,066,312	35,359,564	34,760,663
SFR - Domestic Consumption	73,692,893	80,350,479	71,047,224	67,925,415	65,790,587	65,994,951	66,908,674	61,974,946	60,946,308	62,355,766	67,822,510	69,331,219



	FY22 Jul	FY22 Aug	FY22 Sept	FY22 Oct	FY22 Nov	FY22 Dec	FY22 Jan	FY22 Feb	FY22 Mar	FY22 Apr	FY22 May	FY22 Jun	FY23 Jul	FY23 Aug	FY23 Sept	FY23 Oct	FY23 Nov	FY23 Dec	FY23 Jan	FY23 Feb	FY23 Mar	FY23 Apr	FY23 May	FY23 Jun
Actual Water Totals	1,664,812	1,907,413	1,684,419	1,591,234	1,413,994	1,326,674	1,330,930	1,205,737	1,227,497	1,265,098	1,386,694	1,460,037	1,711,850	1,752,839	1,679,258	1,638,485	1,572,646	1,407,640	1,438,578	1,323,008	1,351,217	1,468,133		
Budget Water Totals	1,530,748	1,618,891	1,633,543	1,526,571	1,356,092	1,219,466	1,243,968	1,180,868	1,182,215	1,231,526	1,348,109	1,471,203	1,784,448	1,887,199	1,904,280	1,779,578	1,580,845	1,421,575	1,450,138	1,376,580	1,378,150	1,435,634	1,571,539	1,715,034



	FY22 Jul	FY22 Aug	FY22 Sept	FY22 Oct	FY22 Nov	FY22 Dec	FY22 Jan	FY22 Feb	FY22 Mar	FY22 Apr	FY22 May	FY22 Jun	FY23 Jul	FY23 Aug	FY23 Sept	FY23 Oct	FY23 Nov	FY23 Dec	FY23 Jan	FY23 Feb	FY23 Mar	FY23 Apr	FY23 May	FY23 Jun
Actual Wastewater Totals	1,328,476	1,458,227	1,348,561	1,304,678	1,248,807	1,234,666	1,278,000	1,140,260	1,196,484	1,221,975	1,256,431	1,255,821	1,305,062	1,349,945	1,305,139	1,258,703	1,303,400	1,228,433	1,267,147	1,173,735	1,186,371	1,269,777		
Budget Wastewater Totals	1,210,030	1,243,724	1,248,654	1,225,928	1,160,186	1,111,011	1,119,986	1,075,582	1,087,826	1,130,160	1,193,261	1,228,452	1,305,058	1,341,398	1,346,715	1,322,205	1,251,299	1,198,263	1,207,942	1,160,051	1,173,256	1,218,915	1,286,972	1,324,926


Receivable Analysis - Greater than 60 days
600,000.00
500,000.00
400,000.00
300,000.00
200,000.00
100,000.00
-
(100,000.00)
(200,000.00)
1/6/2020
3/6/2020
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5/6/2022
7/6/2022
9/6/2022
11/6/2022
1/6/2023
3/6/2023

Albemarle County Service Authority
April 2023 Payments

CHECK NUMBER	CHECK DATE	VENDOR NAME	AMOUNT	DESCRIPTION OVER $5,000
Wire	04/07/2023	Rivanna Water & Sewer Authority	2,006,070.77	Monthly Water/Wastewater Serv
65835	04/03/2023	Commonwealth Excavating	161,098.62	Jefferson Village WMRP
ACH	04/28/2023	Payroll	159,552.05	Net Pay
ACH	04/14/2023	Payroll	157,546.30	Net Pay
65951	04/15/2023	Harrisonburg Construction	75,525.00	Security Improvements
65836	04/03/2023	Core & Main LP	65,092.80	AMI-Hardware/Hosting/Software
233747495	04/14/2023	IRS-Federal Tax Deposit	61,908.60	Payroll
233747505	04/28/2023	IRS-Federal Tax Deposit	58,772.50	Payroll
Wire	04/27/2023	The Bank of New York Mellon	43,288.40	Debt Service
65907	04/03/2023	Whitman, Requardt & Assoc LLP	40,105.49	Scottsville Phase 4 Design
65980	04/15/2023	Sheehy Ford of Richmond Incorporatec	38,700.00	2023 Ford F-150
233747504	04/28/2023	County of Albemarle	37,475.96	Payroll
233747494	04/28/2023	County of Albemarle	36,259.00	Payroll
65843	04/03/2023	East Coast Utility Contractors	31,255.00	Sewer Pump Station
233747501	04/28/2023	Virginia Retirement System	30,336.59	Payroll
233747491	04/28/2023	Virginia Retirement System	30,336.55	Payroll
65865	04/03/2023	Michael Baker International Incorporat	29,343.74	Raintree and Fieldbrook
65852	04/03/2023	AGILIS LLC	26,934.36	4 Story Residential Backflow
65941	04/15/2023	Environmental Systems Research Instit	26,500.00	ESRI ArcGIS & Drone2Map GIS
65869	04/03/2023	Ramboll Americas Engineering	21,442.75	Briarwood Water Main Replace
233747493	04/14/2023	Valic	19,742.35	Payroll
65928	04/15/2023	Bank of America	18,446.81	Supplies, Memberships, Tools
65903	04/03/2023	U S Postmaster	18,000.00	Bulk Mail Permit 205 - FY 23
65879	04/03/2023	Planet Technologies Inc	17,952.00	Office 365 E3 Software Renewal
65876	04/03/2023	Paymentus Corporation	17,548.14	Transaction Fees
65924	04/15/2023	Allison Partners	16,110.00	Coaching Services
65940	04/15/2023	Electrical Equipment Company	12,413.51	TechConnect Renewal
233747496	04/14/2023	Virginia Dept of Taxation	9,991.90	Payroll
233747506	04/28/2023	Virginia Dept of Taxation	9,802.34	Payroll
65939	04/15/2023	Duncan Parnell	9,125.00	Trimble GPS Warranty
65863	04/03/2023	Mansfield Oil Company of Gainesville I	8,652.87	Monthly Fuel
65993	04/15/2023	Cellco Partnership	7,518.74	Monthly Cellular Service
65868	04/03/2023	MSB Coach	5,451.60	Emergenetics & Fall Leadership
233747503	04/28/2023	Valic	5,165.00	Payroll
65890	04/03/2023	RSG Landscaping LLC	5,142.19	Landscaping
65938	04/15/2023	Dominion Energy Virginia	5,093.13	Monthly Energy Service
65849	04/03/2023	Ferguson US Holdings Inc	4,991.66	
65942	04/15/2023	EWT Holdings III Corporation	4,559.06	
65841	04/03/2023	Dominion Energy Virginia	4,471.88	
65898	04/03/2023	SwiftComply US Opco Incorporated	4,463.00	
65846	04/03/2023	Facility Gateway Corporation	4,310.00	
65988	04/15/2023	Truck Enterprises Incorporated	4,170.75	
65878	04/03/2023	The Pitney Bowes Bank Incorporated	4,000.00	
233747490	04/14/2023	Nationwide	3,842.15	
233747500	04/28/2023	Nationwide	3,842.15	
65844	04/03/2023	Ed's Floor Care Services LLC	3,703.33	
65995	04/15/2023	Michael Sean McGill	3,500.00	
65962	04/15/2023	Mansfield Oil Company of Gainesville I	3,233.32	
233747489	04/14/2023	ICMA Membership Renewals	3,107.00	
233747499	04/28/2023	ICMA Membership Renewals	3,107.00	
65889	04/03/2023	Stemmle Plumbing Repair Inc	2,945.00	
65976	04/15/2023	Stemmle Plumbing Repair Inc	2,900.00	

65840	04/03/2023	Tech Data Corporation	2,860.10
65851	04/03/2023	Flora Pettit PC	2,835.00
65877	04/03/2023	PFM Asset Management LLC	2,711.58
65959	04/15/2023	Lowe's	2,687.12
65961	04/15/2023	Mailing Services of Virginia	2,599.96
65904	04/03/2023	UniFirst Corporation	2,511.12
65947	04/15/2023	Fortiline Incorporated	2,462.97
65960	04/15/2023	Luck Stone Corporation	1,798.00
66072	04/28/2023	Guardian	1,790.78
65990	04/15/2023	UniFirst Corporation	1,751.57
233747497	04/14/2023	Flexible Benefit	1,736.00
233747507	04/28/2023	Flexible Benefit	1,736.00
66075	04/28/2023	Minnesota Life Insurance Co	1,674.77
233747498	04/14/2023	ACSA Flexible Spending	1,601.15
233747508	04/28/2023	ACSA Flexible Spending	1,601.15
65892	04/03/2023	S L Williamson Company Inc	1,592.45
65994	04/15/2023	VA Utility Protection Service Inc	1,534.05
65888	04/03/2023	Rivanna Water & Sewer Authority	1,532.58
65853	04/03/2023	Fortiline Incorporated	1,474.41
65882	04/03/2023	Rappahannock Electric Cooperative	1,464.85
65975	04/15/2023	Rivanna Solid Waste Authority	1,414.00
65834	04/03/2023	Comcast	1,409.09
65964	04/15/2023	McClung Printing Incorporated	1,310.00
65933	04/15/2023	Culpeper Auto Parts Incorporated	1,306.27
65838	04/03/2023	Albemarle Circuit Court	1,200.00
65902	04/03/2023	Truck Enterprises Incorporated	1,132.00
65896	04/03/2023	Stanley Martin	1,095.12
65905	04/03/2023	UVA-WorkMed	1,063.00
65991	04/15/2023	United Rentals (North	1,012.46
66069	04/28/2023	ACAC	959.00
65830	04/03/2023	Culpeper Auto Parts Incorporated	856.14
233747502	04/28/2023	AFLAC	855.59
65972	04/15/2023	Republic Services	840.98
65842	04/03/2023	Dr. Hinkle & Associates	825.00
65891	04/03/2023	Ryan Homes	820.95
65944	04/15/2023	Ferguson US Holdings Inc	814.92
233747492	04/28/2023	AFLAC	813.33
65984	04/15/2023	Tencarva Machinery Co LLC	810.25
66074	04/28/2023	Herbert Beskin Trustee	804.00
65824	04/03/2023	Advance Stores Company Inc	714.63
65958	04/15/2023	Thomas B Lincoln Land Surveyor	700.00
65998	04/14/2023	Cincinnati Insurance Company	666.87
65857	04/03/2023	Hathaway Solutions LLC	666.71
65906	04/03/2023	VACORP	651.40
65981	04/15/2023	Siemens Industry Incorporated	650.00
65955	04/15/2023	Price Chevrolet Company	647.33
65833	04/03/2023	Comcast	641.35
65847	04/03/2023	Faulconer Construction	635.56
65997	04/15/2023	Winchester Building Supply Co., Inc.	612.00
65867	04/03/2023	Alexander Morrison	585.22
65965	04/15/2023	ODP Business Solutions LLC	560.96
65839	04/03/2023	Crown Communication LLC	530.45
65922	04/15/2023	Advance Stores Company Inc	522.56
65880	04/03/2023	Ferguson Enterprises LLC #3326	499.50
65859	04/03/2023	Luck Stone Corporation	473.66

65845	04/03/2023	EDC	442.71
65971	04/15/2023	Pitney Bowes Global	441.60
65999	04/14/2023	Treasurer of Virginia	430.90
65973	04/15/2023	Rexel USA Incorporated	407.40
65826	04/03/2023	Appalachian Power	383.15
66078	04/28/2023	Treasurer of Virginia	365.90
65897	04/03/2023	Macro Retailing LLC	332.98
65861	04/03/2023	Mailing Services of Virginia	330.36
65871	04/03/2023	Hannah Hillman	300.00
65872	04/03/2023	Jessica Marshall	300.00
65923	04/15/2023	Aireco Supply Incorporated	292.80
65989	04/15/2023	U. S. Bank	291.67
65952	04/15/2023	Hathaway Solutions LLC	280.47
65974	04/15/2023	Ricoh USA Incorporated	275.00
65970	04/15/2023	Performance Signs LLC	266.00
66076	04/28/2023	Piedmont Family YMCA	257.40
65862	04/03/2023	Malloy Ford	248.36
65985	04/15/2023	TSRC Incorporated	246.79
65855	04/03/2023	Brian Gillespie	240.47
65894	04/03/2023	Southern Photo Print of VA	231.86
65886	04/03/2023	Rexel USA Incorporated	211.23
65870	04/03/2023	Amurcon Realty Company, Agent	210.00
65883	04/03/2023	Red Bud Supply Incorporated	203.73
65837	04/03/2023	County of Albemarle	203.60
65926	04/15/2023	Aqua Air Laboratories Inc	200.00
65884	04/03/2023	Red Wing Business Advantage Account	199.95
66077	04/28/2023	Snap Fitness	199.80
65987	04/15/2023	Traffic Safety Supplies LLC	190.00
65848	04/03/2023	FedEx	186.01
65957	04/15/2023	L/B Water Service Incorporated	175.00
65982	04/15/2023	Macro Retailing LLC	170.99
65827	04/03/2023	Bailey Printing Incorporated	170.00
65953	04/15/2023	James River Communications Inc	159.00
65866	04/03/2023	Miller's Supplies at Work	150.40
65901	04/03/2023	Timmons Group Incorporated	150.00
65885	04/03/2023	Scott Redgate	145.70
65858	04/03/2023	Wisconsin Quick Lube Inc	144.48
65850	04/03/2023	Flexible Benefit Administrators Inc	144.25
65935	04/15/2023	City of Charlottesville	130.70
66073	04/28/2023	The Gym	130.00
65936	04/15/2023	Derrick Collins	125.06
65954	04/15/2023	Wisconsin Quick Lube Inc	122.79
65925	04/15/2023	American Pest Incorporated	118.00
65856	04/03/2023	Gingerich Outdoor Power Spec	112.77
65946	04/15/2023	Flexible Benefit Administrators Inc	112.00
65934	04/15/2023	Checkfree Pay	102.37
65873	04/03/2023	John G. Jones	100.00
65874	04/03/2023	Randy Davis, Jr.	100.00
65875	04/03/2023	Rebecca Flowers	100.00
65966	04/15/2023	Anne Hiss	100.00
65967	04/15/2023	Mary Beth Cancienne	100.00
65968	04/15/2023	Thomas & Karen McDonald	100.00
65977	04/15/2023	Ryan Homes	95.08
65881	04/03/2023	Ashley Privott	94.20
65992	04/15/2023	University Tire & Auto	90.00

65983	04/15/2023	Kris Taflan	87.03
65930	04/15/2023	MWP Supply Incorporated	81.61
65950	04/15/2023	Greenwood Homes	80.41
65899	04/03/2023	Syn-Tech Systems	79.00
65949	04/15/2023	Gingerich Outdoor Power Spec	71.97
65895	04/03/2023	Courtney Spain	71.42
65956	04/15/2023	Taylar R Johnson	70.21
65909	04/03/2023	William A Wells	70.00
65937	04/15/2023	Document Destruction of	69.95
65828	04/03/2023	Amanda Bland	65.02
65996	04/15/2023	Estee Williams	62.91
65900	04/03/2023	TSRC Incorporated	55.75
65860	04/03/2023	Montie L Madison	55.00
65943	04/15/2023	Ey E Homes Incorporated	54.62
65921	04/15/2023	John R V Mayo	54.00
65945	04/15/2023	Fisher Auto Parts Incorporated	50.25
65929	04/15/2023	Larry Barnett	45.26
66070	04/28/2023	Anytime Fitness-Pantops	40.00
66071	04/28/2023	Anytime Fitness - Zion VA	40.00
65969	04/15/2023	Kim Park	37.86
65887	04/03/2023	Sandra Richardson	37.53
65932	04/15/2023	Central Virginia Electric Cooperative	33.71
65931	04/15/2023	Maria Carlton	30.86
65832	04/03/2023	City of Charlottesville	27.67
65825	04/03/2023	BPB Holding Corporation	24.14
65927	04/15/2023	Augusta Cooperative Farm Bureau	21.98
65864	04/03/2023	Martin Hardware Company Inc	20.08
65893	04/03/2023	Maureen Scott	18.32
65963	04/15/2023	Martin Hardware Company Inc	17.70
65831	04/03/2023	Jeff Cheers	13.77
65908	04/03/2023	Brittney Whiteside	13.70
65948	04/15/2023	Wallace Gibson	13.50
65979	04/15/2023	Alexander Schult	12.51
65978	04/15/2023	Kenneth Schmidt	9.29
65986	04/15/2023	Thryv Incorporated	6.50
65829	04/03/2023	Broadway Center LLC	3.94
65854	04/03/2023	Wallace Gibson	3.15
			3,466,865.82

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: FY 2023 Capital Improvement Program (CIP) Report	**AGENDA DATE:** May 18, 2023
STAFF CONTACT(S)/PREPARER: Jeremy M. Lynn, P.E., Director of Engineering	**CONSENT AGENDA:** **ACTION:** ■ **INFORMATION:** ■ **ATTACHMENTS:** YES

BACKGROUND: Monthly CIP Memo including a status report on active CIP Projects and a list of Active Private Development Projects.

DISCUSSION:

- Questions about the status of active CIP Projects.
- Questions about the status of active Private Development Projects.

BUDGET IMPACT: None.

RECOMMENDATIONS: None.

BOARD ACTION REQUESTED: Approval of the Consent Agenda.

ATTACHMENTS:

- Monthly CIP Report
- List of Active Private Development Projects

Albemarle County Service Authority (ACSA)
Capital Improvement Project Report
May 2023

1. Risk Assessment Improvements Phase 1 (Account Code 1621):

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Construction
Percent Complete:	80%
Contractor:	Harrisonburg Construction Co., Inc. (HCC)
Construction Start:	November 2022
Completion:	July 2023
Total Budget:	$1,221,950
Appropriated Funds:	$1,222,048

Project Description - After the attacks of September 11, 2001, industry leaders were tasked by the federal government to prioritize requirements for the protection of the nation's critical infrastructure. The Water Sector, encompassing both water and wastewater, was one of the categories /identified that were expected to remain resilient and continue operating regardless of emergency events. As part of the on-going preparedness program for the ACSA to remain resilient a Vulnerability Assessment was completed in conjunction with our community partners. All our critical assets were analyzed for risks caused by both natural and human-made hazards, using the AWWA Standard J100: *Risk and Resilience Management of Water and Wastewater Systems*. The result was a report to establish mitigation measures to lower risks and increase resiliency. Some mitigation measures have already been completed with others phased over upcoming fiscal years based upon priority.

5/8/2023: The fence screening work at Ashcroft Pump Station No. 2 is complete. The installation of tank ladder security covers at the Mosby Mountain and Ashcroft Upper Tanks is scheduled for the week of May 8, 2023.

2. <u>Energy Audit (Account Code 1625)</u>:

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Study
Percent Complete:	95%
Contractor:	Unknown
Construction Start:	N/A
Completion:	October 2022 (Study)
Total Budget:	$390,000
Appropriated Funds:	$296,000

Project Description - This project will consist of a comprehensive energy audit of the Operations Center and all pump stations. 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.

1/10/2023: The Final Report has been received and is under review by ACSA staff.

3. <u>Avon Operations Center (Account Code 1622)</u>:

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2025
Total Budget:	$4,315,000
Appropriated Funds:	$634,312

Project Description - As part of the Operations Center Expansion Study our consultant reviewed all properties owned by the ACSA that could be utilized as we grow. 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 Operations Center is becoming overcrowded with equipment and materials, causing us to locate some equipment and larger materials in the former ACSA Maintenance Yard at the Crozet Water Treatment Plant, which we lease from RWSA. This project will begin to develop the Avon Street property into a much larger vehicle and materials storage facility, including a training area for our equipment operators.

5/8/2023: SRC and Building Permit documents have been submitted to the County for review. Discussions have begun with one of the neighboring property owners to secure a temporary grading easement.

4. <u>Four-Story Backflow Prevention Assembly Retrofit (Account Code 1765)</u>:

Consultant:	ACSA/Dewberry Engineers, Inc. (Dewberry)
Project Status:	Construction
Percent Complete:	33%
Contractor:	Foothill Irrigation
Construction Start:	February 2023
Completion:	June 2023
Total Budget:	$348,000
Appropriated Funds:	$360,295

Project Description - In late 2018 ACSA staff became aware of four-story residential structures being constructed without proper backflow prevention devices. Section 8 of the ACSA Rules and Regulations details the ACSA Backflow Prevention Program. This program is in accordance with 12VAC5-590-570 through 12VAC5-590-630 of the Virginia Waterworks Regulations. The Containment Policy in 12VAC5-590-610 outlines the

requirement for a backflow prevention (BFP) assembly on the domestic water service line to high rise structures, defined as four (4) or more stories.

5/8/2023: Foothill Irrigation was able to install three backflow assemblies on Friday, April 28, 2023. ACSA staff will continue to coordinate with our customers to schedule the remaining 54 installations.

5. <u>Scottsville Phase 4 Water Main Replacement (Account Code 1758)</u>:

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2024
Completion:	2026
Total Budget:	$5,004,900
Appropriated Funds:	$499,410

Project Description - This project continues our systematic program to replace undersized and deteriorating asbestos-cement and cast-iron water mains throughout our water systems. Roads impacted by water replacement work include James River Road, Warren Street, Hardware Street, Moores Hill, and the downtown streets of Page, Bird, and West Main. This project requires extensive coordination with the Rivanna Water and

Sewer Authority (RWSA) has it includes the replacement of their asbestos-cement water main along James River Road.

5/8/2023: Test hole excavation and geotechnical boring efforts have been completed and information has been provided to WRA for incorporation into the design documents. ACSA staff is currently reviewing the first round of easement plats prior to deed preparation.

6. **Ragged Mountain Phase 1 Water Main Replacement (Account Code 1760):**

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	TBD based on VDOT Bridge Replacement
Completion:	TBD
Total Budget:	$951,400
Appropriated Funds:	$124,975

Project Description - This project will replace the oldest active water main remaining in our system serving residents along Reservoir Road. This cast iron pipe is over 90 years old and is severely tuberculated, which greatly reduces the flow capacity in this section.

5/8/2023: VDOT recently advised that their Morey Creek Bridge Replacement Project has been canceled and a new project has not yet been established or funded. ACSA staff will be meeting with Dewberry later this week to begin discussing next steps in the design process considering this new information.

7. **Crozet Phase 4 Water Main Replacement (Account Code 1756):**

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2025
Total Budget:	$6,183,500
Appropriated Funds:	$588,156

Project Description - Our Strategic Plan calls for the eventual replacement of all asbestos-cement and PVC (pre-1990) 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 asbestos-cement and PVC water mains in the Crozet Water System. Roads impacted by water replacement work include Crozet Avenue (Route 240), Rockfish Gap Turnpike (Route 250), Hillsboro Lane, Brownsville Road, and the neighborhood streets in Park View. This is the fourth of five phases that have been defined to carry out these improvements.

5/8/2023: The ACSA has been unable to successfully deliver through Certified Mail (via USPS) the latest offer letter to the final remaining property owner where an easement needs to be obtained for this project. ACSA staff has prepared a condemnation resolution for the acquisition of the remaining easement. This project will be discussed as a separate Agenda Item.

8. <u>Northfields Water Main Replacement (Account Code 1764)</u>:

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2026
Completion:	2027
Total Budget:	$8,130,000
Appropriated Funds:	$655,997

Project Description - 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.

5/8/2023: The Letter of Agreement for Plat Preparation has been provided to Ramboll.

9. <u>Briarwood Water Main Replacement (Account Code 1766)</u>:

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2026
Completion:	2027
Total Budget:	$2,430,000
Appropriated Funds:	$255,338

Project Description - 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.

1/10/2023: ACSA staff is reviewing the proposed geotechnical boring plan prepared by Ramboll.

10. <u>Barracks West Water Main Replacement (Account Code 1796)</u>:

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2024
Completion:	2025
Total Budget:	$3,385,000
Appropriated Funds:	$218,191

Project Description - This project will replace the undersized and aging cast iron and galvanized water mains that were installed in the late 1960's. These water mains are original to the Old Salem Apartments development, now called Barracks West. This project follows our Strategic Plan goal to replace aging and undersized water mains throughout our system and will provide for an opportunity to improve fire protection to these multi-family apartments.

4/10/2023: Dewberry is working on the 90% Design Documents. The geotechnical boring work was completed the first week of April 2023.

11. <u>Broadway Street Water Main Replacement (Account Code 1768)</u>:

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2024
Total Budget:	$792,800
Appropriated Funds:	$128,000

Project Description - 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 on 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 in transforming this area.

5/8/2023: The geotechnical boring work has been completed; test pits should occur before the end of May 2023.

12. <u>Townwood Water Main Replacement (Account Code 1773)</u>:

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	0%
Contractor:	Undetermined
Construction Start:	2027
Completion:	2027
Total Budget:	$1,300,000
Appropriated Funds:	$169,180

Project Description – This project continues our systematic program to replace PVC water mains that have been in service since the early 1980's and have recently experienced several breaks causing water service disruptions.

5/8/2023: Dewberry has completed the necessary field survey efforts for this project and have begun development of the 50% Design Documents.

13. <u>Raintree and Fieldbrook Water Main Replacement (Account Code 1771)</u>:

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2027
Completion:	2028
Total Budget:	$5,947,300
Appropriated Funds:	$290,887

Project Description - 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 1980's and will eliminate pipe saddles at the water service connections that have been failing due to corrosion.

3/7/2023: Baker has submitted 50% Design Documents and they are under review by ACSA staff.

14. Airport Trunk Sewer Upgrade (Account Code 1828):

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2026
Completion:	2028
Total Budget:	$5,908,800
Appropriated Funds:	$378,459

Project Description - With the continued growth in the Hollymead Town Center area, the existing sewer collector serving the airport and the area west of Route 29 needs upgrading to handle full build-out. The existing sewer was originally sized to serve the light industrial zoning designated for that area at the time of construction. The increased density specified in the County Comprehensive Plan for the same drainage basin will exceed the capacity of the existing sewer. A study of the drainage basin was completed in 2016 with the recommendation the sewer main be increased in size by replacing it in place.

3/7/2023: ACSA staff recently met with a development team to discuss current sewer capacities and the necessary upgrades to accommodate their multi-family residential development within this drainage area. Based on flow projections and existing pipe capacities, upgrades to a large portion of this gravity sanitary sewer system may be necessary ahead of the ACSA's schedule for construction. This may ultimately shift some of the responsibility of upgrading the existing sewer to the development team. ACSA staff has shared the current design with their team, and they are in the process of obtaining cost estimates from contractors. To date, 8 of 24 easements have been obtained.

15. Biscuit Run Sewer Replacement (Account Code 1830):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	0%
Contractor:	Linco, Inc. (Linco)
Construction Start:	2023
Completion:	2023
Total Budget:	$479,600
Appropriated Funds:	$756,419

Project Description - During a routine inspection, the ACSA's Maintenance Department discovered an existing gravity main and manhole along an intermittent stream that drains into Biscuit Run had been exposed

due to runoff. This project will replace the sewer segment that crosses the stream with ductile iron pipe and will reinforce the stream bank where the sewer manhole is exposed.

3/7/2023: ACSA Maintenance has performed easement clearing to improve access for Linco.

16. <u>FY 2021 Miscellaneous Sewer Rehabilitation (Account Code 1904)</u>:

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	100%
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2020
Completion:	May 2023
Total Budget:	$200,000
Appropriated Funds:	$200,000

Project Description - This project continues our annual "find and fix" program of sanitary sewer rehabilitation to reduce I&I in our system. The ACSA made the decision to split our miscellaneous rehabilitation Contract Documents into separate contracts: one for repair and replacement work, and the other for trenchless pipe rehabilitation plus internal manhole rehabilitation. This contract will be utilized to perform trenchless rehabilitation, including sewer lining, segmental lining, top hats, internal point repairs and manhole rehabilitation that does not require excavation work, to correct problems in our system found with systematic CCTV inspection by ACSA crews. It will also be used to complete rehabilitation recommendations generated from the SSES's of larger drainage basins.

5/8/2023: The relining of several sections of sanitary sewer along Barracks Road was completed during the second half of April. Prism is in the process of submitting the closeout documents for this contract. This project is essentially complete; therefore, it will be removed from the CIP Monthly Report.

17. <u>FY 2022 Miscellaneous Sewer Rehabilitation (Account Code 1906)</u>:

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	100%
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2021
Completion:	May 2023
Total Budget:	$200,000
Appropriated Funds:	$200,000

Project Description - This project continues our annual "find and fix" program of sanitary sewer rehabilitation to reduce I&I in our system.

5/8/2023: Prism has completed the remaining sanitary sewer relining and manhole rehabilitation efforts associated with this contract and is in the process of submitting the closeout documents. This project is essentially complete; therefore, it will be removed from the CIP Monthly Report.

18. <u>FY 2024 Miscellaneous Sewer Rehabilitation (Account Code 1908)</u>:

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	Underway
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	April 2023
Completion:	April 2024
Total Budget:	$200,000
Appropriated Funds:	$200,000

Project Description - This project continues our annual "find and fix" program of sanitary sewer rehabilitation to reduce I&I in our system.

5/8/2023: Notice of Award has been issued to Prism.

19. <u>Bellair – Liberty Hills Sewer (Account Code 1829)</u>:

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2026
Total Budget:	$3,493,715
Appropriated Funds:	$380,295

Project Description - Over the past several years, there has been an uptick 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, many of the property owners are interested in connecting to public sewer if it was made available.

3/7/2023: ACSA staff met on February 9, 2023, to discuss Baker's design and the significant portions of the neighborhood proposed to be served by E/One systems. ACSA will be working with Baker to explore how additional portions of the neighborhood could be served by gravity.

20. <u>Madison Park Pump Station Upgrade (Account Code 1735)</u>:

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	0%
Contractor:	Anderson Construction, Inc. (ACI)
Construction Start:	October 2022
Completion:	November 2023
Total Budget:	$1,550,000
Appropriated Funds:	$2,003,831

Project Description - This wastewater pump station was constructed in the early 1980's by private development and the original equipment is wearing down. In addition, the building is undersized creating difficulty in performing routine maintenance and making it impossible to install the control panels necessary to include this pump station in our new SCADA System. A study to evaluate the best option for upgrading this pump station will be performed, followed by design and construction.

5/8/2023: A majority of the submittals have been approved. A Load Letter will be submitted to Dominion Energy later this month for the electrical service upgrade.

21. <u>Sewer Pump Station Comminutors (Account Code 1827)</u>:

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	90%
Contractor:	East Coast Utility Contractors, Ltd. (ECUC)
Construction Start:	July 2022
Completion:	September 2023
Total Budget:	$731,300
Appropriated Funds:	$616,193

Project Description - Three sewer pump stations: Glenmore, Georgetown Green, and Crozet have all been experiencing higher than normal amounts of solid debris that have been causing undue wear and tear on our pumps, reducing their effective life. They have also been subjected to clogging from the fibrous cloth wipes that are marketed as flushable but do not break down in the sanitary sewer collection system. Maintenance identified the need to

install comminutors (aka grinders) in the wet wells or just upstream of them, to eliminate these solids that are adversely impacting our pumps.

5/8/2023: ECUC has completed installation of the manhole at the Glenmore Sewer Pump Station that will house the grinder. Installation and start-up of this grinder is anticipated the week of May 8, 2023.

22. <u>Lewis Hill – West Leigh Water Connection (Account Code 1754)</u>:

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	95%
Contractor:	ACSA Maintenance Department
Construction Start:	2023
Completion:	2023
Total Budget:	$80,900
Appropriated Funds:	$7,125

Project Description - The existing PVC water main that serves as the primary connection between West Leigh Subdivision and Lewis Hill Subdivision is at risk for failure due to the encroachment of a nearby stream. The water main has been taken out of service to avoid a catastrophic failure and the resulting large volume of lost water. This project re-establishes the connection from West Leigh by taking advantage of the recent water main replacement along Sheffield Road with an 8” diameter pipe.

3/7/2023: ACSA staff have provided a response to the Lewis Hill HOA advising that utilization of the existing easement is the alternative to obtaining a new easement. Use of the existing easement will be more impactful, but that decision will be left up to the HOA.

23. Huntington Village Water Connection (Account Code 1770):

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2023
Total Budget:	$60,700
Appropriated Funds:	$3,533

Project Description - The existing water main that serves as the only feed into Huntington Village off Old Ivy Road is at risk of failure due to an existing rock retaining wall that was constructed overtop of the water main. This project provides a second water connection into Huntington Village which is comprised of approximately 135 residential customers.

12/5/2022: The 100% Design Documents have been completed by ACSA staff.

24. Exclusion Meters Replacement (Account Code 1759):

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	35%
Contractor:	ACSA Maintenance Department
Construction Start:	September 2019
Completion:	2024
Total Budget:	$742,500
Appropriated Funds:	$247,500

Project Description - 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 exclusion meters in our system.

5/8/2023: The Glenmore HOA's contractor is currently in the process of repaving the roads in the Darby Road (west) section. ACSA Maintenance crews have demobilized from the area to allow for this work to take place and to allow for the pavement to cure. There are currently 321 private irrigation exclusion meters remaining in our system.

25. <u>SCADA System Phase 3 (Account Code 1605)</u>:

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	0%
Contractor:	M.C. Dean
Construction Start:	November 2022
Completion:	September 2023
Total Budget:	$943,115
Appropriated Funds:	$1,224,918

Project Description - The ACSA Utility System has over 40 critical assets that include water and wastewater pump stations, water storage tanks and master PRV stations. They are considered critical because malfunctions or failures at any of the assets could have a drastic effect on our utility system and our customers. These assets are currently monitored by site visits of assigned Maintenance personnel. This project will create a Supervisory Control and Data Acquisition (SCADA) System that will allow ACSA employees to remotely monitor the operations of these critical assets from the main office building. It will also allow personnel to change the operational settings of some pump stations from the main office building. Using alarms, we will be able to more quickly evaluate problems and prevent some failures before they happen.

5/8/2023: ACSA and M.C. Dean staff continue to work through RFI's and various submittals. Approximately 85% of the materials for the project have been ordered. Based on lead time for various components, the ACSA anticipates a 2-month extension being granted on the project. Field activities are scheduled to begin this summer.

Albemarle County Service Authority (ACSA)
Active Private Development Projects
May 2023

a. 1165 Pen Park Road (Rio): Water service and sewer main extensions to serve 4 lots. The site is located to the east of the Rio Road East and Pen Park Road intersection.

b. Albemarle Business Campus – Block 1 (Scottsville): Water and sewer main extensions to serve 128 multi-family units. The site is located to the northeast of the Old Lynchburg Road and Country Green Road intersection.

c. Belvedere Phase 5B (Rio): Water and sewer main extensions to serve 20 single family homes at the end of Fowler Street in the back of Belvedere.

d. Brookhill Blocks 9-11 (Rivanna): Water and sewer main extensions to serve 85 single family homes in the Brookhill subdivision, located east of Stella Lane between Ashwood Boulevard and Archer Avenue.

e. Brookhill Blocks 16 & 17 (Rivanna): Water and sewer main extensions to serve 135 single family homes in the Brookhill subdivision, located north of Polo Grounds Road and east of the Montgomery Ridge Subdivision.

f. Dunlora Park Phase 2 (Rio): Water and sewer main extensions to serve 6 single family homes in Dunlora Park, located at the intersection of Rio Road East and Dunlora Drive.

g. Galaxie Farm Subdivision (Scottsville): Water and sewer main extensions to serve 65 residential units. This project is located along Scottsville Road, south of Mountain View Elementary.

h. Lochlyn Hill – Phase 4 (Rio): Water and sewer main extensions, and demolition of 14 existing homes for 14 single family detached units and 8 single family attached units. This project is located along Pen Park Lane, north of the City limits.

i. Mountain View Elementary Building Addition (Scottsville): Water main extension to facilitate building addition.

j. Old Trail Village – Block 10 (White Hall): Water service and sewer main extensions to serve 24 single family attached units. The site is located north of Golf Drive, along Rowcross Street.

k. Old Trail Village – Block 31C (White Hall): Water service and sewer main extension to serve 4 single family homes. The site is located

to the east of Rowcross Street, between Upland Drive and Golf Drive.

l. Pleasant Green – Phase 2A (White Hall): Water and sewer main extensions to serve 24 residential units. This project is located to the southeast of the Orchard Acres subdivision.

m. Pleasant Green – Phase 2B and 3 (White Hall): Water and sewer main extensions to serve 173 residential units. This project is located to the southeast of the Orchard Acres subdivision.

n. Proffit Road Townhomes South (Rivanna): Water and sewer main extensions to serve 31 single family attached units. This project is located along Proffit Road, south of Martha Jefferson Outpatient Care Center.

o. Regents School of Charlottesville (Samuel Miller): Water and sewer main extensions to serve a private school, grades K-12. The site is located west of Trinity Presbyterian Church, along Reservoir Road.

p. Rivanna Station – Nicholson Building Addition (Rivanna): Water main extension to serve an expansion of the Nicholson Building and a parking garage at NGIC, located east Route 29 and south of Boulders Road.

q. Rivanna Village Phase 2 (Scottsville): Water and sewer main extensions to serve 178 residential units. This project is located east of the Glenmore Ground Storage Tank and Rivanna Village Phase 1.

r. Scottsville Tiger Fuel (Scottsville): Water service and sewer main extension to serve a gas station. This project is located to the south of the Scottsville Road and James River Road intersection.

s. Southwood Phase 1 – Blocks 9-11 (Scottsville): Water and sewer main extensions to serve 70 single family units and 16 condominium units. This project is located west of Horizon Road and south of Hickory Street.

t. Stonefield Block D1 (Jack Jouett): Water main extension to serve a 220 unit apartment building at the intersection of Inglewood Drive and Bond Street.

u. Victorian Heights (Rio): Water and sewer main extensions to serve 34 attached single family and 54 multi-family units. The site is located to the south of RWSA's Woodburn Road Water Tank, between Woodburn Road and Berkmar Drive.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

AGENDA TITLE: Corrosive Soil Damages Water System Valves **STAFF CONTACT(S)/PREPARER:** Roland Bega and Robbie Lawson	**AGENDA DATE:** May 19, 2023 **ACTION:** None **ATTACHMENTS:** Yes

BACKGROUND: Albemarle County has a corrosive soil component that adversely effects ASCA water valves. This can result in leaks of varying degrees.

DISCUSSION: Prior to 2007, manufacturers made water system valves with galvanized bolts. In 2007, Mueller, Kennedy, ASE and other valve manufacturers started specifying stainless steel bolts on valves due to more corrosive resistance.

In corrosive soil, older galvanized bolts can be corroded away over the years (Attachment 1). In Albemarle County, corrosive soil can vary geographically with higher corrosive soil occurring in drainage areas. Pantops is another area with higher corrosive soil.

Older, underground valves with corroded bolts can actually be kept in place by the weight of the soil around it. Bolts can deteriorate at varying rates, which may keep valve operational in the short term. The valve may leak slowly and go undetected for a long period of time.

More instantaneous and catastrophic results when the valves are turned (exercised) by our Maintenance Crews. Turning the valve off and back on, may cause bolts to snap due the combination of the valve key pressing against the resilient wedge (disc) from the top and water pressure against it from the bottom of the valve. (Attachment 2) This results in the valve splitting apart and results in a significant leak. (Attachment 3)

The remedy of fixing damaged valves is dependent on several factors. Sometimes the valve can be repaired by disassembling it and replacing parts such as bolts or valve gaskets. Valve gaskets usually determine what action should be taken. Older valve gaskets may not be available and in that case the entire valve will need to be replaced. This is the more expensive solution and will require an emergency shutdown of the water lines in a neighborhood.

There are still an estimated 30-35% of installed ACSA water system valves that can be described as installed prior to 2007. These are gradually being replaced as the need occurs and the situation is being monitored.

BOARD ACTION REQUESTED: None

ATTACHMENTS:

(Attachment 1) The circled area is the site where a bolthead was located on a valve and has been completely corroded away.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

(Attachment 2) Diagram of a Water Valve (The resilient wedge is Part 11 in the lower left corner and the valve body in the middle is shown in 2 parts that are bolted together

(Attachment 3**)** A Water valve that recently failed in the Old Forest neighborhood.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Rivanna Water & Sewer Authority (RWSA) Monthly Update	**AGENDA DATE:** May 18, 2023
	CONSENT AGENDA: Informational
STAFF CONTACT(S)/PREPARER: Gary O'Connell, Executive Director 	**ATTACHMENTS:** Yes

BACKGROUND: This report continues the monthly updates on the Rivanna Water & Sewer Authority (RWSA) projects and Board meetings. Below are some updates on RWSA major projects and issues, including updates from the April 25th RWSA Board Meeting and other communications.

RWSA Board Meeting and other Updates and Approvals at the April 25th Board Meeting:

- **Observatory Water Treatment Plant (WTP):** RWSA resumed partial production (6 million gallons daily (mgd) of drinking water at the Observatory WTP in late-April. Full production capacity (10 mgd) is anticipated later this summer after all systems have been successfully completed and tested.

- **Easement Negotiations Updates:** RWSA staff recently had productive meetings to move forward with UVA and UVAF to acquire final easements for two major water pipeline projects (goal is still to complete by this June):

  - South Rivanna to Ragged Mountain Reservoir Water Pipeline - 8 miles of 36" pipe;
  - Ragged Mountain to Observatory WTP Water Pipeline and Pump Station - 5 miles of 36" pipe;
  - RWSA has acquired one easement from UVAF, with two easements pending, and needs to purchase over an acre to build the pump station. RWSA acquired an easement from Sugar Day Farm. Much of the pipeline project is in the public right-of-way of Woodburn Road, Rio Road, and Lambs Road. Also acquired is an easement from the Albemarle School Board to build the pipe behind Journey Middle School. They acquired an easement from the new Regents School located on Reservoir Road. The City donated easements near Ragged Mountain Reservoir. In total, there were 19 easements required on 31 parcels including 14 private property owners and five public property owners (UVA, UVAF, DOF, ACPS, City). All of the private property easements have been acquired, with only those owned by UVA and UVAF remaining from public property owners.

- **Central Water Line:** After a detailed review by the City/ACSA/RWSA team, engineering plans and specifications are moving forward to the 60% completion stage for the Central Water Line project to be constructed along Cherry Avenue and in the

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

City from the Observatory Water Treatment Plant to East High Street. This new water line would importantly connect the enlarged Observatory Water Treatment Plant to the Urban System and to the ACSA customers.

- **Federal Funding for the Beaver Creek Dam Modifications Project:** - Funding totaling $1,020,250 has been approved by the federal Natural Resources Conversation Service (NRCS) for professional engineering and project administration services to design modifications to the Beaver Creek Dam spillway. This funding is in addition to $716,000 previously approved by NRCS for a planning study. RWSA is optimistic that construction funding ($17 million) will be approved after the design has been completed and approved by NRCS.

  To conclude the planning study, the Albemarle County Board of Supervisors and the Thomas Jefferson Soil and Water Conservation District Board (TJSWCD) will be asked to approve a Supplemental Watershed Plan Agreement (Supplement No. 2), which outlines the responsibilities of the project Sponsors and the federal Natural Resources Conservation Service in executing the completed Plan Environmental Assessment. Albemarle County owns the land surrounding the reservoir, and the TJSWCD was a Sponsor of the original project to build the dam.

- **Beaver Creek Pump Station/Intake Design** – As part of the larger Beaver Creek Dam construction a new raw water pump station and reservoir intake will need to be constructed, which also includes a new raw water transmission main from the reservoir to the Crozet Water Treatment Plant and a new hypolimnetic oxygenation system (air bubbling oxygen injection system) to slow and prevent algae formation in the reservoir water. This is estimated at a $20 million project.

  The existing Raw Water Pump Station and Intake facility at the Beaver Creek Reservoir was constructed in 1964 and is located immediately downstream of the Beaver Creek Dam. Required dam safety spillway upgrades necessitate moving the pump station away from its current location downstream of the dam. Additionally, the Drinking Water Infrastructure Plan for the Crozet water service area recommends installation of a new Raw Water Pump Station and Intake to provide adequate raw water pumping capacity to serve the growing Crozet community for the next 50 years. The new raw pump station will be constructed adjacent to the dam on property owned by Albemarle County on the south side of the Beaver Creek Reservoir. The RWSA Board at its recent meeting approved a design contract for the projected nearly $700,000.

- **Scottsville Water System Transfer** – RWSA Board approved the transfer of the "transmission" water system piping and pump station. This approval is on the ACSA Board agenda today with additional ACSA staff have been working with RWSA for some time to make this transfer, which is how the rest of the water system is managed.

- **Urban Water System Permit Update** – Last month a member of the Moorman's Scenic River Advisory Board raised questions about the flow releases to the

Moorman's, below the Sugar Hollow Water Reservoir and Dam that RWSA manages. The RWSA staff presented an informational report on the history of the releases in the Water Supply permit of 2008, and recent activity. Attached is a copy of the presentation. No action was taken by the RWSA Board. Sugar Hollow has been a drinking water reservoir since 1920, with the current Dam built in 1947, upgraded in 1999, and a new rubber bladder replaced last year. The DEQ Permit regulates the water release requirements from Sugar Hollow Dam into the Moorman's River downstream. Eventually the Moorman's meets the Mechums River that jointly flow into the South Rivanna Reservoir. The Permit of 2015 has instream flow provisions which mimic natural inflow (formula in the permit that sets this "natural" inflow calculation). The Permit also sets minimum instream flows (MIF) for when the pipeline would be operational and when Ragged Mountain is expanded.

- **Moore's Creek (Wastewater Plant) Master Plant** – The Moore's Creek Advanced Water Resource Recovery (Wastewater) Facility serves the Urban Area and Crozet, over 130,000 population. Currently treats 15 mgd with a peak flow (during wet weather of 45 mgd).

  The Master Plan was developed to provide longer term planning for CIP projects based on "triggers" to determine when future projects are initiated. "Triggers" include growth capacity, wet weather capacity, future regulatory changes, wastewater chemistry analysis and changes. Nearer term projects in the 2023-2040 timeframe include plant expansion ($55 million, 2029-2036), mechanical thickeners ($15 million, 2029-2036), replacing digesters ($125 million, 2031-36), and others. The total projected 60-year plan to 2080 totals nearly $700 million (in today's dollars). See attached summary, and overview of the next step in evaluation the near-term expansion.

RWSA Major Capital Project Updates:

- **South Rivanna and Observatory Water Treatment Plant Renovations**

Design Engineer:	Short Elliot Hendrickson, Inc. (SEH)
Construction Contractor:	English Construction Company
Construction Start:	May 2020
Percent Completion:	84%
Completion Date:	October 2023
Base Construction Contract:	$37,889,941
Approved Capital Budget:	$43,000,000

Current Status:

Work at Observatory includes the new Chemical Storage Building, foundation work for the GAC building expansion, a large retaining wall, new settled water flume, filter rebuilds and installation of a sludge control unit. Shutdown of the OBWTP completed, operating

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

at 60% capacity until mid-June when final testing completed. South Rivanna work essentially completed.

History:

The Observatory project includes the design and costs for upgrading the plant systems to achieve an upgraded 10 mgd plant capacity. Much of the Observatory Water Treatment Plant is original to the 1953 construction.

- **Airport Road Water Pump Station and Piping**

Design Engineer:	Short Elliot Hendrickson (SEH)
Contractor:	Anderson Construction
Construction Start:	December 2021
Percent Complete:	40%
Completion Date:	September 2024
Budget:	$10,000,000

Current Status:

Completion of site piping and the concrete pour completed this month. Ongoing work at the two parallel water lines along Berkmar Drive, encountering a lot of rock that is slowing construction.

History:

The Route 29 Pipeline and Pump Station Master Plan was developed in 2007 and originally envisioned as a multi-faceted project that reliably connected the North and South Rivanna pressure bands; reduced excessive operating pressures and developed a new Airport pressure zone to serve the highest elevations near the Airport and Hollymead Town Center. The master plan update was completed in June of 2018 to reflect the changes in the system and demands since 2007.

- **Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Line and Raw Water Pump Station**

Design Engineer:	Michael Baker International (Baker)
Project Start:	August 2018
Project Status:	Easement Acquisition & Design (60%)
Construction Start:	2024
Completion:	December 2028
Current Project Estimate:	$44,000,000

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Current Status:

Preparation of engineering plans and specifications continues. RWSA staff is reviewing plans for the water line, which includes the vast majority of the piping to be installed under the project. Easement negotiations with UVA, and the UVA Foundation continue. Waterline design is at 90%.

History:

Raw water is currently transferred from the Ragged Mountain Reservoir (RMR) to the Observatory Water Treatment Plant by way of two 18-inch cast iron raw water lines, which have been in service for more than 110 and 70 years, respectively. The proposed water line will be able to reliably transfer water to the expanded Observatory Plant, which, upon completion, will have the capacity to treat 10 mgd. The new single water line will be constructed of 36-inch ductile iron and will be approximately 14,000 feet in length.

The RMR to Observatory WTP raw water pump station is planned to replace the existing Stadium Road and Royal Pump Stations, which have exceeded their design lives or will require significant upgrades with the Observatory WTP expansion. The pump station will pump up to 10 mgd of raw water to the Observatory WTP. Integration of the new pump station with the planned South Rivanna Reservoir (SRR) to RMR Pipeline is being planned in the interest of improved operational and cost efficiencies and emergency redundancy. An integrated pump station would also include the capacity to transfer up to 16 mgd of raw water from RMR back to the SRR WTP.

- **South Rivanna Reservoir to Ragged Mountain Reservoir Pipeline, Intake and Facilities**

Design Engineer:	TBD
Project Start:	July 2023
Project Status:	Work Authorization Development
Construction Start:	June 2026
Completion:	December 2030
Current Project Estimate:	$79,700,000

Current Status:

This project will include construction of a raw water pipeline from the South Fork Rivanna Reservoir (SFRR) to the northern terminus of the previously constructed Birdwood Raw Water Line. This project, combined with the Ragged Mountain Reservoir (RMR) to Observatory Water Treatment Plant Raw Water Line, will complete the SFRR-RMR transfer line. The project will also include the construction of a new 25 mgd raw water intake and pump station at SFRR. The section of waterline previously to be constructed under the Birdwood to Old Garth Project will now be included in this larger effort, due to the schedule advancement discussed at the February Board Meeting. The draft CSX railroad permit was received for this portion of the project and staff is working through

comments with the railroad. One remaining easement is under negotiation with the UVA Foundation for this portion of the project. A topographic survey for the pipeline is underway. The remainder of design of this project will start in July 2023, after selection and approval of a Design Engineer.

History:

The approved 50-year Community Water Supply Plan includes the construction of a new raw water pipeline from the South Rivanna River to the Ragged Mountain Reservoir. This new pipeline will replace the Upper Sugar Hollow Pipeline along an alternative alignment to increase raw water transfer capacity in the Urban Water System. The project includes a detailed routing study to account for recent and proposed development and road projects in Albemarle County and the University of Virginia. Preliminary design, preparation of easement documents, and acquisition of water line easements along the approved route is also being completed as part of this project that will lead to final design of the raw water line, reservoir intake and pump station.

- **Beaver Creek Dam, Pump Station, and Piping Improvements**

Design Engineer:	Schnabel Engineering (Dam)
Design Engineer:	Hazen and Sawyer (Pump Station)
Project Start:	February 2018
Project Status:	99% NRCS Planning Process
Construction Start:	2025
Completion:	June 2028
Budget:	$43,000,000

Current Status:

A Joint Permit Application and supporting documents were submitted to VDEQ. Remaining NRCS requirements, including review and approval of the planning study, are scheduled for completion in April. The revised Plan Environmental Assessment was approved by the NRCS. NRCS funding for the final design and dam spillway upgrades will be requested at a future date. A report is under review by NRCS.

The final design work has been approved for the new raw water pump station, intake and hypolimnetic oxygenation system.

History:

RWSA operates the Beaver Creek dam and reservoir as the sole raw water supply for the Crozet area. In 2011, an analysis of the Dam Breach inundation areas and changes to Virginia Department of Conservation and Recreation (DCR) *Impounding Structures Regulations* prompted a change in hazard classification of the dam from significant to high hazard. This change in hazard classification requires that the capacity of the spillway be increased, and the dam be replaced. This CIP project includes investigation,

preliminary design, public outreach, permitting, easement acquisition, final design, and construction of the anticipated modifications. Work for this project includes a new relocated raw water pump station and intake. RWSA staff will continue to pursue federal funding for later phases of the project to cover a portion (70%) of final design and construction costs.

- **South Fork Rivanna River Crossing**

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2020
Project Status:	85% Design
Construction Start:	Fall 2023
Completion:	September 2024
Budget:	$7,000,000

Current Status:

Easement acquisition has begun and includes County of Albemarle property in Brook Hill River Park along Rio Mills Road. A required easement on the south side of the river is on a remnant property from the VDOT Berkmar Bridge project and cannot finalize that easement until the property transfer back to the original owner is complete. Additional permitting being sought for the project.

History:

RWSA has previously identified through master planning that a 24-inch water main will be needed from the South Rivanna Water Treatment Plant (SRWTP) to Hollymead Town Center to meet future water demands. Two segments of this water main were constructed as part of the VDOT Rt. 29 Solutions projects, including approximately 10,000 LF of 24-inch water main along Rt. 29 and 600 LF of 24-inch water main along the new Berkmar Drive Extension, behind the Kohl's department store. To complete the connection between the SRWTP and the new 24-inch water main in Rt. 29, there is a need to construct a new river crossing at the South Fork Rivanna River. Acquisition of right-of-way will be required at the river crossing.

- **Upper Schenks Branch Interceptor, Phase II**

Design Engineer:	Frazier Engineering, P.A.
Project Start:	July 2021
Project Status:	Design
Construction Start:	TBD
Completion:	TBD
Current Project Estimate:	$4,725,000

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AGENDA ITEM EXECUTIVE SUMMARY

Current Status

After a recent meeting with City and County staff, RWSA has submitted project summary information and an easement on County property with a valuation estimate for the County's review. Initial meetings with County staff are occurring.

- **SRR to RMR Pipeline – Pretreatment Pilot Study**

Design Engineer:	SEH/DiNatale
Project Start:	August 2020
Project Status:	5% (Phase 3)
Completion:	December 2023
Budget:	$31,739 (Phase 3)

Current Status:

Final efforts are underway to better clarify operations of the raw water transfer system and associated reservoir levels during drought conditions. The next phase is underway and includes the installation of nutrient monitoring/measuring equipment, and a report on the effectiveness of the equipment.

History:

As part of the SRR to RMR Pipeline project, the impact of sending raw water from the SRR to RMR has been previously studied and a significant amount of pretreatment was initially identified as being needed to avoid reducing the quality of the raw water contained within the RMR. With the pipeline easement acquisition process well underway and additional information now available associated with the proposed timing of this overall project based on water demand projections, the intent of this project is to update the pretreatment needs anticipated.

The study is anticipated to be completed in four phases: 1. Analysis and Correlation of Existing Water Quality and Seasonal Weather Data; 2. Enhanced Water Quality Sampling; 3. Pretreatment Piloting; 4. Level Setting for the Final Pretreatment Solution. Phase 1 commenced in January 2021 and was completed in July 2021. Phase 2 began in June 2021.

- **Central Water Line Project**

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	35% Design
Construction Start:	April 2024
Completion:	December 2028
Budget:	$41,000,000

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AGENDA ITEM EXECUTIVE SUMMARY

Current Status:

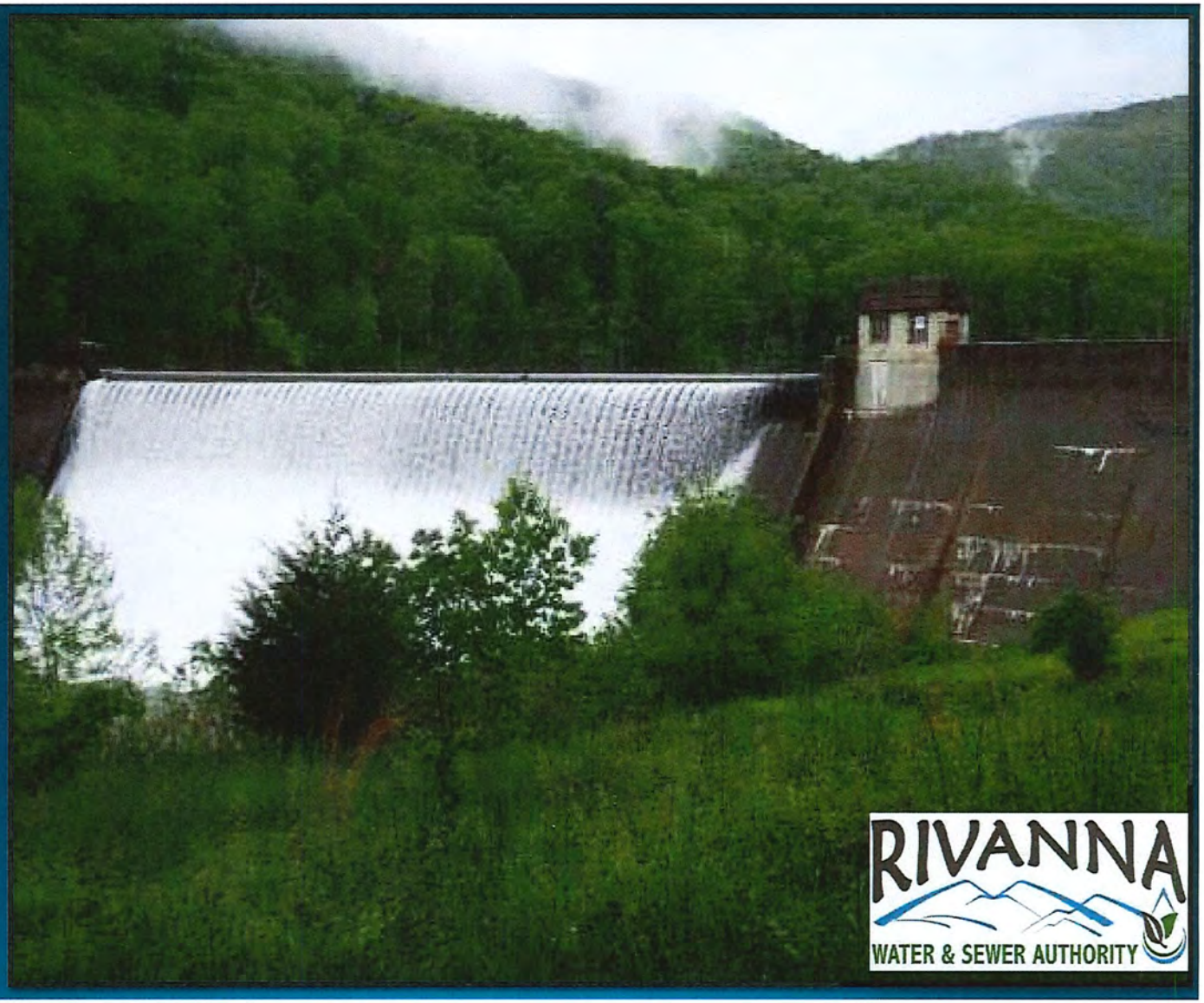
Detailed field investigation and design are underway, as well as adjacent utility coordination.

History:

The hydraulic connectivity in the Urban System is less than desired, creating operational challenges and reduced system flexibility and redundancy. Recent efforts and modeling for the Urban Finished Water Infrastructure Master Plan have determined that a central water line corridor through the City is the best option to hydraulically connect the Observatory Water Treatment Plant to the Urban service area.

Urban Water System Permit Update

~Including Releases from Sugar Hollow Reservoir~



Board of Directors Meeting

Presented by: Andrea Bowles, Water Resources Manager

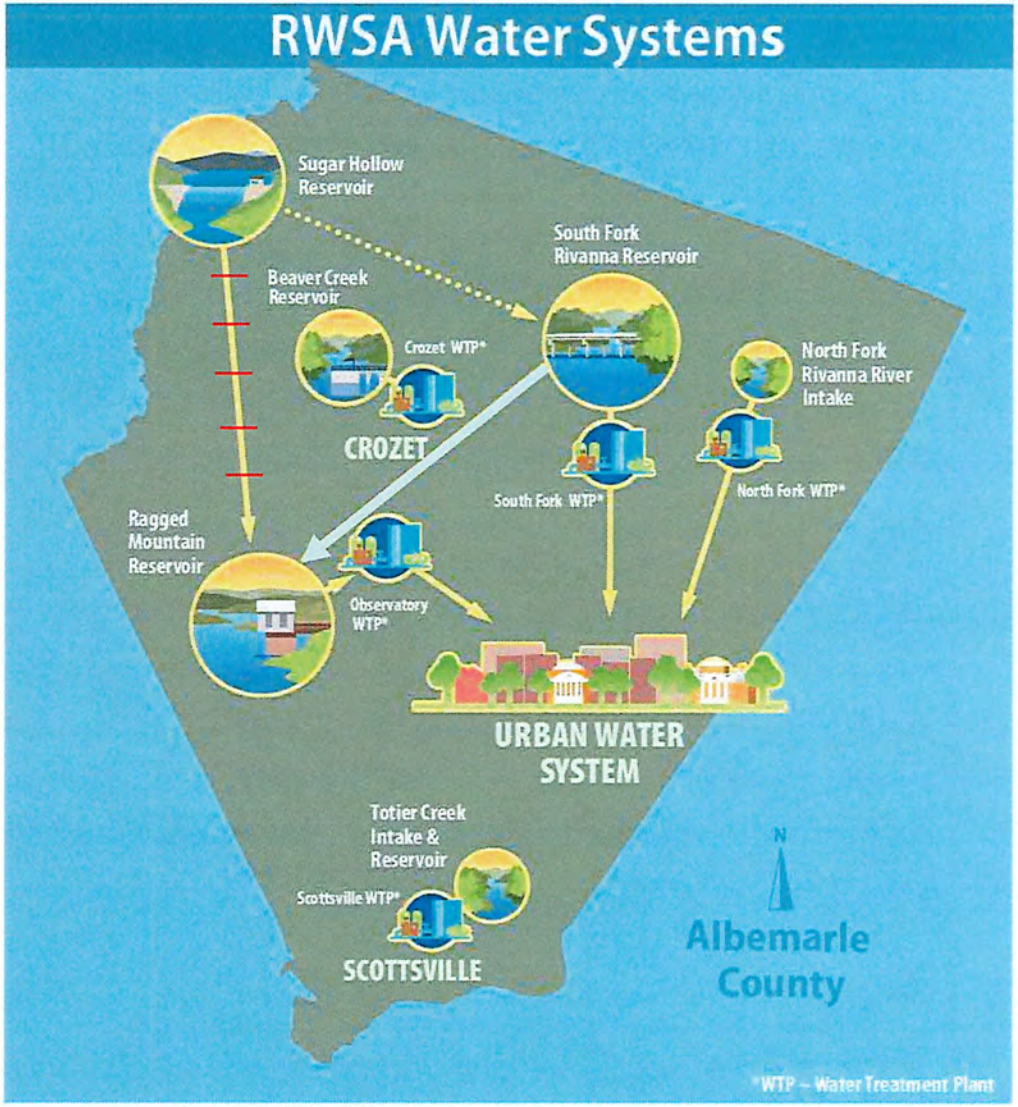
April 25, 2023

Topics for Discussion

- RWSA Water Supply System
- 2008 DEQ and USACE Permits
- Modifications to 2008 Permits
- History of Sugar Hollow Property
- History of Instream Flow Releases from SHR to the Moormans River
- Flow Measurement Design Plan and Operations Manual
- SFRR to RM Reservoir Pipeline Progress

Plan to Increase the Capacity and Reliability of our Public Drinking Water Supply

- Build new, higher dam at RMR
- Build new pipe from SRR to RMR
- Close existing pipe from SHR



2008 DEQ and USACE Permits

- New dam downstream of existing lower dam at Ragged Mountain
- Pipeline between Ragged Mountain and South Fork Rivanna Reservoirs
- Pipeline from RMR to Observatory WTP
- Two water pumping stations
- DEQ Permit expired February 2023; USACE Permit expires June 2023
- Submitted a Joint Permit Application in May 2021
- Granted an administrative continuance by DEQ in August 2022
- Expecting a 10- year permit extension by USACE

Modifications to 2008 Permits

- ***Minor Mod 2 – December 21, 2020: Changed the gage used to estimate inflows to Sugar Hollow Reservoir from the Mechums gage to the Moormans gage***

- ***Minor Mod 4 – December 19, 2022: 1) Modified the definition of "Natural Inflow" and stream gage used regarding the South Fork Rivanna Reservoir, to more accurately reflect inflows to the reservoir, 2) Added to the definition of "Natural Inflow" regarding Sugar Hollow Reservoir to more accurately represent inflows under low-flow conditions.***

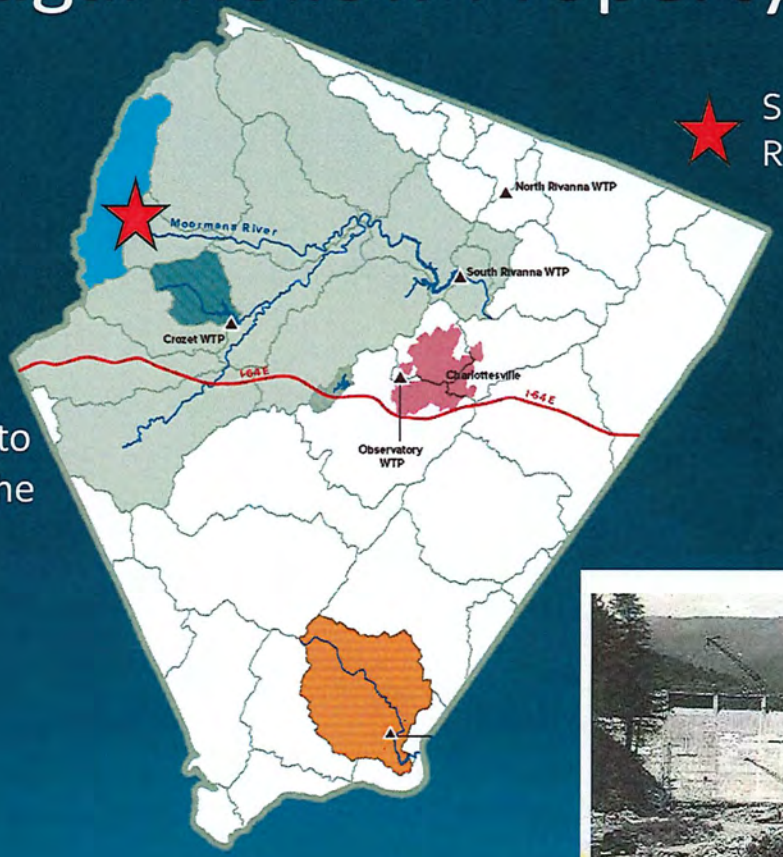
- Minor Mod 1 – March 20, 2009: Extended the time period for recordation following approval of the final stream compensation plan to be changed from 180 day to 365 days.

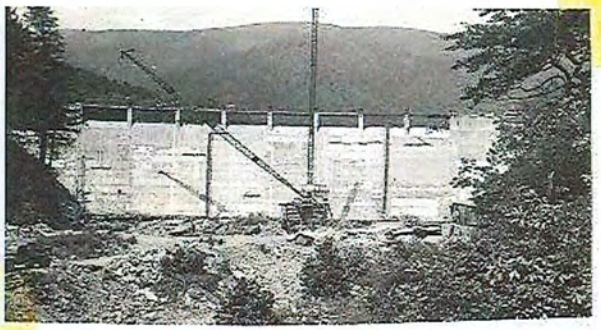
- Major Mod 1 – December 28, 2011: further defined an Intermediate-Expanded Ragged Mountain Reservoir (IERMR) with a normal pool elevation of 671 feet, mean sea level (MSL), as a separate phase prior to a Fully-Expanded Ragged Mountain Reservoir (FERMR) with a normal pool elevation of 683 feet MSL.

- Minor Mod 3 – July 21, 2021: Authorized the transfer of 0.086 acres at the Buck Mountain Project Area to VDOT as a riparian buffer for bridge replacement.

History of Sugar Hollow Property

- 837 acres owned by City of Charlottesville
- Dam built in 1920 as a source of water supply
- Current Dam was built in 1947
- Dam Upgraded in 1999
- Bordered by Shenandoah National Park to the north and west. Private owners to the south.





1 Aug Fig 105

History of Instream Releases from SHR

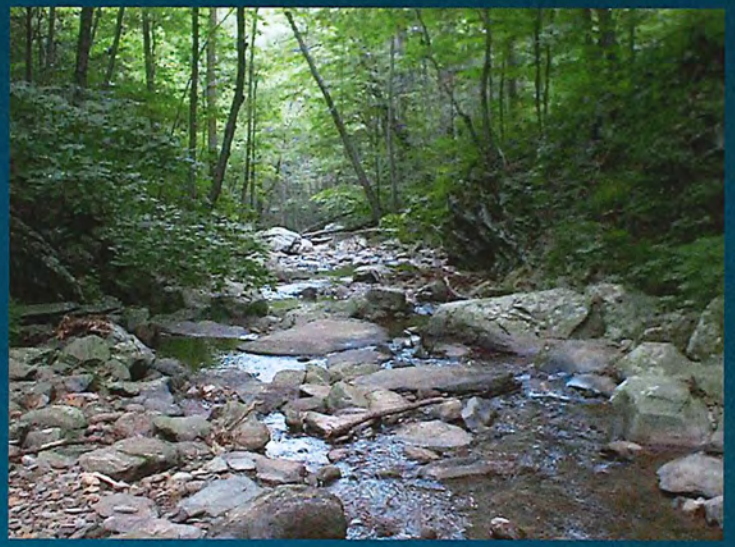
- In 2004, The Nature Conservancy contracted with HydroLogics to develop in-stream flow recommendations in the South Rivanna watershed. This community-wide process included TNC, RWSA, Albemarle County, City of Charlottesville, ACSA, state and local regulatory agencies and other interested parties to develop the Instream flow provisions that eventually ended up in the 2008 Urban Virginia Water Protection Permit (VWPP)
- A VWPP is required for withdrawal of surface water from waters of the U.S.
- *This process was recognized to be a first of its kind in Virginia and a model for other communities.*
- Prior to the construction and initial fill of the expanded Ragged Mountain Reservoir, RWSA voluntarily implemented a release of 400,000 gpd from SHR when the reservoir was not spilling.
- When the permit was issued in 2015, in-stream flow provisions which mimic natural inflow were required in lieu of the 400,000 gpd release.

Sugar Hollow Reservoir Minimum Instream Flow (MIF) Requirements

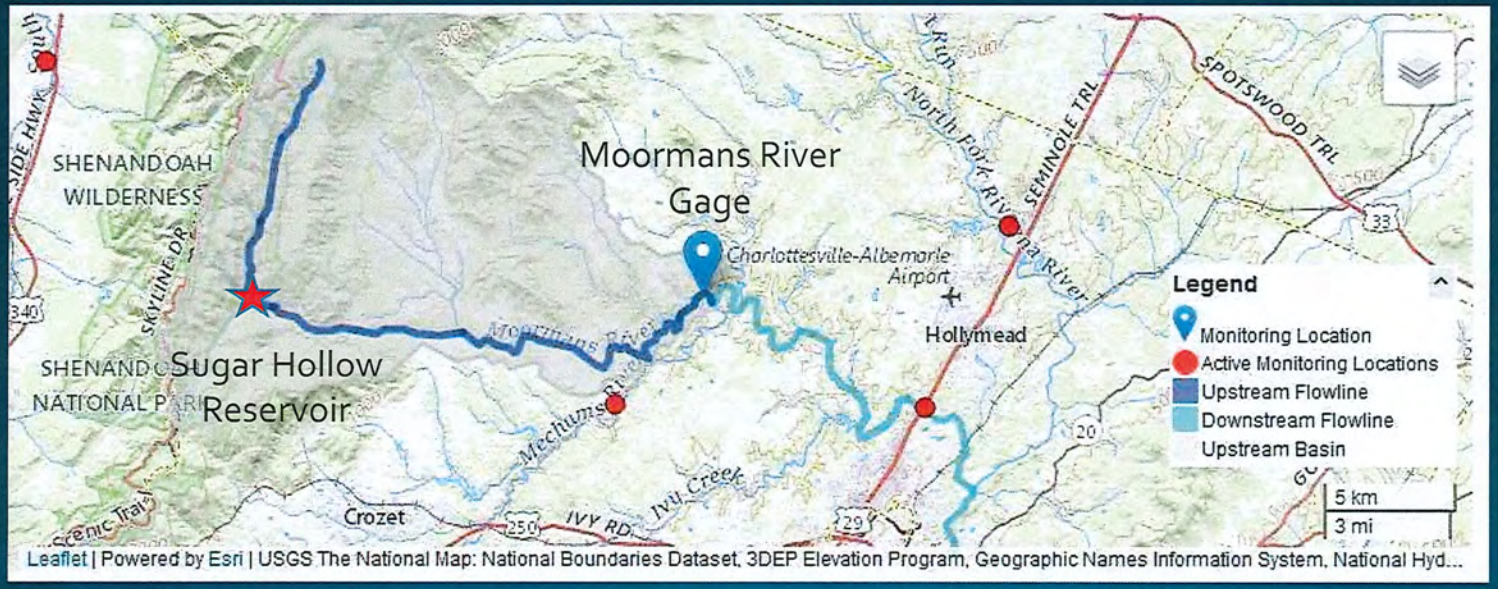
- MIF based on definition of Natural Inflow to SHR and total useable storage in RMR

"Natural inflow," when used with respect to Sugar Hollow Reservoir, uses the gage at the Moormans River near Free Union (USGS gage #02032250) and is calculated as follows: $[17.43^* ((Q_{gage}-Q_{SHR})^*0.65)]/(77.0-17.43)$, where:

- 17.43 mi^2 is the Sugar Hollow Drainage area
- 77.0 mi^2 is the Moorman's gage drainage area
- Q_{gage} is the previous day's provisional mean daily flow at the Moorman's gage, in cubic feet per second (cfs)
- Q_{SHR} is the previous day's flow from SHR, in cfs, to include any discharge or spillage from the dam or reservoir.
- 0.65 is the conversion factor from cfs to millions of gallons per day (Mgal/day)



Stream Gage Locations



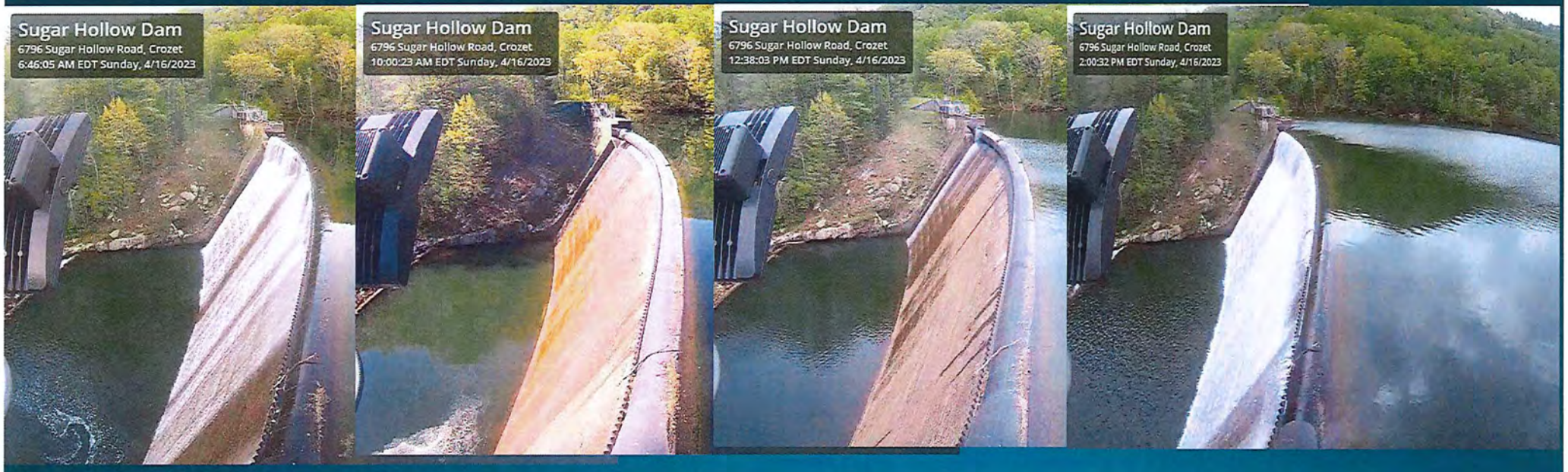
- Moormans River gage used in estimation of inflows to Sugar Hollow Reservoir

Sugar Hollow Reservoir Minimum Instream Flow (MIF) Requirements

- Current MIF Period: After an Expanded RMR is Operational, but Before the Pipeline from SFRR to RMR is Operational
  - When useable storage in RMR is > 1.08 BG and natural inflow to SHR > 5.0 mgd, total downstream flow past SHR must be at least 100% of inflow, or 10 mgd, whichever is less.
  - When useable storage in RMR is <1.08 BG and natural inflow to SHR > 5.0 mgd, total downstream flow past SHR must be at least 100% of inflow, or 2 mgd, whichever is less.
  - Under low flow conditions (estimated inflows are < 5 mgd) the natural inflow may be estimated based on the release rate from SHR required to maintain a stable reservoir elevation.

Release Requirements

- If SHR spills at all during the day, the minimum release requirements of the permit have been met



Release Requirements

- Current permit requires release on third day after the SHR stops spilling.
- Previously, to open the release required operators to go to the dam. The release valve is now automated and remotely controlled.
- To support recent requests, RWSA is voluntarily going to open the release valve on the first day the reservoir stops spilling.
- RWSA checks the dam daily at approx. 6 am thru our remote cameras. If the reservoir is not spilling, operators will open the release valve, and close the valve when spilling resumes.

Community Outreach

- RWSA is meeting with the Moormans River Scenic Advisory Committee on May 8 at the SHR to review the release of water procedures.
- The "Flow Measurement Design Plan and Operations Manual" is currently under revision to reflect Minor Modification 4.
- A public meeting to discuss the draft report will be held on May 16, 2023 at the Crozet Library at 3:00 pm.
- The revised report must be submitted to DEQ prior to August 22, 2023.

Summary

- Reapplication of the VWP for the Urban System is currently under review by DEQ
- In response to comments offered by the Moormans River Scenic Advisory Board, RWSA will reduce the time to begin the flow release from three days to one.
- Release requirements are regulated by the VDEQ through it's VWP permit.

Summary of our Wastewater Master Planning Effort

- This Master Plan was developed to assist in near-term (2040) and long-term (2080) wastewater treatment process, site, and financial planning

- Growth in our community, along with emerging environmental regulations and contaminants, will require additional wastewater treatment facilities at Moores Creek over the next 55 years.
  - increase to 17.5 mgd treatment capacity by 2036
  - increase to 20 mgd treatment capacity by 2060
  - a pretreatment program or "strong waste" surcharge may be needed

- Costs for these facilities will be strategically integrated into our CIP plans to maintain reasonable charges

Next Step: Evaluation of 17.5-MGD Capacity Expansion & Mechanical Thickening Projects

Purpose: Reduce "strong waste" levels to maintain compliance with discharge permit.

Options:

- ✓ Additional Treatment Facilities
- ✓ Pretreatment System by Dischargers
- ✓ Surcharge for waste levels > 240 mg/l

- **Master Plan Schedule: by 2036***
- **Cost: $60 to $70 M (depending on final project scope)**

**RWSA began a sampling program to evaluate sources of strong wastes, as well as innovative technologies and optimization opportunities to reduce impacts to future CIP budgets.*

ACSA Board Future Policy Issues Agendas 2023-2024

Regular 3rd Thursday Monthly Meetings

June '23	July '23	August '23	Sept. '23	Oct. '23	Nov. '23	Dec. '23	Jan. '24	Feb. '24	Pending Issues
June 15th	**July 20th**	**August 17th**	**September 21st**	**October 19th**	**November 16th**	**December 21st**	**January 18th**	**February 15th**	Water Supply Plan Project Status Reports Water Treatment Plants RWSA CIP Central Water Line-Reservoirs Pipeline North Rivanna System
Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	
Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	
Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Annual Water Quality Reports (May)
Public Hearing on Proposed FY '24 Budget, Rates and CIP	Operational Presentation	Year-End Appropriations	Operational Presentation	Operational Presentation - Construction Inspection	Operational Presentation - Climate Action and Sustainability	Operational Presentation	Operational Presentation	Operational Presentation	Board Organizational Meeting each January Annual Report - January
Adoption of Proposed FY '24 Budget, Rates and CIP	Strategic Plan Update 2023-25	Operational Presentation - Training and BizLibrary	Imagine a Day Without Water		Annual Financial Report and Audit Report	Annual Investment Report	Board Organizational Meeting - Election of Officers	AMI Project Status Report	Water Audit and Energy Audit
Amendments to Personnel Management Plan		Long Term Financial Plan	Offsite Credits			Budget Guidelines and Schedule for FY 25 Budget/Rates	Strategic Plan Update		Strategic Plan Updates-2023-2025 January and July
Amendments to Rules and Regs - Rate Schedule and Policy Amendments (First-come first-served policy)			New Billing System Proposal			Holiday Schedule 2024	Annual Report		Annual Water Conservation Report - January Operational Presentation-Sewer Rehab Relining
Crozet Easement						Board Meeting Schedule 2024			National Drinking Water Week-April Imagine a Day Without Water - September
									AMI Updates - Customer Portal Video
									Federal/State Water Quality Regulations Lead and Copper; PFAS; Emerging Contaminants
									Emergency Preparedness - Regional Exercise
									Annual Investments Report December
									Operational Presentations
									ACSA Customer Communications
									Avon Satellite Operations Center
									Federal Infrastructure Grant Funds
									Data Management and Management Dashboards
		Quin to attend as Acting Executive Director since Gary will be on vacation			Executive Director Mid-Year Review				Purchasing Policy Revisions

5/18/2023

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

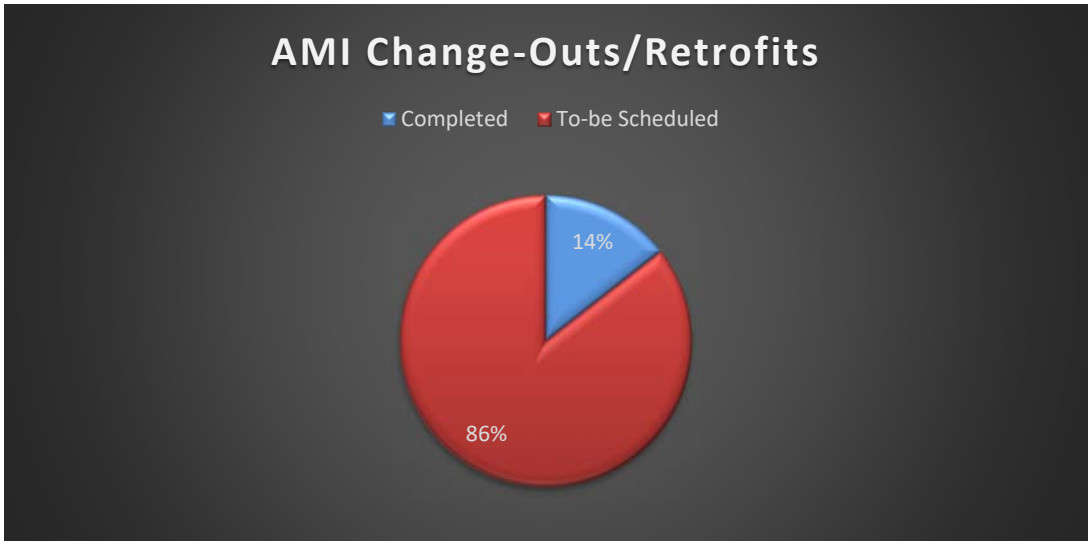
AGENDA TITLE: Advanced Metering Infrastructure (AMI) Monthly Update **STAFF CONTACT/PREPARER:** Quin Lunsford, Director of Finance	**AGENDA DATE:** May 18, 2023 **ACTION:** Informational **ATTACHMENTS:** No

BACKGROUND: The ACSA Board authorized staff at its October 2019 meeting to execute agreements related to the AMI project. Monthly status updates are provided below:

DISCUSSION: Authority staff continues to collaborate closely with the selected vendor (Core & Main/Sensus) and the project management consultant (Esource). Notable accomplishments since the last update include:

- The final phase of the AMI began April 3rd and our installers have successfully upgraded 800+ meters. Approximately 14% of the ACSA's system is fully operational under the AMI program. Going forward, we anticipate between 50 and 60 meter upgrades each day.

- The second graphic below illustrates daily and weekly progress. We have also provided maps showing meters that have been replaced (green pins) and those yet to be replaced (red pins) in different areas of our system.



ALBEMARLE COUNTY SERVICE AUTHORITY

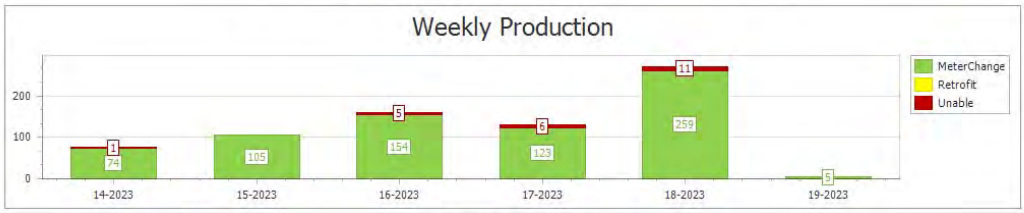
AGENDA ITEM EXECUTIVE SUMMARY

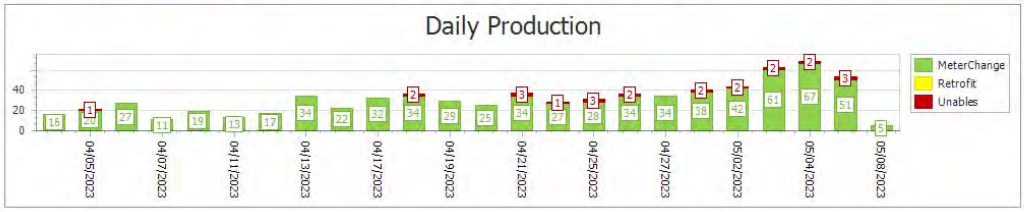
Albemarle County VA

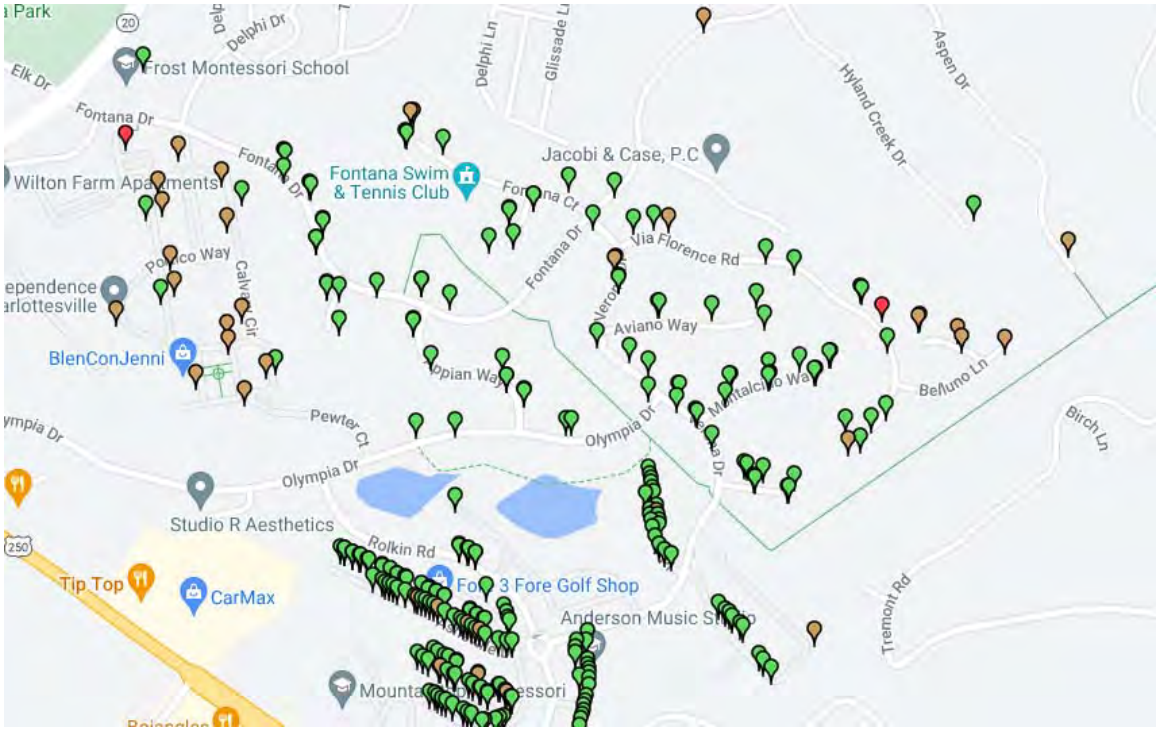
Reading Rate

Total	Good	No Read	Bad Read	Stale	Unable	Read Rate
715	715	0	0	0	0	100.00

Type	Size	Install	INC	Sked	Unable	Remove	RTU
MeterChange	3/4-inch	688	6764	0	1	14	6
MeterChange	1 1/2-inch	0	0	0	0	1	0
MeterChange	1-inch	32	228	0	2	3	0
Retrofit	3/4-inch	0	12029	0	0	0	0
Retrofit	1-inch	0	329	0	0	0	0

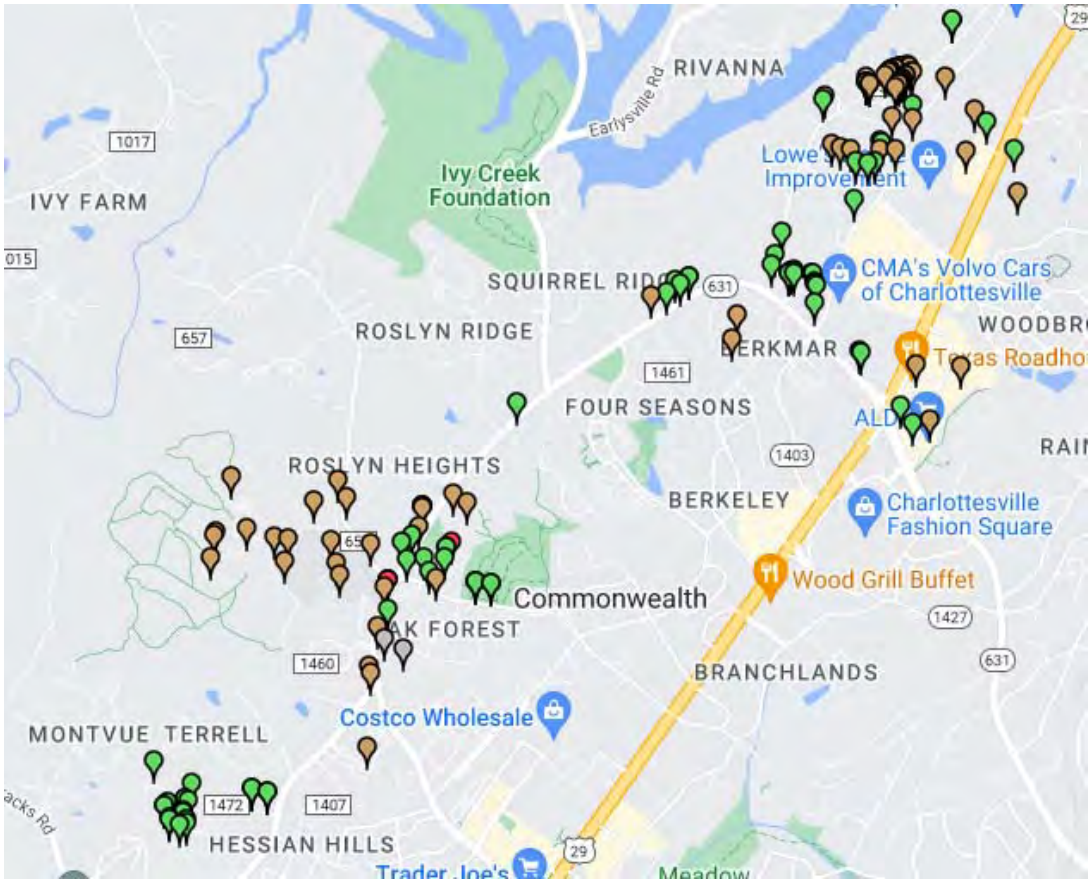


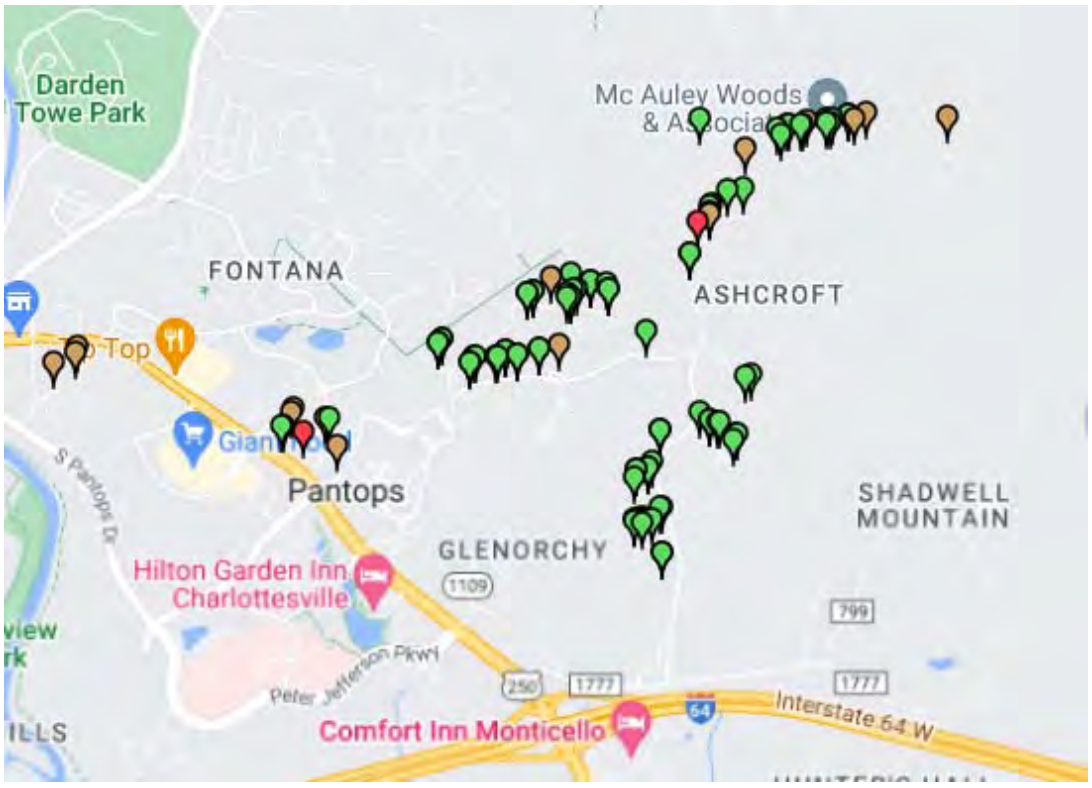




ALBEMARLE COUNTY SERVICE AUTHORITY

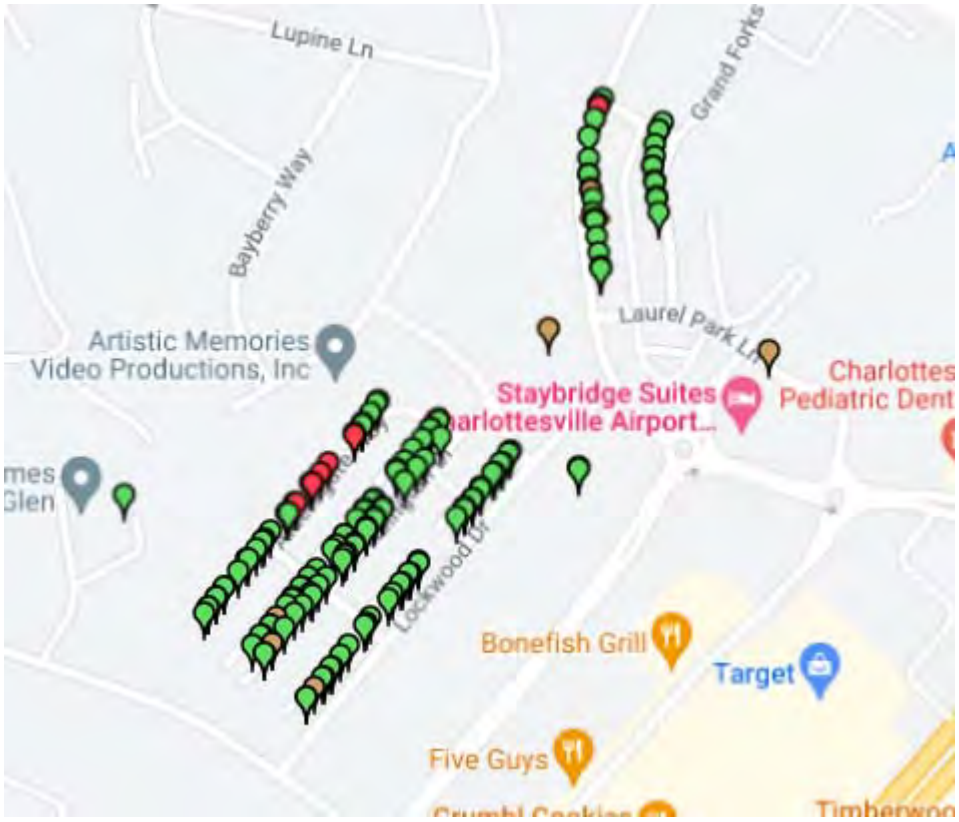
AGENDA ITEM EXECUTIVE SUMMARY





ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY



ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

BUDGET IMPACT: Informational only.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ATTACHMENTS: N/A

Albemarle County Service Authority
Serving Conserving

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

Urban Area 2023 Annual Drinking Water Report

Includes water testing for 2022

Successfully Meeting Water Quality Challenges

Dear Customer,

The ACSA and the Rivanna Water and Sewer Authority (RWSA), in partnership with the Virginia Department of Health (VDH), work cooperatively to ensure our customers receive a safe and reliable supply of drinking water. The RWSA collects, stores, and treats the water, while the ACSA purchases the finished water and delivers it to our customers through our distribution system. Our staff of dedicated men and women work hard every day to ensure your water is always there when you turn on the tap.

Our collective efforts to provide you with the highest quality drinking water never end. Not only is the ACSA working to fully comply with the EPA's revised Lead and Copper Rule (LCR), which will govern how water providers must protect our customers from exposure to lead through their drinking water, but we've also been proactive with years of testing for PFAS, so-called "forever chemicals" being found in drinking water all over the country.

The EPA recently announced new proposed drinking water standards for a few PFAS that will likely take effect in about four years. While these chemicals have not been found in our finished water, the ACSA will test for more of these compounds in the coming years so we can continue to assess the situation. I assure you the ACSA and RWSA are confident in our ability to protect you from concerning levels of these substances.

A major factor in keeping your water of the highest quality is our continued investment in our infrastructure. Throughout our decades of service, the ACSA has been able to meet the many water quality challenges we've faced because of the willingness of our customers to invest in our systems when other communities across the country have been hesitant. It is because of your commitment that our services remain safe, resilient, and prepared for the future.

We recently unveiled our 2023 through 2025 Strategic Plan, which uses input from our customers and our employees to prioritize our short and long-term organizational work as we strengthen our infrastructure. You can find more about our Plan at www.serviceauthority.org.

The ACSA is committed to providing you, the customer, with this water quality report because informed customers are our best allies. If you wish to receive a "hard-copy" of the report, contact Tim Brown at (434) 977-4511, Ext. 119 or at tbrown@serviceauthority.org.

Thank you again for being our customer.

Gary O'Connell, Executive Director

Important Information about Your Water

ACSA Board of Directors

Richard Armstrong, Chair - Scottsville District
Charles Tolbert, Vice Chair - Jack Jouett District
Nathan Moore - Rio District
Dr. Lizbeth Palmer - Samuel Miller District
John Parcells - White Hall District
Clarence Roberts - Rivanna 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.

The Source Water Assessment of the South Rivanna Reservoir watershed was updated in 2020 by the Virginia Department of Health (VDH). VDH determined the reservoir's "relative susceptibility to contamination" to be "high" due to its surface water being exposed to an inconsistent array of contaminants at varying concentrations. This assessment is due to changing hydrologic, hydraulic, and atmospheric conditions with potential sources of contamination in one of the zones of the reservoir's assessment area.

All water sources 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 does not 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 origin of 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.

Your Water Supply & Treatment (continued)

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. 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 and implemented a new, blended, orthophosphate product to optimize distribution system lead and copper corrosion control in February 2021, with a shift to an all-orthophosphate product in February 2022. All testing has shown the change to be effective.

Advanced Treatment Using Granular Activated Carbon (GAC)

Granular activated carbon (GAC) is very effective in improving water quality in distribution systems. It was added to all of 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 both manufactured and naturally occurring contaminants that are discovered in a growing number of water supplies across the country. (See the related section on PFAS.) While testing has shown our service areas are not impacted by these contaminants, GAC provides an added level of treatment for the 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 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. (The GAC system for the Urban Area is shown on the back page of this report.)

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

Water Quality Standards (continued)

extensive testing of the source waters and the treated water before it ever leaves the plant, 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, semi-volatile organic compounds, herbicides, and pesticides in 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 (434) 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). You can also see the section on Cryptosporidium in this report.

Internal Issues of Mold

The most common water-related complaint we've 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 the level of chlorine in the water cannot 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 found the mold to be very common types. More information, including tips on controlling mold, is found at www.serviceauthority.org/waterqualitysupply/water-quality or by calling Tim Brown at (434) 977-4511, ext. 119.

Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances, known more commonly as PFAS, are a group of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their heat, water, and stain resistance. There are thousands of different PFAS compounds, a few of which have been more widely used and studied than the others.

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

PFAS is found in many products in use every day, including:

- Fire extinguishing foam - in aqueous film-forming foams (or AFFFs) used to extinguish flammable liquid-based fires. Such foams are used in training and emergency response events at airports, shipyards, military bases, firefighting training facilities, chemical plants, and refineries.
- Manufacturing or chemical production facilities that produce or use PFAS – for example at chrome plating, electronics, and certain textile and paper manufacturers.
- Food – Some examples include in fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.
- Food packaging – for example in grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and candy wrappers.
- Household products and dust – for example in stain and water-repellent used on carpets, upholstery, clothing, and other fabrics; cleaning products; non-stick cookware; paints, varnishes, and sealants.
- Personal care products – for example in certain shampoo, dental floss, and cosmetics.

PFAS can also be found in drinking water in public drinking water systems and private drinking water wells.

Due to their widespread production and use, as well as their ability to move and persist in the environment, surveys conducted by the Centers for Disease Control and Prevention (CDC) show that most people in the United States have been exposed to some PFAS. Most known exposures are relatively low, but can be elevated, particularly when people are exposed to a concentrated source over long periods of time. Some PFAS chemicals can accumulate in the body over time.

Current scientific research suggests that exposure to high levels of certain PFAS may lead to adverse health outcomes. However, research is still ongoing to determine how different levels of exposure to different PFAS can lead to a variety of health effects.

Sampling associated with the EPA's Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) is being conducted nationwide between 2023 and 2025. We will test our water for 29 PFAS compounds plus lithium under UCMR 5 to help the EPA assess the public health and environmental risks of these substances in drinking water. The ACSA, along with our water provider Rivanna Water and Sewer Authority (RWSA), will conduct the tests as required and report the results in future water quality reports.

In March 2023, the EPA announced proposed national drinking water standards - known as Maximum Contaminant Levels (MCLs) for two PFAS compounds, PFOA and PFOS, at four (4) parts per trillion each. The EPA also announced a proposed "Hazard Index" calculation

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

for four additional PFAS compounds that establishes an MCL for the mixture if it rises above a certain level. Following public comment and scientific review processes, the final standards will likely be announced by the end of 2023. The effective date for the new standards will be three years after the date of the announcement.

While there is significant debate about the EPA's proposed standards and "Hazard Index," the ACSA can report to you that, based on past testing, PFAS compounds are not a significant issue in the Urban Area, as well as our other service areas. While we were not required to do so, the ACSA has worked with the RWSA for several years to monitor for PFAS compounds in your water.

In nine rounds of testing between December 2018 and February 2023 involving the source water and treated water of six treatment plants managed by Rivanna Water and Sewer Authority, PFOA was detected on only one occasion at 2.1 parts per trillion (ppt). PFOS was never detected. The reporting limit used by the certified contract laboratory for testing was 2.0 ppt or less. Testing will continue later in 2023.

As mentioned earlier, the ACSA uses advanced water treatment in the form of granular activated carbon (GAC), and it has been proven to be highly effective in removing PFAS compounds.

Revised Lead and Copper Rule

The Environmental Protection Agency's (EPA) Lead and Copper Rule (LCR), first established in 1991, recently underwent its most extensive revision in 30 years to better protect children and communities from the risks of lead exposure by better protecting children at schools and child care facilities, getting the lead out of our nation's drinking water, and empowering communities through information.

Improvements under the new rule, which have an effective date of October 2024, include:

- Using science-based testing protocols to identify more lead sources in drinking water.
- Establishing a trigger level to jumpstart mitigation earlier and in more communities.
- Mandating more and complete lead service line replacements.
- For the first time, requiring testing in schools and child care facilities.
- Requiring water systems to identify and make public the locations of lead service lines.

As the ACSA and RWSA develop our compliance plans for the new LCR, we want you to know we have been proactive about lead and copper in several ways. We began service line material identification in 2021 and, to date, we have not found any lead service lines in our systems. Meter setters with a lead content were removed years ago.

Revised Lead and Copper Rule (continued)

As mentioned earlier, the RWSA recently conducted detailed corrosion-control studies of all treatment plants and implemented slight changes in the chemical used to inhibit corrosion. These changes have been found to be extremely effective.

The ACSA and RWSA have decades of excellent lead and copper test results. Since 2016, just under 97% of all samples (350 out of 362) have had undetectable levels of lead.

As of March 1, 2023, the materials used in the service lines for approximately 88% of the ACSA's customers have been documented. We have not identified any lines containing lead.

We have started communicating with Albemarle County Public Schools (ACPS) about lead and copper testing that is set to begin in late 2024 or early 2025, in accordance with the revised Lead and Copper Rule. ACPS conducted extensive testing in 2016 and 2018 with excellent results. The ACSA has also started our work with private schools and childcare facilities to test their sites in accordance with the LCR.

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 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 took place during the summer of 2022. (See the data chart.)

A trace amount of lead was found in only one of the 30 samples in 2022, and it was the result of minimal water use in the home for several months. Information on lead in drinking water, testing methods, and steps you can take to reduce exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at www.epa.gov/safewater/lead.

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 (DHHS), 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 main reason for this 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.

DHHS 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 2022 was non-detectable (ND)-0.98 parts per million (ppm).

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 earlier section 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 earlier section for additional information on fluoride.

Potential Health Risks Associated with These Contaminants

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.

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.

2022 Water Quality Test Results

Primary Standards - Potential Health Risk	MCLG	MCL	Urban Area 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.) (2)	N/A	0-1 per month	No (2)	Naturally present in the environment
Fecal Coliform Bacteria (1)	0	See footnote (3)	0 (4)	N/A	0 per month	No (4)	Human and animal fecal waste
Turbidity (max. single value)	N/A	1 (5)	0.17 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	0.9 pCi/l	N/A	<0.5-0.9 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	<2.00-8.72 ppb	No	Corrosion of household plumbing
Copper (8)	1.3 ppm	1.3 ppm (AL)	0.061 ppm (9)	0	<0.020-0.134 ppm	No	Corrosion of household plumbing; erosion of natural deposits
Barium	2 ppm	2 ppm	0.020 ppm	N/A	<0.010-0.020	No	Erosion of natural deposits; drilling waste discharges
Fluoride	4 ppm	4 ppm	0.98 ppm	N/A	<0.010-0.98 ppm	No	Water additive that promotes strong teeth
Nitrates	10 ppm	10 ppm	0.36 ppm	N/A	<0.05-0.36 ppm	No	Fertilizer runoff
DISINFECTION & DISINFECTION BYPRODUCT CONTAMINANTS							
Free Residual Chlorine	MRDL=4 ppm	MRDLG=4 ppm	1.25 ppm (10)	N/A	0.27-2.22 ppm	No	Water additive to control microbes (disinfectant)
Total Trihalomethanes (TTHMs)	0	80 ppb	37 ppb (11)	N/A	10-50 ppb	No	Disinfection byproduct
Haloaectic Acids (HAAs)	0	60 ppb	22 ppb (11)	N/A	5.3-31 ppb	No	Disinfection byproduct

2022 Water Quality Test Results (continued)

Secondary Standards/Aesthetic Factors	MCLG	MCL	Urban Area Water Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
Chloride	N/A	250 ppm	8.1 - 16.1 ppm	N/A	8.1 - 16.1 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 S.U.	7.3-7.8 (mth. avg.)	N/A	7.3-7.8 (mth. avg.)	No	Runoff/leaching of natural deposits
Sulfate	N/A	250 ppm	<5.0-28.9 ppm	N/A	<5.0-28.9 ppm	No	Runoff/leaching of natural deposits
Total Dissolved Solids	N/A	500 ppm	67-123 ppm	N/A	67-123 ppm	No	Runoff/leaching of natural deposits
OTHER PARAMETERS OF INTEREST							
Alkalinity	N/A	N/A	19-61 ppm (mth avg.)	N/A	19-61 ppm	N/A	Runoff/leaching of limestone minerals
Conductivity	N/A	N/A	107-199 micromhos/cm	N/A	107-199 micromhos/cm	N/A	Runoff/leaching of natural deposits
Hardness	N/A	N/A	17-42 ppm	N/A	17-42 ppm	N/A	Runoff/leaching of limestone minerals
Sodium	N/A	N/A	7.88-35.1 ppm	N/A	7.88-35.1 ppm	N/A	Runoff/leaching of natural deposits

What Do All the Numbers Mean?

First, they show your drinking water met or exceeded all regulatory requirements during 2022. 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.

Footnotes

(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 1,048 routine samples collected in 2022, one (1) sample indicated the presence of total coliform bacteria. The sample did not indicate the presence of fecal coliform bacteria.
(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.

Footnotes (continued)

(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 2022 from 30 select, high-risk residences. The one detectable value was the result of minimal water usage in the tested home for several months. All locations will be sampled again in 2025.
(9) The value reported is the 90th percentile of all data (30 samples) collected.
(10) The value reported is the highest running annual average. Range is all individual samples.
(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 2022, but "Results" includes late 2021 and 2022.

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.
Standard Units (S.U.): This is a measure of pH.
N/A: Not applicable. **<:** Less than.

Granular activated carbon (GAC) canisters at the South Rivanna Water Treatment Plant

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Crozet 2023 Annual Drinking Water Report

Includes water testing for 2022

Successfully Meeting Water Quality Challenges

Dear Customer,

The ACSA and the Rivanna Water and Sewer Authority (RWSA), in partnership with the Virginia Department of Health (VDH), work cooperatively to ensure our customers receive a safe and reliable supply of drinking water. The RWSA collects, stores, and treats the water, while the ACSA purchases the finished water and delivers it to our customers through our distribution system. Our staff of dedicated men and women work hard every day to ensure your water is always there when you turn on the tap.

Our collective efforts to provide you with the highest quality drinking water never end. Not only is the ACSA working to fully comply with the EPA's revised Lead and Copper Rule (LCR), which will govern how water providers must protect our customers from exposure to lead through their drinking water, but we've also been proactive with years of testing for PFAS, so-called "forever chemicals" being found in drinking water all over the country.

The EPA recently announced new proposed drinking water standards for a few PFAS that will likely take effect in about four years. While these chemicals have not been found in our finished water, the ACSA will test for more of these compounds in the coming years so we can continue to assess the situation. I assure you the ACSA and RWSA are confident in our ability to protect you from concerning levels of these substances.

A major factor in keeping your water of the highest quality is our continued investment in our infrastructure. Throughout our decades of service, the ACSA has been able to meet the many water quality challenges we've faced because of the willingness of our customers to invest in our systems when other communities across the country have been hesitant. It is because of your commitment that our services remain safe, resilient, and prepared for the future.

We recently unveiled our 2023 through 2025 Strategic Plan, which uses input from our customers and our employees to prioritize our short and long-term organizational work as we strengthen our infrastructure. You can find more about our Plan at www.serviceauthority.org.

The ACSA is committed to providing you, the customer, with this water quality report because informed customers are our best allies. If you wish to receive a "hard-copy" of the report, contact Tim Brown at (434) 977-4511, Ext. 119 or at tbrown@serviceauthority.org.

Thank you again for being our customer.

Gary O'Connell, Executive Director

Important Information about Your Water

ACSA Board of Directors

Richard Armstrong, Chair - Scottsville District
Charles Tolbert, Vice Chair - Jack Jouett District
Nathan Moore - Rio District
Dr. Lizbeth Palmer - Samuel Miller District
John Parcells - White Hall District
Clarence Roberts - Rivanna District

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Your Water Supply & Treatment

Your water is drawn from the Beaver Creek Reservoir, which is within the watershed of the South Fork Rivanna River. The reservoir is replenished by precipitation, stream flow, overland runoff, and groundwater flow. This supply has a low mineral content, is low in hardness and scale ("soft"), and has little of the iron and manganese that is commonly found in our area's groundwater. The treated water does not have iron or manganese.

Water is pumped from the Beaver Creek Reservoir to the Crozet Water Treatment Plant (WTP), where it undergoes both physical and chemical treatment processes before being delivered to the distribution system.

Sodium hypochlorite is used to disinfect the treated water, and fluoride is added to promote good dental health. The Crozet WTP has a designed daily capacity of two million gallons. In 2022, the plant treated an average of more than 620,000 gallons of water a day, a reduction of 8.7% from 2021.

A significant upgrade to the Crozet WTP was completed in the spring of 2018 related to the Stage 2 Disinfection Byproducts Rule. An advanced treatment process that employs granular activated carbon (GAC) was installed to provide higher quality water. In particular, the concentration of disinfection byproducts (TTHMs and HAAs; see discussion of contaminants) has been significantly reduced. 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 and implemented a new, blended, orthophosphate product to optimize distribution system lead and copper corrosion control. Implementation occurred in December 2019, with a shift to an all-orthophosphate product in February 2021. All testing has shown the change to be effective.

Advanced Treatment Using Granular Activated Carbon (GAC)

Granular activated carbon (GAC) is very effective in improving water quality in distribution systems. It was added to all of 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 both manufactured and naturally occurring contaminants that are being found in a growing number of water supplies across the country. While testing has shown our service areas are not impacted by these contaminants, GAC provides an added level of treatment for the protection of our drinking water. (See the section on PFAS.)

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. (The GAC system for Crozet is shown on the back page of this report.)

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 plant, 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, semi-volatile organic compounds, herbicides, and pesticides in the treated water. They are not listed here since none of these

Water Quality Standards (continued)

parameters was detected. More specific information can be obtained by contacting Tim Brown at (434) 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). You can also see the section on Cryptosporidium in this report.

Internal Issues of Mold

The most common water-related complaint we've 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 the level of chlorine in the water cannot 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 found the mold to be very common types. More information, including tips on controlling mold, is found at www.serviceauthority.org/waterqualitysupply/water-quality or by calling Tim Brown at (434) 977-4511, ext. 119.

Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances, known more commonly as PFAS, are a group of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their heat, water, and stain resistance. There are thousands of different PFAS compounds, a few of which have been more widely used and studied than the others.

PFAS is found in many products in use every day, including:

- Fire extinguishing foam - in aqueous film-forming foams (or AFFFs) used to extinguish flammable liquid-based fires. Such foams are used in training and emergency response events at airports, shipyards, military bases, firefighting training facilities, chemical plants, and refineries.

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

- Manufacturing or chemical production facilities that produce or use PFAS – for example at chrome plating, electronics, and certain textile and paper manufacturers.
- Food – Some examples include in fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.
- Food packaging – for example in grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and candy wrappers.
- Household products and dust – for example in stain and water-repellent used on carpets, upholstery, clothing, and other fabrics; cleaning products; non-stick cookware; paints, varnishes, and sealants.
- Personal care products – for example in certain shampoo, dental floss, and cosmetics.

PFAS can also be found in drinking water in public drinking water systems and private drinking water wells.

Due to their widespread production and use, as well as their ability to move and persist in the environment, surveys conducted by the Centers for Disease Control and Prevention (CDC) show that most people in the United States have been exposed to some PFAS. Most known exposures are relatively low, but can be elevated, particularly when people are exposed to a concentrated source over long periods of time. Some PFAS chemicals can accumulate in the body over time.

Current scientific research suggests that exposure to high levels of certain PFAS may lead to adverse health outcomes. However, research is still ongoing to determine how different levels of exposure to different PFAS can lead to a variety of health effects.

Sampling associated with the EPA's Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) is being conducted nationwide between 2023 and 2025. We will test our water for 29 PFAS compounds plus lithium under UCMR 5 to help the EPA assess the public health and environmental risks of these substances in drinking water. The ACSA, along with our water provider Rivanna Water and Sewer Authority (RWSA), will conduct the tests as required and report the results in future water quality reports.

In March 2023, the EPA announced proposed national drinking water standards - known as Maximum Contaminant Levels (MCLs) for two PFAS compounds, PFOA and PFOS, at four (4) parts per trillion each. The EPA also announced a proposed "Hazard Index" calculation for four additional PFAS compounds that establishes an MCL for the mixture if it rises above a certain level. Following public comment and scientific review processes, the final standards will likely be announced by the end of 2023. The effective date for the new standards will be three years after the date of the announcement.

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

While there is significant debate about the EPA's proposed standards and "Hazard Index," the ACSA can report to you that, based on past testing, PFAS compounds are not a significant issue in Crozet, as well as our other service areas. While we were not required to do so, the ACSA has worked with the RWSA for several years to monitor for PFAS compounds in your water.

In nine rounds of testing between December 2018 and February 2023 involving the source water and treated water of six treatment plants managed by Rivanna Water and Sewer Authority, PFOA was detected on only one occasion at 2.1 parts per trillion (ppt). PFOS was never detected. The reporting limit used by the certified contract laboratory for testing was 2.0 ppt or less. Testing will continue later in 2023.

As mentioned earlier, the ACSA uses advanced water treatment in the form of granular activated carbon (GAC), and it has been proven to be highly effective in removing PFAS compounds.

Revised Lead and Copper Rule

The Environmental Protection Agency's (EPA) Lead and Copper Rule (LCR), first established in 1991, recently underwent its most extensive revision in 30 years to better protect children and communities from the risks of lead exposure by better protecting children at schools and child care facilities, getting the lead out of our nation's drinking water, and empowering communities through information.

Improvements under the new rule, which have an effective date of October 2024, include:

- Using science-based testing protocols to identify more lead sources in drinking water.
- Establishing a trigger level to jumpstart mitigation earlier and in more communities.
- Mandating more and complete lead service line replacements.
- For the first time, requiring testing in schools and child care facilities.
- Requiring water systems to identify and make public the locations of lead service lines.

As the ACSA and RWSA develop our compliance plans for the new LCR, we want you to know we have been proactive about lead and copper in several ways. We began service line material identification in 2021 and, to date, we have not found any lead service lines in our systems. Meter setters with lead content were removed years ago.

As mentioned earlier, the RWSA recently conducted detailed corrosion-control studies of all treatment plants and implemented slight changes in the chemical used to inhibit corrosion. These changes have been found to be extremely effective.

Revised Lead and Copper Rule (continued)

The ACSA and RWSA have decades of excellent lead and copper test results. Since 2016, just under 97% of all samples (350 out of 362) have had undetectable levels of lead.

As of March 1, 2023, the materials used in the service lines for approximately 88% of the ACSA's customers have been documented. We have not identified any lines containing lead.

We have started communicating with Albemarle County Public Schools (ACPS) about lead and copper testing that is set to begin in late 2024 or early 2025, in accordance with the revised Lead and Copper Rule. ACPS conducted extensive testing in 2016 and 2018 with excellent results. The ACSA has also started our work with private schools and childcare facilities to test their sites in accordance with the LCR.

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 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 took place during the summer of 2021. (See the data chart.)

Lead was not detected in any of the thirty-one (31) samples in 2021. 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.

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 (DHHS), 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 main reason for this 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.

DHHS 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 2021 was 0.60 - 0.92 parts per million (ppm).

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 earlier section 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 earlier section for additional information on fluoride.

Potential Health Risks Associated with These Contaminants

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.

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.

2022 Water Quality Test Results

Primary Standards - Potential Health Risk	MCLG	MCL	Crozet Water Results	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
MICROBIOLOGICAL ORGANISMS; RELATED MEASUREMENTS							
Total Coliform Bacteria (1)	0	Presence in >1 sample per month	1 per mth. (Apr.) (2)	N/A	0-1 per month	No (2)	Naturally present in the environment
Fecal Coliform Bacteria (1)	0	See footnote (3)	0 per month (2)	N/A	0 per month	No (2)	Human and animal fecal waste
Turbidity (max. single value)	N/A	1 (4)	0.21 NTU	N/A	N/A	No	Soil runoff
Turbidity (% of monthly samples below 0.3 NTU)	N/A	At least 95% (4)	100%	N/A	N/A	No	Soil runoff
RADIOACTIVE COMPOUNDS							
Combined Radium (5)	0 pCi/l	5 pCi/l	0.6 pCi/l	N/A	N/A	No	Erosion of natural deposits
Gross Alpha (5)	0 pCi/l	15 pCi/l	<0.33 pCi/l	N/A	N/A	No	Decay of natural deposits
Gross Beta (5,6)	0 pCi/l	50 pCi/l	2.4 pCi/l	N/A	N/A	No	Erosion of natural deposits
INORGANIC COMPOUNDS							
Lead (7)	0 ppb	15 ppb (AL)	<2.00 ppb (8)	0	All <2.00 ppb	No	Corrosion of household plumbing
Copper (7)	1.3 ppm	1.3 ppm (AL)	0.024 ppm (8)	0	<0.020-0.036 ppm	No	Corrosion of household plumbing; erosion of natural deposits
Barium	2 ppm	2 ppm	0.024 ppm	N/A	N/A	No	Erosion of natural deposits; drilling waste discharges
Fluoride	4 ppm	4 ppm	0.92 ppm	N/A	0.60-0.92 ppm	No	Water additive that promotes strong teeth
Nitrates	10 ppm	10 ppm	0.28 ppm	N/A	N/A	No	Fertilizer runoff
DISINFECTION & DISINFECTION BYPRODUCT CONTAMINANTS							
Free Residual Chlorine	MRDL=4 ppm	MRDLG=4 ppm	1.04 ppm (9)	N/A	0.25-3.50 ppm	No	Water additive to control microbes (disinfectant)
Total Trihalomethanes (TTHMs)	0	80 ppb	31 ppb (10)	N/A	14-43 ppb	No	Disinfection byproduct
Haloaectic Acids (HAAs)	0	60 ppb	21 ppb (10)	N/A	9.1-35 ppb	No	Disinfection byproduct

2022 Water Quality Test Results (continued)

Secondary Standards/Aesthetic Factors	MCLG	MCL	Crozet Water Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
Chloride	N/A	250 ppm	10.8 ppm	N/A	N/A	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 S.U.	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	25.1 ppm	N/A	N/A	No	Runoff/leaching of natural deposits
Total Dissolved Solids	N/A	500 ppm	99 ppm	N/A	N/A	No	Runoff/leaching of natural deposits
OTHER PARAMETERS OF INTEREST							
Alkalinity	N/A	N/A	24-32 ppm (mth. avg.)	N/A	24-32 ppm	N/A	Runoff/leaching of limestone minerals
Conductivity	N/A	N/A	152 micromhos/cm	N/A	N/A	N/A	Runoff/leaching of natural deposits
Hardness	N/A	N/A	46 ppm	N/A	N/A	N/A	Runoff/leaching of limestone minerals
Sodium	N/A	N/A	9.44 ppm	N/A	N/A	N/A	Runoff/leaching of natural deposits

What Do All the Numbers Mean?

First, they show your drinking water met or exceeded all regulatory requirements during 2022. 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.

Footnotes

(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 144 routine samples collected in 2022, one (1) sample indicated the presence of total coliform bacteria. The sample did not indicate the presence of fecal coliform bacteria.
(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) 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
(5) Last sampled in 2017. To be sampled again in 2023.

Footnotes (continued)

(6) The EPA considers 50 pCi/l to be the level of concern for beta particles.
(7) Sampled in August 2021 from 31 select, high-risk residences. To be sampled again in 2024.
(8) The value reported is the 90th percentile of all data (31 samples) collected.
(9) The value reported is the highest running annual average. Range is all individual samples.
(10) TTHM and HAA results are averaged over four quarters at each sampling location to determine compliance with the MCL. Range of detections is from 2022, but "Result" includes late 2021 and 2022.

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.
Standard Units (S.U.): This is a measure of pH.
N/A: Not applicable. **<:** Less than.

Granular activated carbon (GAC) canister at the Crozet Water Treatment Plant

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Scottsville 2023 Annual Drinking Water Report

Includes water testing for 2022

Successfully Meeting Water Quality Challenges

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Gary O'Connell, Executive Director

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Your Water Supply & Treatment

Your water is drawn from Totier Creek, just prior to entering the reservoir; the reservoir serves as a backup water supply. This is within the watershed of the James River.

The water has a low mineral content, is quite"soft" (low in hardness, or scale), and has little of the iron or manganese that is commonly found in the groundwater of this area. The treated water does not have any iron or manganese. Water is pumped from the stream to the Scottsville Water Treatment Plant (WTP), where it undergoes both physical and chemical treatment processes before being delivered to the distribution system.

Sodium hypochlorite is used to disinfect the treated water, and fluoride is added to promote good dental health. The Scottsville WTP has a designed daily capacity of 250,000 gallons, and in 2022, the plant treated an average of just over 59,000 gallons per day, an increase of 12% from 2021.

A significant upgrade to the Scottsville Treatment Plant was 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. 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 and implemented a new, blended, orthophosphate product to optimize distribution system lead and copper corrosion control in September 2020, with a shift to an all-orthophosphate product in October 2021. All testing has shown the change to be effective.

Advanced Treatment Using Granular Activated Carbon (GAC)

Granular activated carbon (GAC) is very effective in improving water quality in distribution systems. It was added to all of 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 both manufactured and naturally occurring contaminants that are being found in a growing number of water supplies across the country. While testing has shown our service areas are not impacted by these contaminants, GAC provides an added level of treatment for the protection of our drinking water. (See the section on PFAS.)

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. (The GAC for the Scottsville system is shown on the back page of this report.)

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 plant, 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, semi-volatile organic compounds, herbicides,

Water Quality Standards (continued)

and pesticides in 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 (434) 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). You can also see the section on Cryptosporidium in this report.

Internal Issues of Mold

The most common water-related complaint we've 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 the level of chlorine in the water cannot 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 found the mold to be very common types. More information, including tips on controlling mold, is found at www.serviceauthority.org/waterqualitysupply/water-quality or by calling Tim Brown at (434) 977-4511, ext. 119.

Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances, known more commonly as PFAS, are a group of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their heat, water, and stain resistance. There are thousands of different PFAS compounds, a few of which have been more widely used and studied than the others.

PFAS is found in many products in use every day, including:

- Fire extinguishing foam - in aqueous film-forming foams (or AFFFs) used to extinguish flammable liquid-based fires. Such foams are used in training and emergency response

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

events at airports, shipyards, military bases, firefighting training facilities, chemical plants, and refineries.

- Manufacturing or chemical production facilities that produce or use PFAS – for example at chrome plating, electronics, and certain textile and paper manufacturers.
- Food – Some examples include in fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.
- Food packaging – for example in grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and candy wrappers.
- Household products and dust – for example in stain and water-repellent used on carpets, upholstery, clothing, and other fabrics; cleaning products; non-stick cookware; paints, varnishes, and sealants.
- Personal care products – for example in certain shampoo, dental floss, and cosmetics.

PFAS can also be found in drinking water in public drinking water systems and private drinking water wells.

Due to their widespread production and use, as well as their ability to move and persist in the environment, surveys conducted by the Centers for Disease Control and Prevention (CDC) show that most people in the United States have been exposed to some PFAS. Most known exposures are relatively low, but can be elevated, particularly when people are exposed to a concentrated source over long periods of time. Some PFAS chemicals can accumulate in the body over time.

Current scientific research suggests that exposure to high levels of certain PFAS may lead to adverse health outcomes. However, research is still ongoing to determine how different levels of exposure to different PFAS can lead to a variety of health effects.

Sampling associated with the EPA's Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) is being conducted nationwide between 2023 and 2025. We will test our water for 29 PFAS compounds plus lithium under UCMR 5 to help the EPA assess the public health and environmental risks of these substances in drinking water. The ACSA, along with our water provider Rivanna Water and Sewer Authority (RWSA), will conduct the tests as required and report the results in future water quality reports.

In March 2023, the EPA announced proposed national drinking water standards - known as Maximum Contaminant Levels (MCLs) for two PFAS compounds, PFOA and PFOS, at four (4) parts per trillion each. The EPA also announced a proposed "Hazard Index" calculation for four additional PFAS compounds that establishes an MCL for the mixture if it rises above a certain level. Following public comment and scientific review processes, the final standards will likely be announced by the end of 2023. The effective date for the new

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

standards will be three years after the date of the announcement.

While there is significant debate about the EPA's proposed standards and "Hazard Index," the ACSA can report to you that, based on past testing, PFAS compounds are not a significant issue in Scottsville, as well as our other service areas. While we were not required to do so, the ACSA has worked with the RWSA for several years to monitor for PFAS compounds in your water.

In nine rounds of testing between December 2018 and February 2023 involving the source water and treated water of six treatment plants managed by Rivanna Water and Sewer Authority, PFOA was detected on only one occasion at 2.1 parts per trillion (ppt). PFOS was never detected. The reporting limit used by the certified contract laboratory for testing was 2.0 ppt or less. Testing will continue later in 2023.

As mentioned earlier, the ACSA uses advanced water treatment in the form of granular activated carbon (GAC), and it has been proven to be highly effective in removing PFAS compounds.

Revised Lead and Copper Rule

The Environmental Protection Agency's (EPA) Lead and Copper Rule (LCR), first established in 1991, recently underwent its most extensive revision in 30 years to better protect children and communities from the risks of lead exposure by better protecting children at schools and child care facilities, getting the lead out of our nation's drinking water, and empowering communities through information.

Improvements under the new rule, which have an effective date of October 2024, include:

- Using science-based testing protocols to identify more lead sources in drinking water.
- Establishing a trigger level to jumpstart mitigation earlier and in more communities.
- Mandating more and complete lead service line replacements.
- For the first time, requiring testing in schools and child care facilities.
- Requiring water systems to identify and make public the locations of lead service lines.

As the ACSA and RWSA develop our compliance plans for the new LCR, we want you to know we have been proactive about lead and copper in several ways. We began service line material identification in 2021 and, to date, we have not found any lead service lines in our systems. Meter setters with a lead content were removed years ago.

As mentioned earlier, the RWSA recently conducted detailed corrosion-control studies of all treatment plants and implemented slight changes in the chemical used to inhibit corrosion. These changes have been found to be extremely effective.

Revised Lead and Copper Rule (continued)

The ACSA and RWSA have decades of excellent lead and copper test results. Since 2016, just under 97% of all samples (350 out of 362) have had undetectable levels of lead.

As of March 1, 2023, the materials used in the service lines for approximately 88% of the ACSA's customers have been documented. We have not identified any lines containing lead.

We have started communicating with Albemarle County Public Schools (ACPS) about lead and copper testing that is set to begin in late 2024 or early 2025, in accordance with the revised Lead and Copper Rule. ACPS conducted extensive testing in 2016 and 2018 with excellent results. The ACSA has also started our work with private schools and childcare facilities to test their sites in accordance with the LCR.

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 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 took place during the summer of 2022. (See the data chart.)

Lead was not detected in any sample in 2022. 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.

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

Cryptosporidium (continued)

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 (DHHS), 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 main reason for this 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.

DHHS 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 2022 was 0.55-0.92 parts per million (ppm).

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 earlier section 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 earlier section for additional information on fluoride.

Potential Health Risks Associated with These Contaminants

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.

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.

2022 Water Quality Test Results

Primary Standards - Potential Health Risk	MCLG	MCL	Scottsville Water Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
MICROBIOLOGICAL ORGANISMS; RELATED MEASUREMENTS							
Total Coliform Bacteria (1)	0	Presence in >1 sample per month	0 per month (2)	N/A	0 per month	No (2)	Naturally present in the environment
Fecal Coliform Bacteria (1)	0	See footnote (3)	0 per month (2)	N/A	0 per month	No (2)	Human and animal fecal waste
Turbidity (max. single value)	N/A	1 (4)	0.22 NTU	N/A	N/A	No	Soil runoff
Turbidity (% of monthly samples below 0.3 NTU)	N/A	At least 95% (4)	100%	N/A	N/A	No	Soil runoff
RADIOACTIVE COMPOUNDS							
Combined Radium (5)	0 pCi/l	5 pCi/l	<0.39 pCi/l	N/A	N/A	No	Erosion of natural deposits
Gross Alpha (5)	0 pCi/l	15 pCi/l	<0.39 pCi/l	N/A	N/A	No	Decay of natural deposits
Gross Beta (5,6)	0 pCi/l	50 pCi/l	1.2 pCi/l	N/A	N/A	No	Erosion of natural deposits
INORGANIC COMPOUNDS							
Lead (7)	0 ppb	15 ppb (AL)	<2.00 ppb (8)	0	All <2.00 ppb	No	Corrosion of household plumbing
Copper (7)	1.3 ppm	1.3 ppm (AL)	0.044 ppm (8)	0	<0.020-0.067 ppm	No	Corrosion of household plumbing; erosion of natural deposits
Barium	2 ppm	2 ppm	0.021 ppm	N/A	N/A	No	Erosion of natural deposits; drilling waste discharges
Fluoride	4 ppm	4 ppm	0.86 ppm	N/A	0.55-0.92 ppm	No	Water additive that promotes strong teeth
Nitrates	10 ppm	10 ppm	0.63 ppm	N/A	N/A	No	Fertilizer runoff
DISINFECTION & DISINFECTION BYPRODUCT CONTAMINANTS							
Free Residual Chlorine	MRDL=4 ppm	MRDLG=4 ppm	1.11 ppm (9)	N/A	0.27-1.62 ppm	No	Water additive to control microbes (disinfectant)
Total Trihalomethanes (TTHMs)	0	80 ppb	39 ppb (10)	N/A	15-51 ppb	No	Disinfection byproduct
Haloaectic Acids (HAAs)	0	60 ppb	29 ppb (10)	N/A	13-38 ppb	No	Disinfection byproduct

2022 Water Quality Test Results (continued)

Secondary Standards/Aesthetic Factors	MCLG	MCL	Scottsville Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
Chloride	N/A	250 ppm	15.2 ppm	N/A	N/A	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 S.U.	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	54.0 ppm	N/A	N/A	No	Runoff/leaching of natural deposits
Total Dissolved Solids	N/A	500 ppm	195 ppm	N/A	N/A	No	Runoff/leaching of natural deposits
OTHER PARAMETERS OF INTEREST							
Alkalinity	N/A	N/A	61-86 ppm (mth avg.)	N/A	61-86 ppm	N/A	Runoff/leaching of limestone minerals
Conductivity	N/A	N/A	332 micromhos/cm	N/A	N/A	N/A	Runoff/leaching of natural deposits
Hardness	N/A	N/A	39 ppm	N/A	N/A	N/A	Runoff/leaching of limestone minerals
Sodium	N/A	N/A	53.8 ppm	N/A	N/A	N/A	Runoff/leaching of natural deposits

What Do All the Numbers Mean?

First, they show your drinking water met or exceeded all regulatory requirements during 2022. 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.

Footnotes

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 72 routine samples collected in 2022, no sample indicated the presence of total coliform or fecal coliform bacteria.
(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) 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.

Footnotes (continued)

5) Last sampled in 2017. To be sampled again in 2023.
(6) The EPA considers 50 pCi/l to be the level of concern for beta particles.
(7) Sampled in September 2022 from ten select, high-risk residences. To be sampled again in 2025.
(8) The value reported is the 90th percentile of all data (10 samples) collected.
(9) The value reported is the highest running annual average. Range is all individual samples.
(10) TTHM and HAA results are averaged over four quarters at each sampling location to determine compliance with the MCL. Range of detections is from 2022, but "Results" includes late 2021 and 2022.

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.
Standard Units (S.U.): This is a measure of pH.
N/A: Not applicable. **<:** Less than.

Granular activated carbon (GAC) canister at the Scottsville Water Treatment Plant

Albemarle County Service Authority
Serving Conserving

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Red Hill 2023 Annual Drinking Water Report

Includes water testing for 2022

Successfully Meeting Water Quality Challenges

Dear Customer,

The ACSA and the Rivanna Water and Sewer Authority (RWSA), in partnership with the Virginia Department of Health (VDH), work cooperatively to ensure our customers receive a safe and reliable supply of drinking water. The RWSA collects, stores, and treats the water, while the ACSA purchases the finished water and delivers it to our customers through our distribution system. Our staff of dedicated men and women work hard every day to ensure your water is always there when you turn on the tap.

Our collective efforts to provide you with the highest quality drinking water never end. Not only is the ACSA working to fully comply with the EPA's revised Lead and Copper Rule (LCR), which will govern how water providers must protect our customers from exposure to lead through their drinking water, but we've also been proactive with years of testing for PFAS, so-called "forever chemicals" being found in drinking water all over the country.

The EPA recently announced new proposed drinking water standards for a few PFAS that will likely take effect in about four years. While these chemicals have not been found in our finished water, the ACSA will test for more of these compounds in the coming years so we can continue to assess the situation. I assure you the ACSA and RWSA are confident in our ability to protect you from concerning levels of these substances.

A major factor in keeping your water of the highest quality is our continued investment in our infrastructure. Throughout our decades of service, the ACSA has been able to meet the many water quality challenges we've faced because of the willingness of our customers to invest in our systems when other communities across the country have been hesitant. It is because of your commitment that our services remain safe, resilient, and prepared for the future.

We recently unveiled our 2023 through 2025 Strategic Plan, which uses input from our customers and our employees to prioritize our short and long-term organizational work as we strengthen our infrastructure. You can find more about our Plan at www.serviceauthority.org.

The ACSA is committed to providing you, the customer, with this water quality report because informed customers are our best allies. If you wish to receive a "hard-copy" of the report, contact Tim Brown at (434) 977-4511, Ext. 119 or at tbrown@serviceauthority.org.

Thank you again for being our customer.

Gary O'Connell, Executive Director

Important Information about Your Water

ACSA Board of Directors

Richard Armstrong, Chair - Scottsville District
Charles Tolbert, Vice Chair - Jack Jouett District
Nathan Moore - Rio District
Dr. Lizbeth Palmer - Samuel Miller District
John Parcells - White Hall District
Clarence Roberts - Rivanna 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 Red Hill Waterworks is supplied by groundwater from a well located within the community. The well extends to a depth of 500 feet, is cased to a depth of 63 feet, and has a tested yield of 29 gallons per minute, far in excess of the water supply needs of your community. The waterworks is permitted by the VDH for a design capacity of 6,800 gallons per day, based upon the estimated usage by the elementary school and the residents. A reserve is maintained in a 10,000-gallon storage tank.

A calcite contactor was added to the treatment of the water in July 2019 to raise the pH of the somewhat acidic well water. Disinfection of the water is achieved by chlorination with sodium hypochlorite, and corrosion control involves the use of a blended orthophosphate/ polyphosphate solution. Each of the treatments is injected directly into the well discharge line and prior to the storage tank. The addition of fluoride to the water began in February 2020.

Your water is an extremely "soft," low mineral content supply with no detectable iron or manganese, the latter situation being unusual for groundwater in the Central Piedmont of Virginia. The nitrate concentration indicates minimal impact from the agricultural use of fertilizers in the vicinity.

Radioactive compounds, and disinfection byproducts (called TTHMs and HAAs) from the use of chlorine, are well below the regulated maximum contaminant levels. Two volatile organic compounds (VOCs), apparently originating from the inner coating of the water

Your Water Supply & Treatment (continued)

storage tank, have been detected at trace levels for several years. One VOC (total xylenes) was barely detectable in the June 2022 sample. No VOCs were detected in the untreated water. More specific information may be obtained by contacting Tim Brown at (434) 977-4511, ext. 119.

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.

A blended orthophosphate/polyphosphate product for corrosion control has been used in the Red Hill treated water since the system came online in 2009, and it has proven to be very effective in keeping lead and copper out of customer water supplies.

Water Quality Standards

The information provided in this report has been collected and reported in accordance with the drinking water standards established by the USEPA and the VDH. The RWSA collected daily, weekly, monthly, semi-annual, and annual samples to ensure the quality of your water. Sample sources included the raw (untreated) well water, the finished (treated) well water, and locations in the distribution system. Two (2) coliform bacteria samples per month began to be collected in October 2022, although one sample a month meets VDH requirements.

The source of your water is a deep well. As water travels 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.

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants, however, does not necessarily indicate that water poses a heath risk. **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 www.epa.gov/safewater.** See the discussion of Cryptosporidium also contained in this report.

Internal Issues of Mold

The most common water-related complaint we've 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 the lower level of chlorine in the water cannot 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 found the mold to be very common types. More information, including tips on controlling mold, is found at www.serviceauthority.org/waterqualitysupply/water-quality, or by calling Tim Brown at (434) 977-4511, ext.119.

Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances, known more commonly as PFAS, are a group of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their heat, water, and stain resistance. There are thousands of different PFAS compounds, a few of which have been more widely used and studied than the others.

PFAS is found in many products in use every day, including:

- Fire extinguishing foam - in aqueous film-forming foams (or AFFFs) used to extinguish flammable liquid-based fires. Such foams are used in training and emergency response events at airports, shipyards, military bases, firefighting training facilities, chemical plants, and refineries.
- Manufacturing or chemical production facilities that produce or use PFAS – for example at chrome plating, electronics, and certain textile and paper manufacturers.
- Food – Some examples include in fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.
- Food packaging – for example in grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and candy wrappers.
- Household products and dust – for example in stain and water-repellent used on carpets, upholstery, clothing, and other fabrics; cleaning products; non-stick cookware; paints, varnishes, and sealants.
- Personal care products – for example in certain shampoo, dental floss, and cosmetics.

PFAS can also be found in drinking water in public drinking water systems and private drinking water wells.

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

Due to their widespread production and use, as well as their ability to move and persist in the environment, surveys conducted by the Centers for Disease Control and Prevention (CDC) show that most people in the United States have been exposed to some PFAS. Most known exposures are relatively low, but can be elevated, particularly when people are exposed to a concentrated source over long periods of time. Some PFAS chemicals can accumulate in the body over time.

Current scientific research suggests that exposure to high levels of certain PFAS may lead to adverse health outcomes. However, research is still ongoing to determine how different levels of exposure to different PFAS can lead to a variety of health effects.

Sampling associated with the EPA's Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) is being conducted nationwide between 2023 and 2025. We will test our water for 29 PFAS compounds plus lithium under UCMR 5 to help the EPA assess the public health and environmental risks of these substances in drinking water. The ACSA, along with our water provider Rivanna Water and Sewer Authority (RWSA), will conduct the tests as required and report the results in future water quality reports.

In March 2023, the EPA announced proposed national drinking water standards - known as Maximum Contaminant Levels (MCLs) for two PFAS compounds, PFOA and PFOS, at four (4) parts per trillion each. The EPA also announced a proposed "Hazard Index" calculation for four additional PFAS compounds that establishes an MCL for the mixture if it rises above a certain level. Following public comment and scientific review processes, the final standards will likely be announced by the end of 2023. The effective date for the new standards will be three years after the date of the announcement.

While there is significant debate about the EPA's proposed standards and "Hazard Index," the ACSA can report to you that, based on past testing, PFAS compounds are not a significant issue in crozet, as well as our other service areas. While we were not required to do so, the ACSA has worked with the RWSA for several years to monitor for PFAS compounds in your water.

In nine rounds of testing between December 2018 and February 2023 involving the source water and treated water of six treatment plants managed by Rivanna Water and Sewer Authority, PFOA was detected on only one occasion at 2.1 parts per trillion (ppt). PFOS was never detected. The reporting limit used by the certified contract laboratory for testing was 2.0 ppt or less. Testing will continue later in 2023.

As mentioned earlier, the ACSA uses advanced water treatment in the form of granular activated carbon (GAC), and it has been proven to be highly effective in removing PFAS compounds.

Revised Lead and Copper Rule

The Environmental Protection Agency's (EPA) Lead and Copper Rule (LCR), first established in 1991, recently underwent its most extensive revision in 30 years to better protect children and communities from the risks of lead exposure by better protecting children at schools and child care facilities, getting the lead out of our nation's drinking water, and empowering communities through information.

Improvements under the new rule, which have an effective date of October 2024, include:

- Using science-based testing protocols to identify more lead sources in drinking water.
- Establishing a trigger level to jumpstart mitigation earlier and in more communities.
- Mandating more and complete lead service line replacements.
- For the first time, requiring testing in schools and child care facilities.
- Requiring water systems to identify and make public the locations of lead service lines.

As the ACSA and RWSA develop our compliance plans for the new LCR, we want you to know we have been proactive about lead and copper in several ways. We began service line material identification in 2021 and, to date, we have not found any lead service lines in our systems. Meter setters with a lead content were removed years ago.

s mentioned earlier, the RWSA recently conducted detailed corrosion-control studies of all treatment plants and implemented slight changes in the chemical used to inhibit corrosion. These changes have been found to be extremely effective.

The ACSA and RWSA have decades of excellent lead and copper test results. Since 2016, just under 97% of all samples (350 out of 362) have had undetectable levels of lead.

As of March 1, 2023, the materials used in the service lines for approximately 88% of the ACSA's customers have been documented. We have not identified any lines containing lead.

We have started communicating with Albemarle County Public Schools (ACPS) about lead and copper testing that is set to begin in late 2024 or early 2025, in accordance with the revised Lead and Copper Rule. ACPS conducted extensive testing in 2016 and 2018 with excellent results. The ACSA has also started our work with private schools and childcare facilities to test their sites in accordance with the LCR.

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 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 took place during the summer of 2021. (See the data chart.)

Lead was not detected in any of the five (5) samples in 2021. 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.

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 (DHHS), 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 main reason for this 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.

DHHS 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 2022 was 0.51 - 0.81 parts per million (ppm).

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.

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 earlier section 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.

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 earlier section 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.

Xylenes and Ethylbenzene are two compounds in a large class of chemicals referred to as volatile organic compounds, or VOCs. These compounds, which include both naturally-occurring and man-made chemicals, are numerous in type and are present throughout the environment.

Potential Health Risks Associated with These Contaminants

Xylenes and Ethylbenzene (continued) The majority of the biologically-derived VOCs are generated in vegetation. They are a component of fuels and other petroleum products. A large majority of the numerous synthetic VOCs are solvents used in paints and other protective coatings, adhesives, thinners, cleaning agents, degreasers, refrigerants, pharmaceuticals, cosmetics and other personal care items, and in many other industrial and commercial products.

Some people who drink water containing xylenes in excess of the MCL over many years may experience damage to the nervous system. Some people who drink water containing ethylbenzene in excess of the MCL over many years may experience problems with their liver or kidneys.

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.

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.

2022 Water Quality Test Results

Primary Standards - Potential Health Risk	MCLG	MCL	Red Hill Water Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
MICROBIOLOGICAL ORGANISMS; RELATED MEASUREMENTS							
Total Coliform Bacteria (1)	0	Presence in monthly sample	0 per month (2)	N/A	0 per month	No (2)	Naturally present in the environment
Fecal Coliform Bacteria (1)	0	See footnote (3)	0 per month (2)	N/A	0 per month	No (2)	Human and animal fecal waste
RADIOACTIVE COMPOUNDS							
Combined Radium (4)	0 pCi/l	5 pCi/l	0.2 pCi/l	N/A	N/A	No	Erosion of natural deposits
Gross Alpha (4)	0 pCi/l	15 pCi/l	<0.39 pCi/l	N/A	N/A	No	Decay of natural deposits
Gross Beta (4,5)	0 pCi/l	50 pCi/l	0.9 pCi/l	N/A	N/A	No	Erosion of natural deposits
INORGANIC COMPOUNDS							
Lead (6)	0 ppb	15 ppb (AL)	<2.00 ppb (7)	0	All <2.00 ppb	No	Corrosion of household plumbing
Copper (6)	1.3 ppm	1.3 ppm (AL)	<0.020 ppm (7)	0	All <0.020 ppm	No	Corrosion of household plumbing; erosion of natural deposits
Barium	2 ppm	2 ppm	<0.010 ppm (11)	N/A	N/A	No	Erosion of natural deposits; drilling waste discharges
Fluoride	4 ppm	4 ppm	0.72 ppm	N/A	0.51-0.81 ppm	No	Water additive that promotes strong teeth
Nitrates	10 ppm	10 ppm	0.96 ppm	N/A	N/A	No	Fertilizer runoff
VOLATILE ORGANIC COMPOUNDS							
Xylenes, Total	10,000 ppb	10,000 ppb	2.1 ppb (8)	N/A	N/A	No	Paints & protective coatings, adhesives, petroleum products and refineries
Ethylbenzene	700 ppb	700 ppb	<0.05 ppb (8)	N/A	N/A	No	Paints & protective coatings, adhesives, petroleum products and refineries
DISINFECTION & DISINFECTION BYPRODUCT CONTAMINANTS							
Free Residual Chlorine	MRDL=4 ppm	MRDLG=4 ppm	1.14 ppm (9)	N/A	0.57-1.54 ppm	No	Water additive to control microbes (disinfectant)
Total Trihalomethanes (TTHMs)	0	80 ppb	29 ppb (10)	N/A	N/A	No	Disinfection byproduct
Haloaectic Acids (HAAs)	0	60 ppb	10 ppb (10)	N/A	N/A	No	Disinfection byproduct

2022 Water Quality Test Results (continued)

Secondary Standards/Aesthetic Factors	MCLG	MCL	Red Hill Water Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
Chloride	N/A	250 ppm	<5.0 ppm (11)	N/A	N/A	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 S.U.	7.1-7.2 (mth. avg.)	N/A	7.1-7.2	No	Runoff/leaching of natural deposits
Sulfate	N/A	250 ppm	<5.0 ppm (11)	N/A	N/A	No	Runoff/leaching of natural deposits
Total Dissolved Solids	N/A	500 ppm	77 ppm (11)	N/A	N/A	No	Runoff/leaching of natural deposits
OTHER PARAMETERS OF INTEREST							
Alkalinity	N/A	N/A	34-41 ppm (mth avg.)	N/A	34-41 ppm	N/A	Runoff/leaching of limestone minerals
Conductivity	N/A	N/A	95 micromhos/cm (11)	N/A	N/A	N/A	Runoff/leaching of natural deposits
Hardness	N/A	N/A	29 ppm (11)	N/A	N/A	N/A	Runoff/leaching of limestone minerals
Sodium	N/A	N/A	7.35 ppm (11)	N/A	N/A	N/A	Runoff/leaching of natural deposits

What Do All the Numbers Mean?

First, they show your drinking water met or exceeded all regulatory requirements during 2022. 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.

Footnotes

(1) Unit of measurement for total and fecal coliform bacteria is the presence or absence of bacteria in a 100 ml sample.
(2) No monthly sample collected within the distribution system indicated the presence of coliform bacteria of any kind. Two (2) samples per month began to be collected in October 2022.
(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) Sampled in August 2022.
(5) The EPA considers 50 pCi/l to be the level of concern for beta particles.

Footnotes (continued)

(6) Sampled in August 2021 from four residences and the elementary school. To be sampled again in 2024.
(7) The value reported is the 90th percentile for all data collected (5 samples).
(8) Volatile organic compounds (VOCs) were sampled in June 2022. One-two VOCs have been leaching from the inner coating of the water storage tank at trace levels.
(9) The value reported is the highest running annual average. Range is all individual samples.
(10) TTHM and HAAs were sampled in 2021 at the connection most distant from the well house; it is assumed to be the point of highest concentration. To be sampled again in 2024.
(11) Sampled in August 2021. To be sampled again in 2024.

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.
Standard Units (S.U.): This is a measure of pH.
N/A: Not applicable. **≤:** Less than.

Albemarle County Service Authority
Serving Conserving

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

Red Hill 2023 Annual Drinking Water Report

Includes water testing for 2022

Successfully Meeting Water Quality Challenges

Dear Customer,

The ACSA and the Rivanna Water and Sewer Authority (RWSA), in partnership with the Virginia Department of Health (VDH), work cooperatively to ensure our customers receive a safe and reliable supply of drinking water. The RWSA collects, stores, and treats the water, while the ACSA purchases the finished water and delivers it to our customers through our distribution system. Our staff of dedicated men and women work hard every day to ensure your water is always there when you turn on the tap.

Our collective efforts to provide you with the highest quality drinking water never end. Not only is the ACSA working to fully comply with the EPA's revised Lead and Copper Rule (LCR), which will govern how water providers must protect our customers from exposure to lead through their drinking water, but we've also been proactive with years of testing for PFAS, so-called "forever chemicals" being found in drinking water all over the country.

The EPA recently announced new proposed drinking water standards for a few PFAS that will likely take effect in about four years. While these chemicals have not been found in our finished water, the ACSA will test for more of these compounds in the coming years so we can continue to assess the situation. I assure you the ACSA and RWSA are confident in our ability to protect you from concerning levels of these substances.

A major factor in keeping your water of the highest quality is our continued investment in our infrastructure. Throughout our decades of service, the ACSA has been able to meet the many water quality challenges we've faced because of the willingness of our customers to invest in our systems when other communities across the country have been hesitant. It is because of your commitment that our services remain safe, resilient, and prepared for the future.

We recently unveiled our 2023 through 2025 Strategic Plan, which uses input from our customers and our employees to prioritize our short and long-term organizational work as we strengthen our infrastructure. You can find more about our Plan at www.serviceauthority.org.

The ACSA is committed to providing you, the customer, with this water quality report because informed customers are our best allies. If you wish to receive a "hard-copy" of the report, contact Tim Brown at (434) 977-4511, Ext. 119 or at tbrown@serviceauthority.org.

Thank you again for being our customer.

Gary O'Connell, Executive Director

Important Information about Your Water

ACSA Board of Directors

Richard Armstrong, Chair - Scottsville District
Charles Tolbert, Vice Chair - Jack Jouett District
Nathan Moore - Rio District
Dr. Lizbeth Palmer - Samuel Miller District
John Parcells - White Hall District
Clarence Roberts - Rivanna 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 Red Hill Waterworks is supplied by groundwater from a well located within the community. The well extends to a depth of 500 feet, is cased to a depth of 63 feet, and has a tested yield of 29 gallons per minute, far in excess of the water supply needs of your community. The waterworks is permitted by the VDH for a design capacity of 6,800 gallons per day, based upon the estimated usage by the elementary school and the residents. A reserve is maintained in a 10,000-gallon storage tank.

A calcite contactor was added to the treatment of the water in July 2019 to raise the pH of the somewhat acidic well water. Disinfection of the water is achieved by chlorination with sodium hypochlorite, and corrosion control involves the use of a blended orthophosphate/ polyphosphate solution. Each of the treatments is injected directly into the well discharge line and prior to the storage tank. The addition of fluoride to the water began in February 2020.

Your water is an extremely "soft," low mineral content supply with no detectable iron or manganese, the latter situation being unusual for groundwater in the Central Piedmont of Virginia. The nitrate concentration indicates minimal impact from the agricultural use of fertilizers in the vicinity.

Radioactive compounds, and disinfection byproducts (called TTHMs and HAAs) from the use of chlorine, are well below the regulated maximum contaminant levels. Two volatile organic compounds (VOCs), apparently originating from the inner coating of the water

Your Water Supply & Treatment (continued)

storage tank, have been detected at trace levels for several years. One VOC (total xylenes) was barely detectable in the June 2022 sample. No VOCs were detected in the untreated water. More specific information may be obtained by contacting Tim Brown at (434) 977-4511, ext. 119.

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.

A blended orthophosphate/polyphosphate product for corrosion control has been used in the Red Hill treated water since the system came online in 2009, and it has proven to be very effective in keeping lead and copper out of customer water supplies.

Water Quality Standards

The information provided in this report has been collected and reported in accordance with the drinking water standards established by the USEPA and the VDH. The RWSA collected daily, weekly, monthly, semi-annual, and annual samples to ensure the quality of your water. Sample sources included the raw (untreated) well water, the finished (treated) well water, and locations in the distribution system. Two (2) coliform bacteria samples per month began to be collected in October 2022, although one sample a month meets VDH requirements.

The source of your water is a deep well. As water travels 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.

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants, however, does not necessarily indicate that water poses a heath risk. **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 www.epa.gov/safewater.** See the discussion of Cryptosporidium also contained in this report.

Internal Issues of Mold

The most common water-related complaint we've 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 the lower level of chlorine in the water cannot 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 found the mold to be very common types. More information, including tips on controlling mold, is found at www.serviceauthority.org/waterqualitysupply/water-quality, or by calling Tim Brown at (434) 977-4511, ext.119.

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PFAS is found in many products in use every day, including:

- Fire extinguishing foam - in aqueous film-forming foams (or AFFFs) used to extinguish flammable liquid-based fires. Such foams are used in training and emergency response events at airports, shipyards, military bases, firefighting training facilities, chemical plants, and refineries.
- Manufacturing or chemical production facilities that produce or use PFAS – for example at chrome plating, electronics, and certain textile and paper manufacturers.
- Food – Some examples include in fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.
- Food packaging – for example in grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and candy wrappers.
- Household products and dust – for example in stain and water-repellent used on carpets, upholstery, clothing, and other fabrics; cleaning products; non-stick cookware; paints, varnishes, and sealants.
- Personal care products – for example in certain shampoo, dental floss, and cosmetics.

PFAS can also be found in drinking water in public drinking water systems and private drinking water wells.

Per- and Polyfluoroalkyl Substances (PFAS) (continued)

Due to their widespread production and use, as well as their ability to move and persist in the environment, surveys conducted by the Centers for Disease Control and Prevention (CDC) show that most people in the United States have been exposed to some PFAS. Most known exposures are relatively low, but can be elevated, particularly when people are exposed to a concentrated source over long periods of time. Some PFAS chemicals can accumulate in the body over time.

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While there is significant debate about the EPA's proposed standards and "Hazard Index," the ACSA can report to you that, based on past testing, PFAS compounds are not a significant issue in crozet, as well as our other service areas. While we were not required to do so, the ACSA has worked with the RWSA for several years to monitor for PFAS compounds in your water.

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- For the first time, requiring testing in schools and child care facilities.
- Requiring water systems to identify and make public the locations of lead service lines.

As the ACSA and RWSA develop our compliance plans for the new LCR, we want you to know we have been proactive about lead and copper in several ways. We began service line material identification in 2021 and, to date, we have not found any lead service lines in our systems. Meter setters with a lead content were removed years ago.

s mentioned earlier, the RWSA recently conducted detailed corrosion-control studies of all treatment plants and implemented slight changes in the chemical used to inhibit corrosion. These changes have been found to be extremely effective.

The ACSA and RWSA have decades of excellent lead and copper test results. Since 2016, just under 97% of all samples (350 out of 362) have had undetectable levels of lead.

As of March 1, 2023, the materials used in the service lines for approximately 88% of the ACSA's customers have been documented. We have not identified any lines containing lead.

We have started communicating with Albemarle County Public Schools (ACPS) about lead and copper testing that is set to begin in late 2024 or early 2025, in accordance with the revised Lead and Copper Rule. ACPS conducted extensive testing in 2016 and 2018 with excellent results. The ACSA has also started our work with private schools and childcare facilities to test their sites in accordance with the LCR.

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 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 took place during the summer of 2021. (See the data chart.)

Lead was not detected in any of the five (5) samples in 2021. 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.

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 (DHHS), 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 main reason for this 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.

DHHS 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 2022 was 0.51 - 0.81 parts per million (ppm).

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.

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 earlier section 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.

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 earlier section 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.

Xylenes and Ethylbenzene are two compounds in a large class of chemicals referred to as volatile organic compounds, or VOCs. These compounds, which include both naturally-occurring and man-made chemicals, are numerous in type and are present throughout the environment.

Potential Health Risks Associated with These Contaminants

Xylenes and Ethylbenzene (continued) The majority of the biologically-derived VOCs are generated in vegetation. They are a component of fuels and other petroleum products. A large majority of the numerous synthetic VOCs are solvents used in paints and other protective coatings, adhesives, thinners, cleaning agents, degreasers, refrigerants, pharmaceuticals, cosmetics and other personal care items, and in many other industrial and commercial products.

Some people who drink water containing xylenes in excess of the MCL over many years may experience damage to the nervous system. Some people who drink water containing ethylbenzene in excess of the MCL over many years may experience problems with their liver or kidneys.

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.

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.

2022 Water Quality Test Results

Primary Standards - Potential Health Risk	MCLG	MCL	Red Hill Water Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
MICROBIOLOGICAL ORGANISMS; RELATED MEASUREMENTS							
Total Coliform Bacteria (1)	0	Presence in monthly sample	0 per month (2)	N/A	0 per month	No (2)	Naturally present in the environment
Fecal Coliform Bacteria (1)	0	See footnote (3)	0 per month (2)	N/A	0 per month	No (2)	Human and animal fecal waste
RADIOACTIVE COMPOUNDS							
Combined Radium (4)	0 pCi/l	5 pCi/l	0.2 pCi/l	N/A	N/A	No	Erosion of natural deposits
Gross Alpha (4)	0 pCi/l	15 pCi/l	<0.39 pCi/l	N/A	N/A	No	Decay of natural deposits
Gross Beta (4,5)	0 pCi/l	50 pCi/l	0.9 pCi/l	N/A	N/A	No	Erosion of natural deposits
INORGANIC COMPOUNDS							
Lead (6)	0 ppb	15 ppb (AL)	<2.00 ppb (7)	0	All <2.00 ppb	No	Corrosion of household plumbing
Copper (6)	1.3 ppm	1.3 ppm (AL)	<0.020 ppm (7)	0	All <0.020 ppm	No	Corrosion of household plumbing; erosion of natural deposits
Barium	2 ppm	2 ppm	<0.010 ppm (11)	N/A	N/A	No	Erosion of natural deposits; drilling waste discharges
Fluoride	4 ppm	4 ppm	0.72 ppm	N/A	0.51-0.81 ppm	No	Water additive that promotes strong teeth
Nitrates	10 ppm	10 ppm	0.96 ppm	N/A	N/A	No	Fertilizer runoff
VOLATILE ORGANIC COMPOUNDS							
Xylenes, Total	10,000 ppb	10,000 ppb	2.1 ppb (8)	N/A	N/A	No	Paints & protective coatings, adhesives, petroleum products and refineries
Ethylbenzene	700 ppb	700 ppb	<0.05 ppb (8)	N/A	N/A	No	Paints & protective coatings, adhesives, petroleum products and refineries
DISINFECTION & DISINFECTION BYPRODUCT CONTAMINANTS							
Free Residual Chlorine	MRDL=4 ppm	MRDLG=4 ppm	1.14 ppm (9)	N/A	0.57-1.54 ppm	No	Water additive to control microbes (disinfectant)
Total Trihalomethanes (TTHMs)	0	80 ppb	29 ppb (10)	N/A	N/A	No	Disinfection byproduct
Haloaectic Acids (HAAs)	0	60 ppb	10 ppb (10)	N/A	N/A	No	Disinfection byproduct

2022 Water Quality Test Results (continued)

Secondary Standards/Aesthetic Factors	MCLG	MCL	Red Hill Water Result	# Samples > AL	Range of Detections	Violation?	Typical Source of Contaminant
Chloride	N/A	250 ppm	<5.0 ppm (11)	N/A	N/A	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 S.U.	7.1-7.2 (mth. avg.)	N/A	7.1-7.2	No	Runoff/leaching of natural deposits
Sulfate	N/A	250 ppm	<5.0 ppm (11)	N/A	N/A	No	Runoff/leaching of natural deposits
Total Dissolved Solids	N/A	500 ppm	77 ppm (11)	N/A	N/A	No	Runoff/leaching of natural deposits
OTHER PARAMETERS OF INTEREST							
Alkalinity	N/A	N/A	34-41 ppm (mth avg.)	N/A	34-41 ppm	N/A	Runoff/leaching of limestone minerals
Conductivity	N/A	N/A	95 micromhos/cm (11)	N/A	N/A	N/A	Runoff/leaching of natural deposits
Hardness	N/A	N/A	29 ppm (11)	N/A	N/A	N/A	Runoff/leaching of limestone minerals
Sodium	N/A	N/A	7.35 ppm (11)	N/A	N/A	N/A	Runoff/leaching of natural deposits

What Do All the Numbers Mean?

First, they show your drinking water met or exceeded all regulatory requirements during 2022. 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.

Footnotes

(1) Unit of measurement for total and fecal coliform bacteria is the presence or absence of bacteria in a 100 ml sample.
(2) No monthly sample collected within the distribution system indicated the presence of coliform bacteria of any kind. Two (2) samples per month began to be collected in October 2022.
(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) Sampled in August 2022.
(5) The EPA considers 50 pCi/l to be the level of concern for beta particles.

Footnotes (continued)

(6) Sampled in August 2021 from four residences and the elementary school. To be sampled again in 2024.
(7) The value reported is the 90th percentile for all data collected (5 samples).
(8) Volatile organic compounds (VOCs) were sampled in June 2022. One-two VOCs have been leaching from the inner coating of the water storage tank at trace levels.
(9) The value reported is the highest running annual average. Range is all individual samples.
(10) TTHM and HAAs were sampled in 2021 at the connection most distant from the well house; it is assumed to be the point of highest concentration. To be sampled again in 2024.
(11) Sampled in August 2021. To be sampled again in 2024.

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.
Standard Units (S.U.): This is a measure of pH.
N/A: Not applicable. **≤:** Less than.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Proposed Fiscal Year 2024 Budget and Rates Workshop	**AGENDA DATE:** May 18, 2023 **ACTION:** Informational
STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance	**ATTACHMENTS:** Yes

BACKGROUND: The proposed fiscal year 2024 budget was provided in April and available on the Authority's website for Board consideration.

The Board meeting today provides an opportunity to review the Fiscal Year 2024 budget and rates in detail and highlight key strategic initiatives for the upcoming fiscal year. We will also review fiscal year 2023 projections and financial impacts as our community moves past challenges presented throughout the pandemic. The presentation has been designed in a workshop format and provides an opportunity for discussion.

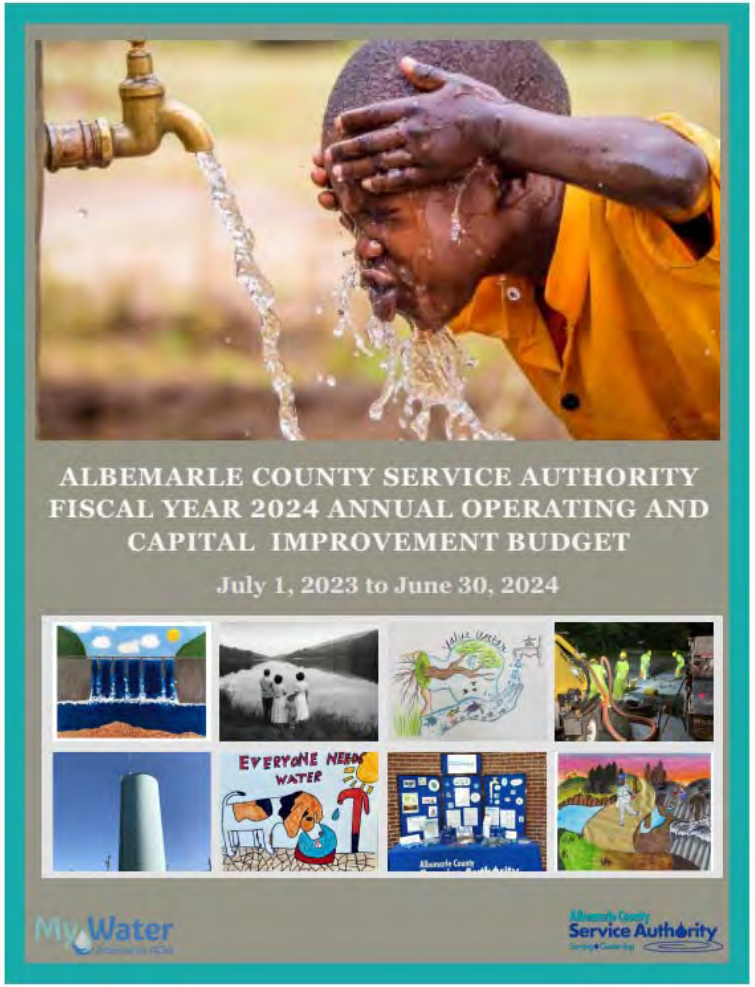
The budget is scheduled to be considered for adoption at the June 15th Board meeting, following a Public Hearing.

ATTACHMENTS:

1. Proposed FY 2024 Budget – Presentation Slides

Fiscal Year 2024 Budget & Rate Workshop

May 18, 2023



Budget Workshop Agenda

- ACSA Overview
- FY 2023 Update and Forecasts
- Strategic Plan and FY 2024 Budget
- Water and Sewer Rate Analysis
- FY 2024 Budget Highlights/Summary
- Proposed Rate Review
- Value of Water/Customer Bill Comparisons
- Departmental Budget Proposals
- Capital Improvement Program Overview
- Next Steps

Clean, Safe, Reliable

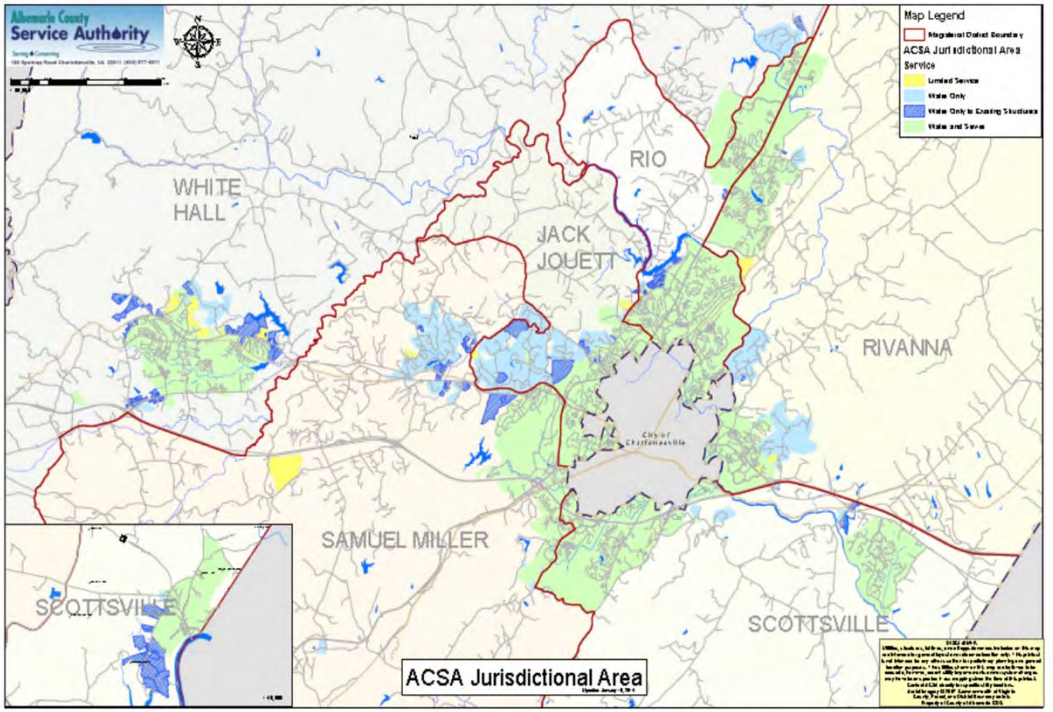
Vision: Serve and conserve today, sustain for tomorrow, and protect our resources forever.

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.

MyWater Provided by ACSA

Albemarle County Service Authority (ACSA)

- Founded in 1964
- Serving 84,100+ customers
- 21,970+ water accounts and growing
- 80 Dedicated Employees
- 374 Miles of Water Lines
- 324 Miles of Sanitary Sewer Lines
- 19 Pump Stations
- 8 Water Storage Tanks
- 3,137 Fire Hydrants



Fiscal Year 2023 Update

- **Operating Revenues (adjusted for seasonal variations through April 2023)**
  - Water Revenues are below budgeted expectations by 4.1% or $655,000
  - Sewer Revenues exceed budgeted expectations by 1.0% or $123,000
- **Operating Expenses (through April 2023)**
  - Water Expenses exceed budgeted expectations by 1.3% or $149,000
  - Sewer Expenses below budgeted expectations by 4.7% or $425,000
  - Departmental Expenses below budgeted expectations by 11.9% or $1,232,000

Forecasts for the Remainder of Fiscal Year 2023

- Operating Revenue Projections:
  - Water Revenues:
    - Expected to be below budgeted amounts by approximately 3% of budgeted amounts ($650,000)
  - Sewer Revenues:
    - Expected to exceed budgeted amounts by approximately 0.8% ($123,000)

The ACSA 2023 – 2025 Strategic Plan and Budget Process

- Four Strategic Themes:
  - Data Optimization
  - Business Resilience
  - Customer Experience
  - Employee Experience
- Key initiatives that support these themes are outlined in the FY 24 budget

Water and Sewer Rate Analysis

Rate Study Update and Analysis Findings

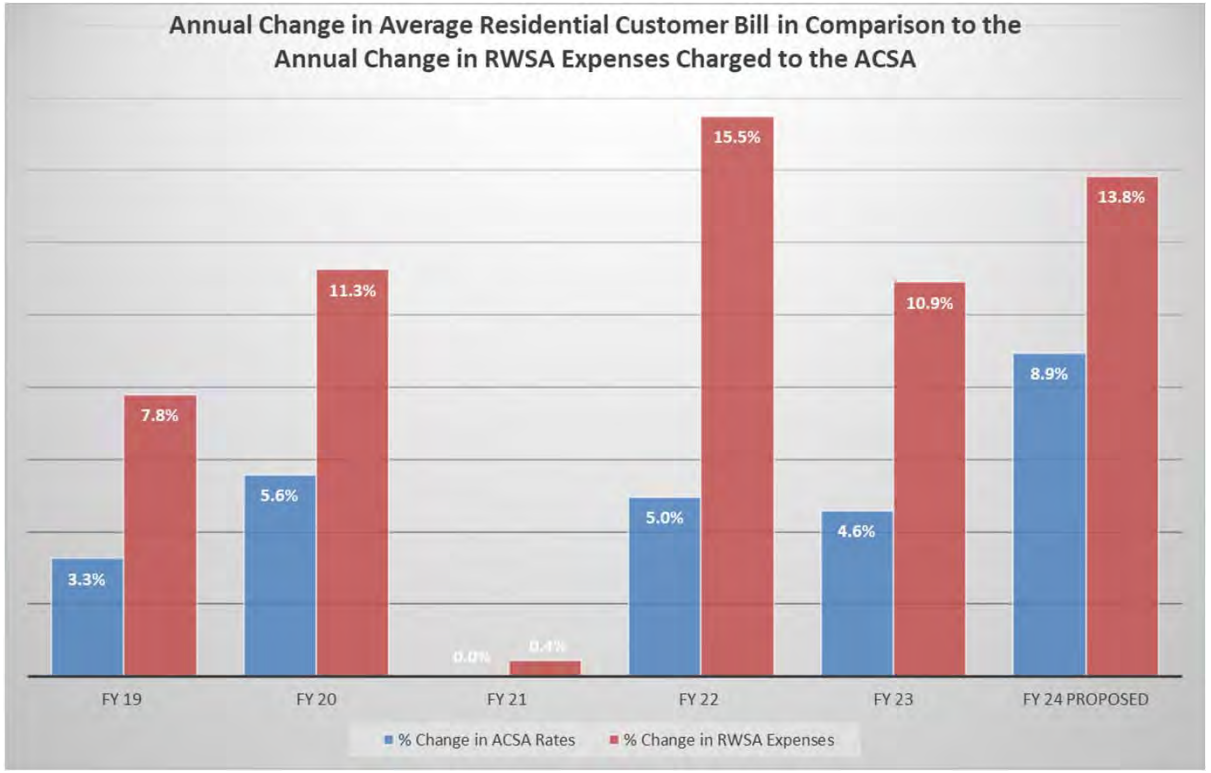
- The ACSA's most significant expenses are the wholesale water and sewer treatment services provided by RWSA
  - Nearly 62% of operating budget
  - Expected average increases year over year for FY 24 - FY 28:
    - Water/Sewer – 12% (expectation in prior budget for same time period was 7.5%)

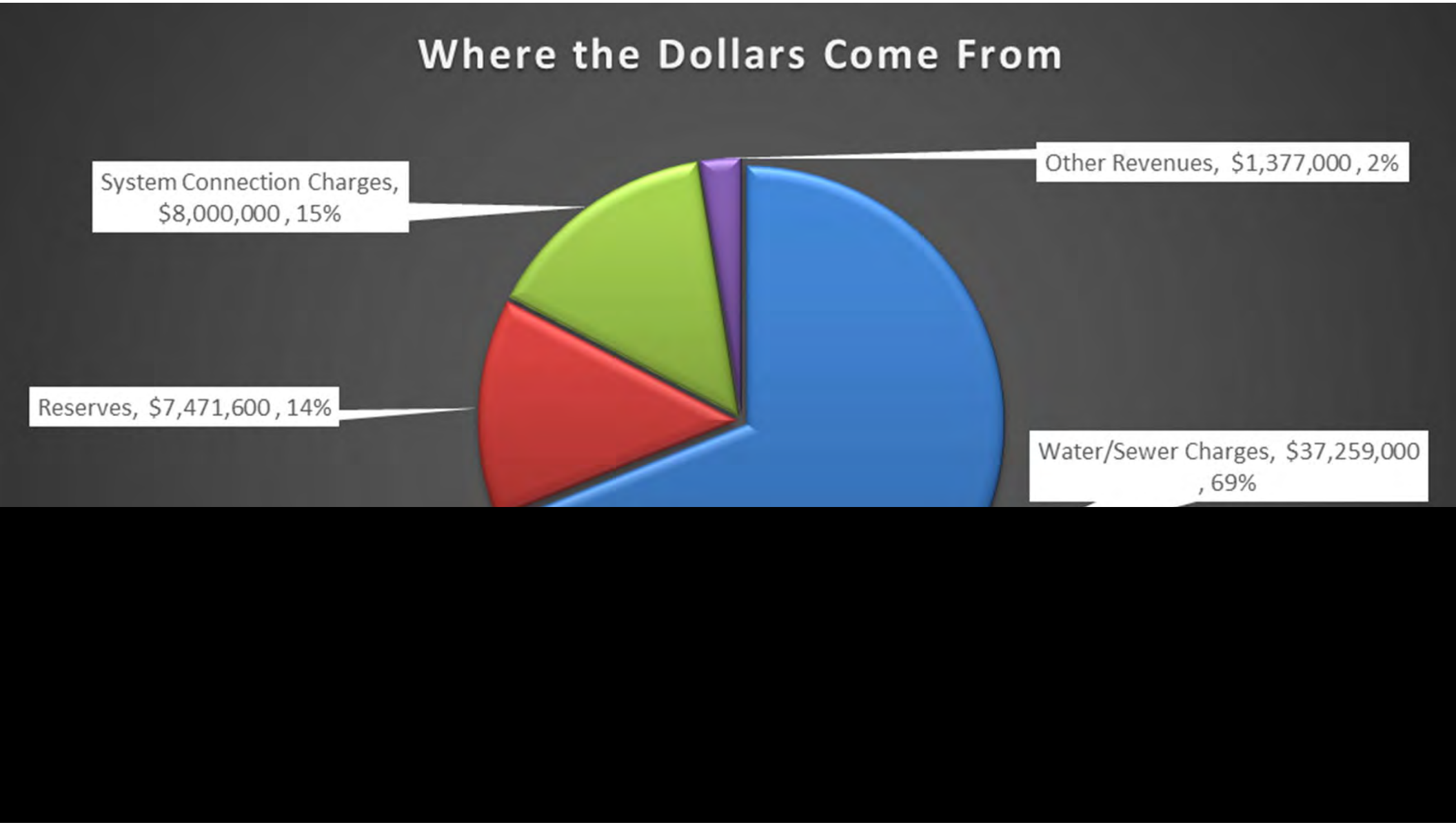
Rate Study Update and Analysis Recommendations

- Recommendation to increase water/sewer charges 8.9% for average residential customers in FY 2024
  - Follows a 4.6% increase in FY 2023, a 5% increase in FY 2022 and **no increase** in customer rates in FY 2021
- Recommendation to increase system development/capacity charges by 7% for FY 2024
  - Last increase was approved in FY 2017.
- Use of reserves to smooth customer rate increases over time
  - Budget includes $2.8M in rate stabilization reserves and $4.6M in growth reserves in FY 2024

FY 2024 Budget Development

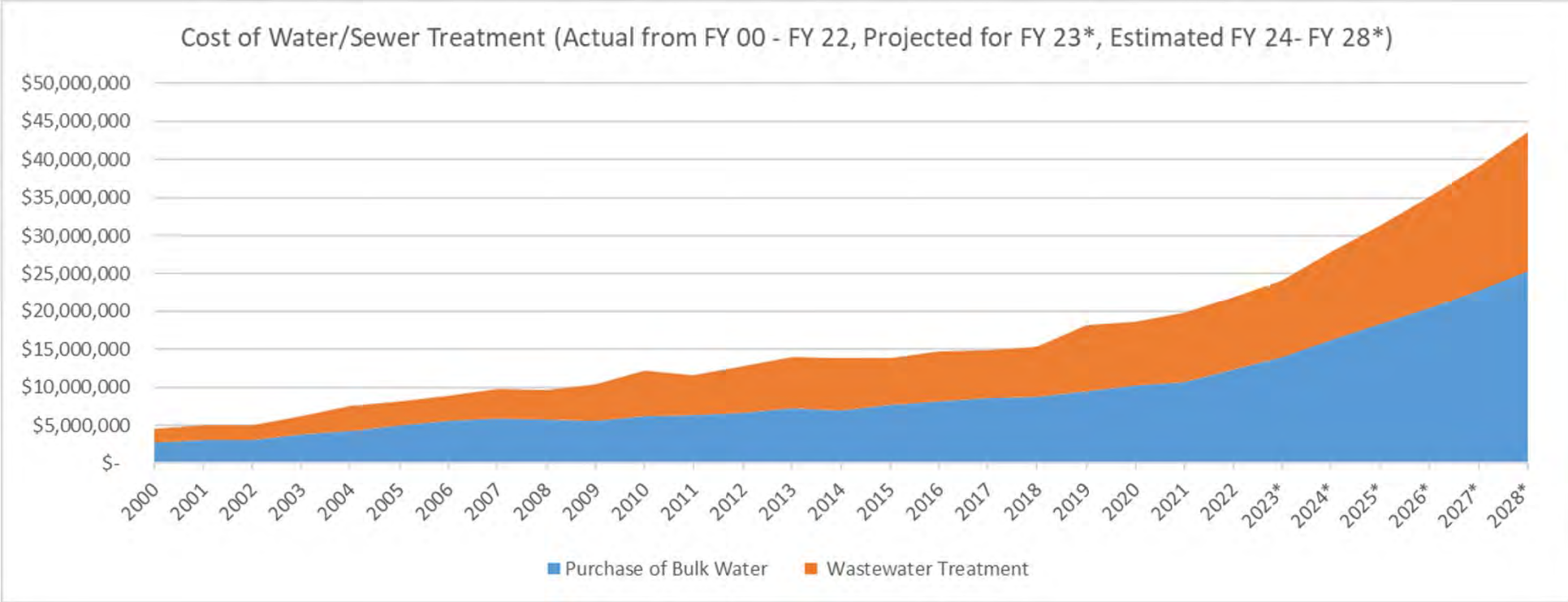
- Increase of $5.31 per month for average single-family customer
- Anticipated increase in RWSA treatment/debt service costs 13.8%




Where the Dollars Come From
Other Revenues, $1,377,000 , 2%
System Connection Charges, $8,000,000 , 15%
Reserves, $7,471,600 , 14%
Water/Sewer Charges, $37,259,000 , 69%

Budgeted Expenses and Capital Costs

Actual and Projected Costs of Water/Wastewater Treatment



Projected Costs of Water/Wastewater Treatment FY's 2024-2028

RWSA Estimates	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
FY 2023 CIP	$25,497,236	$27,705,419	$30,248,474	$33,232,899	$35,535,788
% Inc. to PY	8.1%	8.7%	9.2%	9.9%	6.9%
FY 2024 CIP	$27,052,900	$30,401,819	$33,960,810	$37,904,003	$42,235,693
% Inc. to PY	13.4%	12.4%	11.7%	11.6%	11.4%
$ Inc. in Estimates from FY 23 to FY 24	$1,555,664	$2,696,400	$3,712,336	$4,671,104	$6,699,905

Proposed Water and Sewer Rates FY 2024

	FY 2023	FY 2024
Service Charge	$ 9.45	$ 10.40
Volume Charge - Single-Family Residential (per 1,000 gallons)		
Level 1 (0-3,000 gallons)	$ 5.05	$ 5.56
Level 2 (3,001-6,000 gallons)	$ 10.14	$ 11.15
Level 3 (6,001-9,000 gallons)	$ 15.19	$ 16.71
Level 4 (over 9,000 gallons)	$ 20.27	$ 22.30
Multi-Family/Non-Residential	$ 10.14	$ 11.15
Sewer/All Users (per 1,000 gallons)	$ 10.24	$ 11.06

Additional Recommendations for Changes to Ancillary Charges

- To more closely recover actual costs of services, recommendations to update charges for:
  - Temporary Water Service
  - Meter testing
  - Service Connecting (Tap)/Line Tapping charges
  - Construction Inspection Fees
  - Other Miscellaneous charges
- To align with actual cost of services provided

THE ALBEMARLE COUNTY SERVICE AUTHORITY
PUBLIC HEARING ON PROPOSED BUDGET AND
WATER/WASTEWATER RATE CHANGES FOR FY 2024

The Albemarle County Service Authority will hold a public hearing on Thursday, June 15, 2023, at 9:00 a.m. at the ACSA Office at 168 Spotnap Road, Charlottesville, Virginia 22911 and via Zoom, please visit www.serviceauthority.org for additional information. The public hearing will address the Proposed FY 2024 Budget and the following changes to the water and wastewater rates and other charges/fees:

Water	FY 2023	Proposed FY 2024
Service Charge by Meter Size		
3/4"	$ 9.45	$ 10.40
1"	$ 23.63	$ 25.99
1 ½"	$ 47.25	$ 51.98
2"	$ 75.60	$ 83.16
3"	$ 151.20	$ 166.32
4"	$ 236.25	$ 259.88
6"	$ 472.50	$ 519.75
Volume Charge - Single-Family Residential (per 1,000 gallons)		
Level 1 (0-3,000 gallons)	$ 5.05	$ 5.56
Level 2 (3,001-6,000 gallons)	$ 10.14	$ 11.15
Level 3 (6,001-9,000 gallons)	$ 15.19	$ 16.71
Level 4 (over 9,000 gallons)	$ 20.27	$ 22.30
Multi-Family/Non-Residential	$ 10.14	$ 11.15
Wastewater		
Sewer/All Users (per 1,000 gallons)	$ 10.24	$ 11.06
Temporary Water Service		
Initial Fee	$ 50.00	$ 55.00
Each 30-Day Extension	$ 50.00	$ 55.00
Meter Size – 3/4" & 1" – Deposit	$ 300.00	$ 330.00
Meter Size -1 1/2" – Deposit	$ 400.00	$ 440.00
Meter Size – 2" – Deposit	$ 500.00	$ 550.00
Temporary Use of Fire Hydrants- Deposit		
Monthly usage fee	$ 25.00/ month	$ 30.00/ month
Meter Testing Charge		
3/4" – 1" Meter	$ 200.00	$ 220.00
1 ½" – 2" Meter	$ 250.00	$ 275.00

Service Connection (Tap) Charge	FY 2023	Proposed FY 2024
3/4" meter and connection	$ 1,116.00	$ 1,228.00
1" meter and connection	$ 1,182.00	$ 1,300.00
3/4" meter only	$ 200.00	$ 220.00
1" meter only	$ 300.00	$ 330.00
System Development Charge		
System Dev. Chg. – Water/ERC	$ 1,890.00	$ 2,030.00
System Dev. Chg. – Wastewater/ERC	$ 2,970.00	$ 3,180.00
RWSA Capacity Charge		
RWSA Cap. Chg. – Water/ERC	$ 4,760.00	$ 5,100.00
RWSA Cap. Chg. – Wastewater/ERC	$ 3,850.00	$ 4,120.00
Line Tapping Fees		
Machine – E-4, line size 1 ¼"- 3"	$ 170.00	$ 190.00
Machine – B100, line size 4" – 24"	$ 170.00	$ 190.00
Machine – A-2, line size 6" – 24"	$ 250.00	$ 275.00
Machine – CL-12, line size 4"-24"	$ 100.00/inch	$ 110.00/inch
Miscellaneous Charges		
Account Charge	$ 12.00	$ 13.00
Delinquent Cut off/On-Fee	$ 35.00	$ 40.00
Reconnection Fee – After work hrs./weekends	$ 80.00	$ 90.00
Reconnection Fee 3/4" – 1 ½" meter	$ 35.00	$ 40.00
Reconnection Fee 2"-4" meter	$ 50.00	$ 55.00
Special Service Fee – trip during normal work hrs.	$ 35.00	$ 40.00
Special Service Fee – trip after work hrs./weekend	$ 80.00	$ 90.00
Meter Re-read Fee	$ 35.00	$ 40.00
Construction Plan Review Charge per hour	$ 60.00	Removed
As-built Plan Review – Engineer per hour	$ 60.00	Removed
As-built Plan Review – Inspector per hour	$ 40.00	Removed
Irrigation System Plan Review and Meter Sizing	$ 30.00	$ 35.00
Irrigation System Cost Estimate Preparation	$ 125.00	$ 140.00
Failure to Report Hydrant Meter Reading	$ 50.00	$ 55.00
Construction Inspection Fees:		
Water and/or Sewer lines (Minimum $500/project)	$ 0.64/linear foot	$ 1.30/linear foot
Re-inspection Fee of New Water/Sewer Lines	$ 40.00/hour	$ 45.00/hour

Proposed Water and Sewer Rates FY 2024

- The proposed increase in customer water and sewer rates is attributable to:
  - RWSA treatment and capital cost increases
    - Water: +18.0% increase compared to prior FY or $2.48M
    - Sewer: +8.5% increase compared to prior FY or $0.91M
  - Total departmental operating budget increase of 9.9% or $1.20M

Use of Reserves and Projections

- **The proposed budget includes:**
  - **$2.8M from rate stabilization reserves, to fund "non-growth" ACSA CIP**
  - **$4.6M from "growth reserves" to fund ACSA "growth" CIP and RWSA debt service for growth related projects**
  - **Use of reserves proposed to mitigate the rate increase required by customers in the upcoming year**
  - **Sound financial management and growing system provides the opportunity to more smoothly increase customer rates over time**

Growth Reserves – Accumulation and Use RWSA Capacity Charges

RWSA Capacity Charge Reserves	FY 23 Budget Scenario
Cap. Chg. Reserve 7/1/22	$ 15,977,513
Budgeted Cap. Chg. Revenue	3,788,400
Budgeted Growth-Related DS	(5,172,500)
Cap. Chg. Reserve 6/30/23	$ 14,593,413
Budgeted Use of Growth Reserve FY 23	**$ 1,384,100**

RWSA Capacity Charge Reserves	FY 23 Actual Projections
Cap. Chg. Reserve 7/1/22	$ 15,977,513
Cap. Chg. Revenue through 4/30/23	6,549,273
Growth-Related DS	(5,172,500)
Cap. Chg. Reserve 6/30/23	$ 17,354,286
Addition to Growth Reserve FY 23	**$ 1,376,773**

Growth Reserves – Accumulation and Use ACSA System Development Charges

ACSA Sys. Dev. Reserves	FY 23 Budget Scenario
Sys. Dev. Reserve 7/1/22	$ 14,970,265
Budgeted Sys. Dev. Revenue	2,138,400
Budgeted Growth-CIP FY 23	(4,570,500)
Sys. Dev. Reserve 6/30/23	$ 12,538,165
Budgeted Use of Growth Reserve FY 23	**$ 2,432,100**

ACSA Sys. Dev. Reserves	FY 23 Actual Projections
Sys. Dev. Reserve 7/1/22	$ 14,970,265
Sys. Dev. Revenue through 4/30/23	3,601,873
ACSA Growth-Related CIP Costs 4/30/23	(1,746,123)
Sys. Dev. Reserve 6/30/23	$ 16,826,015
Addition to Growth Reserve FY 23	**$ 1,855,750**

Sample Monthly Combined Water and Sewer Bill

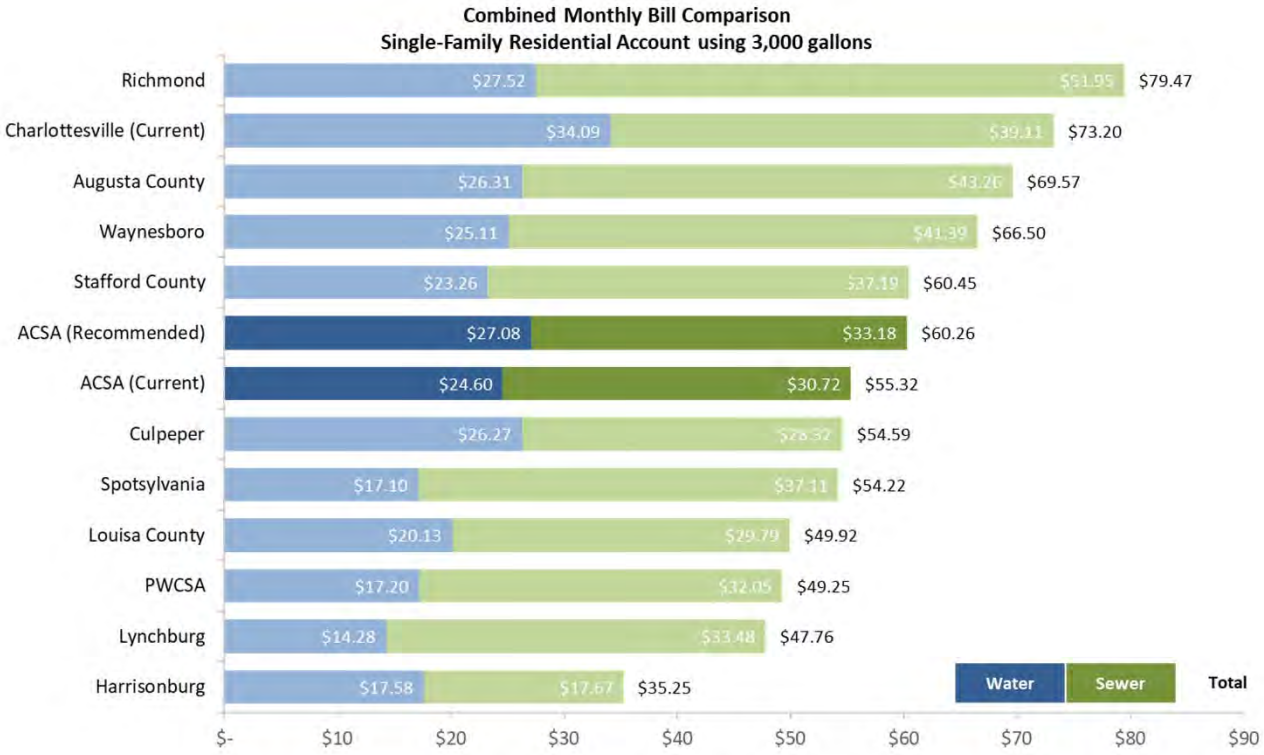
Sample Monthly Combined (Water and Sewer) Bills

Combined Water and Sewer	Meter Size	Monthly Usage (gallons)	Current Bill	Recommended FY 2024 Bill	Monthly $ Change	Daily $ Change
Single-Family						
Minimal User	3/4"	1,200	$ 27.80	$ 30.34	$ 2.54	$ 0.08
Small User	3/4"	2,500	$ 47.68	$ 51.95	$ 4.27	$ 0.14
Average User	3/4"	3,200	$ 59.40	$ 64.70	$ 5.30	$ 0.18
Large User	3/4"	6,200	$ 121.55	$ 132.44	$ 10.89	$ 0.36
Excessive User	3/4"	7,700	$ 159.69	$ 174.10	$ 14.41	$ 0.48
Multi-Family/Non-Residential						
Multi-Family	1"	33,700	$ 710.44	$ 774.47	$ 64.03	$ 2.13
Com. (Offices)	1"	6,300	$ 152.02	$ 165.91	$ 13.89	$ 0.46
Com. (Other)	3/4"	4,700	$ 105.24	$ 114.79	$ 9.55	$ 0.32
Industrial	1 ½"	16,500	$ 383.52	$ 418.45	$ 34.93	$ 1.16
Institutional	¾"	13,000	$ 274.39	$ 299.13	$ 24.74	$ 0.82

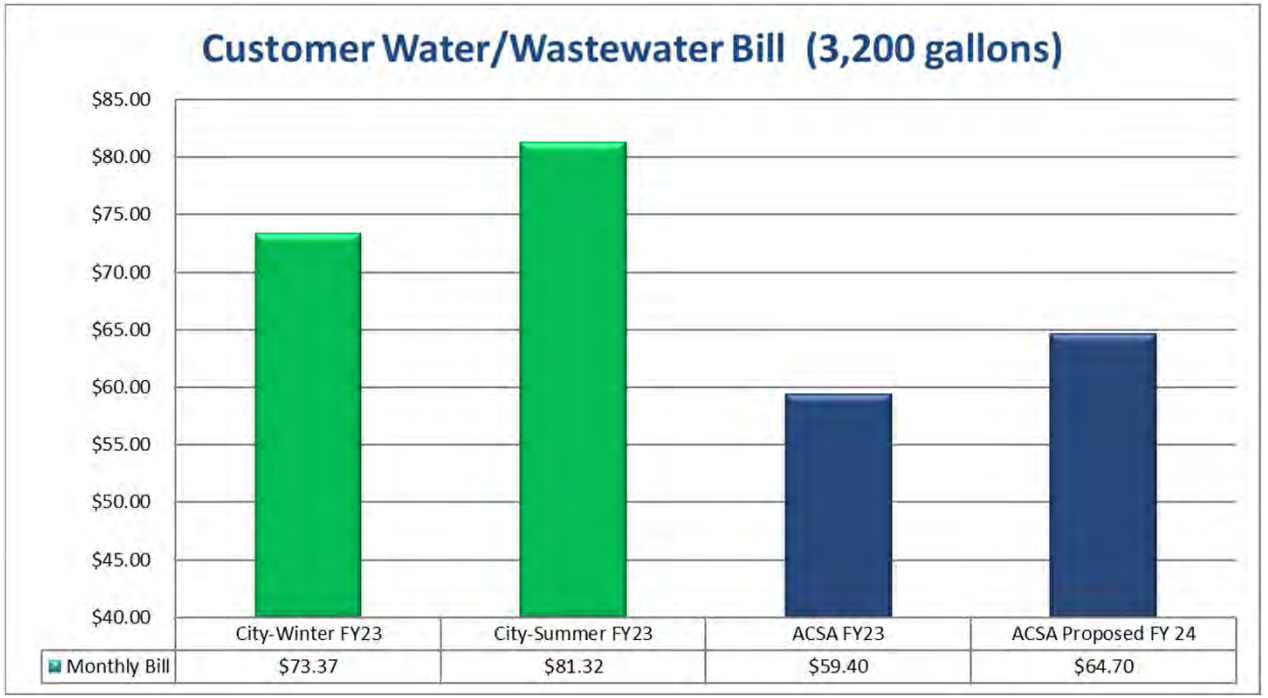
Value of Water

=

ACSA Monthly Bill Comparison to Comparable Utilities

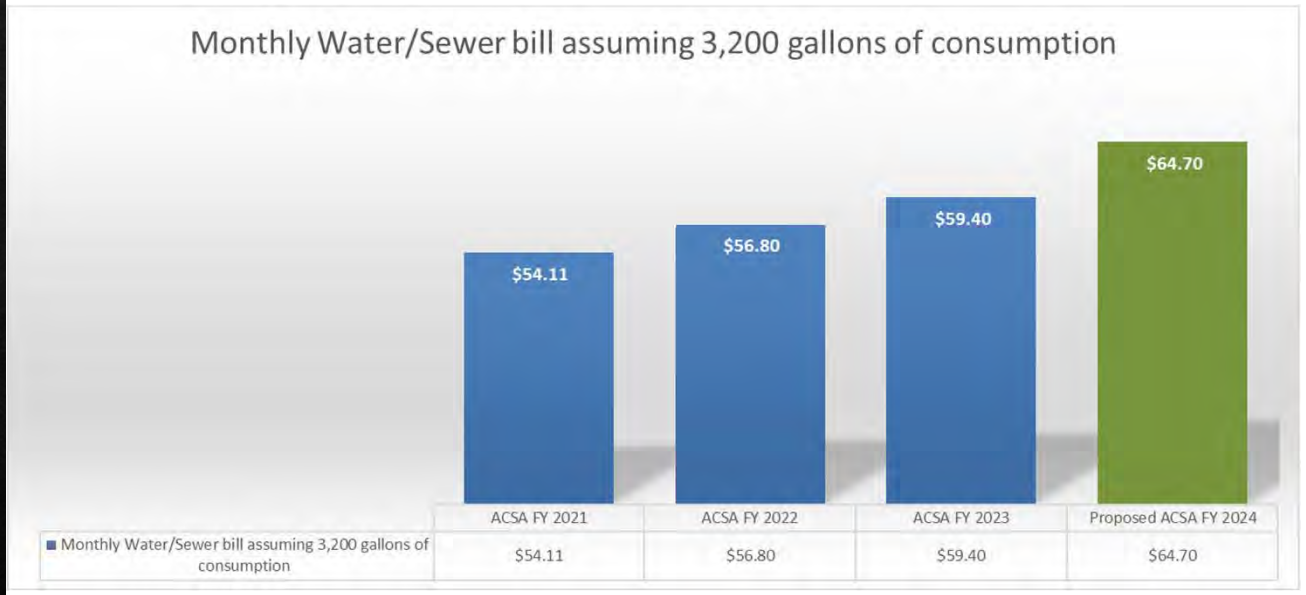


ACSA Monthly Bill Comparison to Comparable Utilities



Assuming the details noted above, an ACSA customer's bill at the FY 24 proposed rates, would be 12%-20% less than a comparable bill from the City (FY 23 rates, additionally the City charges a 10% utility tax in addition to the monthly bill on consumption (not reflected in the City's bill above).

Monthly Bill by Fiscal Year

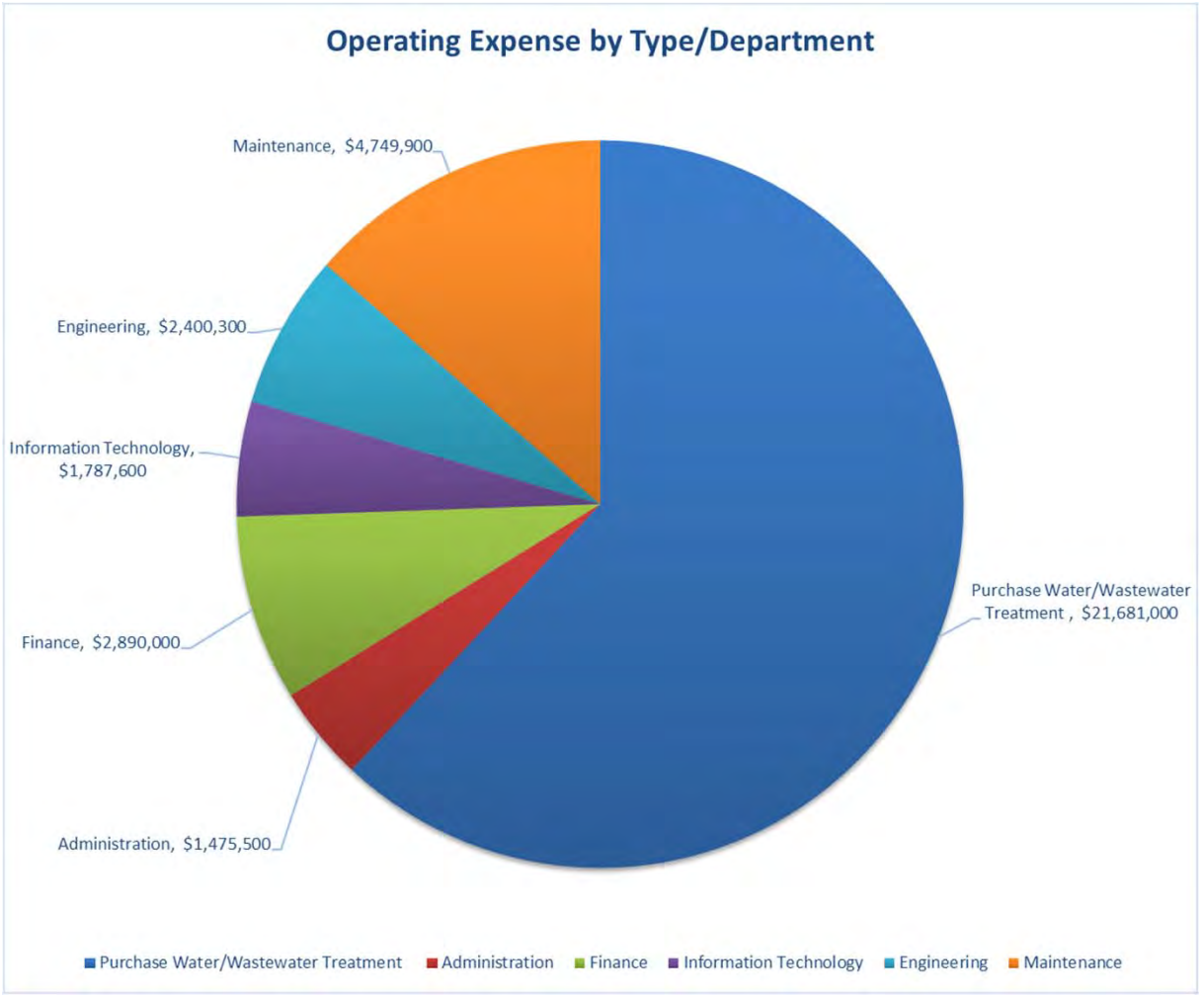


System Connection Charges

- Recommendation to increase development and capacity charges in FY 2024:
  - Large growth/capacity related capital projects underway/upcoming
  - Significant increases in construction/capital costs for growth related projects
  - Last increase in system Connection Charges in FY 2017

		FY 2023	FY 2024
ACSA System Development Charge	Water Wastewater	$1,890* $2,970*	$2,030* $3,180*
RWSA Capacity Charge	Water Wastewater	$4,760* $3,850*	$5,100* $4,120*
	Total	$13,470*	$14,430*
		*per ERC (equivalent residential connection)	

Operating Budget



Administration

- Key initiatives for FY 2024:
  - Review the current employee Performance Review Evaluation Process (2023-2025 Strategic Plan)
  - Create a Leadership Development Training Program for supervisors (2023-2025 Strategic Plan)
  - Expand customer communications (2023-2025 Strategic Plan) through a variety of media, customer education and outreach by adding a full-time Communications Position:
    - Including a comprehensive customer education program on the value and quality of water
  - Continue to actively promote water conservation and environmental sustainability (2023-2025 Strategic Plan)
  - Continue to provide training and professional development opportunities for employees as a component of the Authority's Succession Plan (2023-2025 Strategic Plan)
  - Continue to provide safety training and initiatives (2023-2025 Strategic Plan)
  - Support the Board of Directors in policy making

Engineering

- Key initiatives for FY 2024:
  - Scheduled replacement and repair of aging/undersized infrastructure (2023-2025 Strategic Plan)
  - Continue implementation of the AMI system (2023-2025 Strategic Plan)
  - Improve pump station resiliency and reliability (2023-2025 Strategic Plan)
  - Complete the design/begin construction of the Avon Operations Center (2023-2025 Strategic Plan)
  - Implement recommendations from the Vulnerability Assessment (2023-2025 Strategic Plan)
  - Increase wastewater capacity to accommodate continued growth in the development area (2023-2025 Strategic Plan)
  - Administration and oversight of the Capital Improvement Program

Finance

- Key initiatives for FY 2024:
  - Administration of Advanced Metering Infrastructure (AMI) full system deployment (2023-2025 Strategic Plan)
  - Training directed toward improving workforce skills and succession planning (2023-2025 Strategic Plan)
  - Continuation of strategic investment management (2023-2025 Strategic Plan)
  - Customer Information System (CIS) development, including billing, phone system, and website redesign (2023-2025 Strategic Plan)
  - Support the development of a customer experience vision statement and analysis of customer engagement opportunities (2023-2025 Strategic Plan)
  - Review and documentation of business continuity from an operational and financial perspective (2023-2025 Strategic Plan)

Information Technology

- Key initiatives for FY 2024:
  - Continue to support all ACSA staff and the various project implementations
  - Continue to strengthen data security and monitoring (2023-2025 Strategic Plan)
  - Scheduled replacement and upgrade of:
    - Servers
    - PCs/field tablets
    - Firewall (2023-2025 Strategic Plan)
  - Support the AMI implementation and improve business processes related to work orders, customer requests, asset management, and inventory (2023-2025 Strategic Plan)
  - Upgrade/replace the current phone system and website to improve the customer experience (2023-2025 Strategic Plan)

Maintenance

- Key initiatives for FY 2024:
  - Continue refinement of the CityWorks CMMS workorder and inventory system (2023-2025 Strategic Plan)
  - Vulnerability/Risk assessment project implementation (2023-2025 Strategic Plan)
  - Increased emphasis on training, specifically related to:
    - Emergency Response (2023-2025 Strategic Plan)
    - Safety (2023-2025 Strategic Plan)
    - Overall system knowledge (2023-2025 Strategic Plan)
    - Succession planning (2023-2025 Strategic Plan)
  - Enhanced focus on saddle replacements throughout the service area (2023-2025 Strategic Plan)

Planned Capital Equipment Purchases

- One Fleet Vehicle
  - Replacing with an electric vehicle to support strategic environmental initiatives (2023-2025 Strategic Plan)
- Air-Vac Excavator
- Rammax Compactor
- Planned replacement/purchase of:
  - Two servers
  - Fifteen computers/fifteen field tablets
  - SCADA PLCs
  - Firewall (2023-2025 Strategic Plan)
  - 48 Port server rack switches
- Office Furniture/Equipment for proposed positions

Capital Improvement Program (CIP) Proposed FY 2024

Project Type	Proposed Cost
Water Projects	$ 7,227,000
Wastewater Projects	4,325,000
Total	$ 11,552,000

Budget Next Steps

- May 2023
  - Budget insert in customer bills
- June 15, 2023
  - Public Hearing
  - 2nd Budget Workshop
  - Budget Adoption
  - Rate Adoption

Albemarle County Service Authority
Serving Conserving

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

FY'24 Budget & Rates

July 1, 2023 - June 30, 2024

Investing in Our Water Future

Dear Customer,

The ACSA's mission is to provide safe and reliable water for a good value. To achieve that mission, the ACSA must support the Rivanna Water and Sewer Authority (RWSA), our wholesale treatment provider, as they heavily invest in their water and wastewater systems. The projected cost for all the needed improvements is $326 million over the next five years.

Once again, the ACSA will use our available financial tools to help reduce the burden on your budget. However, RWSA's work requires increased funding beyond the help our reserves can provide; they must charge the ACSA a 13.59% increase for the next budget year in order to fund their upgrades.

The ACSA is responsible for 62% of the RWSA's annual debt service charges for large capital projects, and those charges make up about 62% of our operating budget. As a result, we must raise our rates in Fiscal Year 2024 (starting July 1) and beyond to ensure proper funding for all this important work.

We at the ACSA are mindful of the inflationary times we are in that impact us all. That's why we are once again applying cash reserves to lower this year's proposed rate increase to you. The RWSA's cost increase to the ACSA is 13.59%, while our proposed average rate increase is 8.9% for our customers. ***The average residential customer will see a $5.30 a month increase equaling 18 cents a day.***

We continue to work hard each day to reliably provide you with high-quality water. The investments we're making will ensure our success.

Gary O'Connell
Executive Director, Albemarle County Service Authority

MyWater Provided by ACSA

Proposed ACSA FY '24 Water & Sewer Monthly User Rates

Rates and Charges	FY '23	FY'24
Service Charge	$9.45	$10.40
Volume Charge: Single-Family Residential (per 1,000 gallons)		
Level 1: Up to 3,000 gallons	$5.05	$5.56
Level 2: 3,001 to 6,000 gallons	$10.14	$11.15
Level 3: 6,001 to 9,000 gallons	$15.19	$16.71
Level 4: More than 9,000 gallons	$20.27	$22.30
Multi-Family/Non-Residential (per 1,000 gallons)	$10.14	$11.15
Sewer: All Users (per 1,000 gallons)	$10.24	$11.06

Combined Monthly Bill Comparison

Single-Family Residential, 5,200 Gallons

Sincere Thanks

- The development of the FY 2024 Budget proposal was a collaborative effort and was a successful endeavor thanks to:
- The ACSA Leadership Team
- Input from the Maintenance, Information Technology, Engineering, Administration, and Finance Departments
- Danielle Trent for the budget cover design
- The ACSA's accounting team, Deanna Davenport, Tonya Foster, Jennifer Bryant, and Theresa Whiting

Additional Questions?

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Crozet Phase 4 Water Main Replacement – Easement Acquisition Resolution	**AGENDA DATE:** May 18, 2023
	ACTION: ■ **INFORMATION:** ☐
STAFF CONTACT(S)/PREPARER: Jeremy M. Lynn, P.E., Director of Engineering	**CONSENT AGENDA:**
	ACTION: ☐ **INFORMATION:** ☐
	ATTACHMENTS: (YES)

BACKGROUND: ACSA staff has made numerous efforts to acquire the final easement for the Crozet Phase 4 Water Main Replacement Project. As we approach the time to advertise for bids, the potential exists for the need to initiate the condemnation process for the remaining easements.

DISCUSSION:

- ACSA staff intends to successfully negotiate the remaining easements with the property owner listed in the Resolution.
- If condemnation is necessary, staff will return to the Board with the appropriate documentation for proceeding with filing a certificate of take.

BUDGET IMPACT: None at this time.

RECOMMENDATIONS: Allow staff to proceed with the preliminary steps for filing a certificate of take, in the event the property owner is not responsive or unwilling to grant necessary easements.

BOARD ACTION REQUESTED: Pass the Resolution for Easement Acquisition for the Crozet Phase 4 Water Main Replacement Project.

ATTACHMENTS:

- Resolution for Easement Acquisition: Crozet Phase 4 Water Main Replacement Project.
- Plat of easements remaining to be obtained for the Crozet Phase 4 Water Main Replacement Project.

RESOLUTION

WHEREAS, it is necessary for the Albemarle County Service Authority (the "ACSA") to replace water main lines along Crozet Avenue in Albemarle County, Virginia; such system to include the installation of twelve-inch, eight-inch, six-inch, and 4-inch diameter ductile iron water mains, fire hydrants and appurtenances thereto in accordance with plans, specifications and plats on file in the office of the Executive Director of the ACSA; and

WHEREAS, it is necessary to acquire permanent and temporary construction easements for the installation of such water mains, fire hydrants and appurtenances; and

WHEREAS, the owner of property affected as shown on the plans and plat may be unwilling to convey the needed easements; and

WHEREAS, the ACSA Board finds that there is a public need for the easement to be acquired, and that the easement to be acquired will serve a public purpose;

NOW, **THEREFORE**, **BE IT RESOLVED** by the ACSA that the Executive Director of the ACSA be, and he hereby is, authorized and instructed to acquire, pursuant to authority contained in Virginia Code Section 15.2-5114.6, the necessary permanent and temporary construction easements for the installation of water mains and appurtenances thereto on property as shown on plat of Rinker Design Associates, P.C. as listed in the Table on the following page.

No.	Plat Dated	Reference Property	Owner(s)	District
1	April 12, 2021	TMP# 056C0-00-0C-00100	John W. Anderson, Jr.	White Hall

Reference is made to the plat for the location of the easements as they cross the aforesaid property. The plat is on file in the office of the Executive Director.

The Executive Director is further authorized and directed to take such action as may be authorized by law to obtain possession for the ACSA of such water easements at the earliest possible date.

Pursuant to Va. Code §25.1-204 (B), the Albemarle County Service Authority hereby certifies that the potential acquisition of the property described in this Resolution has been reviewed by the Albemarle County Service Authority Board of Directors for purposes of complying with Va. Code §1-219.1.

* *

Certified to be a true copy of a Resolution adopted by the Albemarle County Service Authority Board of Directors at a regularly scheduled meeting on May 18, 2023 by a vote of __ to __.

____

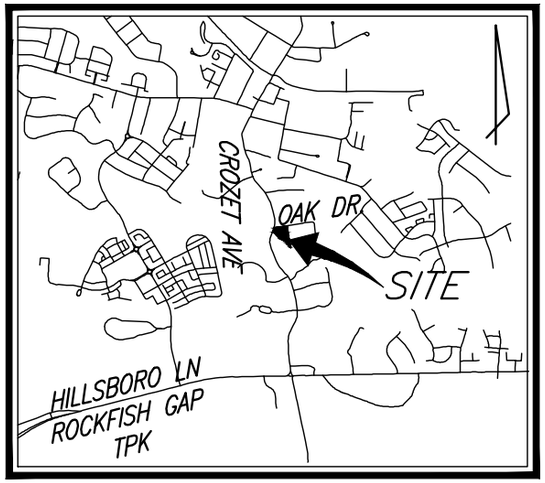
Mr. Richard Armstrong, Chairman

NOTES

1. THE PROPERTY IS IDENTIFIED BY PARCEL IDENTIFICATION NUMBER (PID) 056C0-00-0C-00100.

2. NO TITLE REPORT FURNISHED. THIS PLAT IS SUBJECT TO ANY EASEMENTS AND RESTRICTIONS OF RECORD.

3. BOUNDARY INFORMATION SHOWN HEREON IS COMPILED FROM VARIOUS SOURCES THAT MAY INCLUDE RECORD DATA AND FIELD OBSERVATION. THIS PLAT IS NOT INTENDED TO REPRESENT A BOUNDARY SURVEY.



VICINITY MAP
SCALE: 1"=4,000'

SURVEYOR'S CERTIFICATE

I, NICHOLAS KOUGOULIS, A DULY LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA, DO HEREBY CERTIFY THAT THE PROPERTY SHOWN HEREON IS NOW IN THE NAME OF JOHN W. ANDERSON, JR. AS RECORDED IN DEED BOOK 1687 AT PAGE 53 AMONG THE LAND RECORDS OF ALBEMARLE COUNTY, VIRGINIA.

_____

NICHOLAS KOUGOULIS
LAND SURVEYOR

COMMONWEALTH OF VIRGINIA
NICHOLAS KOUGOULIS
Lic. No. 3046
LAND SURVEYOR

EASEMENT AREA TABULATION

TEMPORARY CONSTRUCTION EASEMENT	1,135 SQ. FT.		0.026 ACRES
WATERLINE EASEMENT	800 SQ. FT.		0.018 ACRES

0 60 120 180

SCALE: 1" =60'

PLAT SHOWING A

WATERLINE EASEMENT & TEMPORARY CONSTRUCTION EASEMENT

TO BE ACQUIRED BY

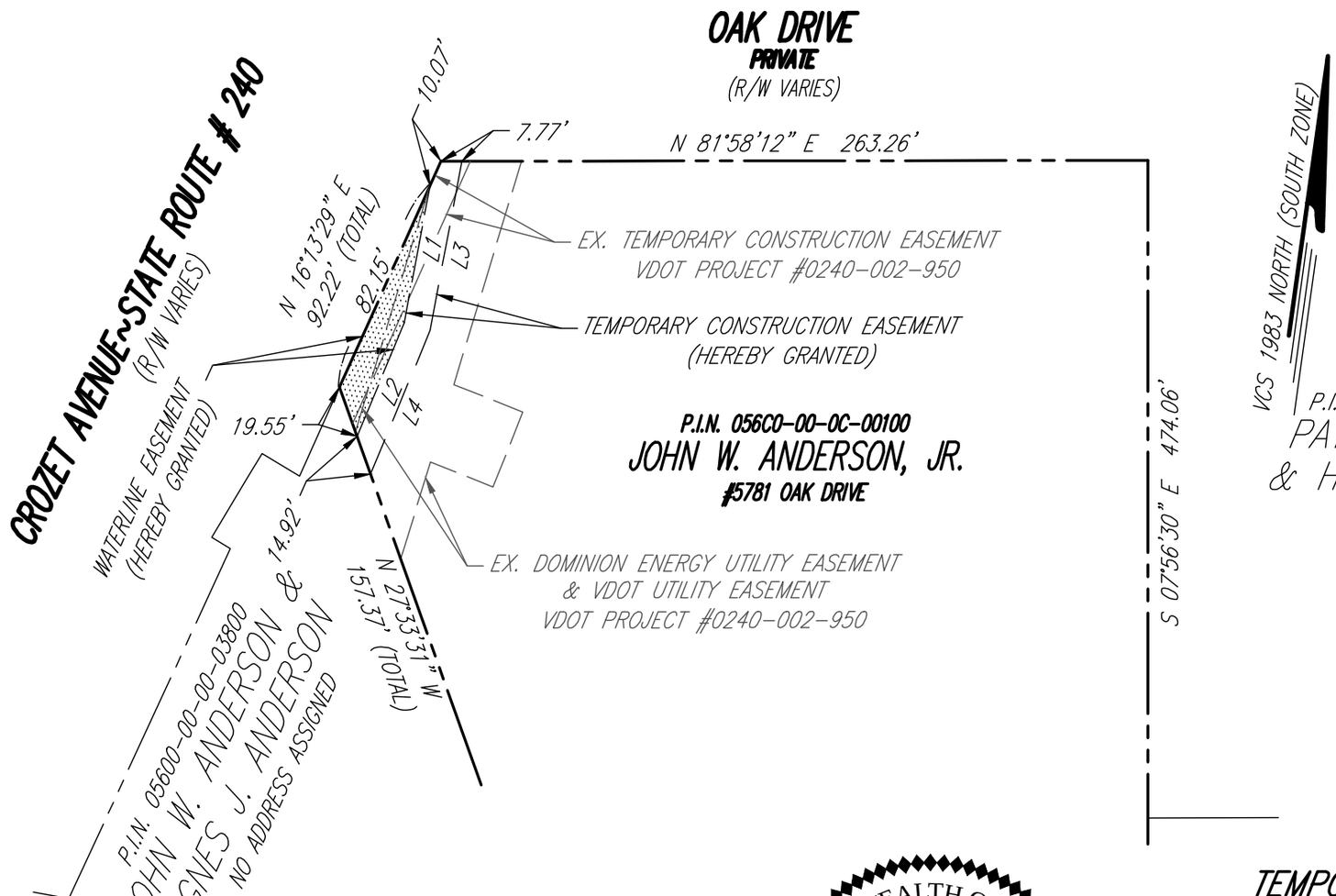
THE ALBEMARLE COUNTY SERVICE AUTHORITY

ON THE LAND OF

JOHN W. ANDERSON, JR.

WHITE HALL MAGISTERIAL DISTRICT
ALBEMARLE COUNTY, VIRGINIA
SCALE: 1"= 60' APRIL 12, 2021
SHEET 1 OF 2

RINKER DESIGN ASSOCIATES, P.C.
ENGINEERING © SURVEYING © LAND PLANNING
11100 ENDEAVOR COURT MANASSAS, VIRGINIA 20109 PHONE : (703) 368-7373



LINE	BEARING	DISTANCE
L1	S 02°39'28" W	51.84'
L2	S 14°31'13" W	45.89'
L3	S 02°39'28" W	64.11'
L4	S 14°31'13" W	58.00'

0 60 120 180

SCALE: 1" =60'

COMMONWEALTH OF VIRGINIA
NICHOLAS KOUGOULIS
Lic. No. 3046
LAND SURVEYOR

PLAT SHOWING A
WATERLINE EASEMENT & TEMPORARY CONSTRUCTION EASEMENT
TO BE ACQUIRED BY
THE ALBEMARLE COUNTY SERVICE AUTHORITY
ON THE LAND OF
JOHN W. ANDERSON, JR.
WHITE HALL MAGISTERIAL DISTRICT
ALBEMARLE COUNTY, VIRGINIA
SCALE: 1"= 60' APRIL 12, 2021
SHEET 2 OF 2

RINKER DESIGN ASSOCIATES, P.C.
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ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Authorize Transfer of Scottsville Transmission Drinking Water Infrastructure to RWSA **STAFF CONTACT(S)/PREPARER:** Gary O'Connell, Executive Director and Jeremy Lynn, Director of Engineering	**AGENDA DATE:** May 18, 2023 **ACTION:** Yes **ATTACHMENTS:** Yes

BACKGROUND: For many years, the ACSA and RWSA have worked together to operate the Scottsville Water System. One section in the Scottsville system does not follow the traditional set up in the rest of the overall system for responsibility.

Recognizing that, the RWSA/ACSA staffs and attorneys have worked to better align and correct the system responsibilities: treatment, transmission, and distribution system. The proposed transfer would enact this alignment. Maps in the attached presentation show the area (tank, pump station and water piping) that would be transferred. We have a capital project for the section of line and will discuss that in the presentation.

BOARD ACTION REQUESTED: Motion to approve the transfer of portions of the Scottsville Drinking Water System from the Albemarle County Service Authority (ACSA) to the Rivanna Water and Sewer Authority (RWSA) and authorize the Executive Director to execute any required documents to implement that transfer.

ATTACHMENTS: Scottsville Water System Transfer Presentation.

Albemarle County Service Authority
Serving Conserving

Scottsville Water System Transfer

PRESENTED TO THE ACSA BOARD OF DIRECTORS

MAY 18, 2023

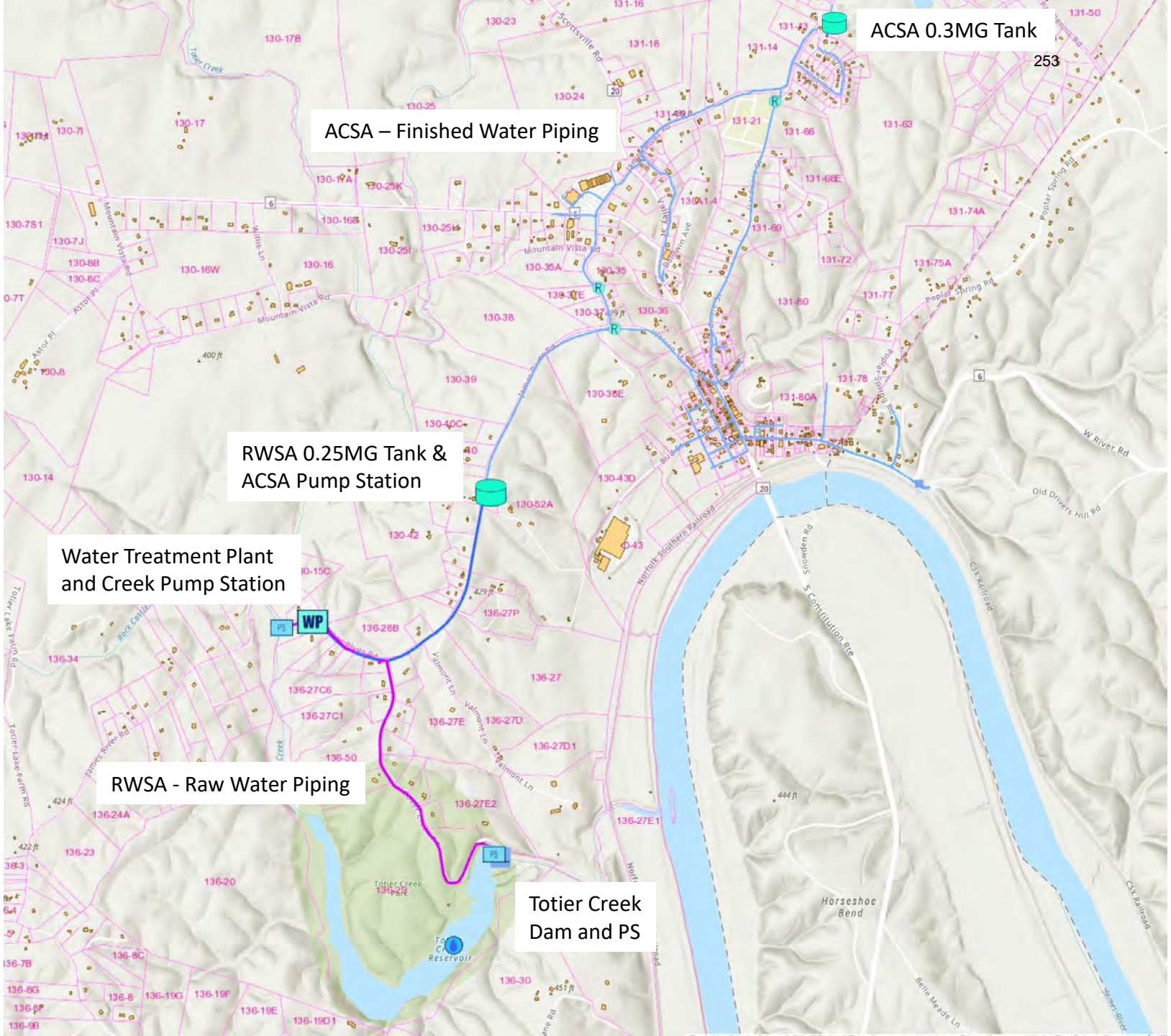
Background

- ACSA and RWSA jointly operate the water system serving the Town of Scottsville
- Ownership of the system is based on the 1973 Four-Party Agreement and the supplemental documents of 1983, 1989 and 2015.
  - RWSA Operates: Totier Creek Reservoir and Scottsville Water Treatment Plant, Limited Piping, and a 0.25MG Water Tank
  - ACSA Operates: System Transmission and Distribution Piping, Control Valves, and a 0.3 MG Tank at Stoney Point
  - Jointly Operate: Pump Station located on James River Road (adjacent to RWSA Tank)

Totier Creek Dam


0.25 MG Water Tank

Current System Mapping



Objectives

ACSA and RWSA staffs have agreed to transfer key assets from ACSA to RWSA to simplify operations and more clearly define responsibilities.

Allows for responsibilities similar to the Urban and Crozet Water Systems.

RWSA:

Raw Water: Storage, Pumping and Treatment

Finished Water: Pumping, Transmission, and Tanks

ACSA:

Finished Water: Distribution, Fire Flow, and Customer Service

Future System Mapping

(following the transfer)

RWSA 0.3MG Tank

RWSA – Finished Water Piping

ACSA – Finished Water Piping

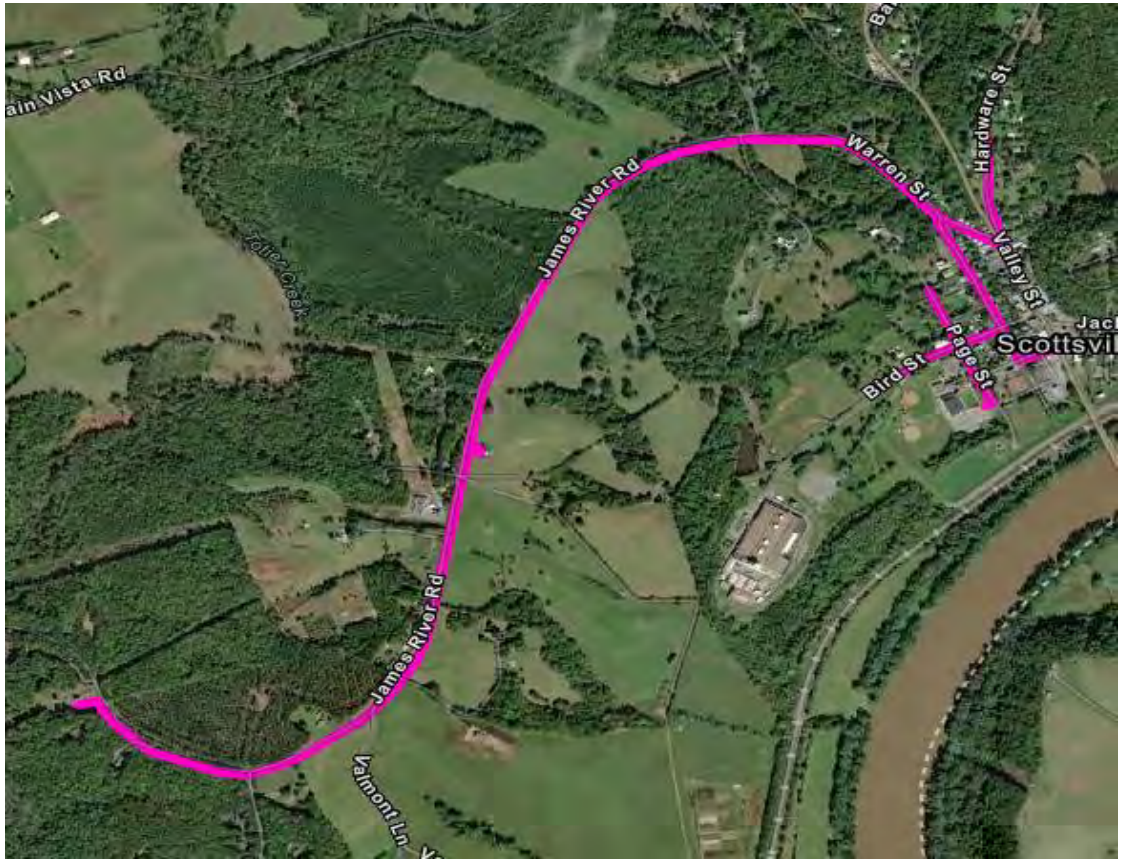
RWSA 0.25MG Tank
& Pump Station

Water Treatment Plant
and Creek Pump Station

RWSA - Raw Water Piping

Totier Creek
Dam and PS

Scottsville Phase 4 Water Main Replacement



Replace Cast Iron and Asbestos Cement Water Mains (both ACSA and RWSA water mains)

Coordination with RWSA

Easement Acquisition in FY 2024

Construction FY 2025-2026 timeframe

FY 2024 $0

Total Budget $6,804,900

Next Steps

- April 25, 2023 - Review and Approval by RWSA Board of Directors
- May 18, 2023 – ACSA Board of Director Consider Approval of the Transfer
- June 2023 - Final Review of Transfer Documents – ACSA Staff and Attorney
- June 2023 – File and Record Transfer Documents
- July & August 2023 – Staff Transfer Operation & Maintenance Responsibilities
- ACSA Capital Project 2025-26 – Water Main Replacement

Questions?

Action Requested by the Board:

Approve the transfer of portions of the Scottsville drinking water system from the ACSA to RWSA and authorize the Executive Director to execute any required documents to implement that transfer.

Albemarle County Service Authority
Serving Conserving

MOTION: **MEETING DATE:** May 18, 2023

SECOND:

RESOLUTION

BE IT RESOLVED by the Board of Directors of the Albemarle County Service Authority that the Board needs to enter into Executive Session to consider the following matter:

1. Pursuant to Va. Code §2.2-3711 A (1) to discuss a personnel matter concerning the Executive Director's Annual Review.

VOTE:

AYES:

NAYS:

(For each nay vote, the substance of the departure from the requirements of the Act should be described).

ABSENT DURING VOTE:

ABSENT DURING EXECUTIVE MEETING:

_____

Gary B. O'Connell, Secretary-Treasurer

MOTION: **MEETING DATE:** May 18, 2023

SECOND:

CERTIFICATION OF EXECUTIVE MEETING

WHEREAS, the Board of Directors of the Albemarle County Service Authority has convened an executive meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of The Virginia Freedom of Information Act; and

WHEREAS, §2.2-3711 A (1) of the Code of Virginia requires a certification by this Board that such executive meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the executive meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the executive meeting were heard, discussed or considered by the Board.

VOTE:

AYES:

NAYS:

(For each nay vote, the substance of the departure from the requirements of the Act should be described).

ABSENT DURING VOTE:

ABSENT DURING EXECUTIVE MEETING:

_____

Gary B. O'Connell, Secretary-Treasurer