



**BOARD OF DIRECTORS' MEETING**  
**December 15<sup>th</sup>, 2022**  
**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](http://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](mailto:board@serviceauthority.org).*

9:00 a.m.	<b>1. Call to Order and Establish a Quorum –Statement of the Board Chair</b>
9:05 a.m.	<b>2. Recognitions – Service Recognition/ Retirement - Calvin Underwood, Operations Supervisor; Jim Bowling – ACSA Attorney</b>
9:20 a.m.	<b>3. Approve Minutes of November 17, 2022</b>
9:25 a.m.	<b>4. Matters from the Public</b>
9:30 a.m.	<b>5. Response to Public Comment</b>
9:35 a.m.	<b>6. Consent Agenda</b>
	a. Monthly Financial Reports
	b. Monthly Capital Improvement Program (CIP) Report
	c. CIP Project Close-Outs
	d. Monthly Maintenance Update
	e. Rivanna Water and Sewer Authority (RWSA) Monthly Update
	f. ACSA Board Policy Future Issues Agenda 2022
	g. Advanced Metering Infrastructure (AMI) Project Update
	h. Holiday Schedule for 2023
	i. ACSA Board Meeting Schedule for 2023
9:50 a.m.	<b>7. Annual Investment Report</b>
10:05 a.m.	<b>8. Operational Presentation – 4-Story Backflow Prevention Program</b>
10:30 a.m.	<b>9. Budget Guidelines and Schedule for FY'24 Budget/Rates</b>
10:40 a.m.	<b>10. Appointment of New ACSA Attorney</b>
10:55 a.m.	<b>11. Items Not on the Agenda</b>
	<b>12. Adjourn</b>



**ALBEMARLE COUNTY SERVICE AUTHORITY**

**STATEMENT OF CHAIR TO OPEN DECEMBER 15, 2022 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.

1           The Board of Directors of the Albemarle County Service Authority  
2 (ACSA) met in a regular session on November 17, 2022, at 9:00 a.m. at the  
3 Administration and Operations Center at 168 Spotnap Road in  
4 Charlottesville, Virginia.

5       **Members Present:** Mr. Richard Armstrong; Mr. Nathan Moore; Dr. Lizbeth  
6 Palmer; Mr. John Parcels; Mr. Clarence Roberts, Chair; Mr. Charles  
7 Tolbert, Vice-Chair.

8       **Members Absent:** None.

9       **Staff Present:** Jeremy Lynn, Michael Lynn, Quin Lunsford, Alex Morrison,  
10 Eric Nutter, Gary O'Connell, Jennifer Bryant, Tonya Foster, Emily Roach,  
11 Danielle Trent, April Walker, Theresa Whiting, Justin Weiler, Deanna  
12 Davenport.

13       **Staff Absent:** James Bowling.

14       **Public Present:** Mike Derdeyn, Flora Pettit PC; Neil Williamson, Free  
15 Enterprise Forum (virtual); Matt Heatwole, Brown Edwards, LLC.

16  
17       1.     Call to Order and Establish a Quorum – Statement of Board Chair

18           Mr. Roberts called the meeting to order, and a quorum was  
19 established. He then read the opening Board Chair statement (Attached as  
20 Page \_\_\_\_).

21  
22       2.     Recognitions – Employee Training

23           Mr. O'Connell stated that he would like to start recognizing  
24 employees for various trainings they complete. He stated that several  
25 ACSA employees attended a state conference with the Virginia Rural  
26 Water Association (VRWA). He stated that Mike Lynn, Director of  
27 Operations, gave a presentation on the ACSA's asbestos-cement pipe  
28 repair program, and the specialized equipment that is used. He stated that  
29 he wanted to thank Mr. Lynn for representing the ACSA well at that event.  
30 He mentioned that Mr. Lynn has also given a number of presentations to

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1 the VRWA and nationally, on emergency preparedness and is an expert in  
2 the utility operations field with regard to the subject.

3 Mr. O'Connell stated that Operations Supervisor Roland Bega and  
4 Crew Leader II William Roach also represented the ACSA in a Q&A  
5 session that was held at a VRWA meeting about hydrants, leak repairs,  
6 and valve maintenance. He mentioned that the ACSA is a leader in best  
7 practices in its field operations and the two did a great job representing  
8 that. He noted that they were also, as a team, the winners of the tapping  
9 contest that occurs, and have been for a number of years. He added that  
10 some of that tapping demonstration done at the contests is being used to  
11 train new employees at the ACSA.

12 Mr. O'Connell stated that the ACSA has also had several  
13 employees in the past month or so, that have participated in the University  
14 of Virginia Darden School's leadership development programs. He  
15 mentioned that Director of Finance, Quin Lunsford, is participating in the  
16 executive program. He noted that Director of IT, April Walker, and Director  
17 of Human Resources and Administration, Emily Roach, both participated in  
18 the women's leadership program. He stated that the programs are high-  
19 quality and intense, and those that have participated in them have had  
20 great success and learned a lot.

21 Mr. Roberts thanked all the staff for their extra effort. He stated that  
22 the training will greatly enhance the ACSA's leadership. Mr. Parcels added  
23 that he thinks it is good that the ACSA permits and encourages these types  
24 of programs, as it is a benefit to the employee and the organization as well.

25  
26 3. Approve Minutes of October 20, 2022

27 There were no corrections or additions to the minutes of October  
28 20, 2022.

29 ***Mr. Tolbert moved to approve the minutes, seconded by Mr.***  
30 ***Armstrong. All members voted aye.***



1       4.     Matters from the Public

2             There were no matters from the public.

3  
4       5.     Response to Public Comment

5             There was no response to public comment.

6  
7       6.     Consent Agenda

8       **a. Monthly Financial Reports** – Mr. Parcels stated that the arrearages  
9             continue to decrease and commended the staff. Mr. O'Connell noted  
10            that it has taken a huge amount of work.

11       **b. Monthly CIP** –

12       **c. CIP Authorizations** –

13       **d. Rivanna Water and Sewer Authority (RWSA) Update** –

14       **e. ACSA Board Policy Future Issues Agenda 2022** –

15       **f. Advanced Metering Infrastructure (AMI) Project Update** – Mr.  
16             Parcells stated that there is a remark in the update about flaws in some  
17             of the meters that are in place, and that they are being corrected. He  
18             asked if there was a way to preemptively ensure the flaws have been  
19             fixed in the new meters coming in. Mr. Lunsford replied yes. He stated  
20             that the manufacturing defect referenced in the update memo was  
21             found in a certain size meter, during a certain time period. He noted  
22             that the ACSA installed all of its 1 ½ - 4-inch meters earlier this year,  
23             and the problem was isolated to a portion of that group of meters. He  
24             stated that some of the meter registers have been successfully  
25             replaced and the ACSA has received another 60 that are currently  
26             being installed. He added that they expect to have the issue  
27             completely resolved soon.

28             **Mr. Parcels moved to approve the consent agenda, seconded**  
29             **by Mr. Armstrong. The Chair asked for a roll-call vote: Mr. Parcels,**  
30             **aye; Mr. Tolbert, aye; Mr. Roberts, aye; Mr. Armstrong, aye; Mr.**  
31             **Moore, aye.**

Albemarle County Service Authority Board of Directors7. Annual Financial Report

Mr. O'Connell stated that every year, this report is presented to the ACSA's Board of Directors Audit Committee, which includes Mr. Tolbert and Mr. Parcels, who met with the auditors and ACSA financial staff. He stated that Quin Lunsford would introduce the item and the auditing firm, Brown Edwards. He mentioned that a representative from Brown Edwards would walk the Board through the report.

Mr. Lunsford stated that he would introduce Matt Heatwole, who is a partner with Brown Edwards and in charge of the ACSA's engagement. He stated that Mr. Heatwole met with Mr. Tolbert and Mr. Parcels last week to comprehensively review the financials. He mentioned that Mr. Heatwole will present Brown Edwards' reports to the full Board, followed by a short presentation from himself.

Mr. Heatwole stated that the Board should have a bound report included in their Board packet. He mentioned that in that report is their audit opinion. He stated that he was happy to report that Brown Edwards is issuing an unmodified, or clean, audit opinion. He noted that the opinion format has changed a bit, in that their opinion is the first paragraph and there is a lot more explanation as well. He stated that in the back of the report is what they call their yellow book audit opinion. He mentioned that the purpose of this is to disclose any items that came to their attention that could be considered material weaknesses or significant deficiencies in internal control. He stated that he is happy to report there were none of those.

Mr. Heatwole stated that the last item provided is a bound copy of the management letter. He stated that it is a tool for management that includes best practice suggestions, as well as a discussion of upcoming standards which are always in the queue. He added that there is also a letter included called Required Communication with those Charged with Governance. He mentioned that it gives a summary of how Brown Edwards arrived at their

1 unmodified audit opinion. He stated that in the copy of this letter is a  
2 management representation letter, which is signed by ACSA management.  
3 He stated that overall, it was a very clean audit thanks to Gary O'Connell,  
4 Quin Lunsford, and the ACSA finance team. He stated that the staff was  
5 very prepared, and everything ran smoothly. He added that it is always a  
6 pleasure working with the ACSA staff, and Brown Edwards is happy to be  
7 the organization's auditors.

8 Mr. Lunsford came forward to give a Power Point presentation to the  
9 Board (Attached as Pages \_\_\_\_\_). He stated that he would begin with  
10 looking at the overall financial report and give the Board a refresher on  
11 what is included. He stated that he would then go over some of the  
12 highlights and operating information, with a summary to finish. He stated  
13 that he would like to thank all departments and everyone that has compiled  
14 information throughout the year. He mentioned that he wanted to  
15 specifically commend Deanna Davenport, Theresa Whiting, Jennifer  
16 Bryant, and Tonya Foster. He stated that their work throughout the year  
17 allows the ACSA to complete the audit engagement quickly. He noted that  
18 they do an incredible amount of work to ensure the financial reports the  
19 Board receives monthly are as accurate as possible, and that the final  
20 financial report is in good shape.

21 Mr. Lunsford stated that there are four sections to the Annual  
22 Comprehensive Financial Report (CAFR), which is included in the Board  
23 packet. He stated that the Introductory Section includes a Letter of  
24 Transmittal that he and Mr. O'Connell draft each year. He stated that it  
25 summarizes, at a high level, happenings at the ACSA and in the  
26 community as a whole. He stated that also included in this section is the  
27 ACSA's award from the Government Finance Officers Association (GFOA)  
28 from the previous year's financial report, the ACSA Board members for the  
29 current year, and an ACSA organizational chart.

30 Mr. Lunsford stated that the next section is the Financial Section,  
31 which includes management's discussion and analysis which is more in-

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1 depth than the actual financial statements and footnotes presented later.  
2 He stated that the third section, the Statistical Section, is towards the end  
3 of the packet and shows financial and operational comparisons between  
4 the current year and the prior nine years. He noted that finally, the  
5 Compliance Section, includes the Comment on Internal Controls. He noted  
6 that he is very pleased that there were no findings there.

7 Mr. Lunsford stated that he would now go over a few financial  
8 highlights. He stated that the ACSA did increase net position this year by  
9 over \$8 million, or 3.8%. He stated that in FY 2021, the net position  
10 increased nearly \$12 million, so there was a slight reduction in the increase  
11 but still an increase, nonetheless. He stated that in terms of operating  
12 income for the last five years, the ACSA remains in sound financial  
13 condition.

14 Mr. Lunsford stated that operating revenues increased almost \$3  
15 million, which is double than what was expected in the budget. He  
16 mentioned that there was also about an 8% increase in operating  
17 expenses, which was mostly driven by expected increases from RWSA for  
18 water and wastewater treatment. He mentioned that there was a decrease  
19 in capital contributions for the current year compared to the prior.

20 Mr. Lunsford stated that this next slide illustrates total assets by asset  
21 type, with the bulk of the assets on the balance sheet related to capital  
22 assets. He stated that investments are the next largest item in current  
23 assets. He noted that the large change in the blue and green bars from FY  
24 2020 to FY 2021 was related to the ACSA's transition from full investment  
25 in the Local Government Investment Pool (LGIP) to a more diverse  
26 portfolio with PFM Asset Management. He added that the next slide was  
27 another illustration of assets by type, with capital assets being the largest  
28 piece of the pie chart followed by cash investments.

29 Mr. Lunsford stated that in terms of total liabilities, there has been quite  
30 a reduction in long-term liabilities in FY 2022. He stated that there are two  
31 components related to that, one being the refunding of the 2010 Build

1 America Bond in August 2022. He mentioned that the ACSA was able to  
2 realize some net present value savings related to that refunding. He stated  
3 that the second component, more notably, is the change in the net pension  
4 liability, which is the liability projected by the Virginia Retirement System  
5 (VRS) for the ACSA's employee pensions. He noted that investment and  
6 returns were incredible, which greatly reduced that liability. He added that  
7 ACSA expects that liability to increase in FY 2023.

8 Mr. Lunsford moved to the next slide, which showed liabilities by type.  
9 He stated that debt is the largest portion of the pie, at about \$5 million,  
10 followed by accounts payable. He mentioned that most of the accounts  
11 payable portion is related to what the ACSA owed RWSA as of June 30,  
12 2022, which is about \$3 million. He noted that the unearned connections  
13 section on the chart refers to prepayments on connection charges, which  
14 are not recognized as revenue and are recorded as liabilities until service  
15 begins.

16 Mr. Lunsford stated that the next slide shows net position. He stated  
17 that the restricted portion is so small, it is not reflected on the bar graph but  
18 totals about \$300,000. He stated that it is related to an escrow account that  
19 the ACSA remits interest and principal payments for, and that money is  
20 restricted until it is paid. He stated that the unrestricted net position  
21 continues to grow, albeit at a slower rate than the net investment in capital  
22 assets.

23 Mr. Lunsford stated that in FY 2022, there were 357 new connections to  
24 the system. He stated that this number is a decrease from the 451 in FY  
25 2021, but still a reasonably strong year with all things considered. He  
26 mentioned that the staff read over nearly 266,000 water meters and  
27 processed over 8,300 service orders.

28 Mr. Lunsford stated that the next slide shows a chart taken from the  
29 back of the CAFR. He stated that it shows the billed consumption by fiscal  
30 year. He noted that there was an increase in FY 2022, with water up by  
31 over 4% and wastewater treatment by almost 5%. He stated that the



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1 expectation, given what has been seen so far, is that these numbers will  
2 come back down this year.

3 Mr. Lunsford stated that the next slide was another graphical  
4 representation of connections by fiscal year. He stated that it shows  
5 continued growth in the system over the last decade.

6 Mr. Lunsford stated that in summary, with all of the impacts of COVID at  
7 the organization and in the community, the ACSA had a very good financial  
8 year. He stated that dry, hot weather during the early part of the fiscal year  
9 drove up consumption, almost historically. He noted that this assisted with  
10 the increase in net position. He mentioned that there was a slight decrease  
11 in capital contributions. He stated that operating expenses increased, but  
12 the increase was expected and included in the budget.

13 Mr. Lunsford stated that he would like to thank Mr. Tolbert and Mr.  
14 Parcels for the conversations they had last week. He stated that he felt the  
15 meeting was good and in-depth, and very helpful for the staff.

16 Mr. Moore stated that he wanted to thank Mr. Lunsford for the clear,  
17 top-line overview. He stated that it is good to see the ACSA in such a good  
18 financial position. He asked if there was any sense on how limiting future  
19 rate increases and spreading them out over time would affect net position  
20 in the future. Mr. Lunsford replied that it is difficult to say because  
21 connection charges are so variable. He mentioned that whether or not that  
22 revenue is recognized will drive a change in net position as much as  
23 anything. He noted that operationally, the ACSA is behind what he had  
24 hoped in terms of water sales and sewer treatment. He stated that, as the  
25 Board has seen in the monthly financials, the billed consumption on the  
26 water side shows significant reductions for month-to-month comparisons  
27 between FY 2022 and FY 2023.

28 Mr. Moore stated that it seems that as long as the community continues  
29 to grow and there are a lot of connection charges, it will be easy to remain  
30 in the black. Mr. Lunsford concurred. Mr. O'Connell stated that this is the  
31 key indicator. He stated that if the growth begins to slow down, the ACSA

1 may have to rethink things, but there are still lots of plans for new  
2 development.

3 Dr. Palmer stated that the growth has been amazingly consistent for  
4 nearly 30 years. She stated that she recalls when she was on the Board in  
5 2006, and 10-15 years before that, there was a steady increase from year  
6 to year.

7  
8 8. Operational Presentation – Exclusion Meter Replacement Program

9 Mr. O'Connell stated that this item relates to a major policy  
10 discussion that the Board had about removing exclusion meters. He stated  
11 that this Power Point (Attached as Pages \_\_\_\_\_) will go over a few  
12 things, including the status of the program and some of the difficulties that  
13 the staff is encountering in trying to replace the meters. He stated that Alex  
14 Morrison, Senior Civil Engineer, is the lead engineer on this project. He  
15 added that Mike Lynn, Director of Operations, oversees the maintenance  
16 crews that are in the field and performing the work.

17 Mr. Morrison stated that he has been involved with this project  
18 since August when it transferred to him from Jeremy Lynn. He stated that  
19 Mike Lynn would be presenting today with him as well. He mentioned that  
20 before they get started, he wanted to recognize Calvin Underwood,  
21 Operations Supervisor, and Robbie Lawson, who will take over Mr.  
22 Underwood's position when he retires next month. He stated that they  
23 handle a lot of scheduling and supervision of the construction crews,  
24 inventory, work orders, and expense coding. He mentioned that he also  
25 wanted to recognize Charlie Thomas and Jason Thomas, who are both  
26 crew leaders working in the field to perform these conversions, as well as  
27 their respective crews. He noted that without these folks, this project would  
28 not be possible or as successful as it has been.

29 Mr. Morrison stated that he would first walk the Board through  
30 some information on exclusion meters, followed by auxiliary meters, and  
31 then some details on the program. He stated that after that, Mike Lynn

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1 would walk the Board through some project pictures, as well as a list of  
2 challenges and issues that the staff has encountered with the project.

3 Mr. Morrison stated that an exclusion meter, also known as a  
4 deduct meter, is a privately owned and maintained meter that branches off  
5 of the private service line behind the customer's domestic meter. He stated  
6 that these meters were allowed in the system up until January 1, 2006  
7 when the Rules and Regulations changed, no longer allowing them to be  
8 installed in the system. He mentioned that the general idea behind this is  
9 the ACSA reads the domestic meter to see how much water passes  
10 through that meter into the private plumbing for that lot. He stated that the  
11 deduct meter records how much water then comes out of that system  
12 directly to the irrigation system, so the ACSA knows the volume of sewer  
13 charges to deduct from their monthly bill because the water that goes into  
14 the irrigation system does not come back into the ACSA's sewer collection  
15 system.

16 Mr. Tolbert asked who reads those exclusion meters to tell how  
17 much water is being used. Mr. Morrison stated that ACSA crews read the  
18 meters. He stated that the meters are privately owned and maintained but  
19 are required to be compatible with the ACSA's reading system. He  
20 mentioned that the current system is a touch-read system, but in the future,  
21 it will be an AMI system which will require upgrades to the meters. He  
22 noted that if the exclusion meter malfunctions, the property owner is  
23 responsible for replacing it at their expense. He added that if they do not  
24 replace it, they do not get the sewer deduction.

25 Mr. Morrison stated that the next slide shows a sketch of how the  
26 exclusion meters are set up. He stated that the ACSA water main is in the  
27 street and the service line is tapped off of that to the domestic meter. He  
28 stated that the ACSA owns and operates that domestic meter, and that is  
29 the end of the ACSA's ownership. He stated that from there, the private  
30 service line runs to the house or structure and at some point, branches off  
31 to the privately owned exclusion meter, where there is a backflow

1 prevention assembly before it then serves the irrigation system. He noted  
2 that the exclusion meters are generally located 3-5ft behind the domestic  
3 meter.

4 Mr. Morrison stated that on January 1, 2006, the ACSA switched to  
5 auxiliary meters. He stated that the main differences are that the auxiliary  
6 meter has a dedicated tap off of the ACSA system, it is an ACSA owned  
7 and operated meter, and it feeds only the irrigation system. Dr. Palmer  
8 asked if the service was coming straight from the main in the street. Mr.  
9 Morrison replied yes. He stated that the next slide shows a sketch of how  
10 the auxiliary meters are set up. He stated that it is a double tap where the  
11 ACSA service line comes off of the main and splits into two service lines to  
12 feed the domestic meter and the auxiliary meter. He noted that sometimes  
13 there is a single service line that comes off of the main directly to the  
14 auxiliary meter.

15 Mr. Moore asked how many of these meters remain the system. Mr.  
16 Morrison replied that there were 495 in the system at the start of the  
17 program and 352 at the time that this presentation was prepared. He noted  
18 that, to date, there are 347. He stated that even after the ACSA stopped  
19 allowing them in the system, there were 495 of them and they began to  
20 cause issues. He mentioned that because the meter is privately owned, the  
21 ACSA does not have the authority to turn off and lock them if there were to  
22 be an issue, such as water restrictions due to a drought. He mentioned that  
23 the only solution would be to turn off the domestic meter, which the ACSA  
24 would not want to do because it would turn off the water to the entire  
25 structure. He stated that irrigation systems are considered high hazard,  
26 thus they have a reduced pressure zone backflow prevention assembly. He  
27 noted that these assemblies are required to be tested annually, and if they  
28 fail to test the device, the ACSA would not be able to turn the meter off.

29 Mr. Morrison stated that this exclusion meter program was created  
30 to be at the expense of the ACSA, with maintenance staff converting the  
31 exclusion meters to auxiliary meters. He stated that the ACSA makes the

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1 tap on the main and switches the meter over to the ACSA's system. He  
2 stated that if the meter needs to be replaced, the ACSA replaces it under  
3 the program and covers all associated expenses. He stated that the  
4 ACSA's current Rules and Regulations states that if a customer is unwilling  
5 to make the conversion, they will receive a 30-day notice to comply. He  
6 stated that after 30 days, the ACSA will no longer read the exclusion meter  
7 nor deduct sewer charges. He noted that there were a few customers that  
8 no longer wanted an irrigation system, in which case the ACSA abandoned  
9 the exclusion meter for them. He added that a majority of customers like to  
10 convert to the auxiliary meter because they like the benefit of the irrigation  
11 system on their property.

12 Mr. Morrison stated that the next slide is a map that shows the  
13 geographic location of the remaining exclusion meters in the system. He  
14 stated that they are pretty spread out, with 152 out of 347 located in the  
15 Glenmore subdivision. He stated that the following slide gives a higher  
16 resolution view of the Glenmore area. He mentioned that currently, ACSA  
17 staff is primarily working in the Glenmore area that they refer to as the  
18 Darby west area. He noted that Darby west refers to Darby Road west of  
19 Piper, which is the main thoroughfare in Glenmore, as well as all of the side  
20 streets. He mentioned that the ACSA is working with the HOA on this  
21 because they have a repaving project. He stated that they agreed to delay  
22 that project until early spring of 2023 to allow the ACSA time to make all of  
23 the conversions in that area. He stated that there are 55 meters left in that  
24 area. He added that once they are done, then S.L. Williamson can  
25 complete the paving and there will not be any patches in the road.

26 Mr. Morrison stated that he would now hand over the presentation  
27 to Mike Lynn, who would walk the Board through some of the project  
28 pictures. Mr. Lynn stated that the first picture shows the white paint and  
29 white flags used to identify the area Miss Utility needs to mark. He stated  
30 that the ACSA also tries to notify the customers as to why the white pain  
31 and flags are on their property. Dr. Palmer asked for clarification on how



1 the ACSA tries to notify the customer. Mr. Lynn stated that the staff will  
2 either knock on the door and speak with the customer or leave a door tag.  
3 Mr. Morrison stated that in addition to that, the ACSA mailed a letter to  
4 every resident in Glenmore to make them aware of the work that was  
5 occurring, even if they did not have an exclusion meter. He stated that the  
6 staff also utilized the email addresses associated with the account, which  
7 covered about 75% of the customers in that area.

8 Mr. Lynn stated that the next picture shows a picture of some  
9 shrubbery in the area. He stated that customers will sometimes use  
10 shrubbery to hide things like electrical boxes, cable boxes, and meters. He  
11 stated that this blocks access to the meter. He stated that the soil in this  
12 area is hard, and the maintenance crews have a lot of difficult with utilities  
13 in this area. He mentioned that there is a lot of hand digging required which  
14 is very time consuming.

15 Mr. Lynn stated that the next few pictures show a finished product  
16 of two meters being looped into four separate meters, and the asphalt has  
17 been patched and repaved. He stated that the goal is to restore the  
18 landscaping to its original state as best as possible. He noted that the next  
19 slide shows one of the asphalt patches, which will be overlayed when the  
20 HOA completes its paving project in the spring.

21 Mr. Lynn moved to the next slide which illustrated a trench box. He  
22 stated that sometimes the services are a bit deeper than the crews would  
23 like them to be. He mentioned that the Occupational Safety and Health  
24 Administration (OSHA) requires the use of a trench box when going five  
25 feet or deeper. He noted that they may use a trench box at less than five  
26 feet if the soil is loose.

27 Mr. Lynn stated that the next slide is a picture of one of the ditches  
28 where the crews are starting to separate the meters. He stated that the  
29 ACSA crews run copper service lines to the meters, at which point the  
30 customer's contractor or plumber will use whatever material they want for  
31 the private lateral. He stated that the next slide is a close up of a

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1 conversion from two meters to three meters, as one of the customers did  
2 not want an auxiliary meter.

3 Mr. Parcels asked if the backflow prevention assembly is part of  
4 the meter itself. Mr. Lynn replied no. He stated that they are located in a  
5 separate box above ground. He mentioned that the ACSA has no  
6 responsibility for installing or replacing the backflow prevention assembly,  
7 as it is privately owned by the customer. Mr. Morrison stated that the  
8 reduced pressure zone backflow prevention assembly that is required for  
9 irrigation must be installed above-ground because when it prevents  
10 backflow, it dumps water. He noted that having it underground would result  
11 in the device submerging itself.

12 Mr. Lynn stated that the next few pictures showed some more  
13 hand-digging and the various utilities the ACSA has to be aware of. He  
14 stated that the biggest concern are the small lines such as the telephone  
15 and cable lines. He stated that the crews use a 12-inch backhoe bucket,  
16 instead of 24 inches, which allows the digging to be more precise and the  
17 ditches narrower. He stated that the last picture shows the finished product  
18 before the restoration work begins. He noted that the goal is to keep the  
19 meters as close together as possible.

20 Mr. Lynn stated that in terms of challenges and issues with this  
21 project, COVID has been a huge one. He stated that landscaping has been  
22 difficult, as some of it is very detailed. He mentioned that a lot of the lawns  
23 were seeded, but some of them were sodded. He stated that the ACSA  
24 purchased a sod cutter, to try and salvage as much of the sod as possible.  
25 He stated that traffic has also been an issue, as the roads in Glenmore are  
26 not that wide. He mentioned that the crews have had to use road plates as  
27 they have had to cut them open, and it has been a challenge to navigate  
28 residents through the work area.

29 Mr. Lynn stated that weather has been an issue, as the crews  
30 cannot work for a day or two after it rains. He stated that personnel and  
31 hardware shortages due to COVID has presented challenges as well. He

1 mentioned that the chip issue that has affected the AMI project has also  
2 affected the exclusion meter replacement program. He stated that the  
3 underground rock in that area has been difficult to work with. He noted that  
4 the HOA allowing the ACSA to open cut the road helps with this issue. He  
5 added that adjusting the elevation between services and PVC material on  
6 the private side have required some additional work also.

7 Mr. Parcels asked what the timeline is to get the remaining 347  
8 exclusion meters converted. Mr. Morrison replied that the ACSA is probably  
9 a couple of years out from finishing all the meters. He mentioned that, as  
10 Mr. Lynn mentioned, COVID and staffing issues made it difficult to dedicate  
11 a crew solely to the project. He noted that there are a lot of variables that  
12 factor into the timeline, but he will take a look at it and come up with an  
13 estimate. He stated that the priority is to complete the remaining 55 meters  
14 in the Darby west area.

15 Dr. Palmer asked, prior to COVID, if the staff had a target number  
16 of meters to complete each year. Mr. Lynn replied that they had just been  
17 completing them as time permits. He stated that the crews are averaging  
18 about two customers per week.

19 Dr. Palmer stated that she understands why the crews are working  
20 in the area they are now but asked how the staff chose which meters to do  
21 when prior to now. Mr. Lynn replied that they focused on the "low-hanging  
22 fruit" outside of Glenmore, in areas like Dunlora and Crozet.

23 Mr. Parcels asked if this project ties into the issue of unmetered  
24 water. Mr. Morrison replied no. He stated that with the exclusion meter, the  
25 water passes through the domestic meter, so it is all metered. He stated  
26 that the privately owned exclusion meter is used to make the transition to  
27 irrigation water, or water only charges.

28 Mr. Tolbert asked if the meter work has been easier in other places  
29 aside from Glenmore. Mr. Lynn replied yes. He stated that all of the lots in  
30 Glenmore have the hard soil, whereas other areas in the county do not. He  
31 stated that the ACSA has dedicated easements around the meters and fire

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1 hydrants, but it can still be an issue sometimes. Mr. Armstrong asked if the  
2 ACSA gave up any rights legally if the crews do not remove obstructions  
3 inside the easement. Mike Derdeyn replied that the easement documents  
4 clearly state that the ACSA has the right to remove any obstructions with  
5 no obligation to replace it. He stated that the restoration work the ACSA  
6 crews perform is purely good customer relations.

7  
8 9. Water Audit Report

9 Mr. O'Connell stated that Jeremy Lynn, Director of Engineering,  
10 would give a quick presentation (Attached as Pages \_\_\_\_\_) on this item.  
11 He stated that this was a Strategic Plan item to look at water use in the  
12 system and identify any issues.

13 Mr. Lynn stated that he first had a comment for Mr. Parcels. He  
14 stated that the Exclusion Meter Replacement Project will extend the life of  
15 some of the domestic meters because the irrigation water is not being  
16 pushed through the domestic meter. He stated that related to water  
17 auditing, older mechanical meters will slow down as they age, and  
18 customers are not incentivized to replace those private meters when they  
19 are not reading the way they should. He noted that this gets to some of the  
20 water loss that he will speak about. He stated that the water is going  
21 through the meter so it is not technically lost, but the ACSA is not keeping  
22 track of it as well as it could be.

23 Mr. Lynn stated that he would be speaking about the ACSA's water  
24 auditing efforts for the Crozet and Scottsville distribution systems. He  
25 stated that he would talk about what water loss is, why the water is tracked,  
26 where the ACSA is in its ongoing efforts, and what the organization is  
27 looking to do in the future.

28 Mr. Lynn stated that water loss is the difference between the  
29 volume of water that is supplied by RWSA and the volume of water that the  
30 ACSA has authorized consumption for. He stated that the AWWA M36  
31 Water Balance chart breaks down the various components that make up

1 the water balance. He stated that the chart begins with water supplied and  
2 then each drop of water goes into various subcategories. He noted that he  
3 would be focusing on the water loss category, which is comprised of  
4 apparent loss and real loss.

5 Mr. Lynn stated that real loss is water that is put into the system but  
6 never reaches a customer. He stated that examples would be water that  
7 leaks out from the distribution system, storage tank overflows, or a service  
8 line leak before it reaches the domestic meter. He stated that apparent loss  
9 is when water reaches a user, but the ACSA is not properly metering it or  
10 receiving revenue from it. He stated that examples of this would be water  
11 theft, customer metering inaccuracies, and data handling errors.

12 Mr. Lynn stated that the ACSA tracks water loss because it reduces  
13 operating costs. He mentioned that it is important to maximize the revenue  
14 from water that is being sold by RWSA. He stated that tracking water loss  
15 also aligns with the ACSA's overall vision statement which is "Serve and  
16 conserve today, sustain for tomorrow, and protect our resources forever."

17 Mr. Lynn stated that the ACSA has been able to perform two  
18 annual water audits for both the Crozet and Scottsville system. He stated  
19 that Crozet is being audited on a calendar year basis, as the timing of the  
20 new finished water meter at RWSA's filter plant allowed the water auditing  
21 efforts to begin sooner than Scottsville. He stated that in the first year,  
22 Crozet was at 11% water loss and 14.6% in the second year. He  
23 mentioned that a fiscal year water audit for Crozet is scheduled to take  
24 place in the next month or two.

25 Mr. Lynn stated that there have been some improvements in the  
26 percentage of water loss in Scottsville, going from 16.26% to 9.95%. He  
27 stated that the Environmental Protection Agency (EPA) website indicates  
28 14% as an average level of loss. Mr. Parcels asked if there were any  
29 guesses for the Urban system as to whether it would be lower or higher  
30 than that 14%. Mr. Lynn replied that it is more difficult to perform a water



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1 audit on the Urban system because of its interconnection with the City of  
2 Charlottesville.

3 Mr. Armstrong asked what the data validity score on the water audit  
4 chart meant. Mr. Lynn replied that it is a score generated by the water loss  
5 audit software. He stated it is a 0-100 score, broken down into five tiers. He  
6 stated that depending on the score, it places the water system in a tier with  
7 a set of suggestions on ways to improve. He mentioned that the ACSA is  
8 seeing improvements, a lot of which are related to AMI and improved  
9 metering accuracy and calibration efforts by RWSA.

10 Mr. Armstrong stated that the data validity score for Crozet  
11 improved, but the total water loss increased. Mr. Lynn replied that the two  
12 are not necessarily related. He stated that the increase in the validity score  
13 just means that there was better data from a policy standpoint but does not  
14 reflect the actual water loss.

15 Dr. Palmer stated that Scottsville used to be a lot worse in terms of  
16 water loss. Mr. Lynn stated that he would discuss some challenges in the  
17 Scottsville area. He stated that based on the data validity score, the ACSA  
18 receives guidance on areas that it needs to focus on. He stated that the  
19 first area is customer metering inaccuracies. He mentioned that the ACSA  
20 has not had a chance to increase its meter testing program, but once it  
21 does there will be some benefits.

22 Mr. Lynn stated that another priority area is water imported. He  
23 stated that RWSA is the only water provider in the area and if the meter at  
24 the filter plant is not reading accurately, it will affect the entire water  
25 balance equation. He stated that the third area of priority is unbilled  
26 metered authorized consumption. He stated that using water through the  
27 auto-flushers is metered so the ACSA is keeping track of it, but it is water  
28 that does not generate any revenue. He mentioned that it will be important  
29 to optimize the use of these auto-flushers to reduce non-revenue water. He  
30 added that fire hydrant testing and other proactive efforts to maintain water  
31 quality would also fall under this category.

1           Mr. O'Connell asked Mr. Lynn if he thinks there will be some  
2 system changes in Scottsville. Mr. Lynn replied that he thinks there will be.  
3 He stated that there are two water tanks in Scottsville, one owned by  
4 RWSA and one that belongs to the ACSA. He mentioned that this is a lot of  
5 storage for a system that does not have a lot of customers. He noted that  
6 economic development is beginning to be discussed with a Bird Street  
7 development and repurposing of the tire plant. He stated that this will mean  
8 more customers and less of a need for flushing in the system.

9           Mr. Lynn stated that in terms of future efforts, the ACSA staff will  
10 continue working on water audits for Crozet and Scottsville and attempt to  
11 identify patterns and ways to improve water auditing for these two systems.  
12 He mentioned that the ACSA has yet to perform a water audit for the Red  
13 Hill system, which is very small. He noted that it is a well system, thus it  
14 would be good to know that water is not being pumped out of the ground  
15 and going to waste. He stated that with the Urban system, the ACSA will be  
16 embarking on a collaborative effort with RWSA and the City of  
17 Charlottesville. He stated that now that the wholesale meters are in place, it  
18 will be interesting to see how they play a role in the Urban system water  
19 auditing process. He stated that the ACSA will also be establishing long-  
20 term apparent and real loss reduction goals once more data is gathered.  
21 He added that both Crozet and Scottsville have water main replacement  
22 projects in the works, which should help with the water loss as well.

23           Mr. Roberts asked how the wholesale metering numbers for the  
24 County compare to the water that is being purchased from RWSA. Mr.  
25 Lynn replied that he would have to dive deeper into the actual numbers, but  
26 they will be off some. Mr. Roberts stated that since he has been on the  
27 Board, including when Dr. Palmer was first on the Board, water loss has  
28 been an issue. He stated that basically in Crozet, according to the water  
29 loss chart, there was 36 million gallons of water in 2021 that the ACSA  
30 purchased from RWSA and did not sell back to its customers. Mr. Lynn  
31 stated that, in layman's terms, this is correct.

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1           Mr. O'Connell stated that these water audits are like doing  
2 detective's work in that they point to areas where there is a problem, after  
3 which steps are taken further and further to identify and reduce the water  
4 loss. He stated that there becomes a point when it is not cost effective to  
5 continue, but these first few audits clearly show there is more work to do.  
6 He added that they act as a planning tool to guide the ACSA's efforts. Mr.  
7 Lynn added that these water audits can guide the maintenance  
8 department's leak detection program. He mentioned that if there is a  
9 certain area or system that is exhibiting excessive leakage, the staff can  
10 begin to focus on that area and try to identify where the loss is coming  
11 from.

12           Mr. Tolbert asked if anyone pays the ACSA for water used for fire  
13 protection, and if the ACSA paid for installing fire hydrants. Mr. Lynn replied  
14 that the developer installs fire hydrants for new construction, and the ACSA  
15 operates and maintains them. He stated that this is another source of  
16 unknown quantities of water being used. He mentioned that the ACSA  
17 does not know how much water the fire department uses, whether for  
18 training or actual fire fighting purposes.

19           Mr. Tolbert asked if anyone is reimbursing the ACSA for supplying  
20 hydrants and water. Mr. Lynn replied that fire sprinklers can be added to  
21 that list, as the ACSA does not charge for water that enters into a fire  
22 sprinkler system. Mr. Parcels asked if that water is potable. Mr. Lynn  
23 replied yes. Mr. Tolbert stated that the fire protection is a service that water  
24 customers are essentially paying for. Mr. Lynn replied yes. Mr. Tolbert  
25 stated that people in the county that are not water customers are receiving  
26 the fire protection as well but are not paying for it. Mr. Lynn replied that  
27 some of them are not receiving the fire protection. He stated that  
28 customers in the rural areas do not have fire protection and are actually  
29 paying an additional cost on their insurance.

30           Dr. Palmer stated that the fire department is funded through  
31 property taxes, so customers are paying for that as well. Mr. O'Connell

1 stated that it is part of the public service, and the system is oversized to be  
2 able to provide that protection. He stated that the ACSA has been  
3 aggressive about maintaining hydrants in the system more than most  
4 utilities, to ensure that they are always working in the event of an actual  
5 fire. Mr. Lynn added that the ACSA is notified of every fire and  
6 subsequently, the maintenance staff performs an inspection to make sure  
7 the hydrant is ready to go for the next use.

8 Mr. Armstrong asked if there have been any significant instances of  
9 water theft. Mr. Lynn replied that there have not been any major  
10 occurrences, but there have been a few cases where a builder or  
11 contractor needed water in a community and straight piped through a meter  
12 setter. He stated that the staff has also seen water haulers pull from  
13 hydrants without a meter. He mentioned that volume wise, these cases do  
14 not involve a huge amount of water. He noted that the bigger concern is  
15 protecting the system from a backflow standpoint, and whether they are  
16 compromising the system.

17 Mr. Armstrong asked if those individuals are referred criminally. Mr.  
18 Lunsford replied that they will be charged a fine if they are a repeat  
19 offender. He mentioned that Tim Brown's environmental group is currently  
20 in the process of tracking down a contractor for water theft. He stated that  
21 there was an extreme example of water theft in the past month, which the  
22 new AMI system will help to prevent in the future. He stated that the  
23 customer was disconnected for nonpayment and the meter was locked. He  
24 stated that the lock was cut, after which the staff completely removed the  
25 meter. He stated that the customer then borrowed their neighbor's meter  
26 and put it in their setter. He noted that with AMI, the staff will receive an  
27 alert when there is any tampering with the meter.

28  
29 10. Items Not on the Agenda

30 Mr. O'Connell stated that he had a couple of items, the first being  
31 the budget for next year. He stated that the staff has begun having internal

**Albemarle County Service Authority Board of Directors**

1 discussions, and there is a budget schedule and general guidelines  
2 included in next month's Board agenda. He stated that RWSA is also  
3 beginning its CIP projects development, which will be reviewed in early  
4 December. He noted that this tends to be a major driver of the ACSA's  
5 rates.

6 Mr. O'Connell stated that the next item he wanted to mention is the  
7 Albemarle County Board of Supervisors went through a Strategic Plan  
8 process including a series of workshops. He mentioned that they adopted a  
9 Strategic Plan that has an item in it to align water and wastewater  
10 infrastructure with the County's development goals. He stated that the  
11 ACSA's water and wastewater systems over time, and in a great level of  
12 detail, are sized to meet development needs in the growth area as  
13 designated in the Comprehensive Plan and the Zoning Plan for full build-  
14 out densities. He noted that if those plans change, the ACSA's long-term  
15 plans could change. He stated that Dr. Palmer could probably speak to  
16 this better than him, but it seems that every time there is a discussion  
17 about the Comprehensive plan, issues come up about expanding the  
18 growth areas in the County.

19 Mr. O'Connell stated that the second piece of this, which comes up  
20 project by project, is that some of the County's economic development  
21 interest has recently been around attracting some major businesses that  
22 could be large water users. He stated that there has been a lot of  
23 discussion about the North Fork Research Park going through some level  
24 of expansion and zoning changes with the County to utilize some of the  
25 land they have. He mentioned that ACSA staff believes the system can  
26 handle the water and wastewater needs for the research park, but it could  
27 put some pressure on the system in the future.

28 Mr. Roberts asked if Mr. O'Connell was included in the discussions  
29 before the Strategic Plan was finalized. Mr. O'Connell replied that he has  
30 had discussion with the economic development staff on several occasions  
31 about particular projects. He stated that there is some concern about how



1 much capacity is in the system for a major water user at North Fork  
2 Research Park. He mentioned that a lot of national development will go to  
3 the state economic development department, which then gets referred out  
4 to different localities. He stated that he thinks the County's economic  
5 development department is trying to prepare to handle larger  
6 developments, which deals with infrastructure issues beyond utilities.

7 Mr. O'Connell stated that the discussion surrounding the  
8 Comprehensive Plan was new to the ACSA. He stated that the specific  
9 item in the Strategic Plan, which he thinks was more driven by the staff  
10 then the Board of Supervisors, was new as well. He mentioned that the  
11 ACSA staff will be spending some time with the County executive staff,  
12 educating them on how the ACSA's connection fees work, the rate study  
13 process, and the growth pays for growth philosophy.

14 Dr. Palmer stated that the idea for the last 20 years has been to try  
15 and make the development area more attractive. She stated that this  
16 emphasis has been very strong in comparison to protecting the rural areas.  
17 She stated that the thought at that time was that expanding the growth area  
18 would frustrate the growth management goals to provide infill. She asked, if  
19 the Board of Supervisors were to invest a substantial amount of money to  
20 make certain areas of the growth area more attractive and provide  
21 infrastructure that would support increased density, are there areas other  
22 than North Fork that could have issues.

23 Mr. O'Connell stated that to some extent, it depends on the  
24 location. He stated that there are some commercial developments along  
25 Route 250 East that are using wells and septic, and there is a large water  
26 line that goes by those properties out to Glenmore. He mentioned that this  
27 could be an example of a change in what is allowed. Dr. Palmer stated that  
28 she is more so talking about locations that are currently part of the  
29 jurisdictional area. Mr. O'Connell stated that the ACSA's goal is to be  
30 positioned to handle the level of development that is in the County's

Albemarle County Service Authority Board of Directors

1 Comprehensive Plan and have the backbone infrastructure that can serve  
2 that development.

3 Dr. Palmer stated that she is curious as to if there are areas  
4 currently in the development area that do not require an expansion of the  
5 jurisdictional area for water and sewer. Mr. O'Connell replied that North  
6 Fork would be the one that is of most concern, but the ACSA should be  
7 able to handle what is currently planned for the long-term future. He  
8 mentioned, however, that if there is an increase in density or desire to bring  
9 in a major water user, this could change.

10 Mr. Moore stated that it seems a lot of developments get scaled  
11 down to be less dense as a result of neighborhood opposition. Mr.  
12 O'Connell replied that traditionally, this has been the case, but there are  
13 some significant developments currently that are close to what the build-out  
14 density was in the Comprehensive Plan. Dr. Palmer added that if the  
15 infrastructure to support that density is in place in a reasonable time frame,  
16 most people will not be as upset about it.

17 Mr. Lynn stated that RWSA has done a great job of working every  
18 five years to identify, through the Comprehensive Plan, projections, and  
19 planning for those improvements in a realistic time frame. He stated that  
20 the challenge for both utilities are the one-offs that are not part of either's  
21 plan, which creates a ripple effect that impacts other anticipated  
22 development. He noted that North Fork is a prime example.

23  
24 11. Executive Session – Mid-Year Executive Director Performance  
25 Review

26 Ms. Trent read a Resolution to enter Executive Session  
27 pursuant to Virginia Code §2.2-3711 A (1) to discuss a personnel matter  
28 (Attached as Page\_\_\_\_\_).

29 ***Dr. Palmer moved to approve the Resolution as presented***  
30 ***to the Board; seconded by Mr. Tolbert. The Chair asked for a roll-call***

1 **vote: Mr. Parcells, aye; Dr. Palmer, aye; Mr. Tolbert, aye; Mr. Roberts,**  
2 **aye; Mr. Armstrong, aye; Mr. Moore, aye.**

3 The Board of Directors came back into regular session. Mr. O'Connell read  
4 into record a Resolution stating that only matters so previously stated  
5 and exempted from open discussion in regular session were discussed in  
6 Executive Session (Attached as Page \_\_\_\_\_).

7 **Mr. Parcells moved to approve the Resolution as presented**  
8 **to the Board, seconded by Dr. Palmer. The Chair asked for a roll-**  
9 **call vote: Mr. Parcells, aye; Dr. Palmer, aye; Mr. Tolbert, aye; Mr.**  
10 **Roberts, aye; Mr. Armstrong, aye; Mr. Moore, aye.**

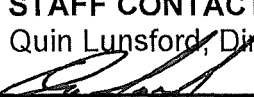
11  
12 12. Adjourn

13 **There being no further business, Dr. Palmer moved that the**  
14 **meeting be adjourned, seconded by Mr. Parcells. All members voted**  
15 **aye.**

16  
17  
18  
19  
20 \_\_\_\_\_  
21 Gary B. O'Connell, Secretary-Treasurer  
22  
23  
24  
25

# ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Monthly Financial Reports  <b>STAFF CONTACT/PREPARER:</b> Quin Lunsford, Director of Finance 	<b>AGENDA DATE:</b> December 15, 2022  <b>ACTION:</b> Informational  <b>ATTACHMENTS:</b> Yes
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**BACKGROUND:** Water and sewer financial reports and check registers for the month of November are attached for your review.

### DISCUSSION:

- Water consumption for the month of October decreased 2.0% compared to September. Water consumption for the month of October 2022 compared to October 2021 decreased 4.3%.
- RWSA's invoice of \$2,021,265 for the month of October was paid on November 10, 2022.
- Unearned water and sewer connection charges totaled \$1,987,203 at month end.
- System connection charges were above budgeted expectations with \$1,133,950 recognized in October. Total system connection charges for FY 2023 are less than those in FY 2022 by 10%.
- Water and Wastewater revenues for FY 2023 are above budgeted expectations by 3.7%. Please see the water/wastewater trend analysis included illustrating that when adjustment for expected variations in seasonal consumption are considered, revenues are 4.0% lower than budgeted expectations.

**BUDGET IMPACT:** Informational only.

**RECOMMENDATIONS:** None

**BOARD ACTION REQUESTED:** None; informational item only.

### 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 Consumption
7. Water and Sewer Report; Customer Class Report
8. Major Customer Analysis
9. Water/Wastewater Revenue Trend Analysis
10. Aged Receivables Analysis
11. Check Register

## ALBEMARLE COUNTY SERVICE AUTHORITY

STATEMENT OF NET POSITION  
November 30, 2022

## ASSETS

Cash and cash equivalents	\$ 10,537,371
Accounts receivable	4,806,731
Investments	42,774,720
Capital assets: (net of accumulated depreciation)	177,706,505
Inventory	554,107
Prepays	11,722
Cash and cash equivalents, restricted	<u>351,449</u>
Total assets	<u>236,742,605</u>

## DEFERRED OUTFLOWS OF RESOURCES

Combined deferred outflows of resources	<u>1,174,141</u>
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## LIABILITIES

Accounts payable	2,083,024
Accrued liabilities	362,722
Compensated absences	763,469
Net pension liability	695,494
Other post-employment benefits	1,144,368
Unearned connection fees	1,987,203
Long-term debt	<u>4,669,118</u>
Total liabilities	<u>11,705,398</u>

## DEFERRED INFLOWS OF RESOURCES

Combined deferred inflows of resources	<u>2,880,258</u>
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## NET POSITION

223,331,090

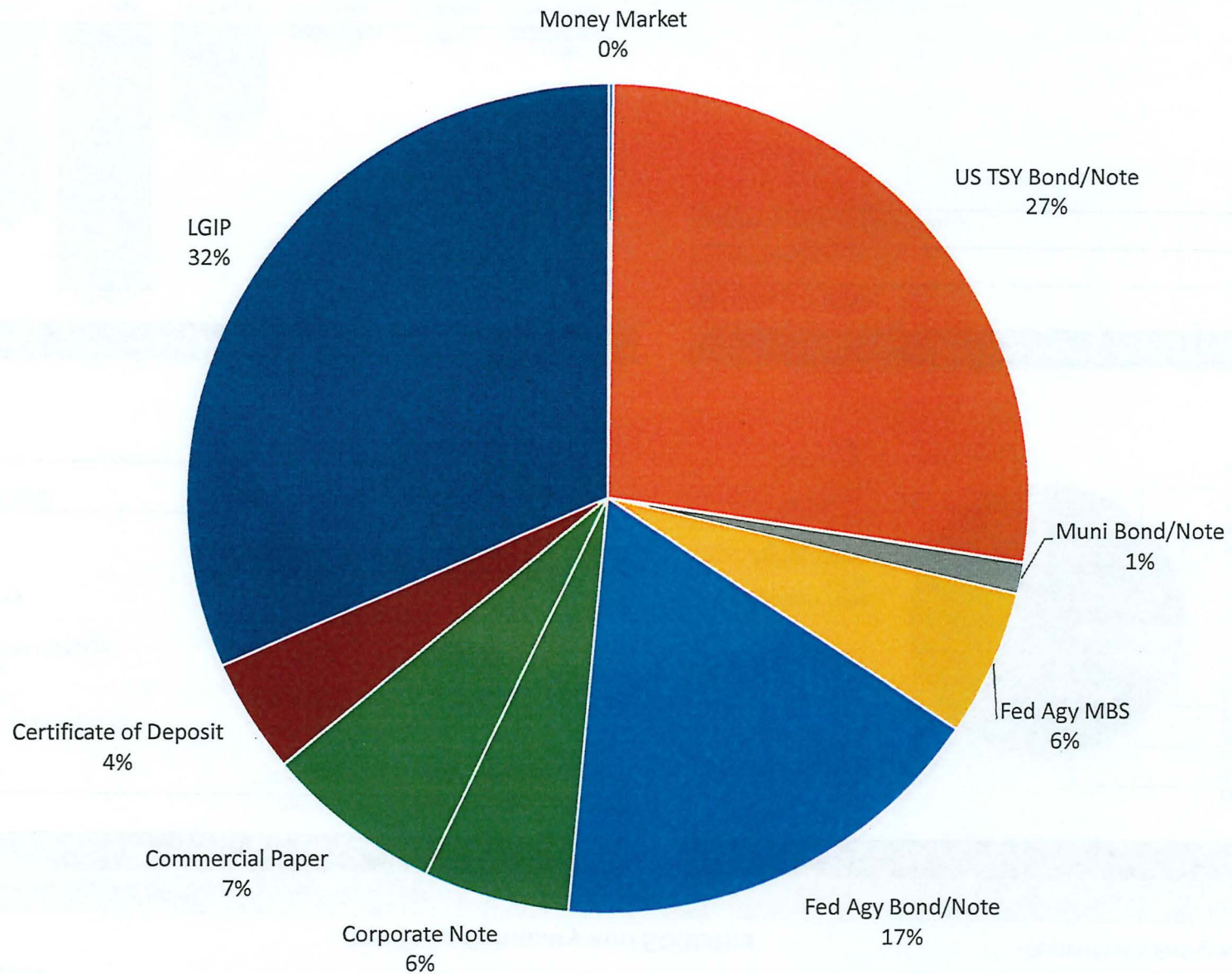
ALBEMARLE COUNTY SERVICE AUTHORITY  
For the One Month Ending November 30, 2022

	Budget FY 2023	Budget Year-to-Date 2023	November Actual Year-to-Date	Actual vs. Budget	Variance Percentage
<b>Revenues</b>					
Water Sales	19,285,000.	8,035,417.	8,355,078.	319,661.	3.98%
Sewer Service	15,137,000.	6,307,083.	6,522,249.	215,166.	3.41%
<b>Total operating revenues</b>	<b>34,422,000.</b>	<b>14,342,500.</b>	<b>14,877,327.</b>	<b>534,827.</b>	<b>3.73% A</b>
<b>Operating Expenses</b>					
Purchase of bulk water	(13,774,000.)	(5,739,167.)	(5,910,413.)	(171,246.)	2.98% B
Purchase of sewer treatment	(10,776,000.)	(4,490,000.)	(4,272,416.)	217,584.	(4.85%) B
Administration	(1,306,475.)	(544,365.)	(514,890.)	29,475.	(5.41%) C
Finance	(2,516,082.)	(1,048,368.)	(997,441.)	50,927.	(4.86%) C
Information Technology	(1,521,900.)	(634,125.)	(580,402.)	53,723.	(8.47%) C
Engineering	(2,289,721.)	(954,050.)	(925,721.)	28,329.	(2.97%) C
Maintenance	(4,726,083.)	(1,969,201.)	(1,578,940.)	390,261.	(19.82%) C
<b>Total operating expenses</b>	<b>(36,910,261.)</b>	<b>(15,379,276.)</b>	<b>(14,780,223.)</b>	<b>599,053.</b>	<b>(3.90%)</b>
<b>Operating gain(loss)</b>	<b>(2,488,261.)</b>	<b>(1,036,776.)</b>	<b>97,104.</b>	<b>1,133,880.</b>	<b>(109.37%)</b>
<b>Nonoperating Revenues</b>					
System connection charges	5,926,800.	2,469,500.	4,150,175.	1,680,675.	68.06% D
Investment/Interest Income	100,000.	41,667.	48,394.	6,727.	16.15% E
Rental income	16,000.	6,667.	4,862.	(1,805.)	(27.07%)
Miscellaneous revenues	455,000.	189,583.	415,463.	225,880.	119.15% F
<b>Total nonoperating revenues (expenses)</b>	<b>6,497,800.</b>	<b>2,707,417.</b>	<b>4,618,894.</b>	<b>1,911,477.</b>	<b>70.60%</b>
<b>Nonoperating Expenses</b>					
Miscellaneous expenses	(434,200.)	(180,917.)	(118,528.)	62,389.	(34.48%) G
Bond interest charges	(162,272.)	(67,613.)	(106,600.)	(38,987.)	57.66% H
Depreciation	0.	0.	(1,724,503.)	(1,724,503.)	0.00% I
<b>Total nonoperating revenues (expenses)</b>	<b>(596,472.)</b>	<b>(248,530.)</b>	<b>(1,949,631.)</b>	<b>(1,701,101.)</b>	<b>684.47%</b>
<b>Capital contributions</b>	<b>0.</b>	<b>0.</b>	<b>475,503.</b>	<b>475,503.</b>	<b>0.00%</b>
<b>Change in Net Position</b>	<b>3,413,067.</b>	<b>1,422,111.</b>	<b>3,241,870.</b>	<b>1,819,759.</b>	<b>127.96%</b>

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

- A. Water and sewer revenues exceed budgeted amounts by 3.73%. Consumption through November (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 0.45%. 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 slightly 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





## Portfolio Summary and Statistics

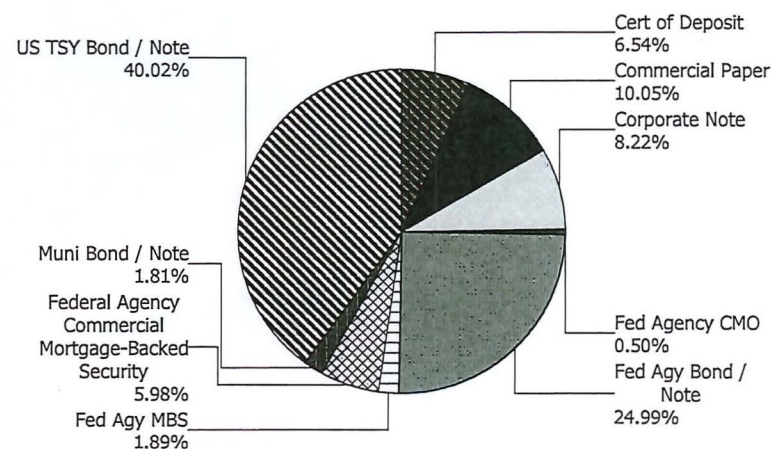
For the Month Ending **November 30, 2022**

### ACSA OPERATING FUNDS - 03100100

#### Account Summary

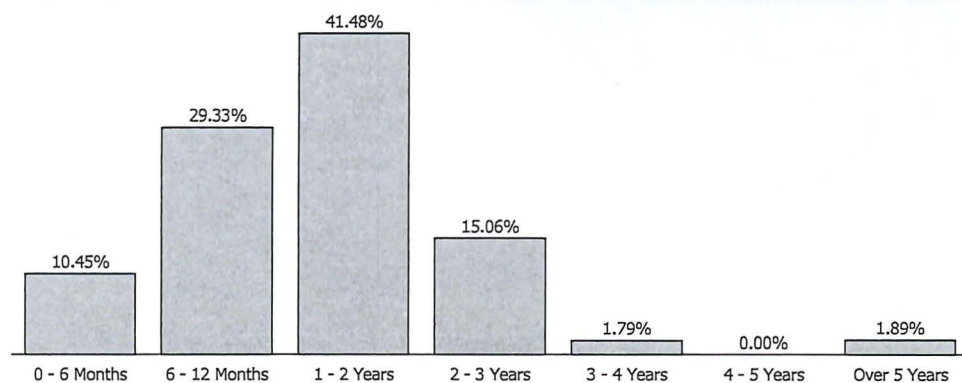
Description	Par Value	Market Value	Percent
U.S. Treasury Bond / Note	12,330,000.00	11,694,094.54	40.02
Municipal Bond / Note	550,000.00	527,421.00	1.81
Federal Agency Mortgage-Backed Security	585,601.74	551,389.93	1.89
Federal Agency Commercial Mortgage-Backed Security	1,802,427.62	1,746,736.63	5.98
Federal Agency Collateralized Mortgage Obligation	150,000.00	145,667.13	0.50
Federal Agency Bond / Note	7,510,000.00	7,298,496.42	24.99
Corporate Note	2,450,000.00	2,401,221.21	8.22
Commercial Paper	3,000,000.00	2,934,543.60	10.05
Certificate of Deposit	1,925,000.00	1,911,024.97	6.54
<b>Managed Account Sub-Total</b>	<b>30,303,029.36</b>	<b>29,210,595.43</b>	<b>100.00%</b>
Accrued Interest		106,314.18	
<b>Total Portfolio</b>	<b>30,303,029.36</b>	<b>29,316,909.61</b>	

#### Sector Allocation



Unsettled Trades **475,000.00** **477,593.43**

#### Maturity Distribution



#### Characteristics

Yield to Maturity at Cost	1.88%
Yield to Maturity at Market	4.69%
Weighted Average Days to Maturity	547

### Capacity/System Development Reserves

\$35,000,000  
\$30,000,000  
\$25,000,000  
\$20,000,000  
\$15,000,000  
\$10,000,000  
\$5,000,000  
\$0

	12/1/2021	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022
RWSA Cap. Chg. Water	8,448,240	8,328,956	8,159,835	8,149,856	8,184,552	8,187,882	8,406,217	8,383,219	8,403,965	8,398,007	8,334,609	8,474,839
RWSA Cap. Chg. WW	7,525,677	7,454,216	7,332,687	7,329,688	7,378,567	7,388,846	7,593,486	7,594,294	7,613,088	7,675,090	7,658,165	7,821,890
ACSA Dev Chg. Water	5,123,465	5,149,800	5,171,694	5,254,886	5,264,097	5,334,852	5,374,541	5,346,434	5,359,666	5,538,083	5,603,410	5,760,711
ACSA Dev Chg. WW	9,263,381	9,309,328	9,323,933	9,446,469	9,485,496	9,576,962	9,692,565	9,623,830	9,647,647	9,897,543	9,990,333	10,190,656
Total	30,360,763	30,242,299	29,988,148	30,180,900	30,312,710	30,488,542	31,066,809	30,947,777	31,024,365	31,508,723	31,586,517	32,248,095

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  
October 2022**

Area	October 2022 Monthly Connection Fees	October 2021 Monthly Connection Fees	\$ Change	% Change
Crozet	\$ 215,520	\$ 175,110	\$ 40,410	23%
Urban	918,430	175,110	743,320	424%
Scottsville	-	-	-	-
<b>Total Connection fees</b>	<b>\$ 1,133,950</b>	<b>\$ 350,220</b>	<b>\$ 783,730</b>	<b>224%</b>
<b>Through October</b>				
Area	YTD FY 2023 Connection Fees	YTD FY 2022 Connection Fees	\$ Change	% Change
Crozet	\$ 727,380	\$ 457,980	\$ 269,400	59%
Urban	2,518,175	3,138,510	(620,335)	-20%
Scottsville	-	-	-	-
<b>Total Connection fees</b>	<b>\$ 3,245,555</b>	<b>\$ 3,596,490</b>	<b>\$ (350,935)</b>	<b>-10%</b>
Area	October 2022 ERC's	October 2021 ERC's	Change	% Change
Crozet	16	13	3	23%
Urban	69	13	56	431%
Scottsville	-	-	-	-
<b>Total ERC's</b>	<b>85</b>	<b>26</b>	<b>59</b>	<b>227%</b>
<b>Through October</b>				
Area	YTD FY 2023 ERC's	YTD FY 2022 ERC's	Change	% Change
Crozet	54	34	20	59%
Urban	187	233	(46)	-20%
Scottsville	-	-	-	-
<b>Total ERC's - YTD</b>	<b>241</b>	<b>267</b>	<b>(26)</b>	<b>-10%</b>

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  
October 2022**

<b>Area</b>	<b>October 2022 ERC's</b>	<b>October 2021 ERC's</b>	<b>October 2020 ERC's</b>
<b>Crozet</b>	16	13	15
<b>Urban</b>	69	13	100
<b>Scottsville</b>	-	-	-
<b>Total ERC's</b>	85	26	115

<b>Through October</b>			
<b>Area</b>	<b>YTD 2023 ERC's</b>	<b>YTD 2022 ERC's</b>	<b>YTD 2021 ERC's</b>
<b>Crozet</b>	54	34	87
<b>Urban</b>	187	233	216
<b>Scottsville</b>	-	-	-
<b>Total ERC's - YTD</b>	241	267	303

Note: The information above presents 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  
Consumption Analysis  
Fiscal Year 2023**

	FY 2023 Consumption	FY 2022 Consumption		Monthly Precipitation (In.)	
				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		148,641,595	-100.00%		1.01
December		140,551,064	-100.00%		0.26
January		142,192,560	-100.00%		4.04
February		127,434,073	-100.00%		1.81
March		131,636,356	-100.00%		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
	624,091,569	1,793,928,984		15.55	41.62
<b>YTD</b>	624,091,569	673,221,883	-7.30%	15.55	17.62

Note: Consumption through October 2022 is 7.30% 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>.





## Water and Sewer Report

(Volumes in Gallons)

October 2022

<b>Billed by Area:</b>	<b>Water</b>	<b>Sewer</b>
Crozet	17,066,159	15,320,574
Scottsville	1,609,429	738,901
Urban	133,793,300	110,722,082
Red Hill	44,126	0
<b>Total</b>	<b>152,513,014</b>	<b>126,781,557</b>

<b>Billing by Sewer Plant:</b>	
AWT	126,042,656
less Glenmore	(4,134,436)
Urban Total	121,908,220
Scottsville	738,901
<b>Total</b>	<b>122,647,121</b>

<b>Number of Installed Meters:</b>	
Urban	45
Crozet	17
Scottsville	0
<b>Total</b>	<b>62</b>

<b>Metered Consumption (billed by invoice):</b>	
Urban	1,810,200
Crozet	1,800
Scottsville	0
<b>Total</b>	<b>1,812,000</b>

<b>Unmetered Consumption:</b>	
ACSA Fire Flow Consump.	31,138
<b>Total</b>	<b>31,138</b>

<b>Unmetered Leak Consumption:</b>	
1104 Killdeer Ln-10/18	Urban 1,000
Paddington Cr-10/21	Urban 50,000
<b>Total</b>	<b>51,000</b>

### Billed Consumption for Selected Customers

	<u>Water</u>	<u>Sewer</u>		<u>Water</u>	<u>Sewer</u>
*VA Land Holding/Starr Hill	386,137	386,137	Boar's Head Inn	627,195	602,495
Southwood Mobile Homes	1,632,960	2,060,000	Farmington, Inc.	951,483	504,616
Turtle Creek Apts.	1,234,030	1,230,530	Westgate Apts.	1,225,999	1,225,599
Barracks West Apartments	1,486,900	1,486,900	Abbingdon Crossing	1,956,537	1,956,537
Monroe Health & Rehab.	812,968	812,968	Four Seasons Apts	1,932,601	1,932,601
Sunrise Senior "Colonnades"	987,521	821,721	Ch'ville/Alb Airport	116,571	117,195
ACRJ	1,281,440	1,124,440	State Farm	185,660	148,660
Westminster Canterbury	1,537,200	1,431,200	Hyatt @ Stonefield	364,816	364,816
SEMF Charleston	1,517,208	1,517,208	Doubletree Hotel	605,506	605,506
Martha Jefferson Hospital	1,979,781	1,139,781	Arden Place Apts	432,075	432,075
Crozet Mobile Home Village	238,200	238,200	Hilton Garden Inn	274,101	229,845
Fashion Square Mall	272,171	272,171	The Blake @ Charlottesville	253,073	253,073
County of Albemarle	1,929,496	1,436,558	The Lodge @ Old Trail	248,078	248,078
University of Virginia	1,742,775	1,741,162	Gov't-Defense Complex	720,838	720,835
Wegmans	287,028	287,028	Harris Teeter Stores	152,312	152,312

\* indicates Industrial Discharge Permit Holders

**WATER**

Class Type	Number of Connections by Area			Total
	<u>Urban</u>	<u>Crozet</u>	<u>Scottsville</u>	
Single-Family Residential	15,719	3,737	196	19,652
Multi-Family Residential	554	43	3	600
Commercial (Offices)	202	12	5	219
Commercial (Other)	923	76	52	1,051
Industrial	36	10	4	50
Institutional	171	32	12	215
<b>Total Water Accounts</b>	<b>17,605</b>	<b>3,910</b>	<b>272</b>	<b>21,787</b>
<b>Plus Multiple Units</b>	<b>12,821</b>	<b>748</b>	<b>89</b>	<b>13,658</b>
<b>Total Water Units</b>	<b>30,426</b>	<b>4,658</b>	<b>361</b>	<b>35,445</b>

**SEWER**

Class Type	Number of Connections by Area			Total
	<u>Urban</u>	<u>Crozet</u>	<u>Scottsville</u>	
Single-Family Residential	13,410	3,459	158	17,027
Multi-Family Residential	523	41	4	568
Commercial (Offices)	186	12	5	203
Commercial (Other)	717	52	44	813
Industrial	15	5	1	21
Institutional	133	27	10	170
<b>Total Sewer Accounts</b>	<b>14,984</b>	<b>3,596</b>	<b>222</b>	<b>18,802</b>
<b>Plus Multiple Units</b>	<b>12,404</b>	<b>743</b>	<b>56</b>	<b>13,203</b>
<b>Total Sewer Units</b>	<b>27,388</b>	<b>4,339</b>	<b>278</b>	<b>32,005</b>

**POPULATION SERVED**

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

	<u>Urban</u>	<u>Crozet</u>	<u>Scottsville</u>	<u>Total</u>
<b>Total Water Customers</b>	71,350	11,213	713	83,275
<b>Total Sewer Customers</b>	64,535	10,505	535	75,575

Albemarle County Service Authority  
Major Customer Analysis  
October 2022 and September 2022

	October 2022		September 2022		Increase(Decrease) Water Consumption	Increase(Decrease) Sewer Usage
	Water*	Sewer*	Water*	Sewer*		
ACRJ	1,281,440	1,124,440	1,097,870	864,870	16.72%	30.01%
Four Seasons Apts.	1,932,601	1,932,601	1,675,053	1,675,053	15.38%	15.38%
SEMF Charleston	1,517,208	1,517,208	1,316,758	1,316,758	15.22%	15.22%
Abbingtion Crossing	1,956,537	1,956,537	1,741,335	1,741,335	12.36%	12.36%
Barracks West Apartments	1,486,900	1,486,900	1,355,400	1,355,400	9.70%	9.70%
County of Albemarle	1,929,496	1,436,558	1,759,864	1,401,009	9.64%	2.54%
Westmisnster Canterbury	1,537,200	1,431,200	1,487,470	1,382,470	3.34%	3.52%
Turtle Creek Apts.	1,234,030	1,230,530	1,274,538	1,266,638	-3.18%	-2.85%
Westgate Apts.	1,225,999	1,225,599	1,355,448	1,354,248	-9.55%	-9.50%
Southwood Mobile Homes	1,632,960	2,060,000	1,870,035	2,070,000	-12.68%	-0.48%
University of Virginia	1,742,775	1,741,162	2,170,440	2,168,562	-19.70%	-19.71%
Martha Jefferson Hospital	1,979,781	1,139,781	2,928,487	1,382,594	-32.40%	-17.56%

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  
October 2022 and October 2021

	October 2022		October 2021		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Four Seasons Apts.	1,932,601	1,932,601	1,568,000	1,568,000	23.25%	23.25%
County of Albemarle	1,929,496	1,436,558	1,791,345	1,429,945	7.71%	0.46%
Westgate Apts.	1,225,999	1,225,599	1,143,000	1,143,000	7.26%	7.23%
Martha Jefferson Hospital	1,979,781	1,139,781	1,898,493	995,793	4.28%	14.46%
Barracks West Apartments	1,486,900	1,486,900	1,461,000	1,461,000	1.77%	1.77%
Abbingtion Crossing	1,956,537	1,956,537	1,967,300	1,967,300	-0.55%	-0.55%
Turtle Creek Apts.	1,234,030	1,230,530	1,298,100	1,297,000	-4.94%	-5.12%
ACRJ	1,281,440	1,124,440	1,469,020	1,318,020	-12.77%	-14.69%
Westmisnster Canterbury	1,537,200	1,431,200	1,868,410	1,477,410	-17.73%	-3.13%
Southwood Mobile Homes	1,632,960	2,060,000	2,021,000	3,866,380	-19.20%	-46.72%
University of Virginia	1,742,775	1,741,162	2,228,601	2,208,500	-21.80%	-21.16%
SEMF Charleston	1,517,208	1,517,208	2,410,475	2,410,475	-37.06%	-37.06%

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 -- October**

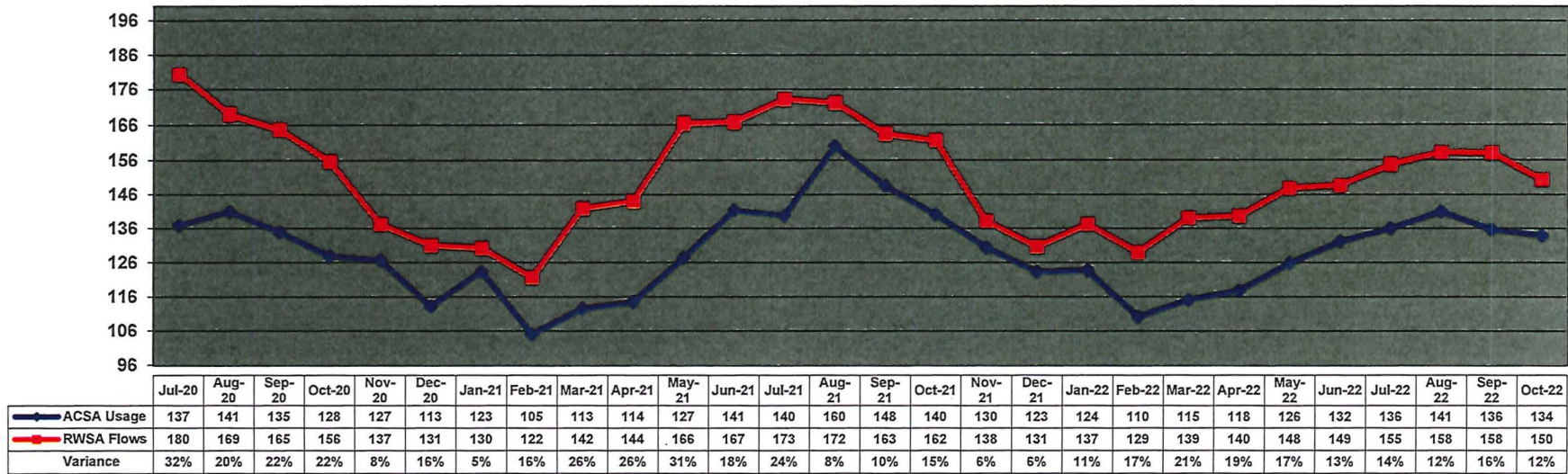
	YTD FY 2023		YTD FY 2022		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Four Seasons Apts.	6,574,927	6,574,927	6,363,000	6,363,000	3.33%	3.33%
Abbingdon Crossing	7,369,846	7,369,846	7,138,800	7,138,800	3.24%	3.24%
Barracks West Apartments	5,962,400	5,962,400	5,835,600	5,835,600	2.17%	2.17%
Martha Jefferson Hospital	9,872,818	4,228,494	9,811,111	4,327,511	0.63%	-2.29%
Westgate Apts.	5,093,870	5,088,170	5,120,000	5,111,300	-0.51%	-0.45%
Turtle Creek Apts.	4,852,251	4,827,851	5,013,100	5,008,000	-3.21%	-3.60%
Southwood Mobile Homes	7,566,995	8,630,000	8,088,000	16,316,064	-6.44%	-47.11%
Westminster Canterbury	6,366,400	5,941,400	7,578,000	6,418,000	-15.99%	-7.43%
County of Albemarle	5,788,936	4,328,813	7,001,521	4,994,721	-17.32%	-13.33%
University of Virginia	9,057,036	9,036,862	12,189,881	12,047,193	-25.70%	-24.99%
ACRJ	4,711,500	3,826,500	6,552,820	5,746,820	-28.10%	-33.42%
SEMF Charleston	5,652,449	5,652,449	9,754,250	9,754,250	-42.05%	-42.05%

**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.

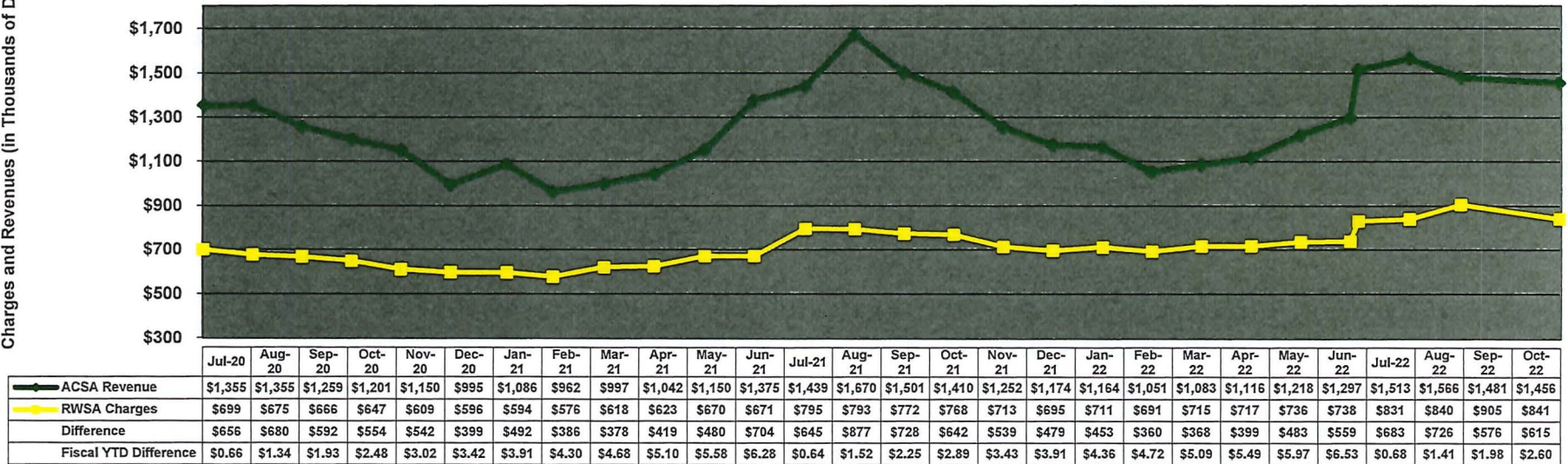
**FY 2021, 2022, and 2023 Urban Water Comparison  
RWSA Flows & ACSA Customer Usage**

Flows & Usage (in Millions of Gallons)



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

Charges and Revenues (in Thousands of Dollars)

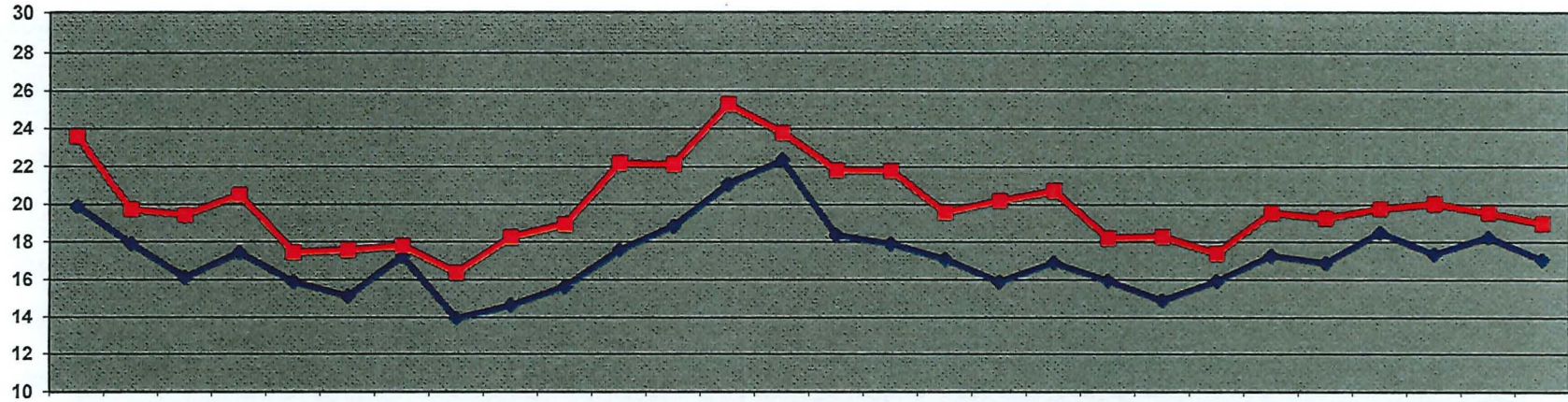


Note: Fiscal YTD Difference (ONLY) in Millions of Dollars



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

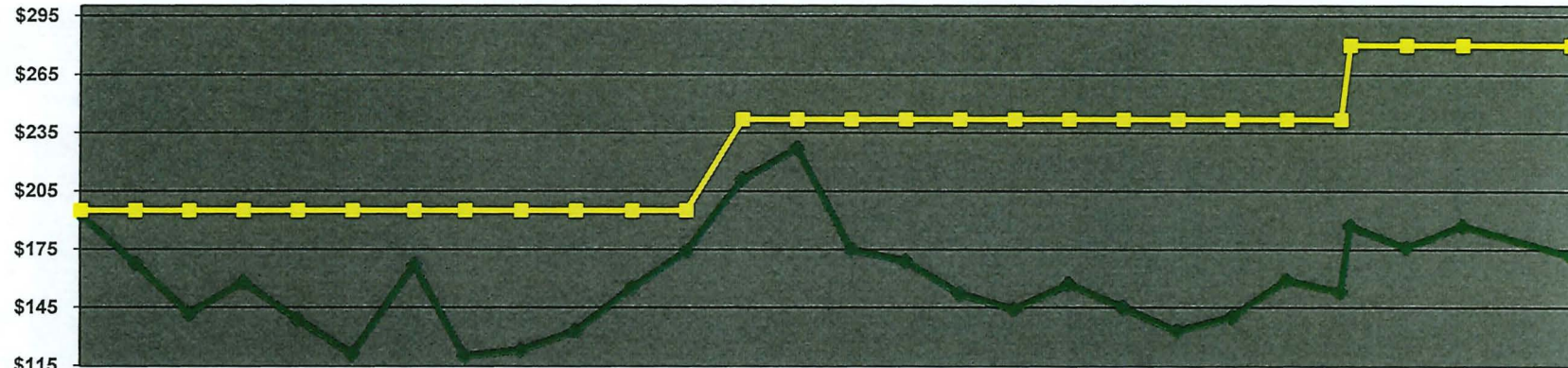
Flows & Usage (in Millions of Gallons)



	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
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
RWSA Flows	24	20	19	21	17	18	18	16	18	19	22	22	25	24	22	22	20	20	21	18	18	17	19	19	20	20	20	19
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%

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

Charges and Revenues (in Thousands of Dollars)

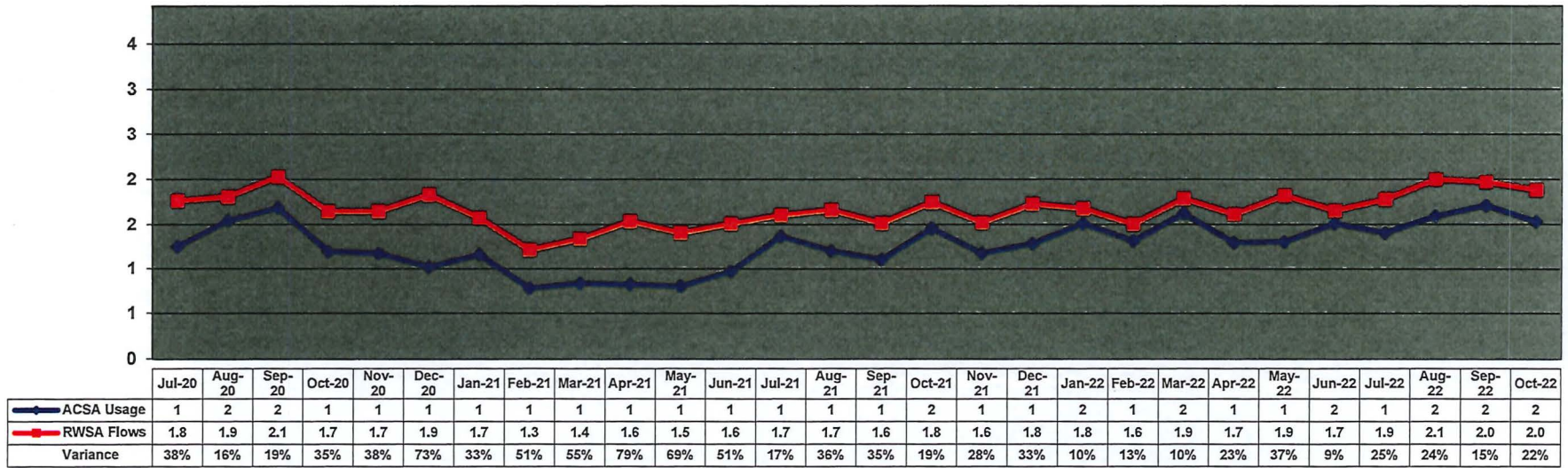


	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
ACSA Revenue	\$193	\$168	\$142	\$158	\$139	\$121	\$167	\$120	\$123	\$133	\$155	\$174	\$211	\$227	\$175	\$169	\$152	\$144	\$157	\$145	\$133	\$140	\$159	\$153	\$187	\$176	\$187	\$172
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
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)
Fiscal YTD Difference	\$0.00	-\$0.03	-\$0.05	-\$0.04	-\$0.06	-\$0.07	-\$0.03	-\$0.08	-\$0.07	-\$0.06	-\$0.04	-\$0.02	-\$0.03	(\$0.05)	(\$0.11)	(\$0.19)	(\$0.28)	(\$0.37)	(\$0.46)	(\$0.56)	(\$0.67)	(\$0.77)	(\$0.85)	(\$0.94)	(\$0.09)	(\$0.20)	(\$0.29)	(\$0.40)



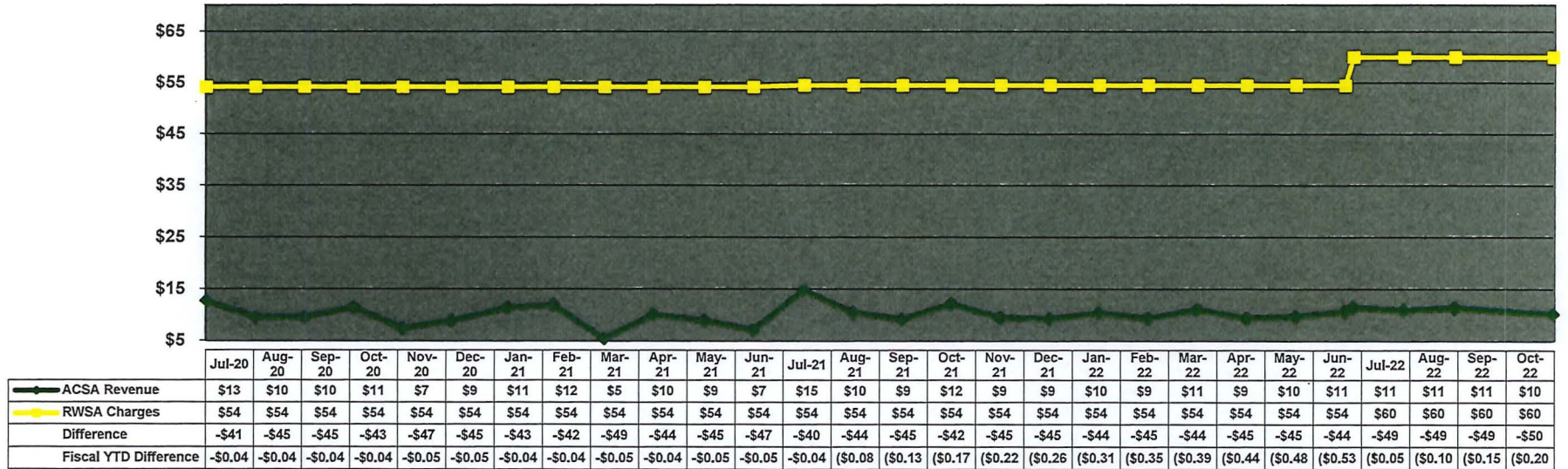
**FY 2021, 2022, and 2023 Scottsville Water Comparison  
RWSA Flows & ACSA Customer Usage**

Flows & Usage (in Millions of Gallons)



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

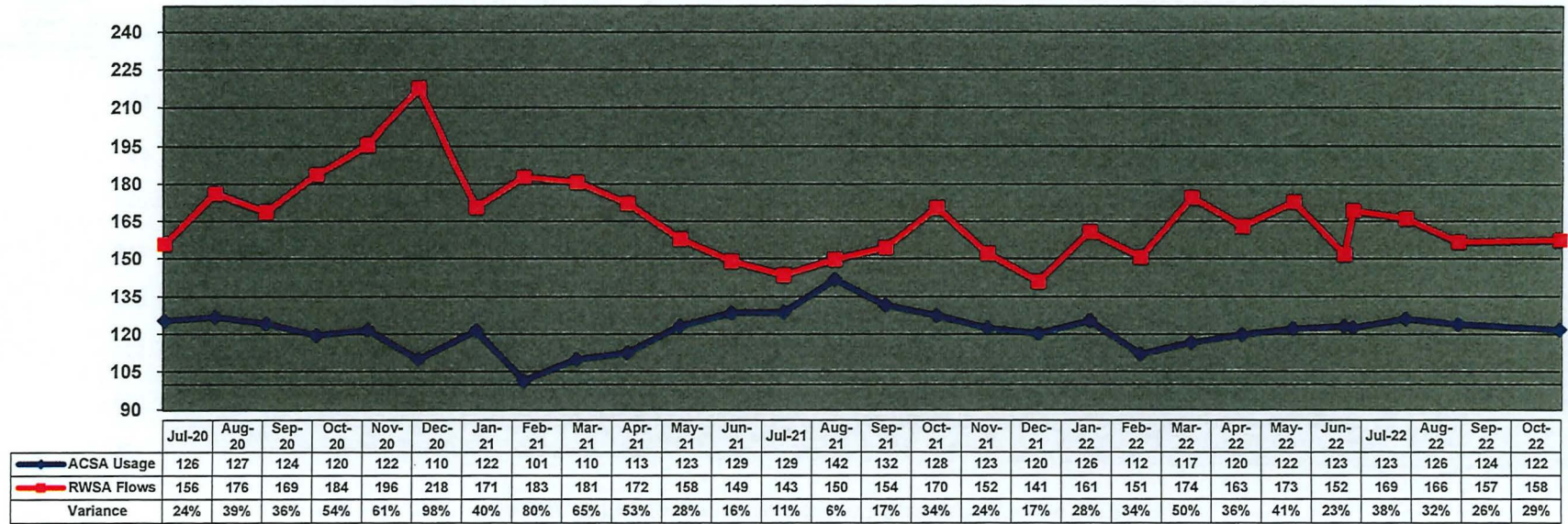
Charges and Revenues (in Thousands of Dollars)





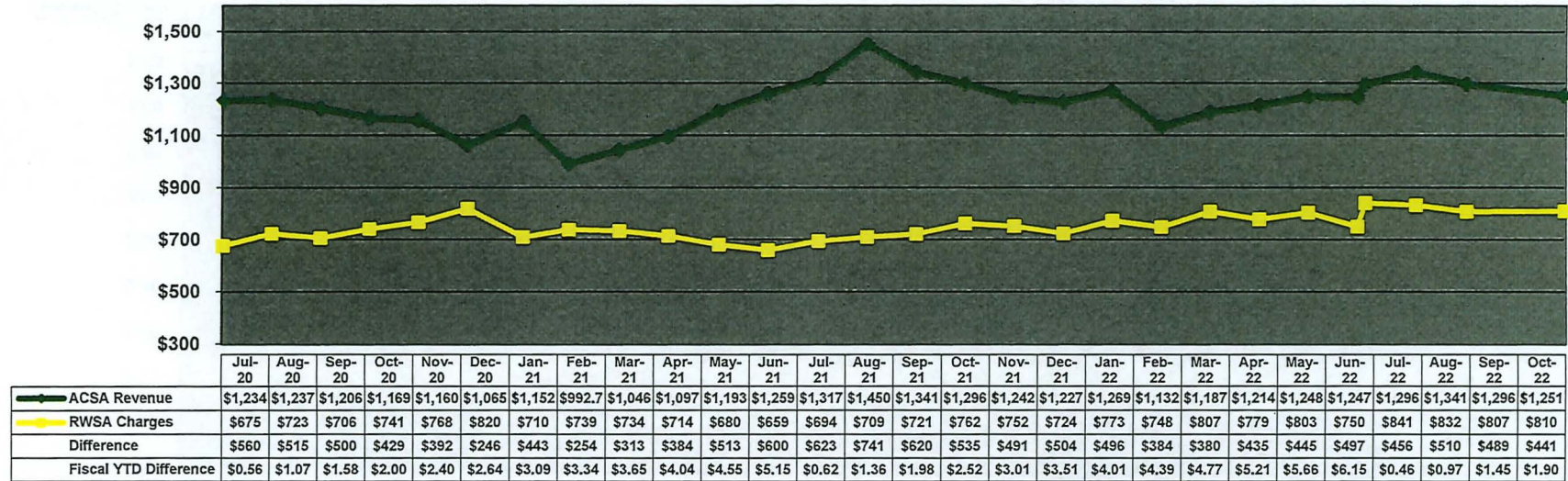
**FY 2021, 2022, and 2023 Urban (including Glenmore) & Crozet Sewer Comparison  
ACSA Customer Usage & RWSA Flows**

Usage & Flows (in Millions of Gallons)



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

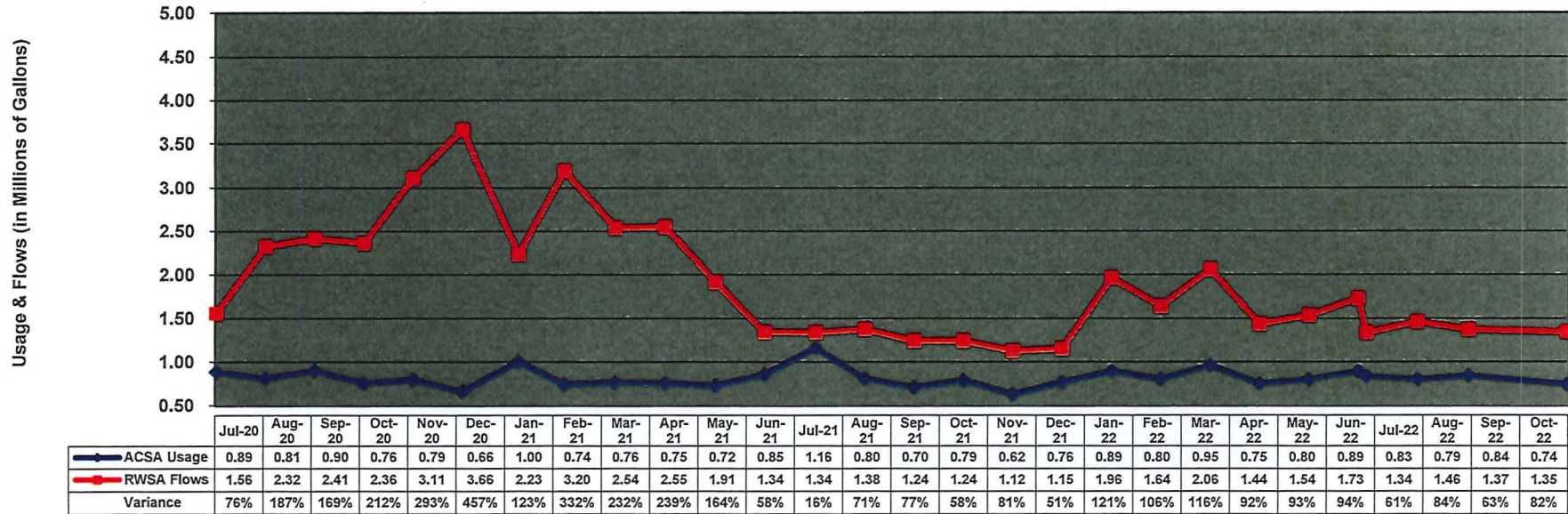
Charges & Revenues (in Thousands of Dollars)



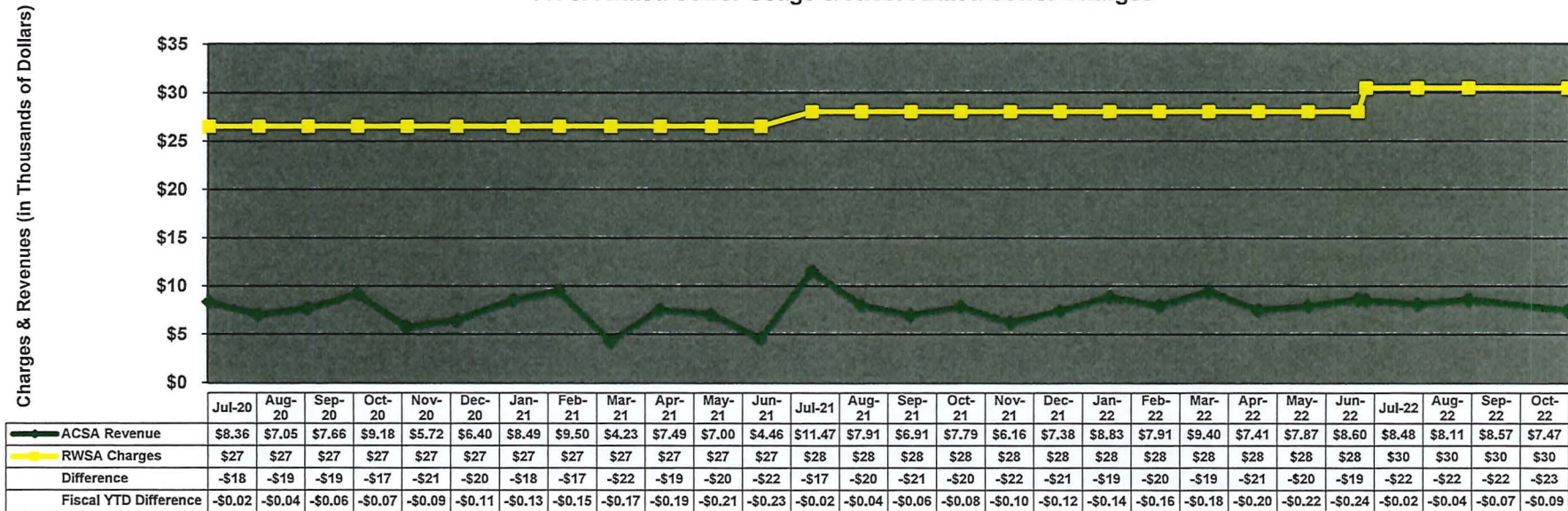
Note: Fiscal YTD Difference (ONLY) in Millions of Dollars



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



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



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
<b>Total</b>	<b>83,444,300</b>	<b>78,001,900</b>	<b>71,834,300</b>	<b>70,491,500</b>	<b>69,226,700</b>	<b>63,412,800</b>	<b>70,714,600</b>	<b>59,565,133</b>	<b>61,024,100</b>	<b>63,173,300</b>	<b>70,991,775</b>	<b>79,485,866</b>

	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
<b>Total</b>	<b>78,657,214</b>	<b>88,634,512</b>	<b>75,729,236</b>	<b>72,548,592</b>	<b>68,412,866</b>	<b>66,103,699</b>	<b>66,819,580</b>	<b>62,038,239</b>	<b>60,920,931</b>	<b>62,397,638</b>	<b>69,403,612</b>	<b>72,259,028</b>

	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								
Level 2 (3,001 - 6,000 gallons)	16,363,636	15,612,084	15,525,446	15,374,370								
Level 3 (6,001 - 9,000 gallons)	4,849,724	4,363,645	4,161,371	4,369,132								
Level 4 (over 9,000 gallons)	7,208,522	6,639,465	6,037,842	6,071,945								
<b>Total</b>	<b>74,021,793</b>	<b>72,120,276</b>	<b>71,357,008</b>	<b>71,172,590</b>	-	-	-	-	-	-	-	-

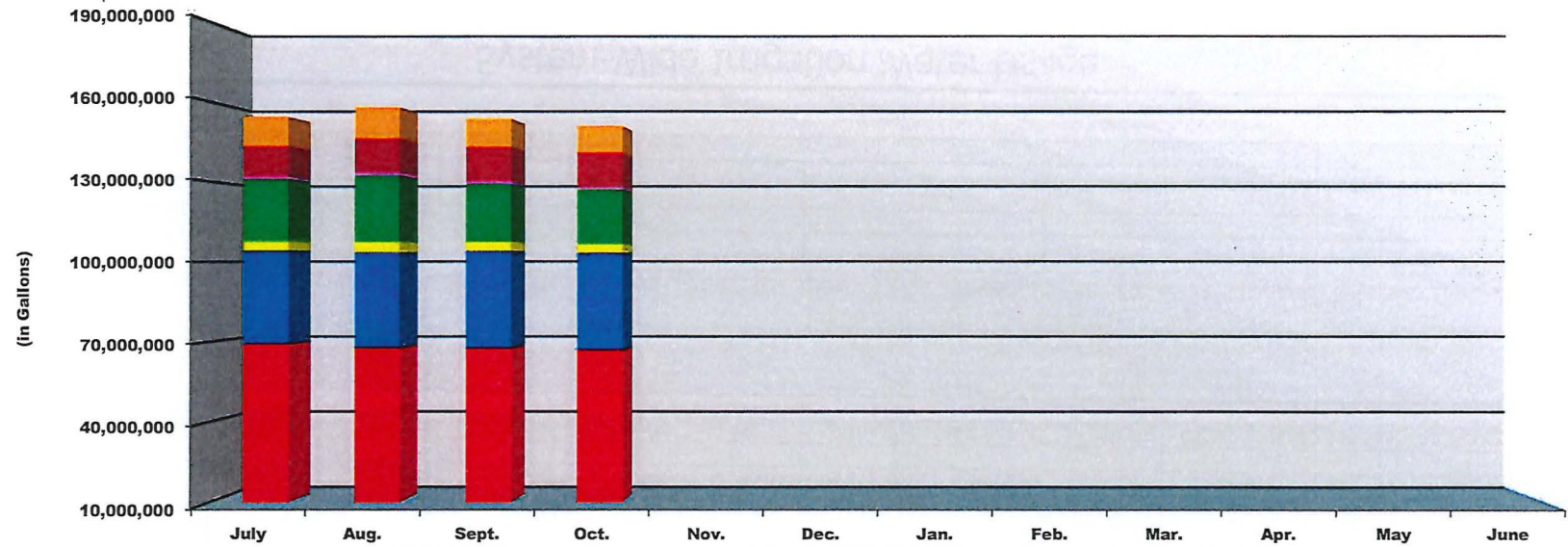
## System-Wide Irrigation Water Usage

(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								
Level 2 (3,001 - 6,000 gallons)	827,558	825,362	768,256	786,824								
Level 3 (6,001 - 9,000 gallons)	990,172	970,507	887,729	916,873								
Level 4 (over 9,000 gallons)	9,170,743	9,922,557	8,931,018	8,221,764								
<b>Total</b>	<b>11,175,137</b>	<b>11,900,819</b>	<b>10,767,652</b>	<b>10,097,825</b>	-	-	-	-	-	-	-	-

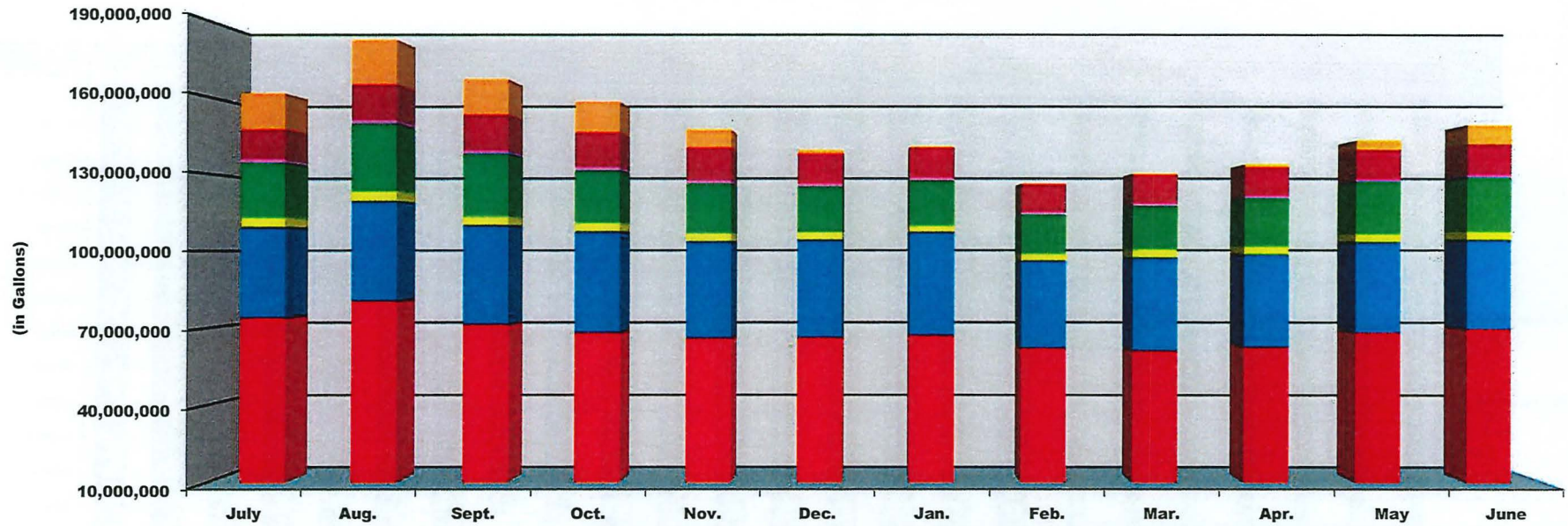


Monthly Water Consumption Fiscal Year 2023

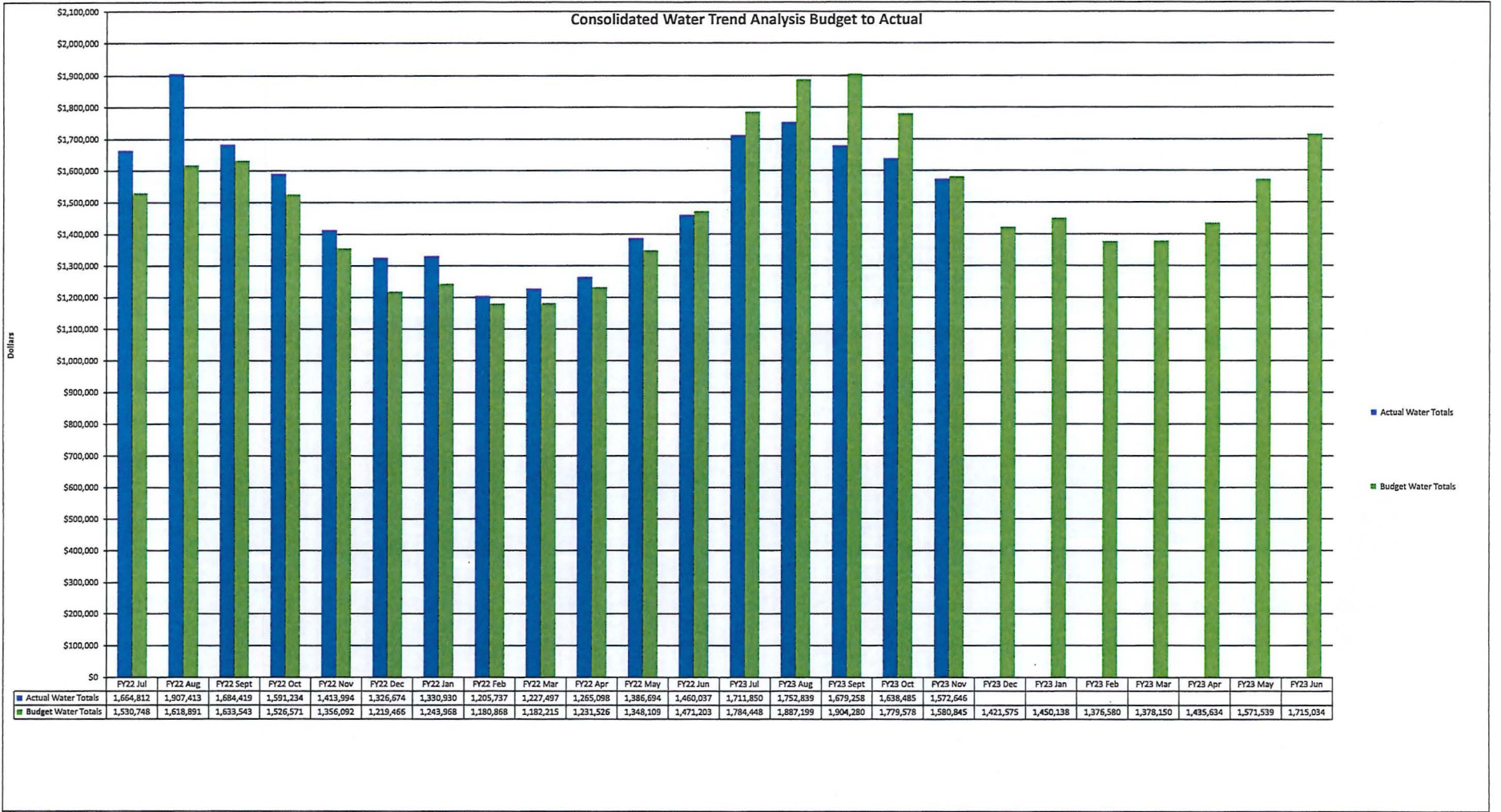


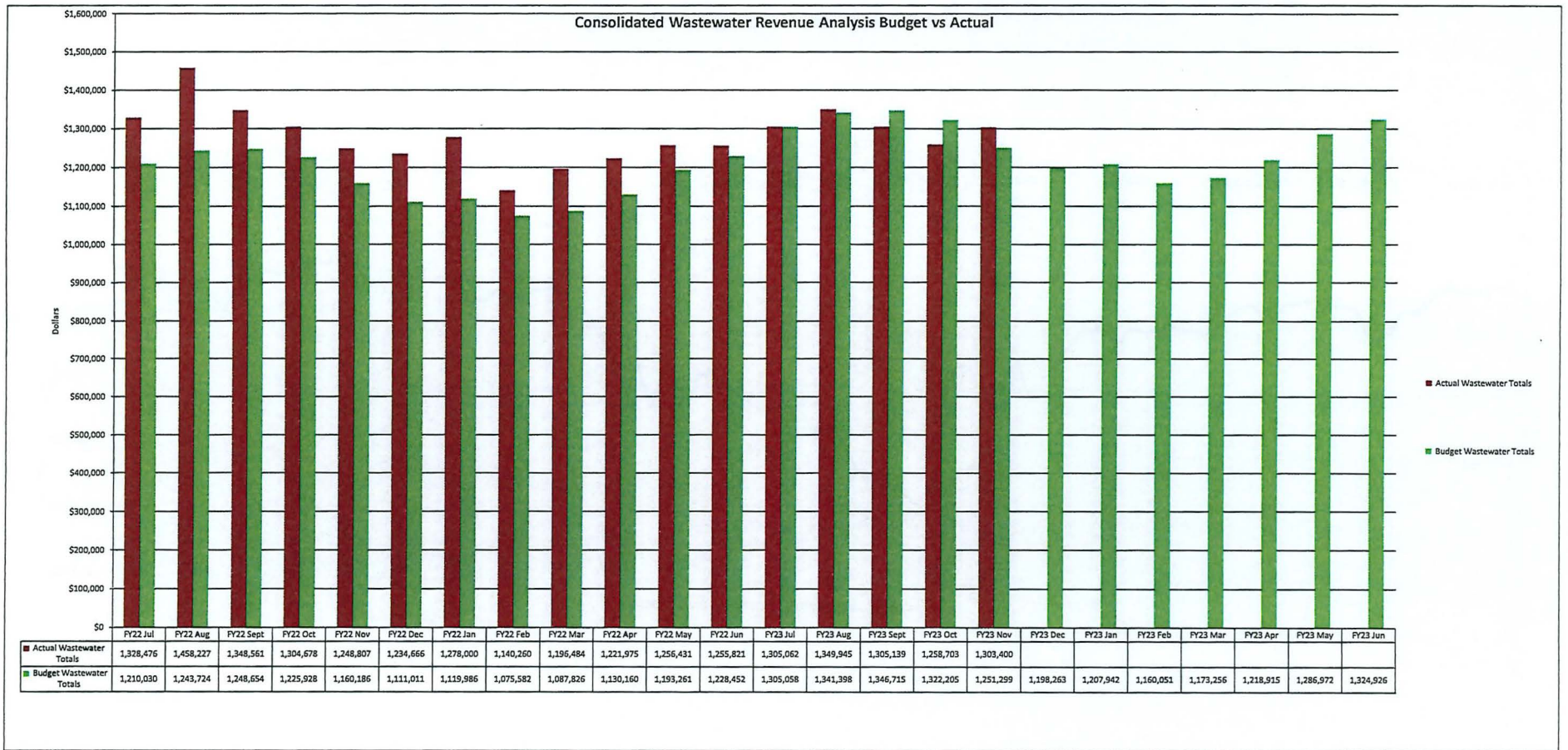
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	7.24%	7.54%	7.02%	6.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Irrigation	11,175,137	11,900,819	10,767,652	10,097,825								
Institutional - Domestic Consumption	11,319,291	12,674,993	12,747,929	12,683,947								
Industrial	939,061	1,164,077	948,893	933,427								
Comm. (Other) - Domestic Consumption	23,118,746	24,680,610	21,554,311	20,295,040								
Offices - Domestic Consumption	3,674,283	4,083,421	3,700,076	3,470,304								
MFR - Domestic Consumption	34,974,805	35,804,051	36,296,110	36,410,800								
SFR - Domestic Consumption	69,126,793	67,577,187	67,479,481	66,746,613								

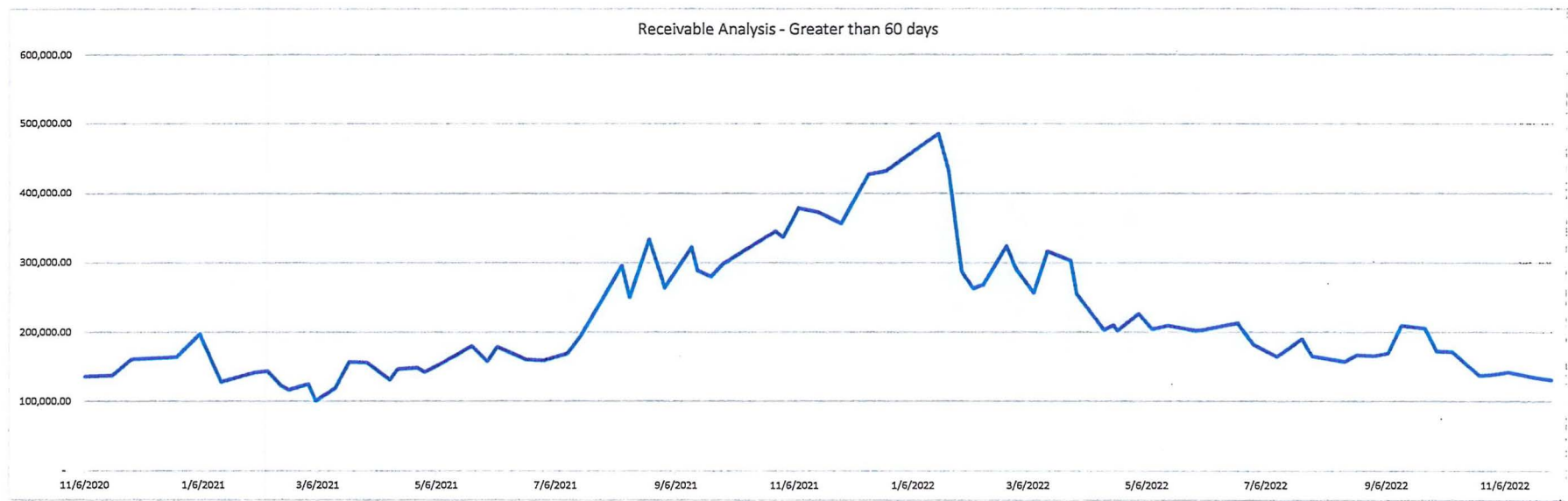
Monthly Water Consumption Fiscal Year 2022











**Albemarle County Service Authority  
November 2022 Payments**

CHECK NUMBER	CHECK DATE	VENDOR NAME	AMOUNT	DESCRIPTION OF ITEMS OVER \$5,000
Wire	11/10/2022	Rivanna Water & Sewer Authority	2,021,264.89	Monthly Water & Wastewater Service
64009	11/15/2022	Commonwealth Excavating Inc	327,472.60	Jefferson Village WMRP - Construction October 22
64016	11/15/2022	Daly Computers Incorporated	247,706.00	Security System Expansion Project
ACH	11/15/2022	Payroll	160,854.41	Net Pay
ACH	11/30/2022	Payroll	159,385.98	Net Pay
64020	11/15/2022	Dewberry Engineers Incorporated	79,176.50	Avon Property PH1 Dev. & PH2 Amend. thru 9/30/22
64039	11/15/2022	Michael Baker International Incorporated	72,970.31	Bellair - Liberty Hills Sewer 8/29-10/2/22 and various
228470169	11/15/2022	IRS - Federal Tax Deposit	65,001.52	Payroll
228470179	11/30/2022	IRS - Federal Tax Deposit	60,564.00	Payroll
Wire	11/21/2022	The Bank of New York Mellon	49,081.78	Debt Service
228470178	11/30/2022	County of Albemarle	37,496.96	Payroll
228470168	11/30/2022	County of Albemarle	34,719.41	Payroll
64011	11/15/2022	Core & Main LP	32,276.27	Inventory - Meter purchase
228470175	11/30/2022	Virginia Retirement System	30,997.54	Payroll
228470165	11/30/2022	Virginia Retirement System	30,945.44	Payroll
64049	11/15/2022	Rooterman of VA	23,100.00	Wet Well Cleaning Yearly Contract
64088	11/30/2022	Daly Computers Incorporated	19,635.00	O365 Business Premium and Server 2022 Standard
228470167	11/15/2022	Valic	18,620.00	Payroll
64126	11/30/2022	Paymentus Corporation	17,882.01	Transaction Fees for October 22
64072	11/15/2022	Harris Systems USA Incorporated	15,172.84	Annual Hosting/Licensing Forms
64045	11/15/2022	Prism Contractors	13,818.45	FY 2021 Misc Sanitary Sewer Rehab 10/1-25/22
64099	11/30/2022	Fore Mallside Forest LP	13,000.00	Refund Acct #04401730-01
228470170	11/15/2022	Virginia Dept of Taxation	11,141.00	Payroll
228470180	11/30/2022	Virginia Dept of Taxation	10,728.35	Payroll
64064	11/15/2022	Verizon Wireless Services LLC	8,005.90	Monthly Cellular Service
63995	11/15/2022	Bank of America	7,744.55	Supplies, Memberships, Tools, Travel, Software
63998	11/15/2022	Brown, Edwards & Company LLP	5,800.00	FY 2022 Financial Statement and Compliance Audit
64138	11/30/2022	St John Bowling & Lawrence PLC	5,790.00	Legal services for October 2022
64021	11/15/2022	Dominion Energy Virginia	5,458.84	Monthly Energy Service
64132	11/30/2022	RSG Landscaping LLC	5,142.19	Landscaping - November 2022
64095	11/30/2022	EWT Holdings III Corporation	4,692.00	
228470177	11/30/2022	Valic	4,630.00	
64022	11/15/2022	Evoqua Water Technologies LLC	4,301.00	
64093	11/30/2022	E Source Companies LLC	4,000.00	
64094	11/30/2022	Ed's Floor Care Services LLC	3,703.33	
64067	11/15/2022	Whitman, Requardt & Assoc LLP	3,509.90	
64066	11/15/2022	WaterPIO	3,500.00	
63992	11/15/2022	Allison Partners	3,285.00	
64113	11/30/2022	Mansfield Oil Company of Gainesville, Inc.	3,167.47	
228470164	11/15/2022	Nationwide	3,132.15	
228470174	11/30/2022	Nationwide	3,132.15	
64044	11/15/2022	PFM Asset Management LLC	2,884.12	
64024	11/15/2022	Ferguson Enterprises LLC #1300	2,777.54	
64052	11/15/2022	Gregory B Saathoff	2,769.68	
64059	11/15/2022	Truck Enterprises Incorporated	2,527.68	
228470173	11/30/2022	ICMA Membership Renewals	2,513.31	
64034	11/15/2022	Lowe's	2,158.35	
65163	11/30/2022	Minnesota Life Insurance Co	2,049.65	
64035	11/15/2022	Luck Stone Corporation	1,937.29	
64065	11/15/2022	Virginia Utility Protection	1,831.20	
65159	11/30/2022	Guardian	1,827.81	
228470163	11/15/2022	ICMA Membership Renewals	1,808.69	
64145	11/30/2022	UniFirst Corporation	1,759.82	
228470171	11/15/2022	Flexible Benefit Administrators, Inc	1,699.75	
228470181	11/30/2022	Flexible Benefit	1,699.75	
228470172	11/15/2022	ACSA Flexible Spending	1,658.72	
228470182	11/30/2022	ACSA Flexible Spending	1,658.72	
64100	11/30/2022	Fortiline Incorporated	1,600.00	
64013	11/15/2022	County of Albemarle	1,591.20	
64048	11/15/2022	Rivanna Water & Sewer Authority	1,532.58	

64050	11/15/2022	S L Williamson Company Inc	1,426.86
64041	11/15/2022	Ramboll Americas Engineering	1,389.00
64127	11/30/2022	Rappahannock Electric Cooperative	1,376.99
64060	11/15/2022	Tyler Technologies Incorporated	1,304.00
64001	11/15/2022	Campbell Equipment Inc	1,275.96
64092	11/30/2022	Dominion Energy Virginia	1,261.85
64040	11/15/2022	Richard Nelson	1,233.74
64028	11/15/2022	ICMA Membership Renewals	1,200.00
64074	11/30/2022	Advance Stores Company Inc	1,176.53
64128	11/30/2022	Red Bud Supply Incorporated	1,149.94
64032	11/15/2022	John Deere Financial	1,109.84
64051	11/15/2022	Southwest Distributors LLC	1,088.40
64036	11/15/2022	Mailing Services of Virginia	978.70
64142	11/30/2022	Tidewater Fleet Supply	962.56
64096	11/30/2022	Ferguson US Holdings Inc	943.21
64062	11/15/2022	UniFirst Corporation	940.86
64139	11/30/2022	Stanley Martin	835.20
64010	11/15/2022	Consolidated Pipe & Supply	780.00
228470166	11/30/2022	AFLAC	772.26
228470176	11/30/2022	AFLAC	772.26
65154	11/30/2022	ACAC	752.00
64079	11/30/2022	Atlantic Emergency	751.80
64033	11/15/2022	LB Technology Incorporated	687.50
64000	11/15/2022	Carrie Brzezinski	686.88
63991	11/15/2022	Albemarle Lock & Safe Company	684.00
64083	11/30/2022	BRC Enterprises Incorporated	675.00
65161	11/30/2022	Herbert Beskin Trustee	669.00
64135	11/30/2022	Safeware Incorporated	654.07
64144	11/30/2022	Tyler Technologies Incorporated	652.00
64149	11/30/2022	VACORP	599.19
63990	11/15/2022	Advance Auto Parts	597.72
64054	11/15/2022	Snow's Garden Center	567.90
64106	11/30/2022	Hathaway Solutions LLC	550.54
64047	11/15/2022	Rivanna Solid Waste Authority	543.00
64141	11/30/2022	TSRC Incorporated	531.89
64014	11/15/2022	Crown Communication LLC	530.45
64007	11/15/2022	C.E.S (City Electric Accounts - Chi)	505.59
64117	11/30/2022	Moore's Electrical & Mechanical	476.25
64068	11/15/2022	Cincinnati Insurance Company	463.74
65158	11/30/2022	Cincinnati Insurance Company	463.74
64073	11/15/2022	Whitley Brown	448.55
64086	11/30/2022	Comcast	443.83
64070	11/15/2022	Treasurer of Virginia	430.90
65167	11/30/2022	Treasurer of Virginia	430.90
64152	11/30/2022	William A Wells	420.00
64046	11/15/2022	Red Wing Business Advantage Account	400.00
64129	11/30/2022	Red Wing Business Advantage Account	400.00
63994	11/15/2022	Bailey Printing Incorporated	376.00
64077	11/30/2022	Appalachian Power	363.43
64146	11/30/2022	United Rentals (North	361.53
64134	11/30/2022	S L Williamson Company Inc	351.78
64055	11/15/2022	Syn-Tech Systems	350.00
64053	11/15/2022	Shade Equipment Company Inc	342.00
64038	11/15/2022	Mayer Electric Supply	329.09
64061	11/15/2022	U. S. Bank	291.67
64143	11/30/2022	The Artina Group	290.99
65164	11/30/2022	Piedmont Family YMCA	279.90
64031	11/15/2022	Jim Price Chevrolet	276.73
64130	11/30/2022	Ricoh USA Incorporated	275.00
64115	11/30/2022	Mayer Electric Supply	273.67
64004	11/15/2022	Central Battery Specialist	265.94
64027	11/15/2022	Hathaway Solutions LLC	252.96
64098	11/30/2022	Flora Pettit PC	245.00
64112	11/30/2022	Malloy Ford	219.95



64043	11/15/2022	Tom Farist	200.00
64122	11/30/2022	Grace Hutcheson	200.00
65165	11/30/2022	Snap Fitness	199.80
64107	11/30/2022	Hawkins-Graves Inc.	199.02
64150	11/30/2022	Protocol SSD Corporation	195.54
64069	11/15/2022	Lendmark Financial Services	192.28
65162	11/30/2022	Lendmark Financial Services	192.27
64102	11/30/2022	Gingerich Outdoor Power Spec	185.47
64081	11/30/2022	Grace R Bull	180.04
64147	11/30/2022	University Tire & Auto	171.37
64029	11/15/2022	James River Communications Inc	159.00
64057	11/15/2022	The Supply Room	156.42
64071	11/15/2022	Virginia Department	150.00
65168	11/30/2022	Virginia Department	150.00
64131	11/30/2022	Bryce Rosenberg	142.64
63999	11/15/2022	Jennifer A Bryant	134.63
65169	11/30/2022	Travis Blount-Elliott	131.46
65160	11/30/2022	The Gym	130.00
63993	11/15/2022	American Pest Incorporated	118.00
64025	11/15/2022	Flexible Benefit Administrators, Inc	114.00
64108	11/30/2022	Taylor Hong	106.60
64019	11/15/2022	Deanna Davenport	102.25
64121	11/30/2022	Brett Nicol	101.23
64123	11/30/2022	Paul Anama	100.00
64124	11/30/2022	Rita Pew	100.00
64125	11/30/2022	Tamara Holleman	100.00
64118	11/30/2022	Lorena Morse	95.51
64075	11/30/2022	Carsons LLC	91.98
64140	11/30/2022	Macro Retailing LLC	85.49
64101	11/30/2022	James Gillespie	85.17
64082	11/30/2022	MWP Supply Incorporated	84.51
64056	11/15/2022	Tencarva Machinery Company	83.55
64119	11/30/2022	Culpeper Auto Parts Incorporated	83.26
64084	11/30/2022	C.E.S (City Electric Accounts - Chi)	82.95
63997	11/15/2022	Blue Ridge Farmers Co-op	81.98
64120	11/30/2022	Kathryn Neeley	75.33
64015	11/15/2022	Crozet Hardware Co., Inc.	75.20
64076	11/30/2022	Albemarle Lock & Safe Company	73.50
64148	11/30/2022	UVA-WorkMed	70.00
64091	11/30/2022	Document Destruction of	69.95
64087	11/30/2022	Anthony Contrada	69.59
64026	11/15/2022	The Gym	65.00
64105	11/30/2022	Hasbrouck Management	52.62
64030	11/15/2022	MyFleetCenter.com	49.00
64109	11/30/2022	Wisconsin Quick Lube Inc	49.00
64006	11/15/2022	Charlottesville Sanitary	47.80
64136	11/30/2022	The Sherwin-Williams Company	45.39
64037	11/15/2022	Martin Hardware Company Inc	44.95
64080	11/30/2022	Elizabeth Bolin	41.55
64097	11/30/2022	Flexible Benefit Administrators, Inc	41.25
65155	11/30/2022	Anytime Fitness-Pantops	40.00
65156	11/30/2022	Anytime Fitness-Ruckersville	40.00
65157	11/30/2022	Anytime Fitness - Zion VA	40.00
65166	11/30/2022	Snap Fitness Hollymead	39.96
64153	11/30/2022	Woodlands of Charlottesville	38.40
64090	11/30/2022	Marijke de la Motte	36.59
64005	11/15/2022	Central Virginia Electric Cooperative	33.40
64042	11/15/2022	Thomas Crawford	30.00
64063	11/15/2022	University Tire & Auto	30.00
64137	11/30/2022	Specialty Fasteners of	26.72
64103	11/30/2022	Helen Godwin	26.27
64003	11/15/2022	Carrier-Oehler Company	26.25
64114	11/30/2022	Martin Hardware Company Inc	22.74
63996	11/15/2022	Richard Bizzell	22.28



64008	11/15/2022	City of Charlottesville	21.15
64110	11/30/2022	Price Chevrolet Company	20.00
64104	11/30/2022	David Granville	19.55
64085	11/30/2022	City of Charlottesville	16.72
64012	11/15/2022	County of Albemarle	13.92
64023	11/15/2022	FedEx	12.09
64111	11/30/2022	Eva L. Knight	10.97
64151	11/30/2022	Helen Williamson	10.97
64133	11/30/2022	Ryan Homes	10.79
64078	11/30/2022	Barbara Armstrong	9.45
64089	11/30/2022	Darian Cochran	9.45
64116	11/30/2022	Stephen McLean	9.45
64002	11/15/2022	Cardinal Home Center	8.03
64058	11/15/2022	Thryv Incorporated	6.59

3,718,620.13

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> FY 2023 Capital Improvement Program (CIP)  <b>STAFF CONTACT(S)/PREPARER:</b> Jeremy M. Lynn, P.E., Director of Engineering	<b>AGENDA DATE:</b> December 15, 2022  <b>CONSENT AGENDA:</b>  <b>ACTION:</b> ■ <b>INFORMATION:</b> ■  <b>ATTACHMENTS:</b> YES
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**BACKGROUND:** Monthly CIP Memo including a status report on active CIP Projects, changes to the CIP Schedule, the revised CIP Schedule, and a list of Active Private Development Projects.

**DISCUSSION:**

- Questions about the status of active CIP Projects.
- Schedule changes to four projects.

**BUDGET IMPACT:** None.

**RECOMMENDATIONS:** None.

**BOARD ACTION REQUESTED:** Approval of the Consent Agenda.

**ATTACHMENTS:**

- Monthly CIP Report
- List of CIP schedule changes
- Revised CIP Schedule
- List of Active Private Development Projects

**Albemarle County Service Authority (ACSA)**  
**Capital Improvement Project Report**  
**December 2022**

**a) Risk Assessment Improvements Phase 1 (Account Code 1621):**

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Construction
Percent Complete:	0%
Contractor:	Harrisonburg Construction Co., Inc. (HCC)
Construction Start:	November 2022
Completion:	April 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.

**12/5/2022:** The Notice to Proceed date of November 21, 2022 has been established and HCC is currently working through the submittal process. HCC has begun some minor site work at the Ashcroft Upper Tank.

**b) Energy Audit (Account Code 1625):**

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.

**12/5/2022:** Comments on the Draft Report have been provided to Ramboll.

**c) Avon Street Maintenance Yard (Account Code 1622):**

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	75%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2024
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.

**12/5/2022:** The County's contractor completed the sidewalk installation along the frontage of ACSA's property without installing the stormwater pipe stub-out as discussed. This will require the removal of a section of sidewalk to install the storm pipe during construction of our project.

**d) Four-Story Backflow Prevention Device Retrofit (Account Code 1765):**

Consultant:	ACSA/Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined

Construction Start:	2022
Completion:	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) assemblies on the domestic water service line to high rise structures, defined as four (4) or more stories.

**12/5/2022: The Request for Proposals for Phase 1 is currently being advertised and pricing must be submitted by December 21, 2022. A report on the Four-Story Backflow Prevention Retrofit is included on this month's Board Meeting agenda.**

**e) Scottsville Phase 4 Water Main Replacement (Account Code 1758):**

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. The design will begin in FY 2019 and carry over into FY 2020. Construction is not anticipated to begin until FY 2025.

**11/7/2022: The SWPPP and VSMP application has been submitted to the County for review. The 90% Design Documents are currently under review by ACSA staff. Easement plat preparation is also underway.**

**f) 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:	\$520,911

**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.

**12/5/2022:** ACSA staff is working to obtain the final easement; to date 17 of 18 easements required for construction have been obtained.

**g) 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:	2023
Completion:	2023
Total Budget:	\$951,400
Appropriated Funds:	\$124,975

**Project Description** - This project will replace the oldest active water main remaining in our system, which was part of the water main that served customers out Reservoir Road. This cast iron pipe is over 90 years old and is severely tuberculated, which greatly reduces the flow capacity in this section.

**12/5/2022:** VDOT recently advised that the Morey Creek Bridge Replacement Project is no longer active as funding is not available to proceed with construction. ACSA staff is exploring other feasible

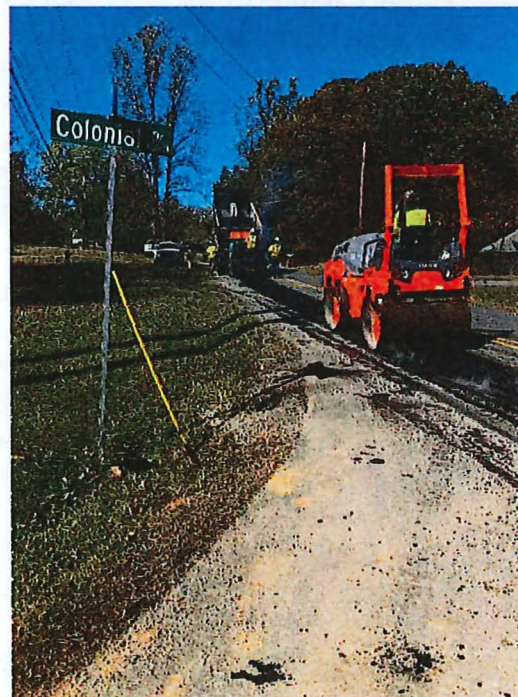
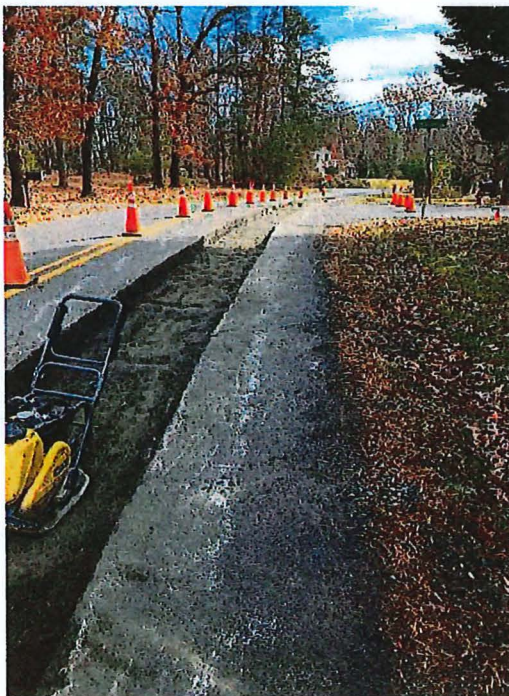
alternatives with Dewberry as the current water main replacement design was dependent on this bridge work.

**h) Jefferson Village Water Main Replacement (Account Code 1747):**

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Construction
Percent Complete:	65%
Contractor:	Commonwealth Excavating, Inc. (CEI)
Construction Start:	August 2022
Completion:	April 2023
Total Budget:	\$2,451,000
Appropriated Funds:	\$1,614,340

**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 49 years old and have reached the end of their useful life. As a former well system that was connected to public water, many of the mains are also undersized.

**12/5/2022:** CEI has completed the installation of all water mains and is currently in the process of transferring water services over to the new mains.





**i) Northfields Water Main Replacement (Account Code 1764):**

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2027
Total Budget:	\$8,130,000
Appropriated Funds:	\$598,497

**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.

11/7/2022: The Letter of Agreement for the additional pavement restoration associated with geotechnical borings has been sent to Ramboll.

**j) Briarwood Water Main Replacement (Account Code 1766):**

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2026
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. The design phase has been initiated and will carry over into FY 2023. Construction is expected to take place in FY 2025 and FY 2026.

5/10/2022: Comments on the 50% design documents have been returned to Ramboll for the preparation of the 90% design.

**k) Barracks West Water Main Replacement (Account Code 1796):**

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	50%



Contractor:	Undetermined
Construction Start:	2025
Completion:	2026
Total Budget:	\$3,385,000
Appropriated Funds:	\$209,335

**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.

**12/5/2022:** ACSA staff met with the owner's representative in November and no concerns were identified. Dewberry has begun preparation of the 90% Design Drawings and identification of the boring and test hole locations.

**l) Broadway Street Water Main Replacement (Account Code 1768):**

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2023
Total Budget:	\$792,800
Appropriated Funds:	\$99,820

**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.

**12/5/2022:** Comments on the 90% Design Documents have been returned to WRA.

**m) Raintree and Fieldbrook Water Main Replacement (Account Code 1771):**

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	25%

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.

9/7/2022: Baker has received the field survey information and is working on the 50% Design Documents.

**n) 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 is in need of 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.

9/7/2022: ACSA staff continues to make efforts to obtain the necessary easements for construction of this replacement sewer. To date, 7 of 24 easements have been obtained.

**o) Biscuit Run Sewer Replacement (Account Code 1830):**

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	100%

Contractor:	Linco, Inc. (Linco)
Construction Start:	2022
Completion:	2023
Total Budget:	\$479,600
Appropriated Funds:	\$84,916

**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.

**12/5/2022:** Approval from DEQ has been received, allowing construction to begin. ACSA staff is awaiting a schedule from Linco.

**p) FY 2021 Miscellaneous Sewer Rehabilitation (Account Code 1904):**

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	95%
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2020
Completion:	December 2022
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 doesn't 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.

11/7/2022: Prism has completed the relining and manhole rehabilitation work associated with Work Order No. 6.

**q) FY 2022 Miscellaneous Sewer Rehabilitation (Account Code 1906):**

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction

Percent Complete:	Underway
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2021
Completion:	January 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 doesn’t 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.

11/7/2022: Work Order No. 3 has been issued and includes manhole rehabilitation and the relining of approximately 2,000 linear feet of sanitary sewer mains.

**r) Bellair – Liberty Hills Sewer (Account Code 1829):**

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, a majority of the property owners are interested in connecting to public sewer if it was made available.

10/10/2022: Baker has submitted the 50% Design Documents and they are currently under review by ACSA staff.

s) **Madison Park Pump Station Upgrade (Account Code 1735):**

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 33 years ago 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.

11/7/2022: The Notice to Proceed was issued on October 17, 2022. ACI is working on submittals, but long lead times for some critical items are anticipated.

t) **Sewer Pump Station Comminutors (Account Code 1827):**

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	0%
Contractor:	East Coast Utility Contractors, Ltd. (ECUC)
Construction Start:	July 2022
Completion:	March 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.

**12/5/2022: ECUC anticipates receipt of the grinders towards the end of January 2023. ECUC will mobilize to the sites in early January to begin preparations for grinder deliveries and installations.**

**u) Lewis Hill – West Leigh Water Connection (Account Code 1754):**

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.

11/7/2022: The ACSA has prepared and presented a financial compensation offer to the HOA for their consideration.

**v) 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. It is anticipated all the work will be coordinated in-house by Maintenance Department personnel.

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

w) **Briarwood Pump Station Generator (Account Code 1767):**

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	95%
Contractor:	ACSA Maintenance Department
Construction Start:	October 2021
Completion:	November 2022
Total Budget:	\$54,100
Appropriated Funds:	\$54,100

**Project Description** - This wastewater pump station was constructed in 1995 by private development and didn't include a permanent generator. In an effort to reduce risk and increase resiliency at the station, Maintenance identified the need to install a generator at this site to avoid deployment of one of our portable generators.

**12/5/2022:** Generator start-up and testing is complete, and the generator is now active and ready to provide back-up power as needed. Other than one warranty punch-list item and a small modification to the security fence, this project is complete. Therefore, this project will be removed from the CIP list.

x) **Exclusion Meters Replacement (Account Code 1759):**

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	31%
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.

**12/5/2022: ACSA Maintenance continues to work on exclusion meters in the vicinity of Darby Road (west). There are currently 343 exclusion meters remaining in our system.**

**y) Woodbrook Force Main Replacement Project (Account Code 1826):**

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	0%
Contractor:	Linco, Inc. (Linco)
Construction Start:	2022
Completion:	2023
Total Budget:	\$149,468
Appropriated Funds:	\$228,745

Project Description – Pure Technologies recently completed a condition assessment of all ACSA's sanitary sewer force mains. Based on that work, they recommended replacement of a portion of the Woodbrook Force Main due to thinning pipe walls from corrosion.

11/7/2022: A Work Order under our FY 2022 Miscellaneous Sewer Repair/Replacement Contract was issued to Linco on October 26, 2022. VDOT has advised that repaving along Idlewood Drive is anticipated in 2023, so this will drive our schedule for replacement.

**z) SCADA System Phase 3 (Account Code 1605):**

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	0%
Contractor:	M.C. Dean
Construction Start:	November 2022
Completion:	June 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. The project will be completed in three phases over a three year period.

**11/7/2022: M.C. Dean has begun providing submittals for review by WRA.**

JML/jl  
060806CIPMonthly12152022

**Albemarle County Service Authority (ACSA)**

**CIP Schedule Revisions**  
**December 2022**

1. The construction phase of the Risk Assessment Improvements Phase 1 Project has been extended to April 2023.
2. The construction phase of the Security System Upgrade Project has been extended to April 2023.
3. The construction phase of the Biscuit Run Sewer Replacement has been extended to March 2023.
4. The design phase of the Huntington Village Water Connection Project has been extended to November 2022.



Capital Improvement Program		Percent		2022	2023		2021	2021	2021	2021	2021	2021	2022	2022	2022	2022	2022	2022		2022	2022	2022	2022	2022	2022	2023	2023	2023	2023	2023	2023
Proposed Project Schedule Worksheet: December 2022	Acct. #	Growth	PM	Forecast	Forecast		July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June		July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Risk Assessment Improvements	1621	0%	AM	117,000																											
Data Management and Dashboarding		100%			20,000																										
Billing System Analysis and Replacement		100%			50,000																										
ESRI Utility Network Implementation		100%			50,000																										
Cityworks Operational Insights Impelmentation		100%			45,000																										
Energy Audit	1625	0%	AM		40,000																										
Avon Street Maintenance Yard	1622	100%	AM	60,000	3,750,000																										
ACSA Facilities - Security System Upgrade		100%			158,000																										
AMI Implementation	1620	15%	PG	5,000,000																											
Four-Story Backflow Prevention Assembly Retrofit	1765	0%	AM																												
Scottsville Phase 4 Water Main Replacement	1758	0%	AM		100,000																										
Crozet Phase 4 Water Main Replacement	1756	0%	JL		1,412,050																										
Ragged Mountain Phase 1 Water Main Replacement	1760	0%	JL		417,000																										
Jefferson Village Water Main Replacement	1747	0%	RN	262,300																											
Northfields Water Main Replacement	1764	0%	RN																												
Hessian Hills Water Main Replacement	1753	0%	JL	3,456,675																											
Briarwood Water Main Replacement	1766	0%	JW																												
Barracks West Water Main Replacement	1796	0%	JW	452,500																											
Townwood Water Main Replacement		0%			170,000																										
Broadway Street Water Main Replacement	1768	0%	RN		650,000																										
Raintree and Fieldbrook PVC Water Main Replacement	1771	0%	JL	432,300																											
Pantops Drainage Basin Rehabilitation	1824	0%	RN																												
Hollymead Drainage Basin Rehabilitation	1825	0%	RN																												
Airport Trunk Sewer Upgrade	1828	100%	JL		115,000																										
Northfields Phase 5 Sewer		100%	RN		70,000																										
Biscuit Run Sewer Replacement	1830	0%	RN	206,000	206,000																										
FY 2021 Miscellaneous Sewer Rehabilitation	1904	0%	JL																												
FY 2022 Miscellaneous Sewer Repair/Replacement	1905	0%	JL	200,000																											
FY 2022 Miscellaneous Sewer Rehabilitation	1906	0%	JL	200,000																											
FY 2023 Miscellaneous Sewer Repair/Replacement	1905	0%	JL		200,000																										
FY 2023 Miscellaneous Sewer Rehabilitation	1906	0%	JL		200,000																										
Oak Forest Pump Station Abandonment	1807	0%	JL																												
Bellair - Liberty Hills Sewer	1829	100%	JL	80,515																											
Madison Office Park Pump Station Upgrade	1735	0%	JL	123,875	425,000																										
Sewer Pump Station Comminutors	1827	0%	RN	291,300																											
Lewis Hill - West Leigh Water Connection	1754	0%	RN																												
Parkview Drive Water Connection		0%																													
Huntington Village Water Connection	1770	0%	RN																												
Briarwood Pump Station Generator	1767	0%	AM																												
Exclusion Meters Replacement	1759	0%	JL																												
Pipe Saddles Replacement	1763	0%																													
SCADA System Phase 3	1605	100%	AM	186,800																											
Developer Participation		100%		100,000	100,000																										
Total Capital Projects to be appropriated in the Fiscal Year				\$ 11,169,265	\$ 8,178,050																										

In house construction Engineering Construction



**Albemarle County Service Authority (ACSA)**  
**Active Private Development Projects**  
**December 2022**

- a. Albemarle Business Campus – Block 1 (Scottsville): Water and sewer main extension to serve 128 multi-family units. The site is located to the northeast of the Old Lynchburg Road and Country Green Road intersection.
- b. Brookhill Blocks 9-11 (Rivanna): Water and sewer main extension to serve 85 single family homes in the Brookhill subdivision, located east of Stella Lane between Ashwood Boulevard and Archer Avenue.
- c. 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.
- d. Galaxie Farm Subdivision (Scottsville): Water and sewer main extension to serve 65 residential units. This project is located along Scottsville Road, south of Mountain View Elementary.
- e. Georgetown Hydraulic (Jack Jouett): Water main extension to serve a commercial office building at the intersection of Georgetown Road and Hydraulic Road.
- f. Glenbrook at Foothills Phase 3 (White Hall): Water and sewer main extensions to serve 120 residential units between the Parkside Villlage and Glenbrook at Foothills subdivisions along Park Ridge Drive.
- g. **Hollymead Town Center Area C Townhomes – Block II (Rio)**: **Water and sewer main extensions to serve 56 attached single family units. This project is located to the south of Timberwood Boulevard, in between Connor Drive and Berkmar Drive.**
- h. Old Trail Village Block 7C (White Hall): Water and sewer main extensions to serve 30 residential units. This project is located along Old Trail Drive near Golf View Drive.
- i. Pleasant Green – Phase 2 (white Hall): Water and sewer main extensions to serve 134 residential units. This project is located to the southeast of the Orchard Acres subdivision.
- j. Proffit Road Townhomes South (Rivanna): Water and sewer main extension to serve 31 town home units. This project is located along Proffit Road, south of Martha Jefferson Outpatient Care Center.

- k. PVCC - Advanced Technical Training Center (Scottsville): Water main extension to serve new building on PVCC campus off College Drive.
- l. Regents School of Charlottesville (Samuel Miller): Water and sewer main extension to serve a private school, grades K-12. The site is located west of Trinity Presbyterian Church, along Reservoir Road.
- m. 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.
- n. 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.
- o. 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.
- p. Stonefield Block D1 (Jack Jouett): Water main extension to serve a 220 unit apartment building at the intersection of Inglewood Drive and Bond Street.
- q. Umansky Subaru of Charlottesville – Major Amendment (Rio): Water main relocation to facilitate the proposed building expansion of the Umansky Subaru. The project is located to the east of Walmart, along Hilton Heights Road.

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Capital Improvement Program (CIP) Project Close-outs	<b>AGENDA DATE:</b> December 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Jeremy M. Lynn, P.E., Director of Engineering	<b>ACTION:</b> <input type="checkbox"/> <b>INFORMATION:</b> <input type="checkbox"/>
	<b>CONSENT AGENDA:</b>
	<b>ACTION:</b> <input checked="" type="checkbox"/> <b>INFORMATION:</b> <input type="checkbox"/>
	<b>ATTACHMENTS:</b> YES

**BACKGROUND:** This is a routine process to close-out CIP Projects that have been completed and no longer require expenditures of funds. Five CIP Projects are to be closed-out with a balancing of expended funds in the 3R Fund.

**DISCUSSION:**

- ❖ Questions about the CIP Projects being closed out.

**BUDGET IMPACT:** None.

**RECOMMENDATIONS:** Close-out the five CIP Projects listed in the detailed memo.

**BOARD ACTION REQUESTED:** Approval of the Consent Agenda.

**ATTACHMENTS:**

- ❖ Detailed memo of the completed CIP Projects and the amount of expended funds.



# MEMORANDUM

**To:** Board of Directors  
**From:** Jeremy M. Lynn, P.E., Director of Engineering  
**Date:** December 15, 2022  
**Re:** Capital Improvement Program (CIP) Project Close-outs  
**cc:** James M. Bowling, IV

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The following projects have been completed in the Capital Improvement Program (CIP):

**HVAC System Upgrade (Account Code 1619):** This project rehabilitated the aging and malfunctioning HVAC system servicing the ACSA Administration Building. The Roof Top Units were refurbished, heating and airflow controls were replaced, portions of the existing ductwork were replaced, and additional ductless split cooling systems for data closets were installed. This project resulted in over-expended funds of \$110,978.66. The over-expenditure included corrections to the existing system and leaking roof drains in the vicinity of the HVAC infrastructure, building acoustic improvements, additional emergency cooling controls for the server room, added scope work for failed HVAC component replacement, and FM-200 fire suppression system components.

**Hessian Hills Water Main Replacement (Account Code 1753):** This project replaced the aging water mains in the Hessian Hills area, as well as the water mains along Barracks Road and Georgetown Road. This project resulted in over-expended funds of \$660,916.01. The over-expenditure included costs associated with the replacement of a segment of sanitary sewer along Inglewood Drive, the need for a revised water connection along Barracks Road, unanticipated conflict with a storm sewer along Barracks Road and additional pavement restoration scope and costs.

**Oak Forest Sewer Pump Station Abandonment (Account Code 1807):** With the development of the Stonefield Area between Route 29 and Commonwealth Drive, ACSA staff identified a gravity sewer main extension that could eliminate this ageing sewer pump station and avoid expensive upgrades. This project included the completion of a challenging bore under Commonwealth Drive and the demolition of the existing pump station. This project resulted in unexpended funds of \$281,977.87, due to several contingency bid items (trench dewatering,



stone base for access road, bypass pumping, and select backfill material) not being utilized during construction of the gravity sewer extension to the existing pump station.

**Redfields Sewer Pump Station Abandonment (Account Code 1823):** With the development of the Wintergreen Farm Subdivision, ACSA staff identified an opportunity for a sewer main extension that could eliminate the Redfields Sewer Pump Station. This project included the installation of two segments of gravity sewer and the demolition of the existing pump station. The project resulted in unexpended funds of \$3,272.45.

**Pantops Drainage Basin SSES and Rehabilitation (Account Code 1824):** This project included evaluation and rehabilitation efforts within our sewer collection system east of the South Fork Rivanna River and north of I-64, including the drainage basin of the Peter Jefferson Place Pump Station. The sanitary sewer evaluation survey (SSES) included manhole inspections, sewer flow monitoring, smoke testing, night flow isolation and measurement, and CCTV inspection of gravity sewer mains. Following completion of the evaluation, rehabilitation of approximately 200 manholes was performed within this drainage basin. The project resulted in unexpended funds of \$93,922.65, due to the SSES and rehabilitation costs being less than anticipated.

The following is a financial summary of the projects:

<b>Account Description:</b>	<b>Appropriated Amount</b>	<b>Expended Amount</b>	<b>Unexpended Amount</b>
HVAC System Upgrade	\$995,971.00	\$1,106,949.66	(\$110,978.66)
Hessian Hills Water Main Replacement	\$5,107,562.00	\$5,768,478.01	(\$660,916.01)
Oak Forest Sewer Pump Station Abandonment	\$2,399,852.00	\$2,117,874.13	\$281,977.87
Redfields Sewer Pump Station Abandonment	\$86,785.00	\$83,512.55	\$3,272.45
Pantops Drainage Basin SSES and Rehabilitation	\$515,056.00	\$421,133.35	\$93,922.65
<b>Total</b>	<b>\$9,105,226.00</b>	<b>\$9,497,947.70</b>	<b>(\$392,721.70)</b>

### **Board Action**

We are requesting the Board of Directors close-out the listed projects.

JML/jml

010101ProjectCloseoutsBoardMemo12152022

## AGENDA ITEM EXECUTIVE SUMMARY

## CONSENT AGENDA

<b>AGENDA TITLE:</b> Manhole Inspections	<b>AGENDA DATE:</b> December 6, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Mike Lynn, Roland Bega & Robbie Lawson	<b>ACTION:</b> Informational
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** Cityworks enables the Maintenance Department to generate Work Orders from Manhole Inspections.

**DISCUSSION:** The Service Authority maintains 9770 manholes in the system. Manhole Inspections are routinely carried out by our CCTV crews. Using GIS, the ACSA service area has been divided for the two CCTV crews into two roughly equal areas (Attachment 1).

Manhole Inspections address the following points:

1. Inflow of surface water through manhole covers
2. Infiltration of groundwater through deteriorated manholes
3. Root Intrusions at the base of manholes
4. Snags in troughs (channels) from accumulated debris blocking flow (Attachment 2)
5. Invert deterioration due to chemical reaction between methane buildup and concrete (Attachment 2)
6. Offset damage to frame (ring) & cover (Attachment 2)
7. Debris accumulation on benches (Attachment 2)
8. Pre-Warranty work – The Engineering Department notifies the Maintenance Department with upcoming turnovers of manholes from contractors to ACSA ownership. Pre-Warranty Inspections insure the new manholes are in good order before they are placed into service.

The National Association of Sewer Service Companies (NASSCO) has established national standards for Manhole Inspection Reports.(Attachment 3). Maintenance Department personnel are trained and certified by NASSCO to conduct manhole inspection procedures.

In the past year, a total of 1220 Manhole Inspections were generated by Cityworks. Those Manhole Inspections led to 131 Work Orders.

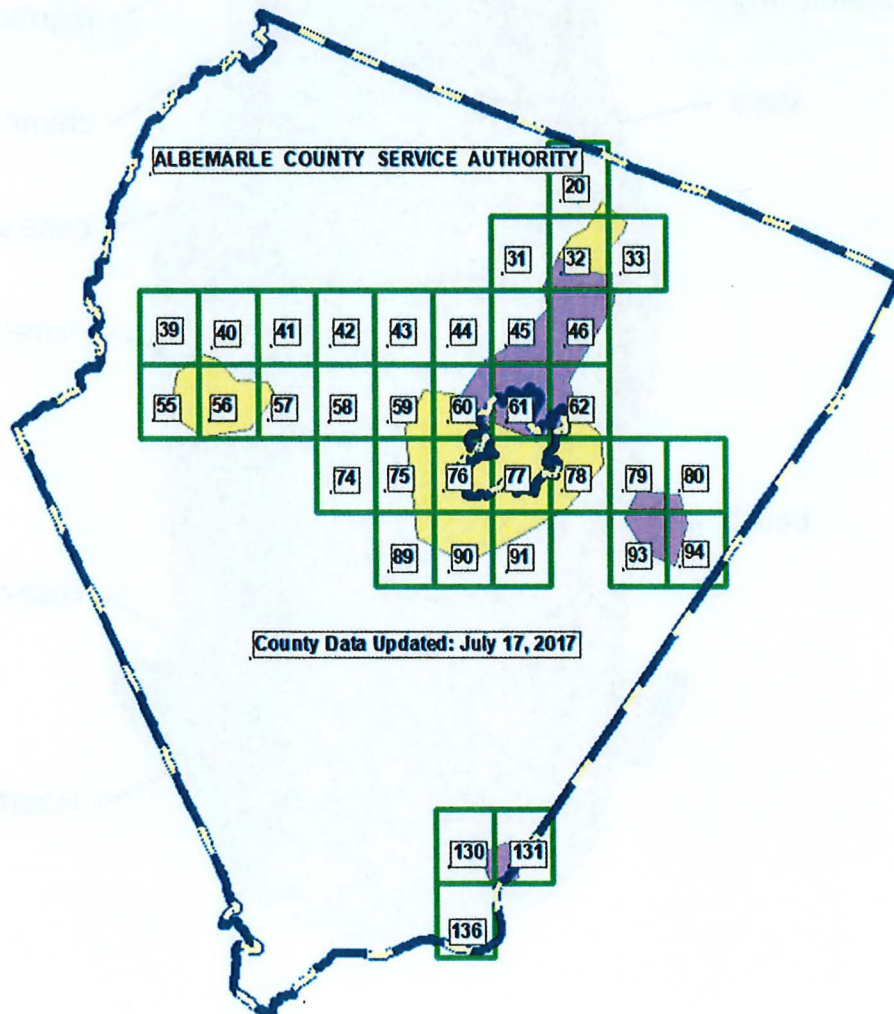
**BOARD ACTION REQUESTED:** None

**ATTACHMENTS:**

(Attachment 1)

**Unit 20 Service Area**

**Unit 39 Service Area**



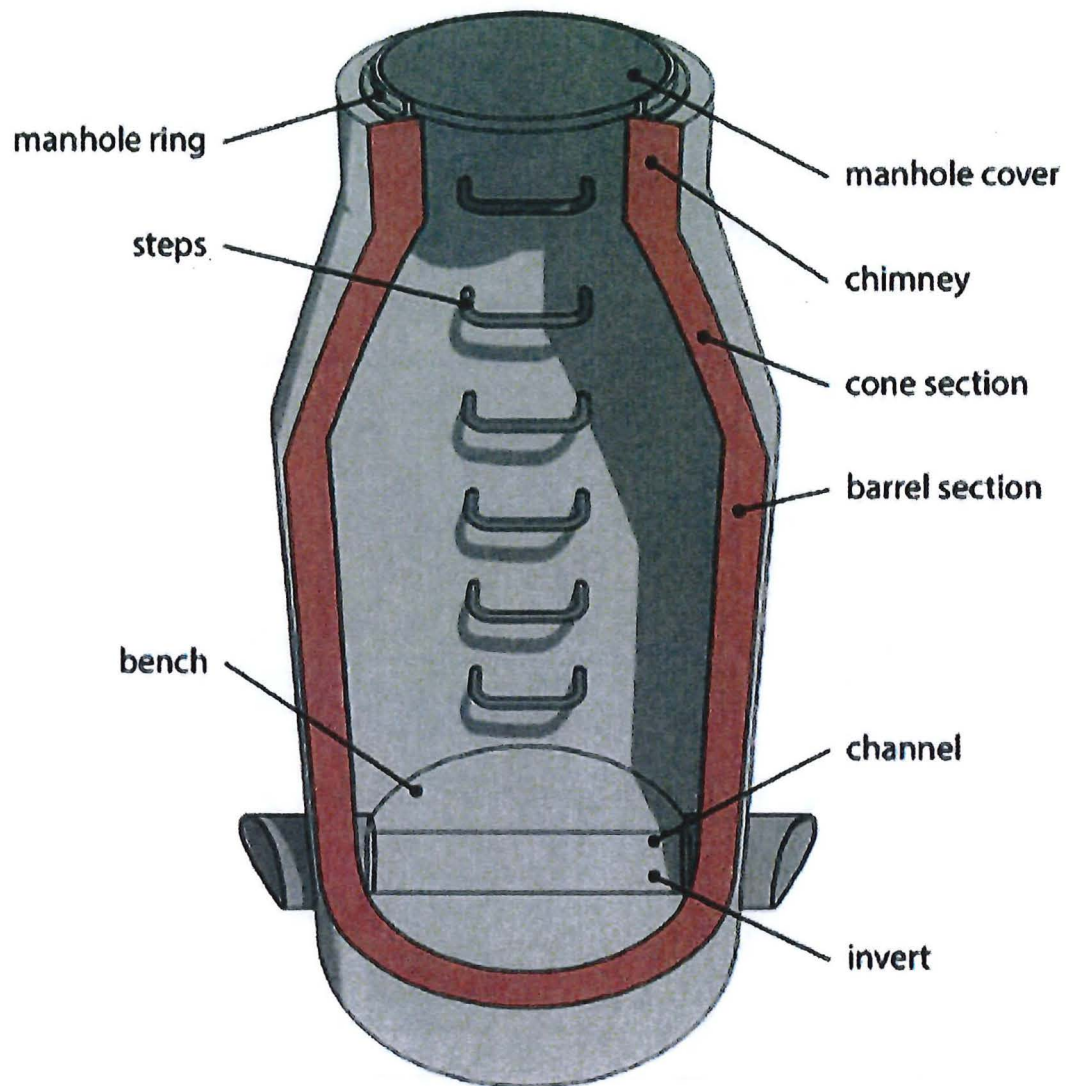
## ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

## CONSENT AGENDA

(Attachment 2)

## Cutaway Manhole Drawing



(Attachment 3)



CUES, Inc. 3600 Rio Vista  
Avenue Orlando, FL 32805  
Phone: 407-849-0190 Fax: 407-425-1569

## Node Inspections Large Photos

MH/Access point no.: <b>SMH6419</b>	Access type: <b>AMH</b>	City: <b>Charlottesville</b>	Street: <b>Peachtree Dr</b>
Coordinates from GIS:	Latitude: <b>38°04.49355'N</b>	Longitude: <b>078°42.73406'W</b>	
Coordinates from GPS:	Latitude:	Longitude:	Altitude:
Rim to invert: <b>12.550 ft.</b>	Manhole type:	Cone material:	Channel material:
Cover size: <b>21.8 in.</b>	Surface cover:	Wall material: <b>CR</b>	Base material:
Wall diameter:	Cover type:	Bench material:	Steps material: <b>P</b>
Dist. to hydrant:	Ring material:	Frame type:	Metered Drop manhole
Year constructed:	Purpose: <b>F</b>	Weather: <b>1</b>	Work order no.: <b>893</b>
Start date/time: <b>12/11/2020 11:34 AM</b>	Project name: <b>Orchard Acres</b>	Surveyed by: <b>Lawson, Robbie</b>	
Additional info:			

Reference point of node observation clock position is Out flow pipe at 6 o'clock



## ALBEMARLE COUNTY SERVICE AUTHORITY


## AGENDA ITEM EXECUTIVE SUMMARY

## CONSENT AGENDA

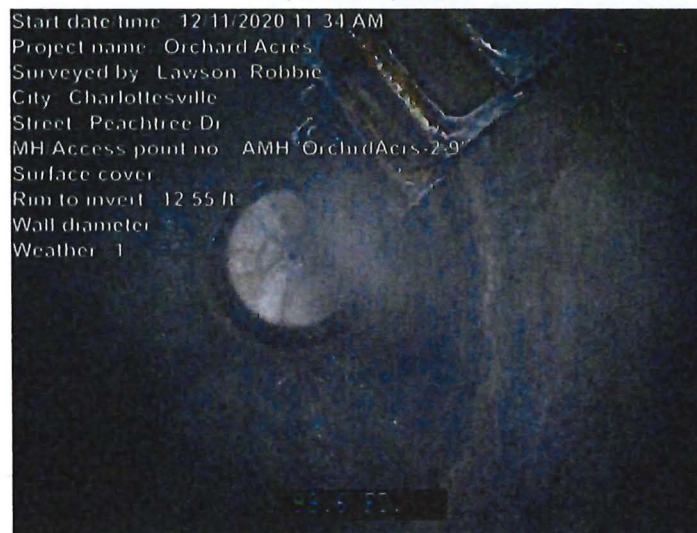
## Observations

Depth	Length	Component	Code	Modifier	From/To	Rating	Remarks
0.0 ft.		WI	IG		11 /	5	


Depth: 0.0 ft.  
 IG: Infiltration Gusher  
 Clock from: 11 o'clock  
 Clock to:  
 Rating: 5  
 Dimension 1:  
 Dimension 2:



## Inspection's photos



## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Rivanna Water & Sewer Authority (RWSA) Monthly Update  <b>STAFF CONTACT(S)/PREPARER:</b> Gary O'Connell, Executive Director 	<b>AGENDA DATE:</b> December 15, 2022  <b>CONSENT AGENDA:</b> Informational  <b>ATTACHMENTS:</b> Yes
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**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 November 15<sup>th</sup> RWSA Board Meeting and other communications.

RWSA Board Meeting and other Updates and Approvals at the November 15<sup>th</sup> Board Meeting:

- **Sale of Buck Mountain Property:** The Board approved the sale of the house at 1880 Buck Mountain Road. This is an area purchased years ago for a future reservoir, which was never permitted. That reservoir use for the long-term future remains a possibility.
- **RWSA Strategic Plan:** Formally approved with the addition of some metrics. An earlier draft summary of the plan was provided to the ACSA Board.
- **Observatory Water Treatment Plant:** Going off-line December 5<sup>th</sup>- early March due to major renovations underway at the plant. The South Rivanna Plant has also been under renovation and improvements, that allows the plant to reliably treat the entire Urban system while the Observatory Water Treatment plant is shut down for three months. The Observatory work includes critical treatment components and facilities that are being demolished and improved.

**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:	75%
Completion Date:	May 2023
Base Construction Contract:	\$37,467,169.49
Approved Capital Budget:	\$43,000,000

## ALBEMARLE COUNTY SERVICE AUTHORITY

### AGENDA ITEM EXECUTIVE SUMMARY

#### Current Status:

At South Rivanna, lead paint abatement continues. Work at Observatory includes the new Chemical Storage Building, sedimentation basin improvements, foundation work for the GAC expansion and a large retaining wall. Shutdown of the OBWTP is planned for December – March 2023.

#### History:

The Observatory project includes the design and costs for upgrading the plant systems to achieve a consistent 7 MGD plant capacity, as well as consider the costs involved with upgrading the plant to 10 or 12 MGD capacity. Much of the Observatory Water Treatment Plant is original to the 1953 construction.

At the South Rivanna Water Treatment Plant significant needs were identified and assembled into a single project. The projects include: expansion of the coagulant storage facilities; installation of additional filters to meet firm capacity needs; the addition of a second variable frequency drive at the Raw Water Pump Station; the relocation of the electrical gear from a sub-terrain location at the Sludge Pumping Station; a new Administration building onsite for additional office, lab, control room and storage space; improvements to storm sewers to accept allowable WTP discharges; and the construction of a new metal building to cover the existing liquid lime feed piping and tanks. The scope of this project will not increase plant treatment capacity, which is at 12 MGD.

#### • Airport Road Water Pump Station and Piping

Design Engineer:	Short Elliot Hendrickson (SEH)
Contractor:	Anderson Construction
Construction Start:	December 2021
Percent Complete:	25%
Completion Date:	December 2023
Base Contract:	\$8,520,312
Budget:	\$10,000,000

#### Current Status:

Excavation for the base slab at the pump station is complete and the contractor will begin rebar and concrete work next. Water line installation has begun at the pump station site and will progress south along Berkmar Drive towards Kohl's.

## AGENDA ITEM EXECUTIVE SUMMARY

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 (30%)
Construction Start:	2025
Completion:	2028
Current Project Estimate:	\$44,000,000

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. RWSA staff is coordinating with VDOT on the Route 29 Bypass and Fontaine Avenue crossings. Design work on the pump station has begun.

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 million gallons per day (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 million gallons per day (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

## ALBEMARLE COUNTY SERVICE AUTHORITY

### AGENDA ITEM EXECUTIVE SUMMARY

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 Raw Water Line-Birdwood to Old Garth Road**

Design Engineer:	Kimley-Horn
Project Start:	June 2021
Project Status:	90% Design
Construction Start:	January 2023
Completion:	December 2023
Current Project Estimate:	\$4,000,000

**Current Status:**

Preparation of engineering plans and specifications is substantially complete for a 0.25-mile section of this 36" raw water pipe from Birdwood to Old Garth Road. One remaining easement is under negotiation with the UVA Foundation for this phase of the project. The railroad permit application will be finalized when remaining sod boring is completed.

**History:**

This project is the continuation of the SRR to RMR 36" raw water pipeline built on the Birdwood Golf Course. Design efforts were authorized in June 2021 with construction anticipated in summer 2022.

- **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:	85% NRCS Planning Process
Construction Start:	2024
Completion:	2027
Budget:	\$43,000,000

**Current Status:**

A Joint Permit Application and supporting documents were submitted to VDEQ this month. Remaining NRCS requirements, including review and approval of the planning study, are scheduled for completion this winter. 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.

## AGENDA ITEM EXECUTIVE SUMMARY

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. A federal grant totaling \$341,000 was secured from the National Rural Conservation Service (NRCS) to cover the costs of an Environmental Assessment for the dam modifications. 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:	60% Design
Construction Start:	2024
Completion:	2028
Budget:	\$7,000,000

Current Status:

Geotechnical work has begun to determine rock depths for the trenchless crossing under the river parallel to the west side of the Berkmar Bridge and follow Rio Mills Road until it intersects the new 24" water line in Route 29. Easement work has begun.

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.



# ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

- **South Fork Rivanna Reservoir to Ragged Mtn. Reservoir Water Line Right-of-Way**

Design Engineer:	Michael Baker International (Baker)
Project Start:	October 2017
Project Status:	Easement Acquisition Underway
Completion Date:	2022
Total Capital Project Budget:	\$2,295,000

**Current Status:**

Progress continues in the efforts to acquire the 8 miles of easements and agreements (with VDOT) for this 36" water line. Discussions continue for remaining easements with the UVA Foundation and one final private property owner.

**History:**

The approved 50-year Community Water Supply Plan includes the future construction of a raw water line from the South Fork Rivanna Reservoir to the Ragged Mountain Reservoir. This water line will replace the existing Upper Sugar Hollow Pipeline along an alternative alignment to increase raw water transfer capacity in the Urban Water System. This project includes a routing study, preliminary design, and preparation of easement documents, as well as acquisition of water line easements along the approved route.

- **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

**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.

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

Design Engineer:	SEH/DiNatale
Project Start:	August 2020

## AGENDA ITEM EXECUTIVE SUMMARY

Project Status:	100% (Phase 1)
	90% (Phase 2)
Completion:	December 2022
Budget:	\$22,969 (Phase 1)
	\$116,401 (Phase 2)

Current Status:

Final efforts are underway to better clarify operations of the raw water transfer system and associated reservoir levels during drought conditions.

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:	15% Design
Construction Start:	2024
Completion:	2028
Budget:	\$41,000,000

Current Status:

Detailed field investigation and design are underway.

History:

The hydraulic connectivity in the Urban System is less than desired, creating operational challenges and reduced system flexibility and redundancy. Recent efforts

## ALBEMARLE COUNTY SERVICE AUTHORITY

### AGENDA ITEM EXECUTIVE SUMMARY

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.

- **Security Enhancements**

Construction Contractor:	Security 101
Construction Start:	March 2020
Percent Complete:	50% (WA 5), 0% (WA6)
Completion:	May 2023
Budget:	\$2,810,000

**Current Status:**

WA5, which authorizes card access installation at Glenmore Water Resource Recovery Facility (GWRRF), Scottsville Water Resource Recovery Facility (SVWRRF), and Red Hill Water Treatment Plant (RHWTP), began during the week of June 20th. Conduit and cable pulling is complete at all facilities covered in the WA, and the only work that remains is wiring and programming to be completed this fall. WA6 will include card access installation at RWSA's remote sites and electronic padlocks, including all dams and pump stations. Completion scheduled for May 2023.

**History:**

As required by the Federal Bioterrorism Act of 2002 and the American Water Infrastructure Act of 2018, water utilities must conduct Vulnerability Assessments and have Emergency Response Plans. RWSA recently completed an updated Risk Assessment of its water system in collaboration with the Albemarle County Service Authority (ACSA), City of Charlottesville (City), and University of Virginia (UVA). A number of security improvements that could be applied to both the water and wastewater systems were identified. The purpose of this project will be to install security improvements at RWSA facilities including treatment plants, including additional security gate and fencing components, vehicle bollards, facility signage, camera system enhancements, additional security lighting, intrusion detection systems, door and window hardening, installation of industrial strength locks, communication technology and cable hardening, and an enhanced access control program.

ACSA Board Future Policy Issues Agendas 2022-2023

Regular 3rd Thursday Monthly Meetings	Jan. '23	Feb. '23	March '23	April '23	May '23	June '23	July '23	August '23	Sept. '23	Pending Issues
	January 19th Recognitions	February 16th Recognitions	March 16th Recognitions	April 20th Recognitions	May 18th Recognitions	June 15th Recognitions	July 20th Recognitions	August 17th Recognitions	September 21st	Water Supply Plan Project Status Reports Water Treatment Plants RWSA CIP Central Water Line-Reservoirs Pipeline
	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 Authorization	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	
	Operational Presentation-Lead and Copper	Operational Presentation-Training and Biz Library	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Board Organizational Meeting each January
	Board Organizational Meeting	PAFR (Popular Annual Financial Report) Presentation	Proposed CIP Presentation	Proposed Capital Improvements Program (CIP) FY '24 Presentation	Proposed FY 2024 Budget and Rates Workshop	Public Hearing on Proposed FY '24 Budget, Rates and CIP	Strategic Plan Update	Year-End Appropriations		Annual Report - January
	ACSA Annual Report 2022	Security Assessment Updates; IT Report	AMI Update	Public Hearing on Proposed FY '24 Capital Improvements Program (CIP)		Adoption of Proposed FY '24 Budget, Rates and CIP				Water Audit and Energy Audit
	Strategic Plan Updated 2020-2022 Final Report	New Strategic Plan Draft 2023-2025		Proposed FY '24 Budget and Rates Overview Presentation		Amendments to Personnel Management Plan				Strategic Plan Updates-2023-2025 January and July
	Annual Water Conservation Report (Consent Agenda)	Customer Experience Report		Resolution Scheduling Budget and Rates Public Hearing for June 15, 2023						Annual Water Conservation Report - January
		Best Practices Review Panel - Report		National Drinking Water Week Resolution						National Drinking Water Week-April Imagine a Day Without Water - September
		Update on Customer Late Payments								AMI Updates - Customer Portal Video
										Federal/State Water Quality Regulations
										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
			Executive Director Annual Review							Purchasing Policy Revisions

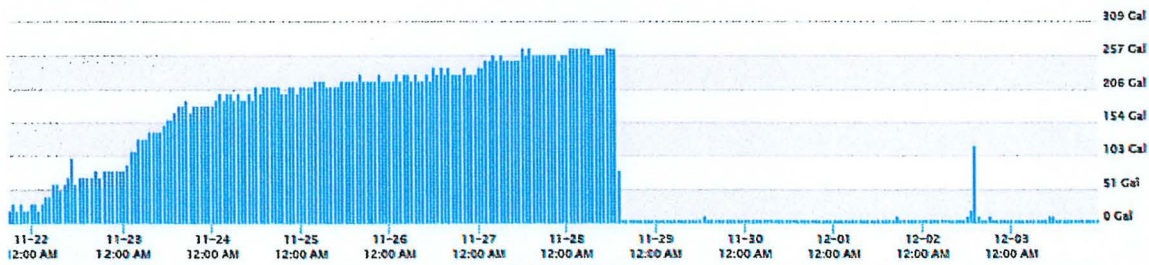
## AGENDA ITEM EXECUTIVE SUMMARY

**AGENDA TITLE:** Advanced Metering Infrastructure (AMI) Monthly Update**AGENDA DATE:** December 15, 2022**STAFF CONTACT/PREPARER:**  
Quin Lunsford, Director of Finance**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:

- We continue to monitor meters that have been deployed and are notifying customers daily of irregular consumption/leaks. Feedback from customers continues to be extremely positive. Near the end of November, staff was notified of a continuous flow alert for the Crozet park building that the Albemarle Parks and Recreation operates. The alert identified flows of 230+ gallons per hour continuously. Our team contacted the Parks and Recreation Department, and they were able to identify and correct the inadvertent water use. We estimated that this earlier identification by the ACSA and correction by the customer saved in excess of 140,000 gallons of water. The chart below, from the AMI system, illustrates water consumption before, during, and after identification of the leak.



- Our contractor continues to replace meter registers on a small number of meters that have been identified as having potential defects that increase the likelihood of meter failure. We have repaired 130 meters out of the total 270 meters with the manufacturing defect. The remainder will be replaced as replacement registers are received.

**BUDGET IMPACT:** Informational only.

**RECOMMENDATIONS:** None

**BOARD ACTION REQUESTED:** None; informational item only.

**ATTACHMENTS:** N/A



# MEMORANDUM

**To:** ACSA Board of Directors  
**From:** Gary O'Connell, Executive Director *Gary O'Connell*  
**Date:** December 15, 2022  
**Re:** Proposed Schedule of Holidays, 2023

---

As outlined in the ACSA Personnel Management Plan, the following holidays will be observed in calendar year 2023:

Martin Luther King Day	Monday, January 16, 2023**
President's Day	Monday, February 20, 2023**
Memorial Day	Monday, May 29, 2023
Juneteenth	Monday, June 19, 2023**
Independence Day	Tuesday, July 4, 2023
Labor Day	Monday, September 4, 2023
Veteran's Day	Friday, November 10, 2023**
Thanksgiving	½ day Wed., Thur. & Fri., Nov. 22, 23 & 24, 2023
Christmas Eve	½ day Friday, December 22, 2023
Christmas Holidays	Mon. & Tues., Dec. 25 & 26, 2023
New Year's Day	Monday, January 1, 2024

\*\*Floater Holidays. ACSA offices will remain open on these four holidays. Holiday leave may be taken on the day formally observed, or anytime thereafter during the same calendar year; the three leave days will not accrue if not taken within that time, except for Veterans Day which has to be used by November 10<sup>th</sup> of the following year.

We are recommending approval of this holiday schedule for 2023.



# ALBEMARLE COUNTY SERVICE AUTHORITY

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## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> 2023 Board Meeting Schedule	<b>AGENDA DATE:</b> December 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Gary O'Connell, Executive Director	<b>ACTION:</b> Informational (Consent Agenda)
	<b>ATTACHMENTS:</b> No

**BACKGROUND:** The By-Laws of the Albemarle County Service Authority (ACSA) provide that "regular meetings of the Authority shall be held monthly on the third Thursday of the month at 9:00 a.m." ACSA Board meetings are held in the Board Room at the ACSA, 168 Spotnap Road. The 2023 schedule based on this is as follows:

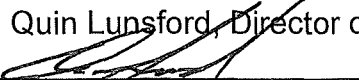
### ACSA 2023 Board Meeting Schedule

#### *3<sup>rd</sup> Thursday of the month at 9:00 a.m.*

- Thursday, January 19, 2023 at 9:00 a.m.
- Thursday, February 16, 2023 at 9:00 a.m.
- Thursday, March 16, 2023 at 9:00 a.m.
- Thursday, April 20, 2023 at 9:00 a.m.
- Thursday, May 18, 2023 at 9:00 a.m.
- Thursday, June 15, 2023 at 9:00 a.m.
- Thursday, July 20, 2023 at 9:00 a.m.
- Thursday, August 17, 2023 at 9:00 a.m.
- Thursday, September 21, 2023 at 9:00 a.m.
- Thursday, October 19, 2023 at 9:00 a.m.
- Thursday, November 16, 2023 at 9:00 a.m.
- Thursday, December 21, 2023 at 9:00 a.m.

**BOARD ACTION REQUESTED:** Informational; and calendar scheduling.

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Annual Investment Report	<b>AGENDA DATE:</b> December 15, 2022
<b>STAFF CONTACT/PREPARER:</b> Quin Lunsford, Director of Finance 	<b>ACTION:</b> Informational
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** The ACSA Board authorized the Authority to execute a contract with PFM Asset Management, LLC (PFMAM) for Investment Management Services at its June 20, 2019 Board meeting. PFMAM has assisted with development of the Authority's investment program, including; investment policy development/revisions, investment strategy development, performance benchmark selection, competitive purchasing, portfolio monitoring/management, and accounting/reporting.

The presentation today will provide updates on economic/market conditions and an update on the ACSA's current portfolio.

**DISCUSSION:** Ms. Leslie Weaber and Mr. Scott Fleming, both representatives of PFMAM, will provide an overview of current economic and market conditions. Additionally, the PFMAM team will provide a portfolio update on the ACSA's current investment approach, holdings, and performance.

**BUDGET IMPACT:** Informational only.

**RECOMMENDATIONS:** None

**BOARD ACTION REQUESTED:** None; informational item only.

**ATTACHMENTS:** Annual Market and Portfolio Update (PowerPoint)



# Albemarle County Service Authority

## Market & Portfolio Update

December 15, 2022

**[pfmam.com](http://pfmam.com)**

*PFM Asset Management LLC*

**NOT FDIC INSURED : NO BANK GUARANTEE : MAY LOSE VALUE**



# Economic Update





# Current Market Themes



- ▶ The U.S. economy is characterized by:
  - ▶ Persistent high inflation
  - ▶ A deteriorating housing market
  - ▶ Continued personal consumption that is impacting household savings and balance sheets
  - ▶ Worsening economic outlook that is propped up by a strong labor market



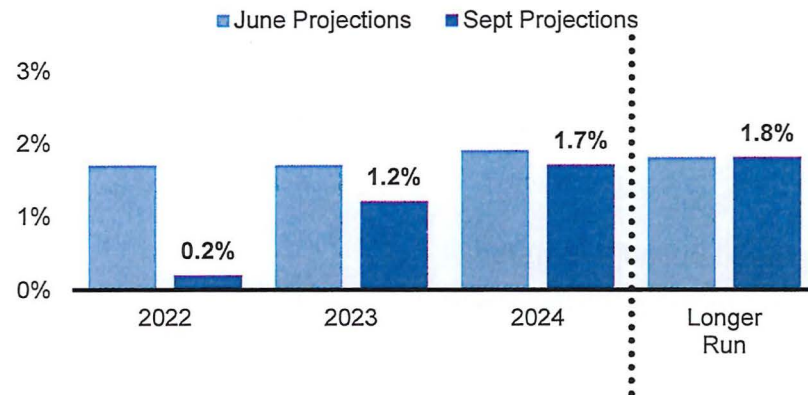
- ▶ The Federal Reserve has committed to a heavy-handed policy
  - ▶ Expectations have shifted from a soft landing to a moderate/hard landing, with increased recession risks
  - ▶ Short-term fed funds rate projected to reach 4.25% to 4.50% by year end
  - ▶ Potentially slowing pace, but continued quantitative tightening



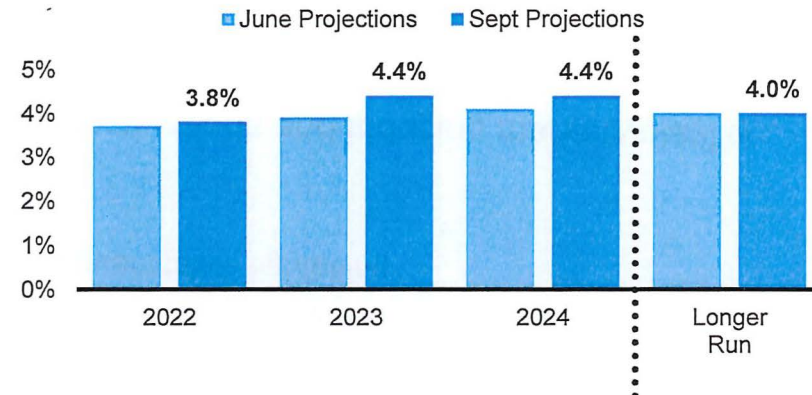
- ▶ Rapidly rising rates negatively impacting valuations and inducing market volatility
  - ▶ Yields across curve reached their highest levels in 14 years
  - ▶ Treasury yield curve remains inverted, but less so compared to Q2
  - ▶ Elevated volatility across all major asset classes

# Fed's Projections Reflect Weaker Economic Growth and Extended Timeline for Tighter Policy

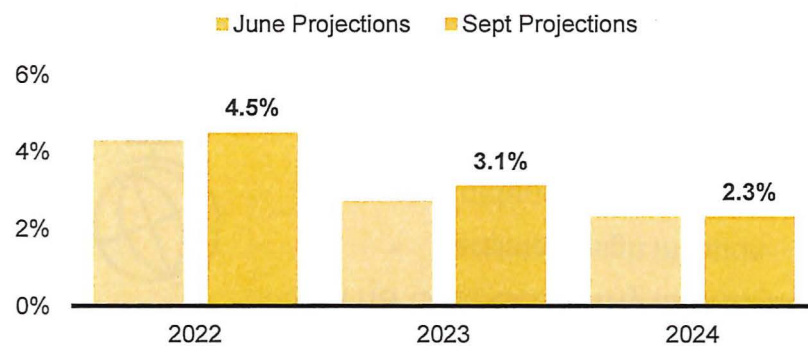
## Change in Real GDP



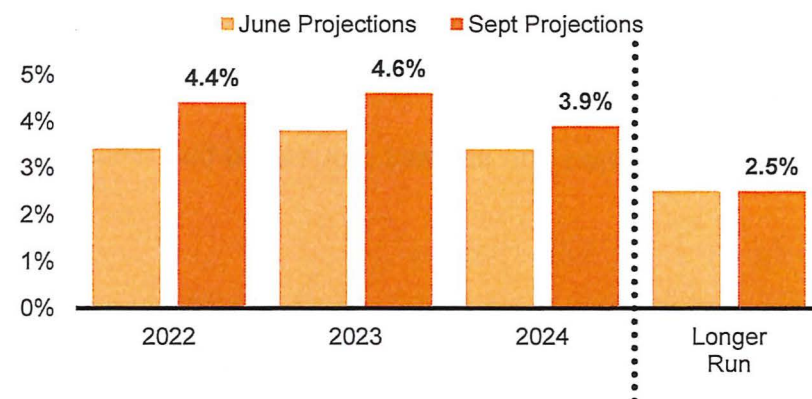
## Unemployment Rate



## Core PCE Inflation



## Federal Funds Rate

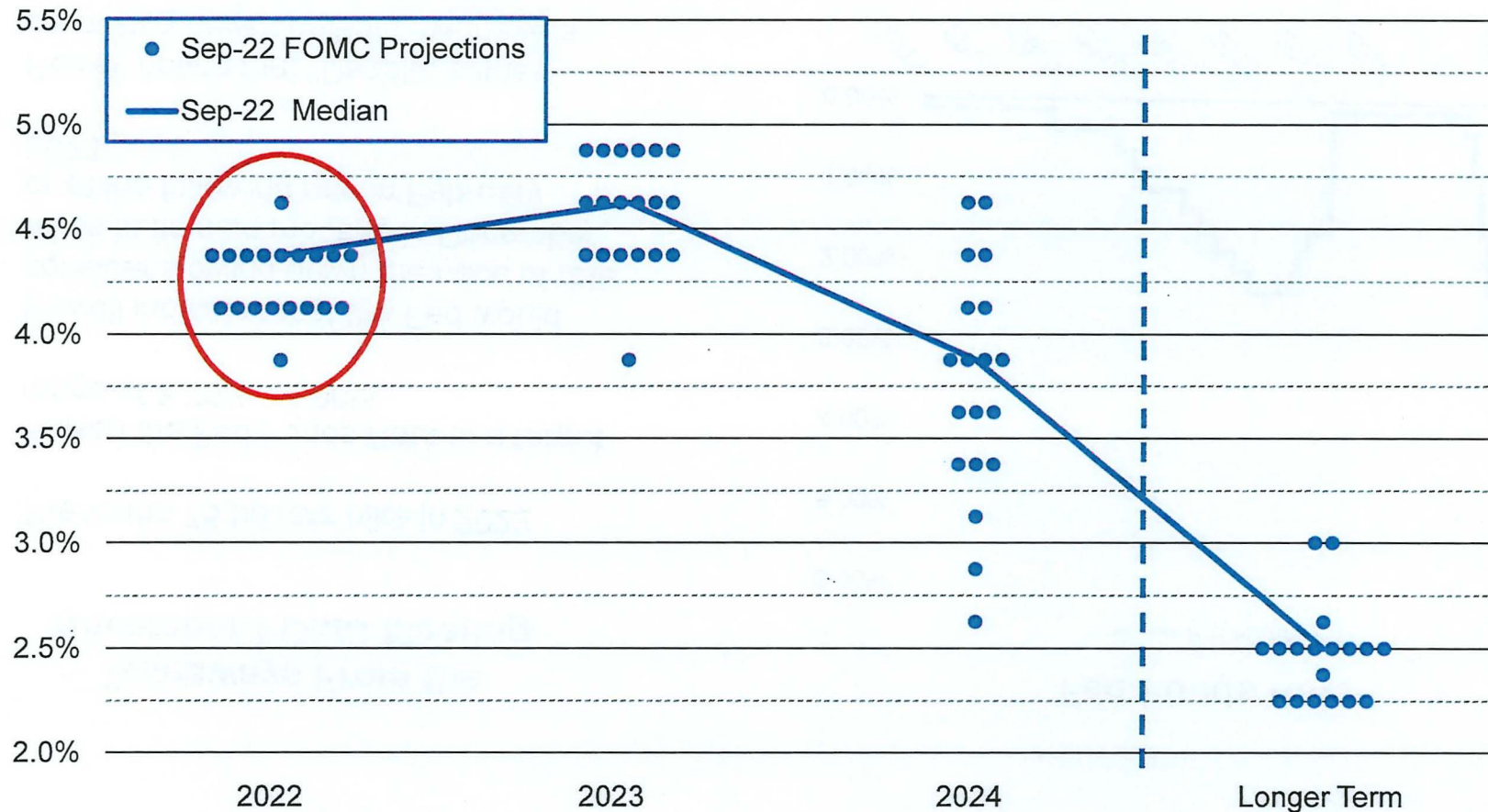


Source: Federal Reserve, latest economic projections as of September 2022.



# Federal Reserve Officials Project Elevated Rates Through the End of 2023

Fed Participants' Assessments of 'Appropriate' Monetary Policy



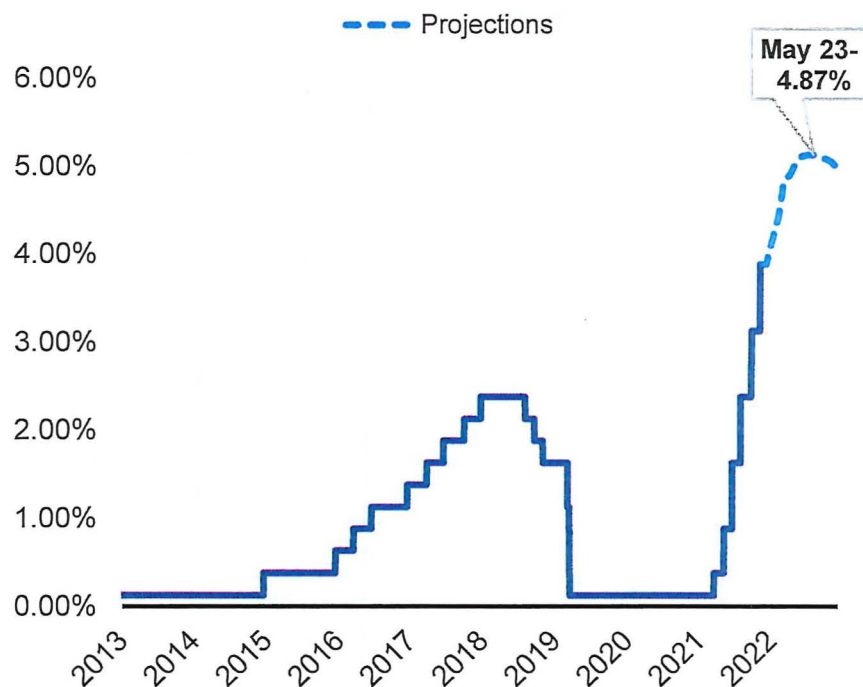
Source: Federal Reserve and Bloomberg. Individual dots represent each Fed members' judgement of the midpoint of the appropriate target range for the federal funds rate at each year-end.

# Monetary Policy

## Takeaways From the November FOMC Meeting

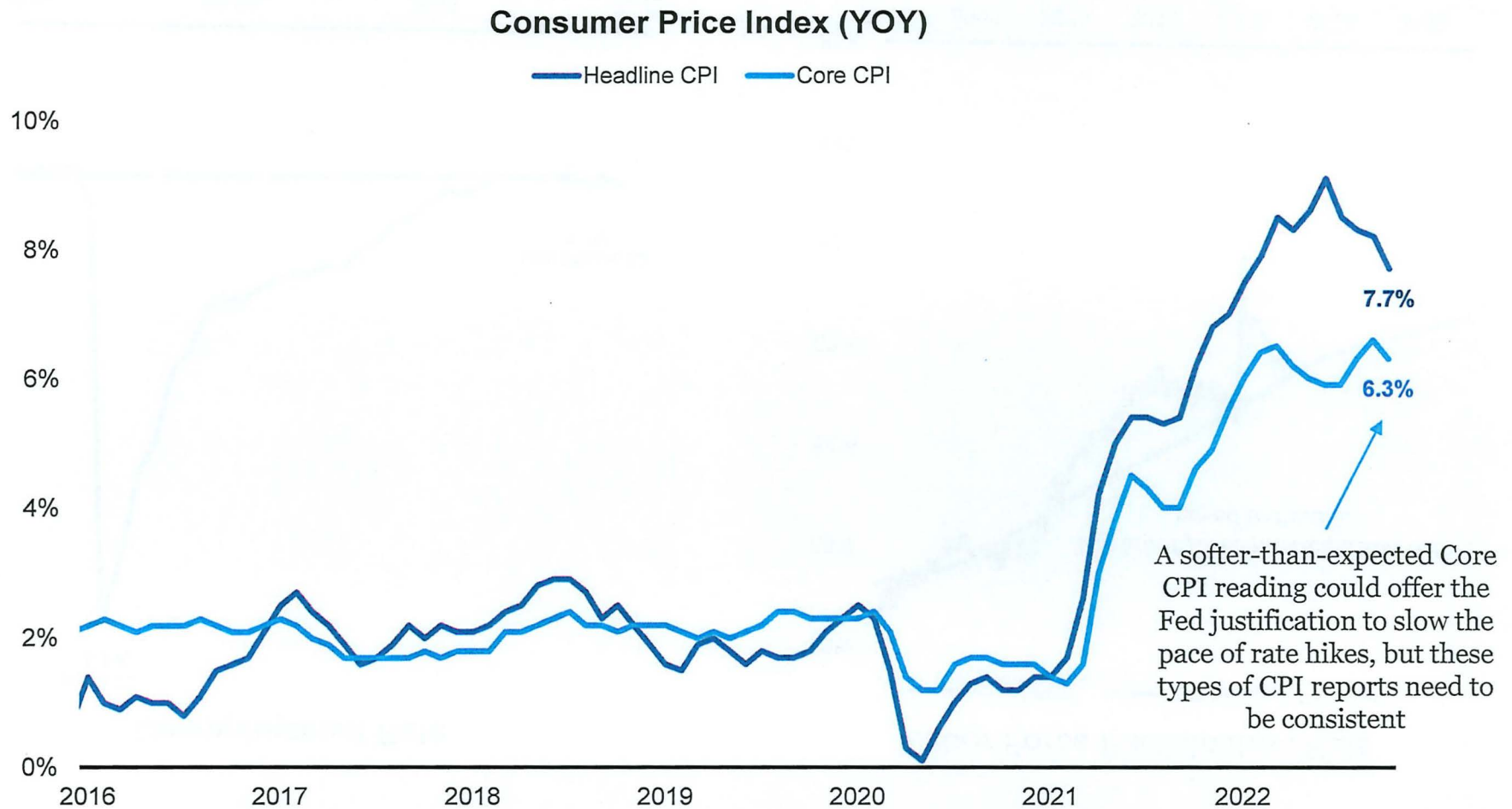
- The fourth 75 bp rate hike in 2022
- Raised the Fed Funds Rate to a target range of 3.75% - 4.00%
- Powell indicated that the Fed would consider slowing down the pace of rate hikes at its next meeting in December or at the following one in February 2023.
- Powell noting that "Despite some promising developments, we have a long way to go in restoring price stability."

## Fed Funds Rate



Source: Federal Reserve. FOMC Statement. Transcript of Chair Powell's Press Conference on November 2, 2022. Fed funds futures as of December 5, 2022.

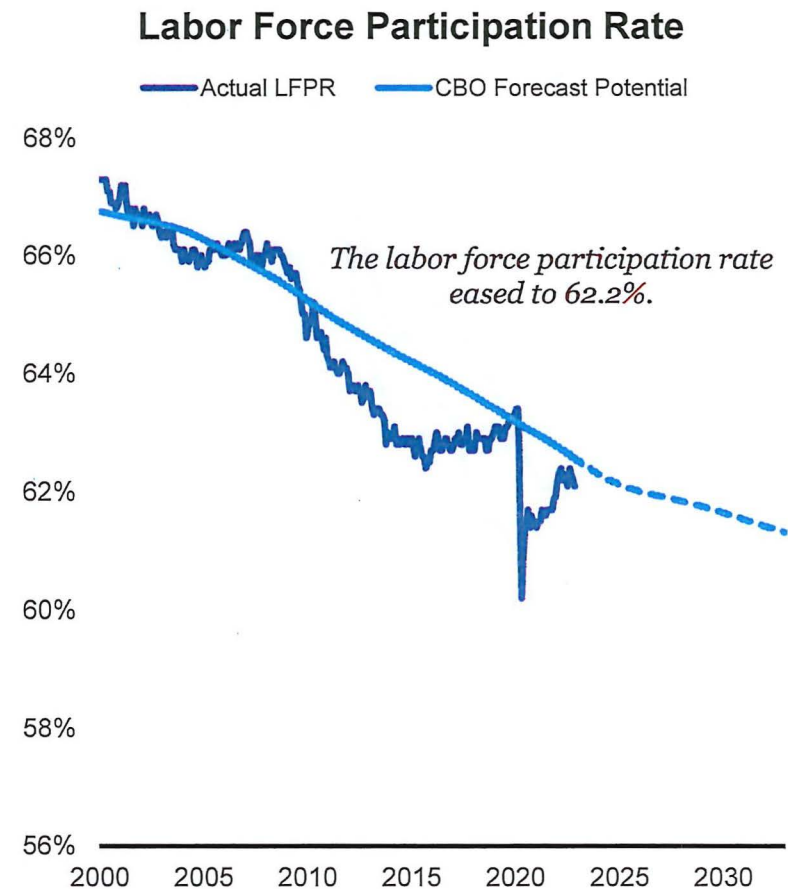
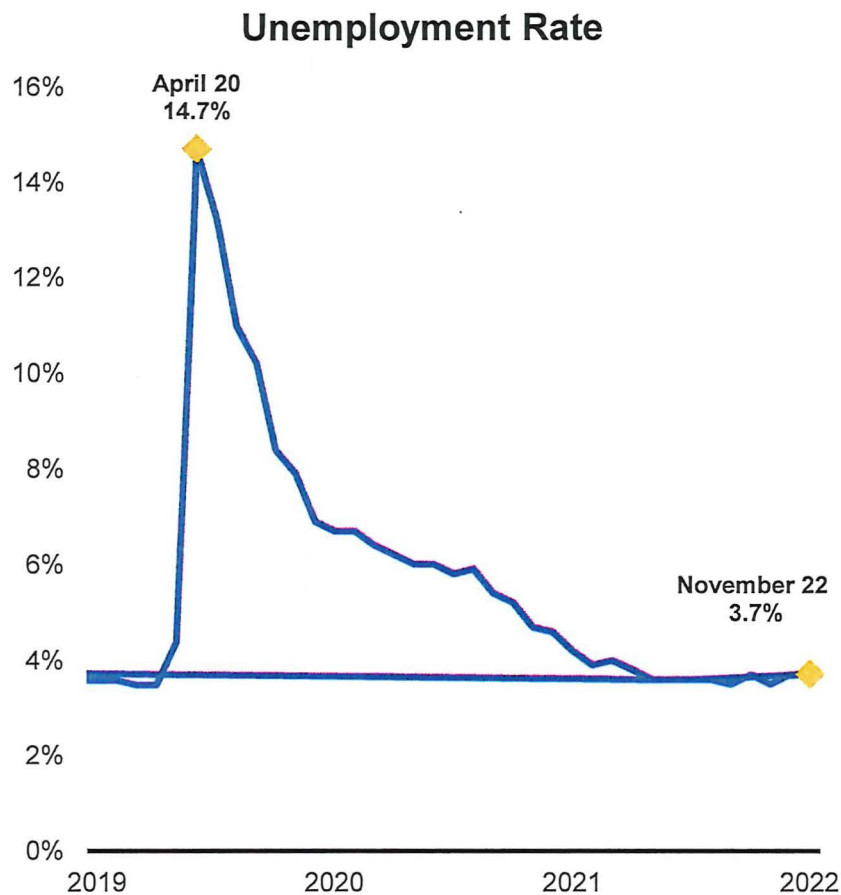
# Core CPI Deceleration Is Welcome News, But Overall Inflation Remains Much Too High



Source: Bloomberg, Bureau of Labor Statistics as of October 2022.

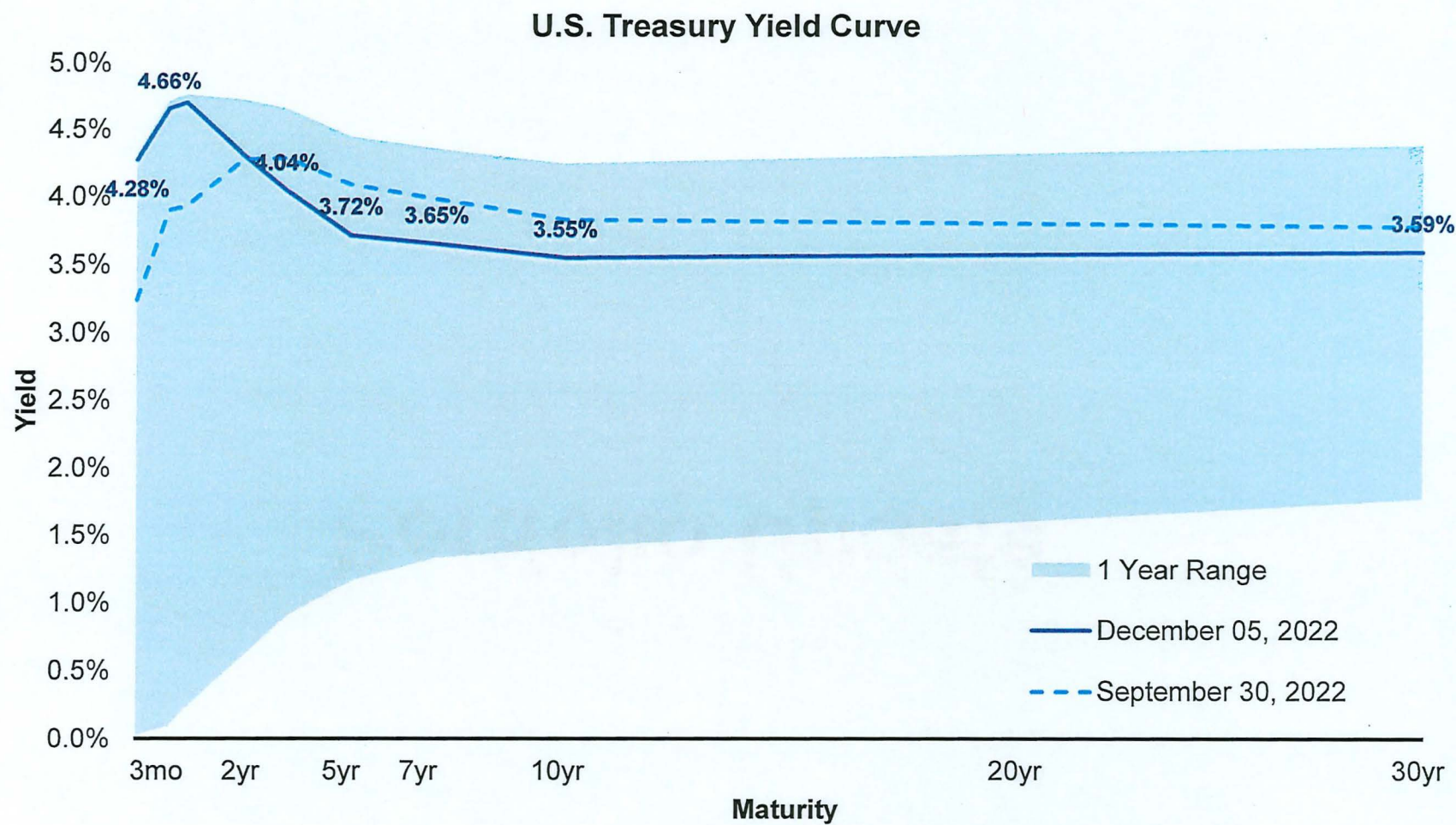


# U.S. Economy Added 263,000 Jobs in November; Unemployment Rate Remained at 3.7%



Source: Congressional Budget Office November 2022 economic projections, Bureau of Labor Statistics. Bloomberg, as of October 2022. Data is seasonally adjusted.

# Treasury Curve Inverted Further



Source: Bloomberg, as of 12/05/2022.



# Portfolio Update





# Fixed Income Investment Approach

<b>Target Duration</b>	<u>Shorter-Term Cash Needs</u>		<u>Return-Seeking Investments</u>		
<b>Sector Structure</b>	Treasury Bills	Agency Discount Notes	U.S. Treasuries	Federal Agencies	Investment-Grade Corporates
	Commercial Paper	Certificates of Deposit (CDs)	Negotiable CDs	Asset-Backed Securities	Agency Mortgage-Backed Securities

## Investment Strategy Value Adds for Fixed Income Portfolios

### Active Management

Review portfolios on a daily basis, examining portfolio holdings, upcoming maturities, cash flows, and any other client-specific needs.

### Dynamic Asset Allocation

Make opportunistic adjustments to exploit underweight sectors, limit risk, maximize return, and optimize sector allocation.

### Tactical Rebalancing

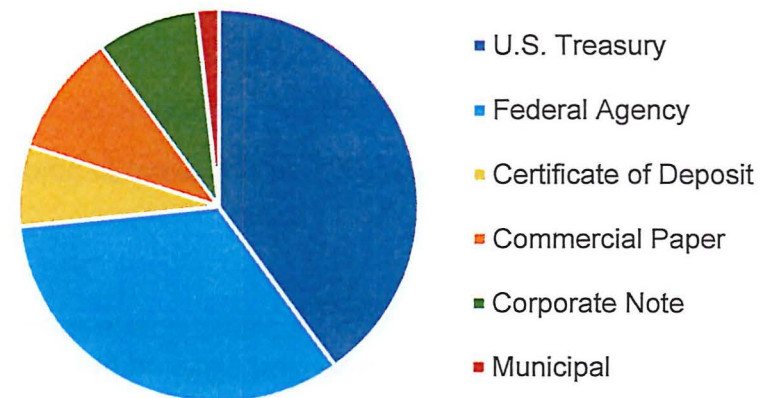
Regularly identify best combination of return and risk characteristics using relative value relationships between sectors, issuers, and areas of the yield curve.

# Portfolio Snapshot

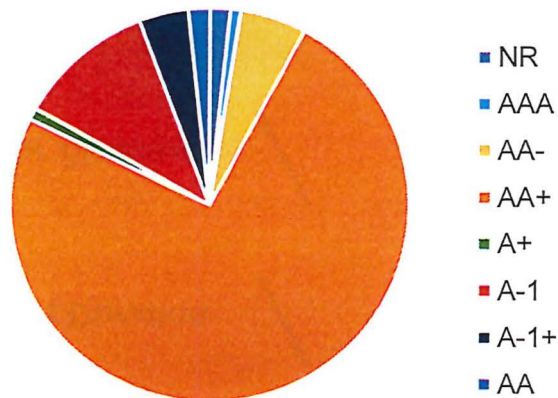
## Portfolio Statistics

- **Total Market Value:** \$29,210,595.43
- **Portfolio Effective Duration:** 1.25 years
- **Yield at Cost:** 1.88%
- **Yield at Market:** 4.69%

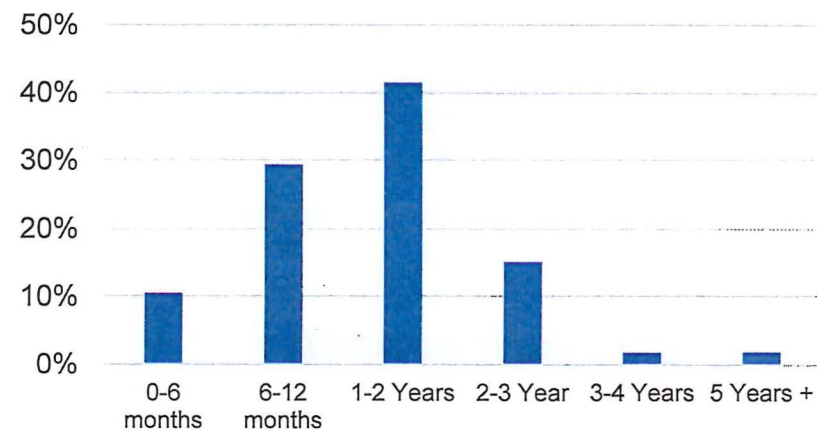
## Sector Allocation



## Credit Quality



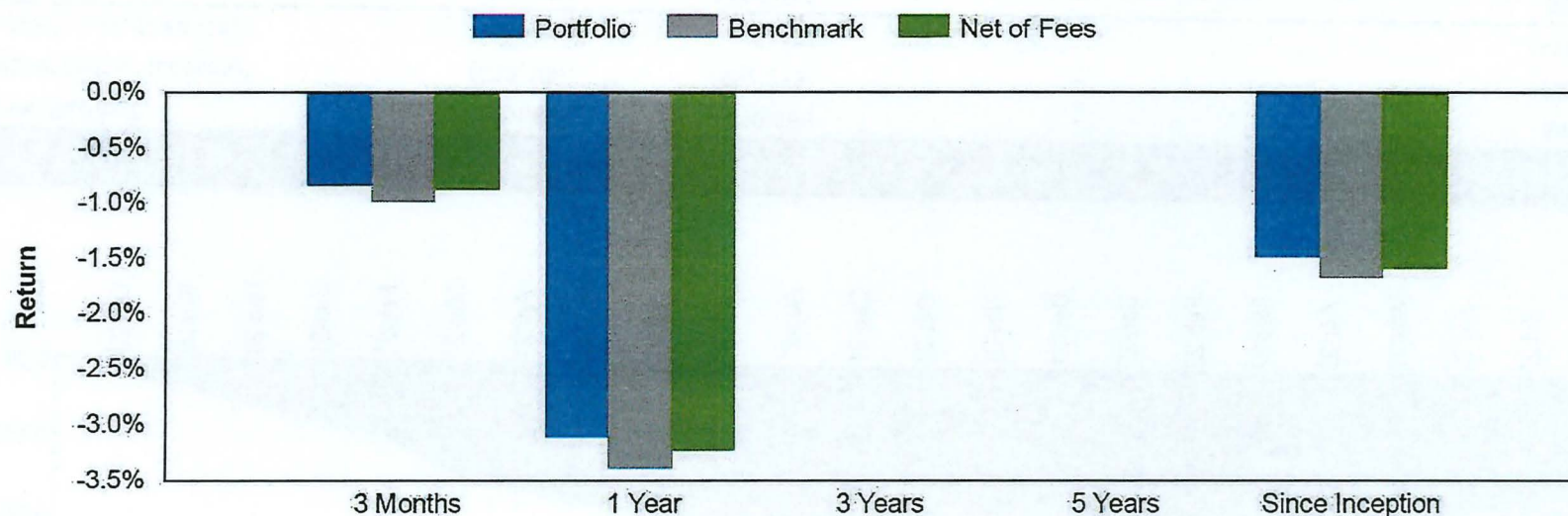
## Maturity Distribution



As of 11/30/2022 Yield and duration calculations exclude cash and cash equivalents. Sector allocation includes market values and accrued interest. The portfolio's benchmark is the ICE BofAML 0-3 Year U.S. Treasury Index. Source: Bloomberg. An average of each security's credit rating was assigned a numeric value and adjusted for its relative weighting in the portfolio..



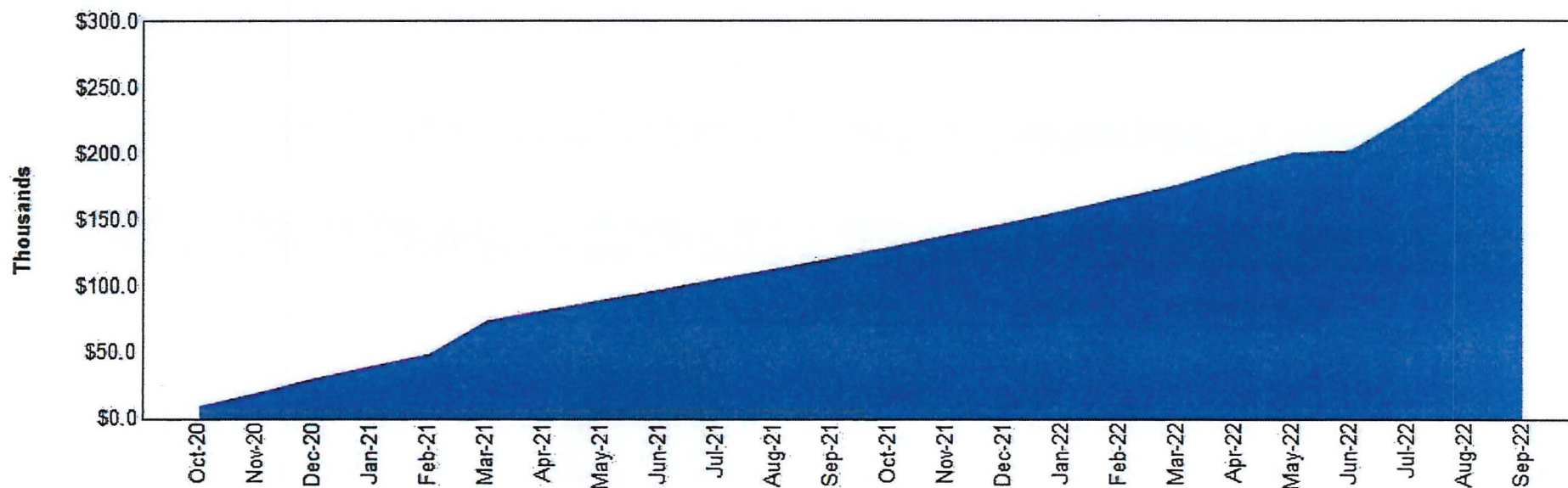
# Portfolio Performance



Market Value Basis Earnings	3 Months	1 Year	3 Years	5 Years	Since Inception <sup>1</sup>
Interest Earned <sup>2</sup>	\$74,667	\$210,266	-	-	\$415,406
Change in Market Value	(\$323,284)	(\$1,147,368)	-	-	(\$1,302,339)
<b>Total Dollar Return</b>	<b>(\$248,617)</b>	<b>(\$937,102)</b>	<b>-</b>	<b>-</b>	<b>(\$886,933)</b>
<b>Total Return<sup>3</sup></b>					
Portfolio	-0.84%	-3.11%	-	-	-1.49%
Benchmark <sup>4</sup>	-0.99%	-3.40%	-	-	-1.69%
Basis Point Fee	0.03%	0.12%	-	-	0.12%
<b>Net of Fee Return</b>	<b>-0.87%</b>	<b>-3.23%</b>	<b>-</b>	<b>-</b>	<b>-1.60%</b>

The lesser of 10 years or since inception is shown. Since inception returns for periods one year or less are not shown. Performance inception date is 1. September 30, 2020. 2. Interest earned calculated as the ending accrued interest less beginning accrued interest, plus net interest activity. 3. Returns for periods one year or less are presented on a periodic basis. Returns for periods greater than one year are presented on an annualized basis. 4. The portfolio's benchmark is the ICE BofAML 0-3 Year U.S. Treasury Index. Source: Bloomberg.

# Accrual Basis Earnings



Accrual Basis Earnings	3 Months	1 Year	3 Years	5 Year	Since Inception <sup>1</sup>
Interest Earned <sup>2</sup>	\$74,667	\$210,266	-	-	\$415,406
Realized Gains / (Losses) <sup>3</sup>	(\$19,306)	(\$52,233)	-	-	(\$30,167)
Change in Amortized Cost	\$21,414	(\$117)	-	-	(\$106,546)
<b>Total Earnings</b>	<b>\$76,774</b>	<b>\$157,916</b>	<b>-</b>	<b>-</b>	<b>\$278,693</b>

1. The lesser of 10 years or since inception is shown. Performance inception date is 1. September 30, 2020. 2. Interest earned calculated as the ending accrued interest less beginning accrued interest, plus net interest activity. 3. Realized gains / (losses) are shown on an amortized cost basis.



## Disclaimer

Investment advisory services are provided by PFM Asset Management LLC ("PFMAM"), an investment adviser registered with the U.S. Securities and Exchange Commission and a subsidiary of U.S. Bancorp Asset Management, Inc. ("USBAM"). USBAM is a subsidiary of U.S. Bank National Association ("U.S. Bank"). U.S. Bank is a separate entity and subsidiary of U.S. Bancorp. U.S. Bank is not responsible for and does not guarantee the products, services or performance of PFMAM. The information contained is not an offer to purchase or sell any securities. Additional applicable regulatory information is available upon request.

For more information regarding PFMAM's services please visit [www.pfmam.com](http://www.pfmam.com).



## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Four-Story Residential Backflow Prevention Assembly Retrofit	<b>AGENDA DATE:</b> December 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Jeremy M. Lynn, P.E., Director of Engineering and Alexander J. Morrison, P.E., Senior Civil Engineer	<b>ACTION:</b> <input type="checkbox"/> <b>INFORMATION:</b> <input checked="" type="checkbox"/>
	<b>ATTACHMENTS:</b> YES

**BACKGROUND:** In late 2018 ACSA staff became aware that an unknown number of residential structures had been constructed with a fourth (4<sup>th</sup>) story, without proper backflow protection. 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.

The ACSA, in conjunction with identified builders, developed a list of all structures in the ACSA water system that were constructed with a habitable area on the fourth level containing plumbing and did not have a BFP device. There are eighty-one (81) structures that meet these criteria and therefore require the installation of a backflow prevention assembly.

Although changes in the County Building Code made it more difficult for ACSA staff to identify four-story residential structures requiring BFP assemblies, it is still our responsibility to recognize these structures and enforce our regulations accordingly. The ACSA Board has previously agreed to bear the initial cost of all backflow prevention device assemblies, including all materials, labor, and permitting, with the customer being responsible in the future for the cost of annual testing and maintenance of the BFP, in accordance with our Rules and Regulations.

**DISCUSSION:**

- ❖ At the August 15, 2019, Board Meeting, the ACSA Board of Directors voted to appropriate \$348,000 from the FY 2020 3R Fund for the Four-Story Backflow Prevention Assembly Retrofit Project.
- ❖ Every affected customer has been contacted to explain the project and determine all needed components to bring their residences into compliance.
- ❖ The BFP assembly can either be installed outside of the residence in a dedicated meter box just behind the ACSA meter, or inside the structure

**ALBEMARLE COUNTY SERVICE AUTHORITY****AGENDA ITEM EXECUTIVE SUMMARY**

(with or without drywall work). The location of the BFP assembly will be determined at the discretion of the customer.

- ❖ ACSA staff anticipates entering into a contract with a licensed plumber to complete the various installations. The Request for Proposals for Phase 1 is currently being advertised and pricing is expected from interested contractors by December 21, 2022.
- ❖ If a customer prefers to contract with their own established plumber the ACSA will propose reimbursement to the customer based upon a valid invoice, up to a “cap” amount, to be determined by ACSA staff.
- ❖ To ensure that future four-story residential structures include BFP assemblies ACSA staff have created a multi-layered system of checks: during initial review of construction plans engineers will verify any four story residential units proposed; utility location technicians during building permit reviews will verify the number of stories for each residential unit; and construction inspectors will take notice of the number of stories on any buildings under construction on development sites they are still actively visiting.

**BUDGET IMPACT:** None.

**RECOMMENDATIONS:** None.

**BOARD ACTION REQUESTED:** No Board action requested. Information only.

**ATTACHMENTS:** PowerPoint presentation – Four-Story Residential Backflow Prevention Assembly Retrofit Project

# Four-Story Residential Backflow Prevention Assembly Retrofit Project

Alexander J. Morrison, PE

Senior Civil Engineer

**Albemarle County  
Service Authority**

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environmental resources forever.*



# Table of Contents

- What is Backflow?
- What is a Backflow Prevention Assembly?
- State Regulations
- ACSA Backflow Prevention Program
- Project Background and Development
- Project Implementation Delays
- Project Status
- ACSA Process Changes
- Questions



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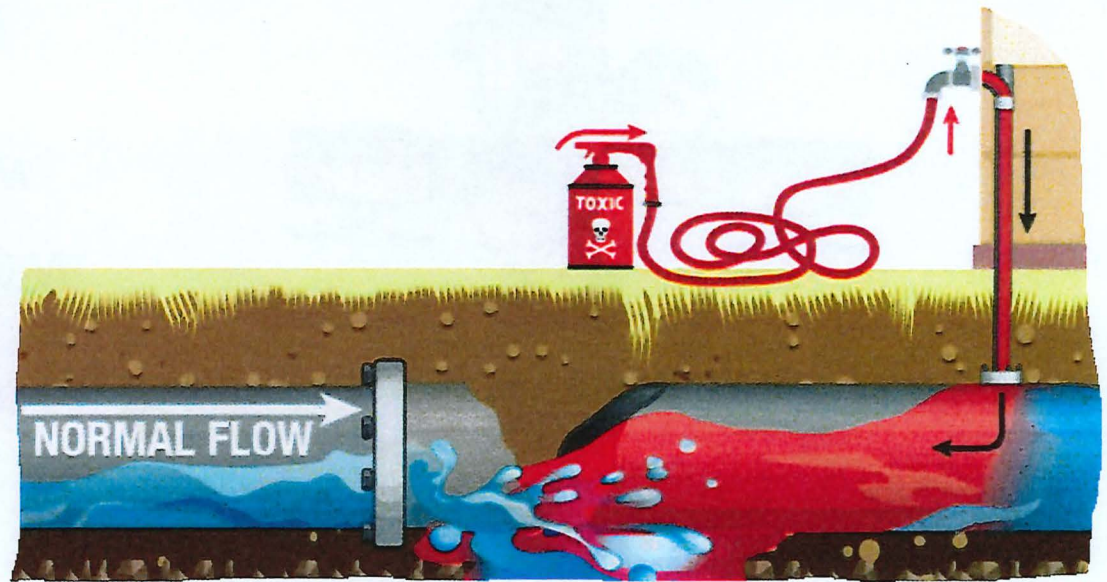
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# What is Backflow?

- Undesirable reversal of flow of a liquid, gas, or suspended solid into the potable water supply due to backsiphonage or back pressure.



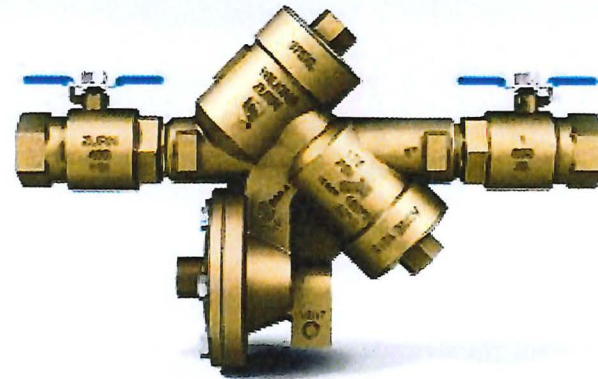
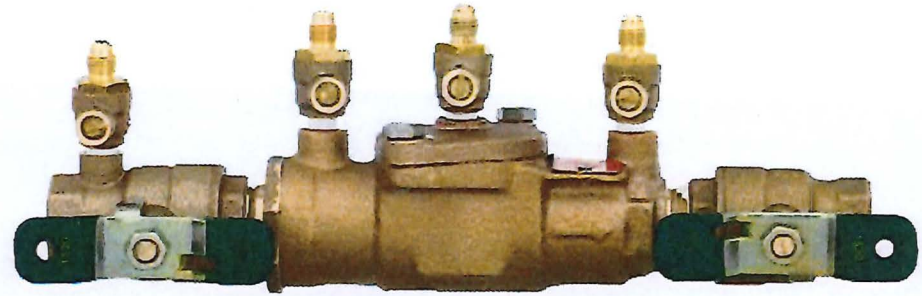
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# What is a Backflow Prevention Assembly?

- An assembly used to protect potable water supplies from contamination or pollution due to backflow.
  - Double Check (DC) – Low Hazard
  - Reduced Pressure Zone (RPZ) – High Hazard



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# State Regulations

- Virginia Administrative Code
- Title 12: Health
- Agency 5: Department of Health
- Chapter 590: Waterworks Regulations
- Part II: Operation Regulations for Waterworks
- Article 4: Cross Connection Control and Backflow Prevention in Waterworks
- **Section 580** - General requirements for cross-connection control and backflow prevention
- **Section 600** - Cross-connection control program responsibilities
- **Section 610** - Containment of backflow.
- **Section - 630** Backflow prevention assemblies, devices, and backflow elimination methods for containment



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# State Regulations (cont.)

- 12VAC5-590-610.E: “A backflow prevention assembly or backflow elimination method shall be installed at consumer water systems serving the following types of facilities, including:”
  - 12VAC5-590-610.E.21: “Highrise buildings (four or more stories)”

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# ACSA Backflow Prevention Program

- ACSA Rules and Regulations
  - Section 8: Cross-Connection and Backflow Prevention
- Engineering Department
  - Environmental Group
    - Environmental Compliance Specialist
    - Regulatory Compliance Specialist
    - Engineering Technician I
- 4,126 Tracked Backflow Assemblies
  - 2,904 RPZ's
  - 1,204 DC's
  - 18 Other



# ACSA Backflow Protection Program (cont.)



## Backflow Prevention & Cross-Connection Control



**How You Can Help Us  
Protect the Safety  
of Our Drinking Water**

### What is backflow?

Backflow is the reversal of flow in a water system from the normal or intended direction of flow. It creates the opportunity for potential contaminants or pollutants from private plumbing systems in your home or business to enter the main water distribution system.

Backflow can happen either from back-siphonage or back-pressure. Back-siphonage is the reversal of flow caused by a reduction in the main line pressure. This can occur with a major break in the water main or during heavy water usage such as fire-fighting. Back-pressure is the increase in water pressure inside the home or business caused by elevation or mechanical pumping.

### How can I prevent backflow?

If you are a business, or have a lawn irrigation system or fire suppression system in your home, you already know about backflow prevention assemblies that the ACSA requires of you, and that must be tested annually by a certified contractor. The installation of a backflow preventer protects the ACSA drinking water system from possible contamination.

Think of the device as a security gate that allows water to flow in the right direction, but blocks it – and the contaminants it might be carrying – from returning to our water main if backflow occurs.

Many of you have simpler, but effective, backflow preventers on your outside faucets. Most homes built in Virginia in the past 40 years have faucets with a built-in vacuum breaker. These can also be purchased from a hardware or home improvement store for less than \$10, are simple to install, and help to safeguard our system.

Typical Backflow Prevention Devices



The ACSA asks that you follow a few key practices as you use water in your home, and especially around the yard:

**DO: Recognize that the water in the plumbing of your home or business can potentially be drawn or forced into the main water system under certain conditions.**

**DO NOT: Submerge hoses into sinks, buckets, pools, spas, tubs, or radiators.**

Cute? Yes.  
But bad for  
backflow  
prevention.



**DO: Purchase vacuum breakers for your outside faucets if not already present. A plumber can assist you, if necessary.**

**DO NOT: Use spray attachments on garden hoses that contain chemicals - fertilizers, weed-killers, and pesticides - without a vacuum breaker on the faucet or other backflow protection.**



**Make sure chemical-filled spray attachments have backflow protection before you use them. Your home will be contaminated first if backflow occurs!**

### What is cross-connection?

A cross-connection is a link between the public potable water system and any source of possible contamination. In addition to a hose submerged in a tub, bucket and pool, and a garden hose with an attached pesticide container, are such instances as:

- boiler water
- dialysis machines
- dental office equipment
- carbonated beverage machines; and
- groundwater well or cistern.

Each of these instances requires proper backflow protection to ensure your ACSA water remains safe.

Clean drinking water is EVERY customer's business. By taking the necessary steps to prevent backflow and cross-connection, you will help us protect the safety of our drinking water.



**For more information on backflow prevention & cross-connection control, visit ACSA's website at [www.serviceauthority.org](http://www.serviceauthority.org) or call 434-977-4511.**

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environmental resources forever.*



# Project Background and Development

New Construction Issue  
discovered in 2018

Virginia Building Code change  
in 2011 regarding the definition  
of fourth (4<sup>th</sup>) story

Meetings with VDH to  
confirm requirements.

Meetings with builders to  
identify structures

Request for Project  
funding from Board of  
Directors

Customer Contact  
and data acquisition

Bid Document Development

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# Project Implementation Delays

- Structure identification on new construction from 2011 to 2018
  - Primary Residence out of State or Country
- Customer Data Collection
  - COVID
  - Change of Ownership
  - Unresponsiveness
- HOA ARB Landscaping Requirements
- Unsuccessful 2022 Bid



# Project Status

- Restructuring of project into three (3) phases based on geographic locations:
  - Phase 1: Out of Bounds (24 structures)
  - Phase 2: Cascadia (29 structures)
  - Phase 3: Avinity, Hollymead, Lochlyn, and Old Trail (28 structures)
- Development of “Request for Proposals (RFP)” for each Phase.
- Phase 1 RFP underway with proposals due December 21, 2022, at 2:00 PM EST.



# ACSA Review Process Changes

Initial Plan Review

Building Permit Process

Active Construction,  
Prior to Meter  
Installation

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# Questions

Questions or comments?

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# ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Budget Guidelines and Schedule for FY 2024 Budget, Rates, Capital Improvement Program (CIP)  <b>STAFF CONTACT(S)/PREPARER:</b> Quin Lunsford, Director of Finance	<b>AGENDA DATE:</b> December 15, 2022  <b>ACTION:</b> ■  <b>ATTACHMENTS:</b> Yes
---	--

**BACKGROUND:** The annual operating and capital budget, rate and fee recommendations are provided to the Board annually for consideration.

**DISCUSSION:** The proposed Budget and Rate schedule is as follows:

Regular Board Meeting March 16, 2023	<ul style="list-style-type: none"> <li>• Present Proposed Capital Improvement Program (CIP) to Board</li> <li>• Schedule CIP Public Hearing</li> </ul>
Regular Board Meeting April 20, 2023	<ul style="list-style-type: none"> <li>• CIP Public Hearing</li> <li>• Budget Work Session on Proposed FY '24 Budget</li> <li>• Preliminary Rate Schedule</li> <li>• Schedule Public Hearing</li> </ul>
Regular Board Meeting May 18, 2023	<ul style="list-style-type: none"> <li>• Budget, CIP, and Rates Work Session</li> </ul>
Regular Board Meeting June 15, 2023	<ul style="list-style-type: none"> <li>• Public Hearing to adopt rates</li> <li>• Budget, CIP, and Rate Adoption</li> </ul>

Overview:

- The ACSA retail rate is largely driven by RWSA Wholesale Rate; over 60% of ACSA operating expenses are for purchased water/wastewater treatment from RWSA; Based on preliminary information, the Authority expects significant increases in charges for water/wastewater treatment from the RWSA in FY 24. A short presentation has been prepared outlining early estimates and potential impacts on ACSA customer rate recommendations;
- Update to the rate study completed last year in conjunction with preparation of the Fiscal Year 2024 budget;
- Outside of the expected increases in RWSA charges, no anticipated significant ACSA operating cost increases, unless supply of materials continues to be impacted by the pandemic;
- Utilization of a budgeting module within the ACSA's recently deployed financial system;
- Customer Rate/Budget Newsletter scheduled to be provided with May customer bills;

**BOARD ACTION REQUESTED:** Consideration and approval of the Fiscal year 2024 Budget and Rate Schedule.

**ATTACHMENTS:** Preliminary estimates and budgetary impacts of Water/Wastewater charges from RWSA (PowerPoint)





# Albemarle County Service Authority

Fiscal Year 2024 Budget Schedule, Guidelines, and Preliminary Information

December 15, 2022



## Agenda

### Preliminary FY 2024 Budget Guidelines and Schedule

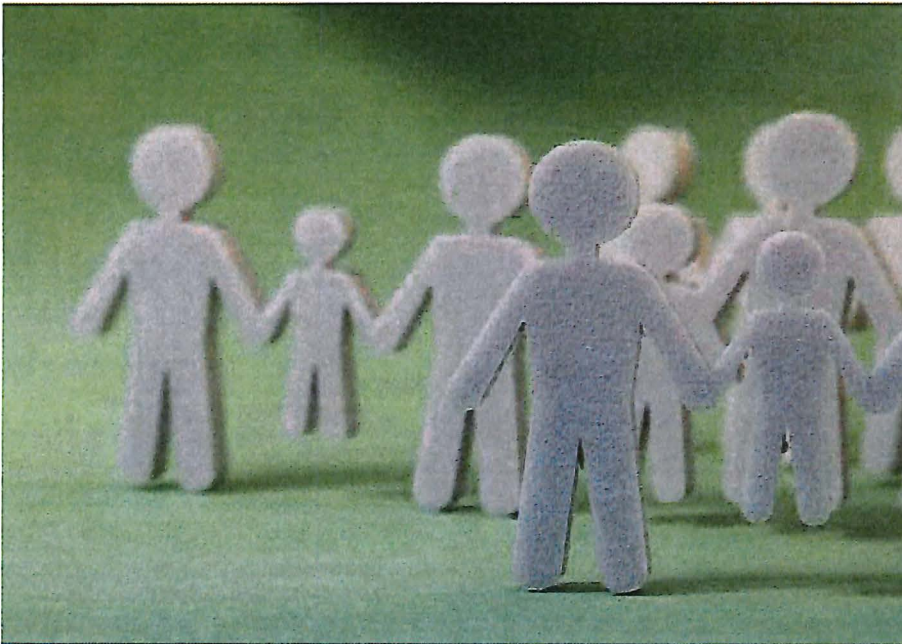
Review preliminary budgetary information - RWSA charges for water/wastewater treatment

## Proposed FY 2024 Budget Schedule

March 16, 2023 - Regular Board Meeting	<ul style="list-style-type: none"><li>• Present Proposed Capital Improvement Program (CIP) to Board</li><li>• Schedule CIP Public Hearing</li></ul>
April 20, 2023 - Regular Board Meeting	<ul style="list-style-type: none"><li>• CIP Public Hearing</li><li>• Budget Work Session on Proposed FY '24 Budget</li><li>• Preliminary Rate Schedule</li><li>• Schedule Public Hearing</li></ul>
May 18, 2023 - Regular Board Meeting	Budget, CIP, and Rates Work Session
June 15, 2023 - Regular Board Meeting	<ul style="list-style-type: none"><li>• Public Hearing to adopt rates</li><li>• Budget, CIP and Rate Adoption</li></ul>



## Proposed FY 2024 Guidelines/Information



- ▶ Update rate study performed last year
- ▶ Utilize budgeting module within the ACSA's recently deployed financial system
- ▶ Customer Rate/Budget Newsletter provided to Customers in May

# Increases in the Cost of Purchased Water and Wastewater Treatment

- ▶ Initial RWSA projections/estimates show larger than expected increases in the cost of water/wastewater treatment to the ACSA
- ▶ Estimates are subject to change but significant increases on already committed projects
- ▶ Increases driven largely by the RWSA CIP program
  - ▶ FY 23-27 CIP total \$205.8M
  - ▶ FY 24-28 CIP total \$345.2 M
    - ▶ Increase of \$139.4M from FY 23-27 CIP to FY 24-28 CIP driven by:
      - ▶ \$77 M from inflation, supply chain, detailed scope updates and increased borrowing costs
      - ▶ \$7.3 M in FY 28 costs which entered the 5-year CIP
      - ▶ \$54.1 M for accelerated projects; SRR-RMR Waterline & Additional GAC Filters
      - ▶ \$10.4 M for new projects and studies to complete major repairs at MC, Berkmar WL extension, and PAC upgrades at SRWTP
      - ▶ Less \$8.9 M in projects completed in FY 23



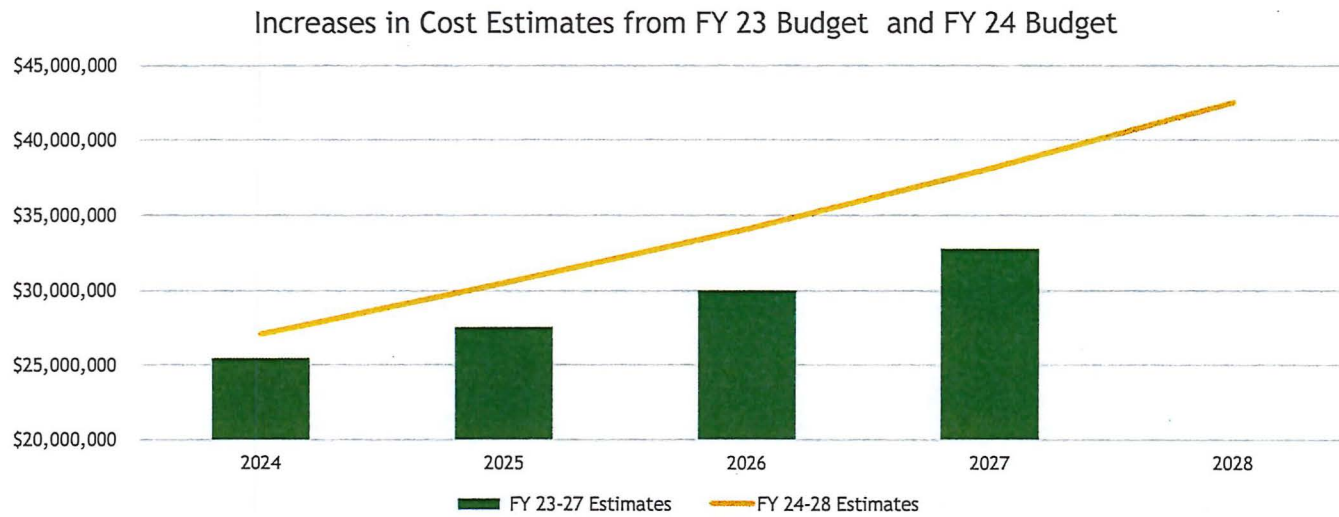
## Increases in the Cost of Purchased Water and Wastewater Treatment (Cont.)

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Estimated Charges to ACSA	23,900,000	27,100,000	30,500,000	34,100,000	38,100,000	42,500,000
\$ Inc. to Prior Year		3,200,000	3,400,000	3,600,000	4,000,000	4,400,000
% Inc. from PY		13.6%	12.6%	11.8%	11.7%	11.5%

## Increases in Cost Estimates in FY 23-27 RWSA Projections and the FY 24-28 Projections

Estimated Charges to ACSA	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
FY 23-27 RWSA Chg.. (\$'s)	25,500,000	27,600,000	30,000,000	32,800,000	--
% Inc. from PY	8.0%	8.3%	8.7%	9.3%	--
FY 24-28 RWSA Chg.. (\$'s)	27,100,000	30,500,000	34,100,000	38,100,000	42,500,000
% Inc. from PY	13.6%	12.6%	11.8%	11.7%	11.5%
\$ Inc. in Est. Chg..	1,600,000	2,900,000	4,100,000	5,300,000	--





Increases in Cost Estimates in FY 23-27 RWSA Projections and the FY 24-28 Projections

## Preliminary Information for Board Awareness

Single-Family Consumption	FY 23	FY 24	Monthly Inc.
2,500 gal	\$47.68	\$52.43	\$4.75
3,200 gal	\$59.40	\$65.32	\$5.92
6,200 gal	\$121.55	\$133.67	\$12.12

- ▶ ACSA staff is in the early stages of budget, rate, CIP development
- ▶ Provided these preliminary estimates from the RWSA, customer rate increase recommendations will likely be considerably higher than they have been historically
- ▶ Increases in charges from the RWSA to exceed 10% each year through at least FY 2028, 13.6% proposed for FY 24
- ▶ Table to the left reflects customer bills at different consumption levels using current rates in FY 23 and a 10% increase in rates (provided for contextual purposes and discussion)



## Next steps

### Awareness

- Share preliminary information with the ACSA Board as RWSA charges greatly exceeded expectations from last year. Meet with RWSA to better understand the initial proposal and potential options

### Analysis

- Begin detailed analysis of funding needs, through the operating and capital budget process

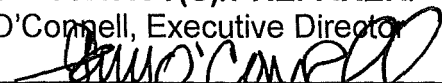
### Guidance

- Seek guidance from the ACSA Board as the Authority develops the FY 2024 budget

### Development

- Develop options for Board consideration to evaluate substantial changes to water/sewer cost estimates

**ALBEMARLE COUNTY SERVICE AUTHORITY****AGENDA ITEM EXECUTIVE SUMMARY**

<b>AGENDA TITLE:</b> Attorney Appointment Agreement Approval	<b>AGENDA DATE:</b> December 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Gary O'Connell, Executive Director 	<b>ACTION:</b> <input checked="checked" type="checkbox"/>
	<b>ATTACHMENTS:</b> YES

**BACKGROUND:** For some time now, we have known that our current Attorney, Jim Bowling, would be retiring at the end of this year. That time has come. As the Board is aware we have been transitioning with Mike Derdeyn of the Flora Pettit law firm for over a year. He and his firm seem to be a very good fit for the legal needs of the ACSA.

**DISCUSSION & RECOMMENDATION:** Mr. Derdeyn has prepared a Representation Agreement with he and his firm Flora Pettit that is attached. The agreement is very similar to our current arrangement with the same hourly fee, and a monthly billing for legal work provided to the ACSA. Much of our legal work and subsequent billings are related to our many capital projects, such as construction contracts, easements and the like.

**BOARD ACTION REQUESTED:** Approve the attached General Representation Agreement with Mr. Mike Derdeyn and his firm Flora Pettit to represent the ACSA in legal matters, and to authorize the Executive Director to sign said agreement.

**ATTACHMENTS:** Flora Pettit General Representation Agreement.



Michael E. Derdeyn  
*Attorney at Law*

Direct: (434) 817-7978  
med@fplegal.com

Phone: (434) 979-1400  
Fax: (434) 977-5109  
530 East Main Street  
P.O. Box 2057  
Charlottesville, Virginia 22902

December \_\_, 2022

**VIA EMAIL**

Albemarle County Service Authority  
c/o Gary O'Connell, Executive Director  
[goconnell@serviceauthority.org](mailto:goconnell@serviceauthority.org)

Re: General Representation

Dear Mr. O'Connell:

Thank you for the opportunity to represent you ("you" or "your") with the above-referenced matter. We believe that a clear understanding of the terms of legal representation is fundamental to a good relationship. Accordingly, the purpose of this letter is to set forth the terms of your engagement with me and my firm, Flora Pettit (referred to herein as the "Firm" "we" "our" or "us").

Nature and Scope of Services

You have requested our advice and services with respect to the above-referenced matter. We will be pleased to perform additional services at your request, and unless a new agreement is made, this agreement will apply to those services.

Hourly Rates and Fees

I will be your primary contact for this engagement and will use other attorneys and paralegals in the Firm as appropriate. My hourly rate is \$350. The Firm's hourly rates for other lawyers, paralegals, and staff range from \$75 – 385. Upon notice to you, we may increase our rates as part of an increase in billing rates that is applicable to all of the Firm's clients. This generally occurs at the beginning of the year. Work assignments will be made, whenever possible, in a way that maximizes our effectiveness and efficiency and minimizes your legal expenses. Our goal is to provide high quality legal services to you at a reasonable expense.

In addition to the fees described above, the Firm will charge for all costs and expenses associated with the services rendered. These costs could include, but are not limited to, court costs, filing fees, travel expenses, external delivery and courier services, express mail, standard postage, and document production. Clerical staff time and routine copying will not be charged except where unusual circumstances require overtime or excessive clerical support. Although we will advance most of these costs, we may ask you to pay directly any expenses in excess of \$1,000.00.



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Other Fees, Charges, and Expenses

You authorize us to retain and agree to pay the fees or charges of every other person or entity hired by us to perform necessary services related any litigation. Depending on the circumstances, such other persons and entities may include, but are not limited to, court reporters, appraisers, real estate agents, escrow agents, accountants, investigators, expert witnesses, title examiners, and surveyors. You authorize the Firm, in its discretion, to direct such other persons and companies to render statements for services rendered and expenses advanced either directly to you or to the Firm, in which latter event you agree to allow reimbursement to us for the full amount of such statements.

Advance Fee Deposit

We are not requiring an advance fee deposit at this time, however, we reserve the right to request one. If and when an advance fee deposit is collected, we will deposit it in our non-interest bearing trust account as security for the prompt payment of our fees. The Firm will invoice you on a monthly basis for all fees and expenses. If any bill is not paid when due we may apply the advance fee deposit and request that it be replenished immediately. If it is not so replenished we will cease further work on your matter, consistent with the Virginia Rules of Professional Conduct, and seek to withdraw from the referenced case. At the conclusion of our representation we will apply the advance fee deposit to our final bill and return the surplus, if any, to you.

Billing and Statements

The Firm will invoice you on a monthly basis for all fees and expenses, which will be payable by you upon presentation. If you have any questions about a statement, we will be pleased to discuss them with you. I ask that you review each invoice promptly when rendered and bring any questions to my attention within thirty (30) days, after which time all invoices shall be deemed accurate, fair, and reasonable. Payment by credit card will include a fee for processing costs of one-percent.

Late Payment Interest Charges

Unless otherwise agreed by the Firm, any invoice outstanding for more than 60 calendar days from the date of the invoice may incur an interest charge of 1% per month (12% per annum), which will be automatically added to the invoice, and which you agree to pay. This charge represents our reasonable endeavor to estimate fair compensation for our administrative expenses and the cost to the Firm. This charge does not delay the time at which payment is due.

Conflicts

With respect to conflict matters, the Firm has performed a formal conflict check and has found no conflicts relative to our representation of you. However, if I become aware of an actual or potential conflict with respect to any particular matter, I will discuss it with you immediately.



November 7, 2022

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### Files

In the course of providing legal advice, we usually obtain documents or other materials belonging to you or relating to our representation of you. We retain those records so that we are better able to represent you and, in some cases, to comply with professional guidelines. Once we complete the matter to which those records relate, we will arrange to return those records to you if you ask us to do so. In that situation, we have the right to make copies of any of the records for our files. If we retain the records, we may send them to our storage facilities. Our records retention policy provides that upon the expiration of a certain period of time, which varies depending on the type of engagement, those records may be destroyed. Generally, the records we return to you or retain in storage do not include our internal documents, such as drafts of pleadings or agreements, emails that have not been placed in your file, memoranda that relate to internal staffing or administrative matter, or items that we have received from third parties on a restricted basis.

### Client's Obligations

We will rely on the completeness and accuracy of the information you provide when performing services for you. Therefore, to enable us to provide effective representation, you agree to disclose to us, fully and accurately and on a timely basis, all facts and documents that are or might be material or that we may request. You also agree to apprise us on a timely basis of all developments relating to the matters we are handling for you that are or might be material; attend meetings, conferences, and other proceedings when it is reasonable to do so; determine acceptable terms of any compromise, settlement or agreement; and otherwise cooperate fully with us.

### Liability Insurance Coverage

It is your responsibility to determine whether you are covered by any relevant insurance that may cover all or some of our fees and expenses. If so, you are responsible for notifying your insurer(s) of the claim or potential claim and our involvement as soon as possible. You should send us a copy of any such notice.

### Email Communications

If requested by you, we will communicate with you by email. Such communications are subject to security risks. You should send and receive e-mail from a computer where you have secure e-mail access. Do not use a computer that can be accessed by other parties. If you send or receive e-mail from a computer owned by your employer, your employer has access to your e-mail and the attorney-client privilege may be waived. If at any time you do not wish to use e-mail as a way to communicate with you, please advise us in writing. If you send us an e-mail from an address, you are authorizing us to respond to that e-mail address.

### Termination of Representation

Subject to general standards of professional responsibility of the legal profession and the Virginia Rules of Professional Conduct, the Firm has the right to terminate our representation of

November 7, 2022

Page 4

you if any fees and/or expenses are not timely paid after an invoice with respect to them is rendered. Moreover, any delay in forwarding requested documents or other information can also serve as grounds for termination. You may terminate this engagement at any time upon written notice to me. If the engagement is terminated, you agree to and shall be liable for all fees and expenses incurred to the date of such termination.

#### Conclusion of Attorney-Client Relationship

It is our policy that the attorney-client relationship will be considered terminated upon our completion of the services that you have engaged us to perform. If you later retain us to perform further or additional services, our attorney-client relationship will be revived subject to these terms of engagement, as they may be supplemented at that time.

#### Complete Integration, Binding Upon All Parties

This agreement contains the entire agreement relating to the Firm's representation of you and the fees, charges, and expenses to be paid relative thereto. This agreement shall not be modified except in a writing signed by all parties. This agreement shall be binding upon all parties and their respective heirs, executors, legal representatives, and successors. The engagement shall not begin until this agreement has been fully executed and the deposit is deposited in the Firm's escrow account.

If the foregoing correctly sets forth your understanding of the terms of the Firm's engagement, please so indicate by dating, signing and returning the enclosed copy of this letter.

Date: December \_\_, 2022

FLORA PETTIT

By: \_\_\_\_\_  
Michael E. Derdeyn

ALBEMARLE COUNTY SERVICE AUTHORITY

Date: December \_\_, 2022

By: \_\_\_\_\_  
Gary O'Connell, Executive Director