



**BOARD OF DIRECTORS' MEETING**  
**September 15, 2022**  
**9:00 A.M.**

**AGENDA**

*This meeting is being held pursuant to and in compliance with Va. Code Section 2.2-3708(3) and the ACSA Remote Participation Policy effective September 1, 2022. Va. 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.	1. Call to Order and Establish a Quorum –Statement of the Board Chair
9:05 a.m.	2. Approve Minutes of August 18, 2022
9:10 a.m.	3. Matters from the Public
9:20 a.m.	4. Response to Public Comment
9:30 a.m.	5. Consent Agenda
	a. Monthly Financial Reports
	b. Monthly Capital Improvement Program (CIP) Report
	c. CIP Authorizations
	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. Exploring a New Strategic Plan for 2023
	i. ACSA Operations Center Fire Suppression System Replacement Project – Request to use a Design/Build Contract
9:50 a.m.	6. Imagine a Day Without Water – Resolution
10:00 a.m.	7. Customer Account Arrearages Report – Status Update
10:20 a.m.	8. Update Report – Supplier Issues
10:40 a.m.	9. Transfer of Ownership to Upper Woodbrook Interceptor
11:00 a.m.	10. Items Not on the Agenda
	11. Adjourn



**ALBEMARLE COUNTY SERVICE AUTHORITY**

**STATEMENT OF CHAIR TO OPEN SEPTEMBER 15, 2022 MEETING**

This meeting today is being held pursuant to and in compliance with Va. Code Section 2.2-3708,3 and the ACSA Remote Participation Policy effective September 1, 2022.

The Directors who are electronically present at this meeting are.... **(Name the directors electronically present for the meeting)**

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 virtually in a regular session on August 18, 2022, at 9:00 a.m.  
3 through Zoom.

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

6 **Members Absent:** Clarence Roberts, Chair.

7 **Staff Present:** Jim Bowling, Daniel Fouch, Quin Lunsford, Jeremy Lynn,  
8 Michael Lynn, Alex Morrison, Gary O'Connell, Justin Ray, Justin Weiler,  
9 Deanna Davenport, Emily Roach Danielle Trent, April Walker, Theresa  
10 Whiting.

11 **Staff Absent:** None.

12 **Public Present:** Mike Derdeyn, Flora Pettit PC; Neil Williamson, Free  
13 Enterprise Forum.

14  
15 1.     Call to Order and Establish a Quorum – Statement of Board Chair

16           Charles Tolbert, Vice-Chair, stated that he would serve as acting  
17 Chair in Clarence Roberts' absence. The Vice-Chair called the meeting to  
18 order, and a quorum was established. He then read the Board Chair  
19 statement declaring an electronic meeting (Attached as Page \_\_\_\_\_).

20  
21 2.     Service Recognition – Pete Gorham Retirement – 43 Years

22           Gary O'Connell stated that he would reluctantly like to introduce  
23 this item. He stated that this would be Pete Gorham's last Board meeting at  
24 the Albemarle County Service Authority, as he will be retiring on August 31,  
25 2022 after 43 years of service. He stated that Mr. Gorham has been a great  
26 leader in the Engineering department and the ACSA cannot thank him  
27 enough. He mentioned that there was a nice retirement reception for Mr.  
28 Gorham last week, where employees had an opportunity to thank him  
29 directly.

30           Mr. O'Connell stated that Mr. Gorham has done a plethora of things  
31 during his time at the ACSA to help provide better service to our

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1 customers. He stated that the CIP program has gone from 8 projects just a  
2 decade ago, to 41 active projects. He noted that the resolution mentions  
3 Mr. Gorham's humor and wit which have been seen here and there during  
4 Board meetings but is something employees witness on a daily basis in the  
5 office. He mentioned that Jeremy Lynn, Senior Civil Engineer, is a good  
6 successor who will begin as Director of Engineering on September 1, 2022.  
7 He added that the staff has a very nice plaque to present to Mr. Gorham,  
8 along with a resolution in the Board packet for adoption (Attached as  
9 Page\_\_\_\_\_).

10 Mr. Tolbert stated that he would read the resolution.

11 ***Mr. Moore moved to approve the recognition resolution as***  
12 ***presented to the Board, seconded by Mr. Tolbert. The Vice-Chair***  
13 ***asked for a roll-call vote: Mr. Armstrong, Mr. Parcels, aye; Mr. Moore,***  
14 ***Dr. Palmer, aye; Mr. Tolbert, aye.***

15 Mr. Tolbert stated that he, and the Board, wishes him a happy and  
16 long retirement. He mentioned that even though this was Mr. Gorham's last  
17 official meeting as an ACSA staff member, he was welcome back any time  
18 as a member of the public. Dr. Palmer stated that in her 8 years of prior  
19 service on the ACSA Board of Directors, the meetings were in-person and  
20 she always found Mr. Gorham's explanations very helpful, and his sense of  
21 humor always helped. She stated that he will be very much missed by all.

22 Mr. Gorham stated that he has been extremely fortunate over the  
23 years to work with numerous great people who were dedicated to doing the  
24 best for the ACSA and its customers, not to mention people who were a  
25 pleasure to be around every day. He stated that he has also been very  
26 lucky to serve several Boards that were supportive of employees and did a  
27 great job of giving direction to the staff. He stated that he believes there are  
28 great things ahead for the ACSA and the organization has the people it  
29 needs to do anything it decides to do. He noted that many of the excellent  
30 people he has worked with over the years are still at the ACSA, plugging  
31 away every day.



1        3.        Approve Minutes of July 21, 2022

2                Mr. Parcels stated that he had had two minor corrections to the  
3 minutes of July 21, 2022. He stated that that first correction was on page  
4 12, line 10. He stated that the word "works" should be "work." He stated  
5 that the second correction was also on page 12, line 18. He noted that  
6 there should be an "a" between the words "do" and "dive."

7                ***Mr. Parcels moved to approve the minutes, seconded by Mr.***  
8 ***Armstrong. All members voted aye, except for Dr. Palmer who***  
9 ***abstained from voting due to her absence at the July 21, 2022***  
10 ***meeting.***

11  
12        4.        Matters from the Public

13                There were no matters from the public.

14  
15        5.        Response to Public Comment

16                There was no response to public comment.

17  
18        6.        Consent Agenda

19        ***a. Monthly Financial Reports*** – Mr. Parcels stated that the cover memo  
20 summary states that staff will give a presentation on customer  
21 arrearages. He asked when that presentation would take place. Mr.  
22 O'Connell replied that the presentation is scheduled for the September  
23 Board meeting.

24        ***b. Monthly CIP*** –

25        ***c. CIP Authorizations*** –

26        ***d. CIP Project Close-Outs***

27        ***e. Monthly Maintenance Update*** –

28        ***f. Rivanna Water and Sewer Authority (RWSA) Update***

29        ***g. ACSA Board Policy Future Issues Agenda 2022*** –

30        ***h. Advanced Metering Infrastructure (AMI) Project Update*** – Mr.

31                Parcels asked if the meter vendor has given the ACSA a status of how

1 many meters they have, and an overall projection of when all the  
2 meters will be delivered. He noted that the staff has mentioned several  
3 times that ideally, they would like to get all of the remaining meters in  
4 and have one mass installation, as this would be more efficient. He  
5 stated that he was also curious about the \$5 million that was budgeted  
6 in FY 2022, a lot of which was not used. He stated that he assumed  
7 that money would be reallocated to FY 2023.

8 Mr. Lunsford stated that he does not have an update as to when  
9 the bulk of the remaining meters will be shipped. He stated that the  
10 staff has met several times to discuss the full deployment. He stated  
11 that currently, the distributor is accumulating parcels of meters at a  
12 time, which are being housed at their warehouse facility. He mentioned  
13 that at some point, the staff may evaluate deploying some of those as  
14 long as they are refreshed quickly enough to keep the installation team  
15 mobilized.

16 Mr. Lunsford stated that in terms of the funding, when the staff  
17 budgets for a capital project, they do not request reappropriation for  
18 those capital projects. He stated that the capital projects and  
19 associated appropriations are ongoing until the project is complete. He  
20 noted that this is different from the reappropriation requests in the next  
21 agenda item.

22 Mr. Parcels stated that it must be frustrating to have to drag the  
23 project out like this, given that there are so many meters left to be  
24 installed. Mr. Lunsford replied that the staff is anxious to get the rest of  
25 the meters deployed, given the success they have seen with the nearly  
26 1,800 meters that have been installed. He stated that the upside of the  
27 situation is that staff has had an opportunity to get their hands around  
28 processes and procedures, and how to evaluate the data they receive.

29 ***Mr. Parcels moved to approve the Consent Agenda, seconded***  
30 ***by Mr. Armstrong. The Vice-Chair asked for a roll-call vote: Mr.***

1        ***Armstrong, aye; Mr. Parcels, aye; Mr. Moore, aye; Dr. Palmer, aye;***  
2        ***Mr. Tolbert, aye.***

3  
4        7.        Year-End Appropriations

5                Mr. Lunsford stated that this is an annual exercise to reappropriate  
6                budgeted funds in the ACSA's operating budget. He stated that all of the  
7                requests presented before the Board today were in progress in FY 2022,  
8                which ended June 30, 2022. He stated that as supplies and equipment are  
9                delivered and those financial transactions occur, the staff is asking the  
10              Board to reappropriate those funds to FY 2023.

11              ***Mr. Armstrong moved to approve the reappropriation of***  
12              ***\$252,361.43 from FY 2022 to FY 2023, seconded by Mr. Parcels. The***  
13              ***Vice-Chair asked for a roll-call vote: Mr. Armstrong, aye; Mr. Parcels,***  
14              ***aye; Mr. Moore, aye; Dr. Palmer, aye; Mr. Tolbert, aye.***

15  
16        8.        Investment Policy Report – Update

17              Mr. O'Connell stated that this report is a follow-up to previous  
18              Board discussions about the ACSA's Investment Policy, specifically socially  
19              responsible investments (SRIs). He stated that Mr. Lunsford will try to help  
20              clarify where the ACSA stands in terms of investments, as well as get  
21              Board feedback.

22              Mr. Lunsford stated that staff met with the Board and the ACSA's  
23              financial advisors, PFM Asset Management, in March of this year to update  
24              the organization's investment policy and further diversify investments that  
25              were allowable. He stated that through that conversation, the Board  
26              requested some information related to SRI and environmental, social, and  
27              governance (ESG) programs to be mindful of what the ACSA is investing  
28              its funds in.

29              Mr. Lunsford stated that after doing some further work with PFM,  
30              the staff is asking the Board today to give some specific direction for them

1 to evaluate and provide different options for the Board to consider. He  
2 noted that there is no expectation that any program the Board could  
3 consider would greatly impact return. He mentioned that the Code of  
4 Virginia, and the ACSA's current policy, greatly limits what the organization  
5 can invest in.

6 Mr. Lunsford stated that the SRI program is an exclusionary  
7 approach to investing, as it identifies what the ACSA does not want to  
8 invest in. He mentioned that there is no additional cost to implement this  
9 type of program. He stated that the ESG program is a bit more  
10 complicated, but certainly doable. He stated that there will be some  
11 associated cost and, although not excessive, should be a consideration in  
12 the Board's evaluation. He mentioned that the ESG program uses various  
13 resources to analyze issuers based on their environmental and social  
14 impacts, as well as the way they are governed. He noted that the issuer  
15 then receives a score for the Board to consider.

16 Dr. Palmer asked if Mr. Lunsford could explain, in a few words, the  
17 difference between what the State will allow and the ACSA's adopted  
18 investment policy. She stated that she recalls a lengthy discussion about  
19 the topic during her previous time on the Board but is a little behind on  
20 discussions since that time.

21 Mr. Lunsford stated that the ACSA's Investment Policy is more  
22 restrictive than the State's. He mentioned that the State establishes what  
23 the ACSA is allowed to invest in, and at what levels. He stated that the  
24 ACSA's Investment Policy, for all intents and purposes, limits different  
25 sector percentage allowances to render them less than what the State  
26 would allow.

27 Dr. Palmer asked if the same sectors were allowed under both  
28 policies, but just at different proportion levels. Mr. Lunsford replied that this  
29 is correct. He stated, with reasonable certainty, that he believes the  
30 ACSA's policy allows investment in all of the investments allowed by the



1 State. He mentioned that it may exclude some of the sectors that the State  
2 allows, but he does not know for sure.

3 Dr. Palmer stated that in the Board packet on page 22, there is a  
4 pie chart that shows allocation of investments by type. She mentioned that  
5 on the next page, there is a pie chart that shows investment sector  
6 allocation. She stated that there is a bit of difference between the two  
7 charts and asked if Mr. Lunsford could explain that difference. Mr. Lunsford  
8 replied that the difference between the two charts is the inclusion of the  
9 Local Government Investment Pool (LGIP) in the allocations of investments  
10 by type chart. He noted that the LGIP investment is not included in the  
11 PFM investment portfolio.

12 Mr. O'Connell asked if Mr. Lunsford could talk about commercial  
13 paper and corporate notes, and some examples of institutions the ACSA is  
14 investing in. Mr. Lunsford replied that the majority of the commercial paper  
15 (the 13% in the pie chart on page 22) is related to bank issuers, but there is  
16 potential for other issuers. He stated that the corporate note portion (the  
17 3% in the pie chart on page 22) is also mostly financial institutions, but the  
18 ACSA did have a holding with Exxon and Amazon at the end of July. He  
19 added that this sliver of the pie chart is where the staff is focused on for  
20 any SRI or ESG directive that the Board would like them to consider.

21 Mr. O'Connell stated that with regard to State limits, there could  
22 only be about 15-20 more businesses that the ACSA could invest in. Mr.  
23 Lunsford stated that this is mostly correct. He stated that what has been  
24 communicated to the ACSA from its advisor, is that there are 15-20 active  
25 issuers that meet the qualifications as set forth through the organization's  
26 investment policy and State code. He noted that there could be other  
27 issuers that are not included in that active set of 15-20 issuers, but it is  
28 irregular and not frequent.

29 Mr. Parcels asked if PFM has indicated examples of some of the  
30 other entities that are acceptable, but the ACSA is not investing in. Mr.  
31 Lunsford replied that given the way the policy is currently written, there are

1 no vehicles that would not be used if they met the criteria set forth in that  
2 policy. He mentioned that any further consideration of SRI or ESG would  
3 limit that pool of available investments even more.

4 Mr. Parcels stated that he thought he heard Mr. Lunsford say that  
5 PFM believes the ACSA is essentially socially responsible with its current  
6 investments. Mr. Lunsford replied that this would be correct, depending on  
7 how granular the Board wanted to get. He noted, for example, that some  
8 organizations have considered a Wal-Mart corporate note to be an  
9 ineligible investment because some of the stores sell firearms. He added  
10 that it depends on how specific the Board wants to be in their evaluation to  
11 potentially exclude or score.

12 Dr. Palmer stated that The Economist had a special report on these  
13 types of investments a few weeks ago. She stated that one of the  
14 takeaways with respect to the ESGs was that the rating agencies that are  
15 performing these types of evaluations are not up to par. She stated that if  
16 there is a cost associated with ESG, she would be concerned about going  
17 that route. She added that she is also concerned about having to pay a  
18 consultant to perform regular reviews on ESG investments the ACSA might  
19 choose.

20 Mr. Parcels asked if the LGIP breaks out into individual  
21 investments in corporations within that pool. He also asked, corollary to  
22 that, if the \$12 million difference between the \$30 million under asset  
23 management and the \$42 million in ACSA assets sits in the LGIP. Mr.  
24 Lunsford replied yes, and he believes it is actually about \$13 million in the  
25 LGIP now. He stated that there are thousands of investments in the LGIP,  
26 all of which are incredibly liquid and accessible within a day if needed. He  
27 mentioned that he can provide a listing of the investments within the LGIP.  
28 He noted that the ACSA has no say over what those investments are, but  
29 they are all obviously in compliance with State code.

30 Mr. Parcels stated that he is satisfied that the ACSA is doing the  
31 best it can do, and PFM is doing due diligence for the benefit of the

1 organization. He stated that he has not heard anything thus far that is  
2 contrary to SRI or ESG.

3 Mr. Armstrong stated that instead of having an ad hoc conversation  
4 right now, he wonders if the Board should create a subcommittee that  
5 would identify investments that speak to matters like environmental  
6 protection or water pollution and quality that it feels should be included in  
7 the ACSA's Investment Policy. He stated that this would give Mr. Lunsford  
8 some direction when working with PFM.

9 Mr. O'Connell stated that there are about 20 companies across  
10 various sectors that the ACSA can invest in. He stated that every single  
11 one of those companies have SRI policies and annual reports, as they are  
12 subject to scrutiny from the rating agencies. He mentioned that these 20  
13 companies make up the realm in which the ACSA can invest or not invest,  
14 and this is where the staff is seeking guidance. He stated that the sector  
15 that would jump out to him is energy, but it depends on how deep the  
16 Board wants to dive. He noted, for example, Nestlé has investments in  
17 plastic water bottle companies. He stated that this could be seen as  
18 conflicting with the role the ACSA plays.

19 Dr. Palmer stated that she would like the Board to see a list of the  
20 20 companies and have an opportunity rate what they are interested in, to  
21 have a more organized conversation. She stated that she is fine with what  
22 the ACSA is currently doing, but she understands ensuring the organization  
23 is not investing in something egregious.

24 Mr. Moore stated that as a baseline, a water and sewer company  
25 would not want to invest in a company that is polluting water. He stated that  
26 he does agree with Dr. Palmer in that having more information to begin  
27 with would help the discussion.

28 Mr. Tolbert stated that if the Board had a list of the 20 companies, it  
29 would either solve the problem or show the need for a subcommittee as Mr.  
30 Armstrong suggested. He stated that a Board meeting like this is not a  
31 good place to make complicated decisions if the research has not been

1 done ahead of time. He mentioned that he thinks the Board may need a  
2 subcommittee to dive deeper at some point but looking at the list would be  
3 a good way to start. Mr. Parcels concurred.

4 Mr. Lunsford stated that staff will compile that list but, in full  
5 disclosure, issuers are added to and taken off that list frequently. He stated  
6 that PFM is very hesitant to put anything in writing related to that list as  
7 credit ratings could change, causing a company to be removed from the  
8 list. Mr. Tolbert added that perhaps Mr. Lunsford could include a hedging  
9 paragraph with the list pertaining to those fluctuations. Mr. O'Connell added  
10 that Mr. Lunsford can also include what sector the company is in, which  
11 defines things from a policy standpoint.

12 Mr. Bowling stated that the Board needs to ensure they comply with  
13 the Freedom of Information Act, regarding meetings and public information.  
14 Mr. Tolbert stated that his understanding is that any subcommittee can only  
15 have two members, otherwise the committee meetings would have to be  
16 announced. Mr. Bowling concurred.

17 Dr. Palmer stated that the Board can send their thoughts to the  
18 Board Chair in an email, as opposed to having a bunch of meetings. Mr.  
19 Bowling replied that Board members can certainly send an email to the  
20 Chair but once the Chair responds, it becomes public information. Dr.  
21 Palmer replied that she understands it is public information but is  
22 attempting to eliminate the need for a Board meeting. Mr. Bowling stated  
23 that he just wants to ensure that the Board and ACSA is open and avoids  
24 any accusations of impropriety.

25 Mr. O'Connell stated that perhaps a future consent agenda can  
26 contain information about where the Board lands on the investment policy,  
27 so that it is public information. He stated that the staff will first send out the  
28 list of the 20 companies, and then everyone can determine if there is a  
29 need for future discussions.



1        9.        Future Board Meetings – Virtual Option Discussion & Resolution

2                Mr. O'Connell stated that the ACSA has been operating under the  
3        County's Emergency Ordinance to conduct virtual meetings. He stated that  
4        the ordinance expires September 1, 2022, which would mean the ACSA  
5        would go back to in-person Board meetings. He stated that there is  
6        included in state law, a means to have some virtual meetings. He stated  
7        that Jim Bowling, ACSA Attorney, has put together a Remote Participation  
8        Policy for the Board to consider.

9                Mr. Bowling stated that this is convoluted legislation, which is  
10        effective September 1, 2022, and does two things. He stated that first, it  
11        continues the present policy, with some changes, the ACSA Board has  
12        allowing remote participation for absent Board members who are unable to  
13        meet in-person for certain reasons. He stated that second, the legislation  
14        allows certain public bodies to have all virtual meetings, including the  
15        ACSA.

16                Mr. Bowling stated that the legislation limits the number of virtual  
17        meetings allowed to two per calendar year, or 25% of all meetings,  
18        whichever is greater. He stated that if the Board adopts the policy today,  
19        the ACSA could have an all-virtual meeting in September, as well as  
20        November or December. He stated that the policy does not allow for  
21        consecutive virtual meetings, which is why the ACSA could only have two  
22        for the remainder of the calendar year.

23                Mr. Tolbert asked if emergency meetings counted in the allowed  
24        number of virtual meetings. Mr. Bowling replied that he does not think that  
25        is covered in the new legislation. He stated that he would go out on a limb  
26        and say that an emergency meeting probably falls outside of this policy. Mr.  
27        Tolbert asked if the County were to adopt another emergency ordinance  
28        like they did for the Covid-19 pandemic, would those meetings be counted  
29        against the allowed number of virtual meetings. Mr. Bowling stated that  
30        they would not, which is included in section five of the policy. He added that

1 the ACSA could also have all virtual committee meetings, which is covered  
2 in section four of the policy.

3 Dr. Palmer asked if the Board needed to determine which meetings  
4 would be virtual ahead of time. Mr. Bowling replied no, noting that it is a  
5 "use them or lose them" situation. He stated that the Board may want to  
6 consider a virtual September meeting, and then another virtual meeting  
7 later. He noted that next year, there is the potential for three virtual  
8 meetings, as long as they are not consecutive. Dr. Palmer asked if the year  
9 is considered January to December. Mr. Bowling replied yes.

10 Mr. Tolbert stated that the issue before the Board is whether to  
11 adopt the suggested Remote Participation Policy. He stated that if and  
12 when the Board adopts the policy, it can then decide which meetings to hold  
13 virtually. Mr. Parcels asked what the alternative would be to not adopting  
14 this policy. Mr. Bowling replied that if the ACSA does not adopt the policy, it  
15 will not be able to have all-virtual meetings and absent Board members  
16 would not be allowed to participate remotely.

17 ***Mr. Parcels moved to approve adoption of the Remote***  
18 ***Participation Policy, as presented to the Board; seconded by Mr.***  
19 ***Armstrong. The Vice-Chair asked for a roll-call vote: Mr. Armstrong,***  
20 ***aye; Mr. Parcels, aye; Mr. Moore, aye; Dr. Palmer, aye; Mr. Tolbert,***  
21 ***aye.***

22 Mr. Tolbert asked if the Board should now discuss which remaining  
23 meetings for the calendar year will be virtual. Mr. O'Connell stated that his  
24 suggestion would be to discuss it now, while still on the topic. He stated  
25 that the staff's suggestion would be to announce a virtual meeting in  
26 September, which means the October meeting would need to be in-person.  
27 He stated that IT has prepared for an in-person meeting with a virtual  
28 option for the public, but they would like to perform some equipment  
29 testing. The Board concurred with a virtual meeting for September. Mr.  
30 Parcels stated that he would refrain from giving his preference for  
31 September, as he will not be able to attend virtual or otherwise. Mr. Tolbert

1 concluded that, barring any unforeseen circumstances, the ACSA staff and  
2 Board will meet virtually in September and in-person in October.

3  
4 10 Operational Presentation – ARC GIS

5 Mr. O'Connell stated that Justin Ray, GIS & CMMS Coordinator will  
6 be giving the Board an overview presentation of GIS (Attached as Pages  
7 \_\_\_\_\_). He noted that the ACSA's GIS is pretty impressive for a utility of  
8 its size, as not many around the country have this level of information  
9 about their system.

10 Justin Ray, GIS & CMMS Coordinator, stated that last month he  
11 discussed the CMMS side of Cityworks, and this month he would discuss  
12 the GIS side of the equation. He noted that he gave a presentation on this  
13 a few years ago and similar to that presentation, he would give the Board  
14 an overview and go through some of the basics of GIS.

15 Mr. Ray stated that GIS is digitized representations spatially of the  
16 ACSA's infrastructure in the ground, in a mapping database. He stated that  
17 the ACSA currently has over 130,000 assets in its database. He stated that  
18 GIS is not just one software, as there are a number of ways to access the  
19 data. He mentioned that ArcGIS Pro is the new desktop application staff is  
20 using, and Field Maps is for mobile users. He stated that ArcGIS Enterprise  
21 is a large server and deployment for the software. He noted that GIS is also  
22 integrated with a number of software such as the modelling and CCTV  
23 software. He added that ArcGIS Enterprise is the backbone for a significant  
24 chunk of the ACSA's onsite server and is the backbone that powers things  
25 like the Cityworks integration.

26 Mr. Ray stated that the ACSA just migrated from ArcMap to ArcGIS  
27 Pro this year. He mentioned that the ACSA had been using ArcMap for  
28 decades. He stated that there was an organizational training with 15 staff  
29 members to help with the migration.

30 Mr. Ray stated that Field Maps is the way GIS is accessed by field  
31 staff. He stated that field staff used to have laptops with a software called

1 ArcPad, which was in place for at least a decade. He mentioned that  
2 eventually, the staff migrated to iOS devices with the explorer and collector  
3 applications. He mentioned that ESRI, the software vendor, replaced both  
4 of those with a single application called Field Maps, which the ACSA  
5 transitioned to earlier this year.

6 Mr. Ray stated that how the GIS is used depends on the employee.  
7 He stated that some staff, like construction inspectors, are in the field with  
8 GPS units and iPads with Field Maps. He noted that they will collect data  
9 as the assets go into the ground, and GPS-locate those features which  
10 goes directly into the GIS. He stated that the engineers will digitize new line  
11 features in the GIS. He mentioned that he handles map requests all the  
12 time that come in from engineering firms, construction firms, realtors, or the  
13 general public needing to know where the ACSA's assets are.

14 Mr. Ray stated that the GIS database is fairly large and continues  
15 to grow. He stated that every asset that goes into the ground becomes a  
16 new feature in the database, so it is constantly changing. He stated that  
17 imagery is important, and staff can find it very useful. He mentioned that  
18 there are a number of different sources for imagery. He stated that there is  
19 the ESRI provided imagery which is a little dated and not the best. He  
20 stated that there is also the Virginia Geographic Information Network  
21 (VGIN) imagery collected by the State every four years, which is much  
22 higher resolution imagery. He stated that the ACSA also collaborates with  
23 the County and purchases imagery, which offers various angles of an  
24 image. He added that the ACSA also has a drone but has not been able to  
25 fly it for recent projects due to limitations. He noted that this would change  
26 once the new GIS Technician is hired.

27 Mr. Ray stated that in terms of what is next, there a few CIP  
28 projects related to GIS. He stated that the Utility Network project is being  
29 approached from a feasibility standpoint, as it would require a complete  
30 overhaul of the ACSA's GIS system. He stated that the Cityworks  
31 Operational Insights project is very much tied to GIS, as is anything related



1 to Cityworks. He mentioned that Data Reviewer will be implemented, which  
2 is an extension for the GIS software, allowing for better data quality control.  
3 He noted that CIP Story Map is a user-friendly way to view all of the CIP  
4 projects, which would be available to the public as well. He stated that the  
5 hope is that Story Map will be available for next year's CIP. He added that  
6 the GIS is in a constant state of change with new software and data  
7 upgrades and enhancing its capabilities.

8 Dr. Palmer stated that she remembered from a while back, that  
9 there was some concern over making information regarding the location of  
10 certain infrastructure available to the public. She asked what the criteria  
11 would be for making that information public. Mr. Ray replied that in general,  
12 the ACSA does not give out data to the public. He stated that if he receives  
13 a request for the information, he will provide them with a static map of the  
14 specific area they are requesting information for. He noted that the only  
15 data that is displayed publicly on the website currently is meter locations.  
16 He mentioned that there is an upcoming CIP project that will look at what  
17 data is in fact sensitive information. April Walker, Director of IT, stated that  
18 the upcoming Dashboarding project has a data classification piece that will  
19 analyze the data and determine what is classified and what is not. Mr. Ray  
20 added that there is a Freedom of Information Act (FOIA) exemption for  
21 critical infrastructure, which is the main reason the data has not been given  
22 out publicly.

23  
24 11. Items Not on the Agenda

25 Dr. Palmer asked if a Board member asks a question about a  
26 specific agenda item via email, is it policy for the staff to email the entire  
27 Board with the answer. She stated that Mr. Lunsford did this recently, and  
28 she was happy to see that the answer went out to the entire Board. Mr.  
29 O'Connell replied that if it is a one-on-one issue like a customer inquiry as  
30 opposed to say a broader policy issue, the entire Board would probably not  
31 be copied. He stated that in the case of Mr. Lunsford's email, the staff saw

Albemarle County Service Authority Board of Directors

1 it as additional information that they felt would be useful for the rest of the  
2 Board to have.

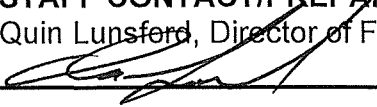
3  
4 12. Adjourn

5 ***There being no further business, Mr. Parcels moved that the***  
6 ***meeting be adjourned, seconded by Mr. Moore. All members voted***  
7 ***aye.***

8  
9  
10  
11 \_\_\_\_\_  
12 Gary B. O'Connell, Secretary-Treasurer  
13  
14

# 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> September 15, 2022  <b>ACTION:</b> Informational  <b>ATTACHMENTS:</b> Yes
---	---

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

**DISCUSSION:**

- Water consumption for the month of July increased 3.5% compared to June. Water consumption for the month of July 2022 compared to July 2021 decreased 3.9%.
- RWSA's invoice of \$2,041,957 for the month of July was paid on August 10, 2022.
- Unearned water and sewer connection charges totaled \$2,377,008 at month end.
- System connection charges were above budgeted expectations with \$832,710 recognized in July. Total system connection charges for FY 2023 are more than those in FY 2022 by 147%.
- Water and Wastewater revenues for FY 2023 are above budgeted expectations by 6.7%. Please see the water/wastewater trend analysis included illustrating that when adjustment for expected variations in seasonal consumption are considered, revenues are 3.1% 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

August 31, 2022

## ASSETS

Cash and cash equivalents	\$ 9,523,367
Accounts receivable	4,967,842
Investments	42,775,867
Capital assets: (net of accumulated depreciation)	177,112,004
Inventory	611,880
Prepays	240,542
Cash and cash equivalents, restricted	<u>684,777</u>
Total assets	<u>235,916,279</u>

## DEFERRED OUTFLOWS OF RESOURCES

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

## LIABILITIES

Accounts payable	2,084,582
Accrued liabilities	359,303
Compensated absences	763,469
Net pension liability	695,494
Other post-employment benefits	1,144,368
Unearned connection fees	2,377,008
Long-term debt	<u>5,044,118</u>
Total liabilities	<u>12,468,342</u>

## DEFERRED INFLOWS OF RESOURCES

Combined deferred inflows of resources	<u>2,880,258</u>
--	------------------

## NET POSITION

<u>221,741,820</u>
--------------------



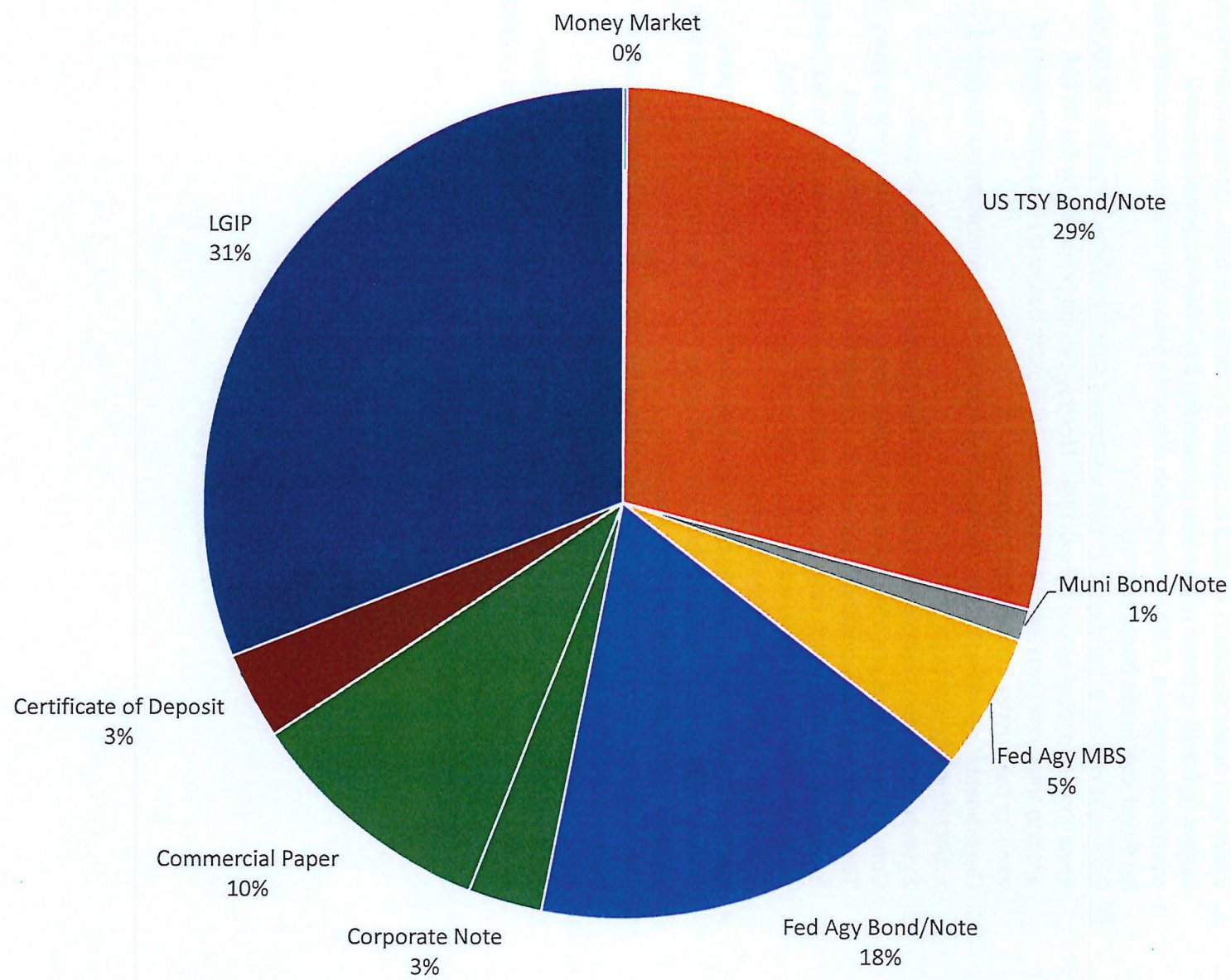
ALBEMARLE COUNTY SERVICE AUTHORITY  
For the One Month Ending August 31, 2022

	Budget FY 2023	Budget Year-to-Date 2023	August Actual Year-to-Date	Actual vs. Budget	Variance Percentage
<b>Revenues</b>					
Water Sales	19,285,000.	3,214,167.	3,464,689.	250,522.	7.79%
Sewer Service	15,137,000.	2,522,833.	2,655,007.	132,174.	5.24%
<b>Total operating revenues</b>	<b>34,422,000.</b>	<b>5,737,000.</b>	<b>6,119,696.</b>	<b>382,696.</b>	<b>6.67% A</b>
<b>Operating Expenses</b>					
Purchase of bulk water	(13,774,000.)	(2,295,667.)	(2,350,259.)	(54,592.)	2.38% B
Purchase of sewer treatment	(10,776,000.)	(1,796,000.)	(1,735,630.)	60,370.	(3.36%) B
Administration	(1,286,500.)	(214,417.)	(161,520.)	52,897.	(24.67%) C
Finance	(2,502,100.)	(417,017.)	(356,098.)	60,919.	(14.61%) C
Information Technology	(1,521,900.)	(253,650.)	(151,783.)	101,867.	(40.16%) C
Engineering	(2,288,400.)	(381,400.)	(362,391.)	19,009.	(4.98%) C
Maintenance	(4,509,000.)	(751,500.)	(560,409.)	191,091.	(25.43%) C
<b>Total operating expenses</b>	<b>(36,657,900.)</b>	<b>(6,109,650.)</b>	<b>(5,678,090.)</b>	<b>431,560.</b>	<b>(7.06%)</b>
<b>Operating gain(loss)</b>	<b>(2,235,900.)</b>	<b>(372,650.)</b>	<b>441,606.</b>	<b>814,256.</b>	<b>(218.50%)</b>
<b>Nonoperating Revenues</b>					
System connection charges	5,926,800.	987,800.	1,481,570.	493,770.	49.99% D
Investment/Interest Income	100,000.	16,667.	3,077.	(13,590.)	(81.54%) E
Rental income	16,000.	2,667.	2,431.	(236.)	(8.84%)
Miscellaneous revenues	455,000.	75,833.	154,458.	78,625.	103.68% F
<b>Total nonoperating revenues (expenses)</b>	<b>6,497,800.</b>	<b>1,082,967.</b>	<b>1,641,536.</b>	<b>558,569.</b>	<b>51.58%</b>
<b>Nonoperating Expenses</b>					
Miscellaneous expenses	(434,200.)	(72,367.)	(322.)	72,045.	(99.56%) G
Bond interest charges	(162,272.)	(27,045.)	0.	27,045.	(100.00%) H
Depreciation	0.	0.	(691,162.)	(691,162.)	0.00% I
<b>Total nonoperating revenues (expenses)</b>	<b>(596,472.)</b>	<b>(99,412.)</b>	<b>(691,484.)</b>	<b>(592,072.)</b>	<b>595.57%</b>
<b>Capital contributions</b>	<b>0.</b>	<b>0.</b>	<b>268,501.</b>	<b>268,501.</b>	<b>0.00%</b>
<b>Change in Net Position</b>	<b>3,665,428.</b>	<b>610,905.</b>	<b>1,660,159.</b>	<b>1,049,254.</b>	<b>171.75%</b>

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

- A. Water and sewer revenues exceed budgeted amounts by 6.67%. Consumption through August (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 lower than budgeted amounts by 0.14%. 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 below 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 **August 31, 2022**

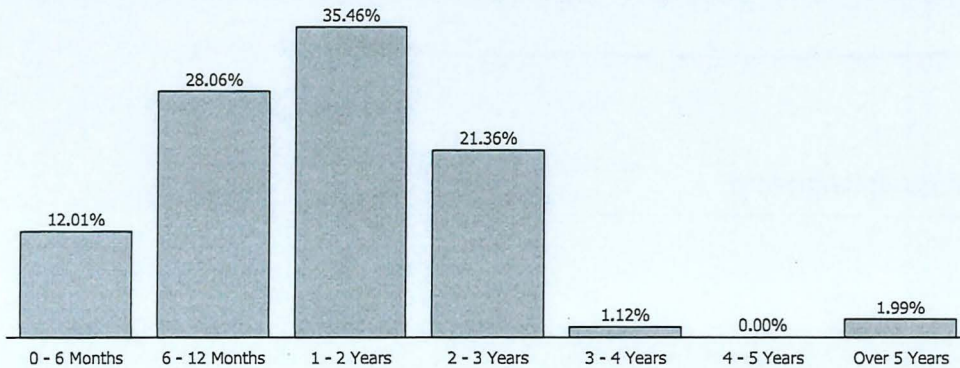
ACSA OPERATING FUNDS - 03100100

### Account Summary

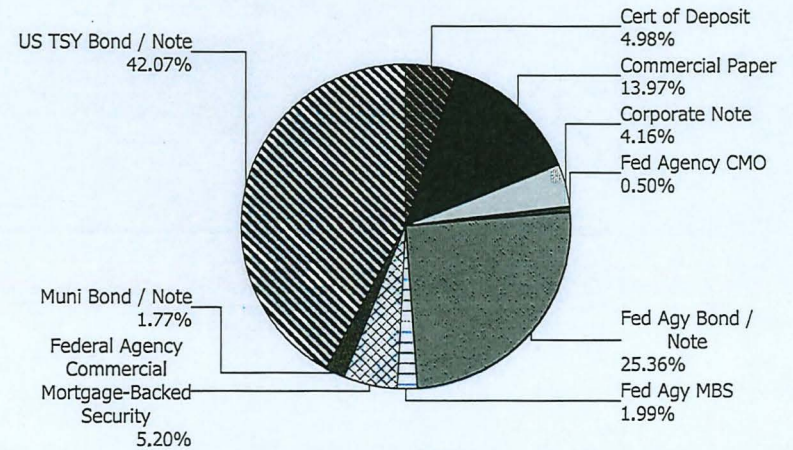
Description	Par Value	Market Value	Percent
U.S. Treasury Bond / Note	13,105,000.00	12,560,089.77	42.07
Municipal Bond / Note	550,000.00	526,882.00	1.77
Federal Agency Mortgage-Backed Security	617,811.76	595,262.12	1.99
Federal Agency Commercial Mortgage-Backed Security	1,582,358.54	1,553,555.01	5.20
Federal Agency Collateralized Mortgage Obligation	150,000.00	148,010.15	0.50
Federal Agency Bond / Note	7,760,000.00	7,568,485.52	25.36
Corporate Note	1,275,000.00	1,240,350.05	4.16
Commercial Paper	4,200,000.00	4,168,651.80	13.97
Certificate of Deposit	1,500,000.00	1,486,596.81	4.98
<b>Managed Account Sub-Total</b>	<b>30,740,170.30</b>	<b>29,847,883.23</b>	<b>100.00%</b>
Accrued Interest		61,462.65	
<b>Total Portfolio</b>	<b>30,740,170.30</b>	<b>29,909,345.88</b>	

Unsettled Trades **581,318.33** **568,061.06**

### Maturity Distribution



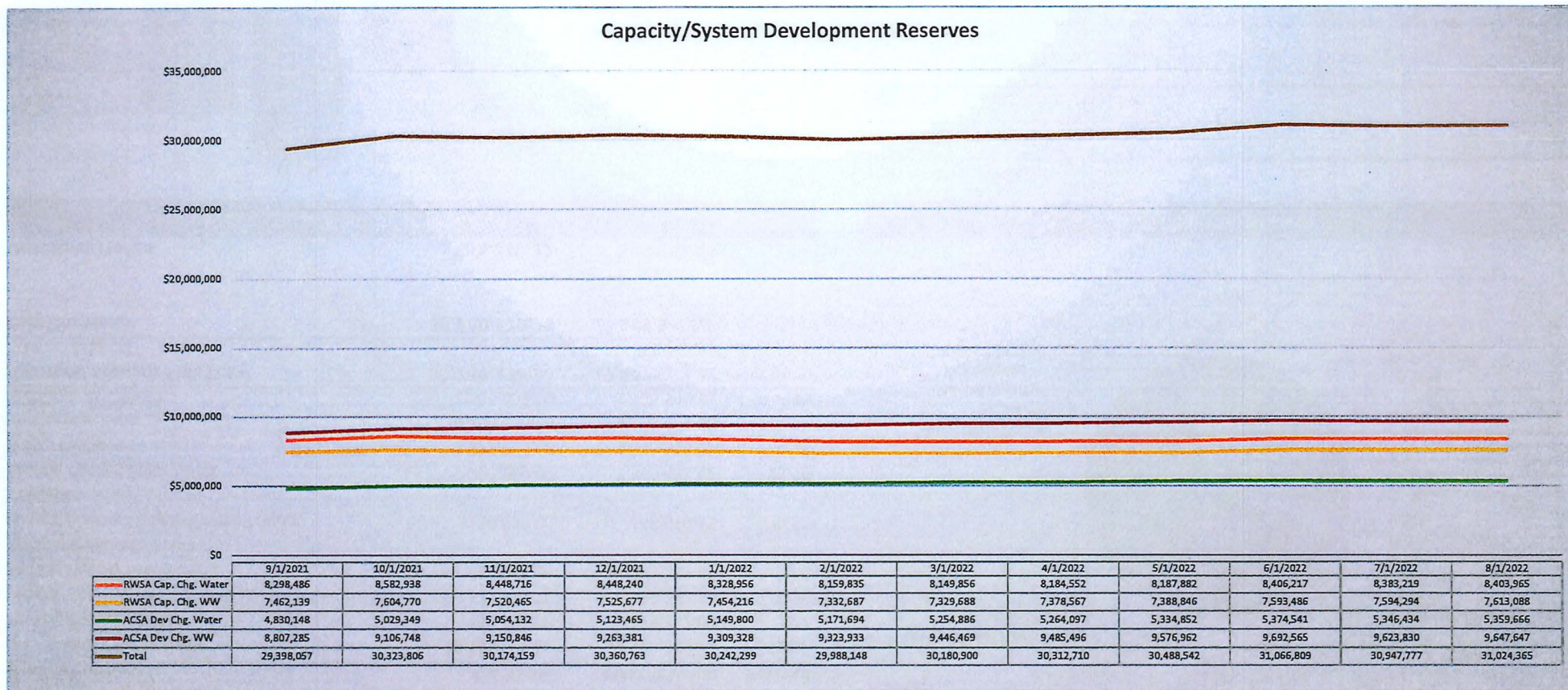
### Sector Allocation



### Characteristics

Yield to Maturity at Cost	1.38%
Yield to Maturity at Market	3.43%
Weighted Average Days to Maturity	572





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  
July 2022**

Area	July 2022 Monthly Connection Fees	July 2021 Monthly Connection Fees	\$ Change	% Change
Crozet	\$ 107,760	\$ 94,290	\$ 13,470	14%
Urban	724,950	242,460	482,490	199%
Scottsville	-	-	-	-
<b>Total Connection fees</b>	<b>\$ 832,710</b>	<b>\$ 336,750</b>	<b>\$ 495,960</b>	<b>147%</b>
<b>Through July</b>				
Area	YTD FY 2023 Connection Fees	YTD FY 2022 Connection Fees	\$ Change	% Change
Crozet	\$ 107,760	\$ 94,290	\$ 13,470	14%
Urban	724,950	242,460	482,490	199%
Scottsville	-	-	-	-
<b>Total Connection fees</b>	<b>\$ 832,710</b>	<b>\$ 336,750</b>	<b>\$ 495,960</b>	<b>147%</b>

Area	July 2022 ERC's	July 2021 ERC's	Change	% Change
Crozet	8	7	1	14%
Urban	54	18	36	200%
Scottsville	-	-	-	-
<b>Total ERC's</b>	<b>62</b>	<b>25</b>	<b>37</b>	<b>148%</b>
<b>Through July</b>				
Area	YTD FY 2023 ERC's	YTD FY 2022 ERC's	Change	% Change
Crozet	8	7	1	14%
Urban	54	18	36	200%
Scottsville	-	-	-	-
<b>Total ERC's - YTD</b>	<b>62</b>	<b>25</b>	<b>37</b>	<b>148%</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  
July 2022**

<b>Area</b>	<b>July 2022 ERC's</b>	<b>July 2021 ERC's</b>	<b>July 2020 ERC's</b>
<b>Crozet</b>	8	7	26
<b>Urban</b>	54	18	75
<b>Scottsville</b>	-	-	-
<b>Total ERC's</b>	62	25	101

<b>Through July</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>	8	7	26
<b>Urban</b>	54	18	75
<b>Scottsville</b>	-	-	-
<b>Total ERC's - YTD</b>	62	25	101

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		183,549,927	-100.00%		4.60
September		167,986,757	-100.00%		5.46
October		159,438,005	-100.00%		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
	155,932,214	1,793,928,984		6.42	41.62
<b>YTD</b>	155,932,214	162,247,194	-3.89%	6.42	2.30

Note: Consumption through July 2022 is 3.89% 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)

July 2022

Corrected

Billed by Area:	Water	Sewer
Crozet	18,491,296	16,423,312
Scottsville	1,483,587	829,211
Urban	135,925,351	111,016,099
Red Hill	31,980	0
<b>Total</b>	<b>155,932,214</b>	<b>128,268,622</b>

Billing by Sewer Plant:	
AWT	127,439,411
less Glenmore	(4,750,358)
Urban Total	122,689,053
Scottsville	829,211
<b>Total</b>	<b>123,518,264</b>

Number of Installed Meters:	
Urban	42
Crozet	4
Scottsville	0
<b>Total</b>	<b>46</b>

Metered Consumption (billed by invoice):	
Urban	1,715,400
Crozet	41,100
Scottsville	0
<b>Total</b>	<b>1,756,500</b>

Unmetered Consumption:	
ACSA Fire Flow Consump.	Urban 22,270
<b>Total</b>	<b>22,270</b>

Unmetered Leak Consumption:	
4616 Heather Ct-7/3/22	Urban 100
1294 Stonypoint Rd-7/7/22	Urban 200
<b>Total</b>	<b>300</b>

### Billed Consumption for Selected Customers

	Water	Sewer
*Virginia Land Holding	253,039	253,039
Southwood Mobile Homes	2,039,000	2,100,000
Turtle Creek Apts.	1,085,764	1,080,664
Barracks West Apartments	1,525,400	1,525,400
Monroe Health and Rehab	956,927	956,927
Sunrise Senior "Colonnades"	937,110	725,010
ACRJ	1,020,280	853,280
Westminster Canterbury	1,554,690	1,439,690
SEMF Charleston	1,464,801	1,464,801
Martha Jefferson Hospital	2,376,936	965,595
Crozet Mobile Home Court	261,900	261,900
Fashion Square Mall	159,785	159,785
County of Albemarle	926,547	699,426
University of Virginia	2,386,957	2,380,598
Wegmans	271,556	271,556

	Water	Sewer
Boar's Head Inn	541,812	523,512
Farmington, Inc.	1,004,409	533,448
Westgate Apts.	1,232,893	1,229,593
Abbingdon Crossing	1,926,166	1,926,166
Four Seasons Apts	1,568,221	1,568,221
Ch'ville/Alb Airport	205,261	206,491
State Farm	144,200	93,200
Hyatt @ Stonefield	343,629	343,429
Doubletree	838,231	838,231
Arden Place Apts.	448,132	448,132
Hilton Garden Inn	239,011	239,011
The Blake @Charlottesville	224,946	224,946
The Lodge @ Old Trail	252,582	252,582
Gov't-Defense Complex	1,146,332	1,012,191
Harris Teeter Stores	226,117	226,117

\* indicates Industrial Discharge Permit Holders



July 2022

**WATER**

Class Type	Number of Connections by Area			Total
	Urban	Crozet	Scottsville	
Single-Family Residential	15,627	3,691	196	19,514
Multi-Family Residential	550	43	3	596
Commercial (Offices)	202	12	5	219
Commercial (Other)	917	76	52	1,045
Industrial	36	9	4	49
Institutional	171	32	12	215
<b>Total Water Accounts</b>	<b>17,503</b>	<b>3,863</b>	<b>272</b>	<b>21,638</b>
<b>Plus Multiple Units</b>	<b>12,690</b>	<b>748</b>	<b>89</b>	<b>13,527</b>
<b>Total Water Units</b>	<b>30,193</b>	<b>4,611</b>	<b>361</b>	<b>35,165</b>

**SEWER**

Class Type	Number of Connections by Area			Total
	Urban	Crozet	Scottsville	
Single-Family Residential	13,319	3,413	158	16,890
Multi-Family Residential	519	41	4	564
Commercial (Offices)	186	12	5	203
Commercial (Other)	712	52	46	810
Industrial	15	5	1	21
Institutional	133	25	10	168
<b>Total Sewer Accounts</b>	<b>14,884</b>	<b>3,548</b>	<b>224</b>	<b>18,656</b>
<b>Plus Multiple Units</b>	<b>12,273</b>	<b>745</b>	<b>56</b>	<b>13,074</b>
<b>Total Sewer Units</b>	<b>27,157</b>	<b>4,293</b>	<b>280</b>	<b>31,730</b>

**POPULATION SERVED**

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

	Urban	Crozet	Scottsville	Total
<b>Total Water Customers</b>	70,793	11,098	713	82,603
<b>Total Sewer Customers</b>	63,980	10,395	535	74,910

Albemarle County Service Authority  
Major Customer Analysis  
July 2022 and June 2022

	July 2022		June 2022		Increase(Decrease) Water Consumption	Increase(Decrease) Sewer Usage
	Water*	Sewer*	Water*	Sewer*		
Southwood Mobile Homes	2,039,000	2,100,000	1,655,000	2,050,000	23.20%	2.44%
Abbingtion Crossing	1,926,166	1,926,166	1,571,998	1,571,998	22.53%	22.53%
Martha Jefferson Hospital	2,376,936	965,595	2,138,315	1,173,315	11.16%	-17.70%
Four Seasons Apts.	1,568,221	1,568,221	1,479,526	1,479,526	5.99%	5.99%
University of Virginia	2,386,957	2,380,598	2,299,273	2,291,756	3.81%	3.88%
Barracks West Apartments	1,525,400	1,525,400	1,473,800	1,473,800	3.50%	3.50%
Westmisnster Canterbury	1,554,690	1,439,690	1,536,450	1,394,450	1.19%	3.24%
SEMF Charleston	1,464,801	1,464,801	1,449,054	1,449,054	1.09%	1.09%
ACRJ	1,020,280	853,280	1,073,840	941,840	-4.99%	-9.40%
Westgate Apts.	1,232,893	1,229,593	1,355,491	1,355,491	-9.04%	-9.29%
Turtle Creek Apts.	1,085,764	1,080,664	1,223,764	1,217,464	-11.28%	-11.24%
County of Albemarle	926,547	699,426	1,581,996	1,247,408	-41.43%	-43.93%

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  
July 2022 and July 2021

	July 2022		July 2021		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Abbingtion Crossing	1,926,166	1,926,166	1,558,900	1,558,900	23.56%	23.56%
Barracks West Apartments	1,525,400	1,525,400	1,395,800	1,395,800	9.28%	9.28%
Four Seasons Apts.	1,568,221	1,568,221	1,537,000	1,537,000	2.03%	2.03%
Southwood Mobile Homes	2,039,000	2,100,000	2,039,000	5,600,666	0.00%	-62.50%
Martha Jefferson Hospital	2,376,936	965,595	2,409,651	984,951	-1.36%	-1.97%
Westmisnster Canterbury	1,554,690	1,439,690	1,585,140	1,465,140	-1.92%	-1.74%
Westgate Apts.	1,232,893	1,229,593	1,309,000	1,302,700	-5.81%	-5.61%
Turtle Creek Apts.	1,085,764	1,080,664	1,192,000	1,191,000	-8.91%	-9.26%
University of Virginia	2,386,957	2,380,598	3,048,507	3,037,600	-21.70%	-21.63%
ACRJ	1,020,280	853,280	1,563,620	1,338,620	-34.75%	-36.26%
SEMF Charleston	1,464,801	1,464,801	2,357,650	2,357,650	-37.87%	-37.87%
County of Albemarle	926,547	699,426	1,541,649	754,649	-39.90%	-7.32%

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

\* -- Consumption/usage in gallons.

## Albemarle County Service Authority

## Major Customer Analysis

Year-to-date Comparison: Current Year/Prior Year -- July

	YTD FY 2023		YTD FY 2022		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Abbingtion Crossing	1,926,166	1,926,166	1,558,900	1,558,900	23.56%	23.56%
Barracks West Apartments	1,525,400	1,525,400	1,395,800	1,395,800	9.28%	9.28%
Four Seasons Apts.	1,568,221	1,568,221	1,537,000	1,537,000	2.03%	2.03%
Southwood Mobile Homes	2,039,000	2,100,000	2,039,000	5,600,666	0.00%	-62.50%
Martha Jefferson Hospital	2,376,936	965,595	2,409,651	984,951	-1.36%	-1.97%
Westmisnster Canterbury	1,554,690	1,439,690	1,585,140	1,465,140	-1.92%	-1.74%
Westgate Apts.	1,232,893	1,229,593	1,309,000	1,302,700	-5.81%	-5.61%
Turtle Creek Apts.	1,085,764	1,080,664	1,192,000	1,191,000	-8.91%	-9.26%
University of Virginia	2,386,957	2,380,598	3,048,507	3,037,600	-21.70%	-21.63%
ACRJ	1,020,280	853,280	1,563,620	1,338,620	-34.75%	-36.26%
SEMF Charleston	1,464,801	1,464,801	2,357,650	2,357,650	-37.87%	-37.87%
County of Albemarle	926,547	699,426	1,541,649	754,649	-39.90%	-7.32%

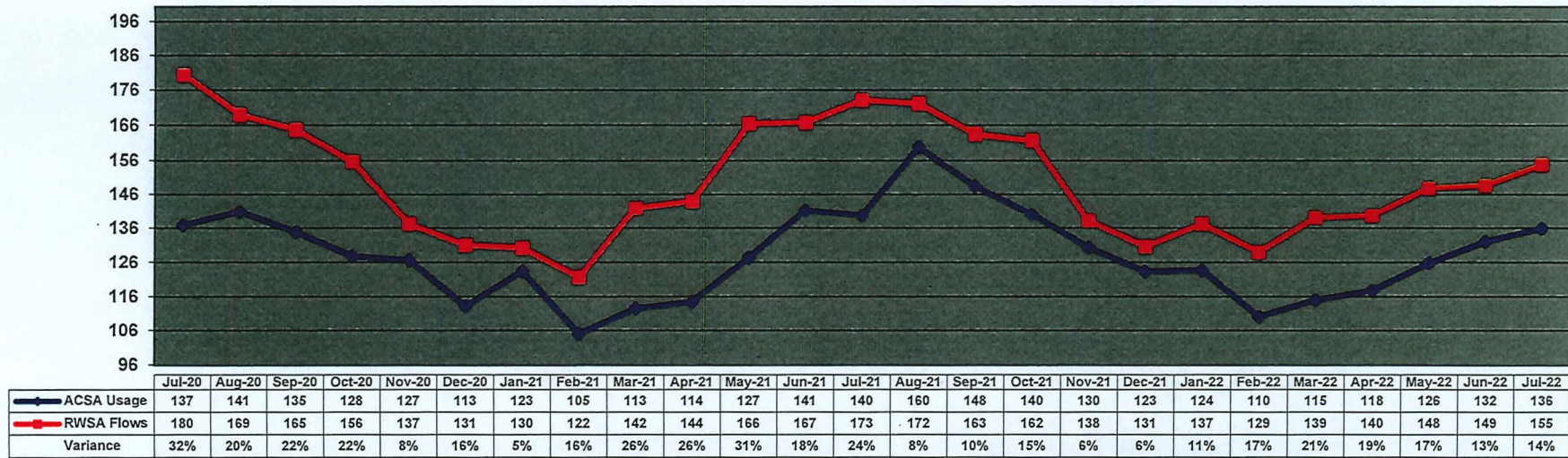
Note: Only major customers of the ACSA have been analyzed above. For purposes of this analysis, major customers are those who, on average, consume over one million gallons per month. Variations can occur for a variety of reasons including but not limited to: conscious conservation efforts, expansion,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

\* -- Consumption/usage in gallons.



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

Flows & Usage (in Millions of Gallons)



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

Charges and Revenues (in Thousands of Dollars)

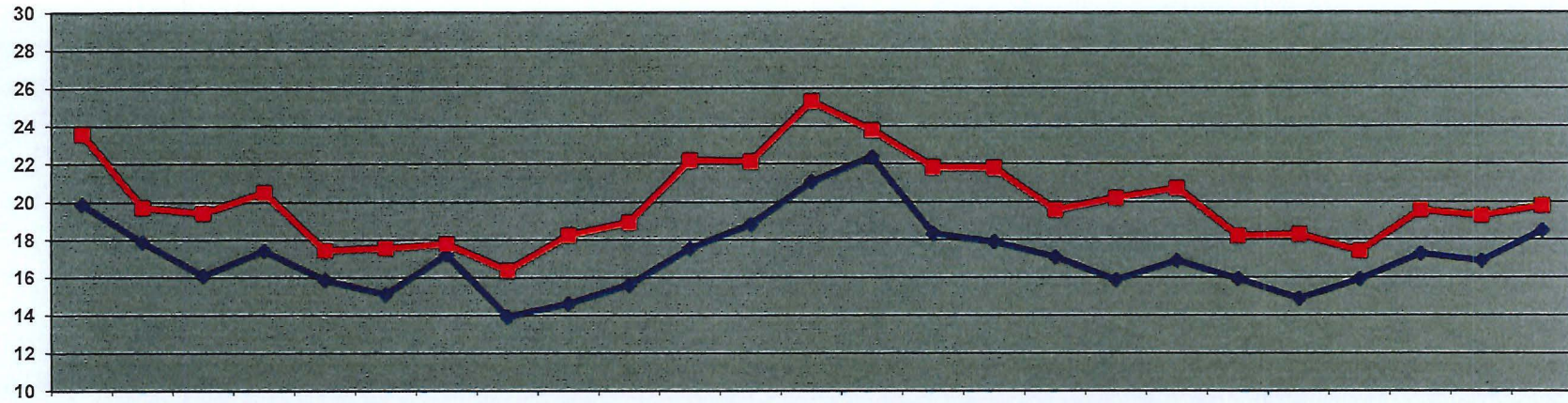


Note: Fiscal YTD Difference (ONLY) in Millions of Dollars



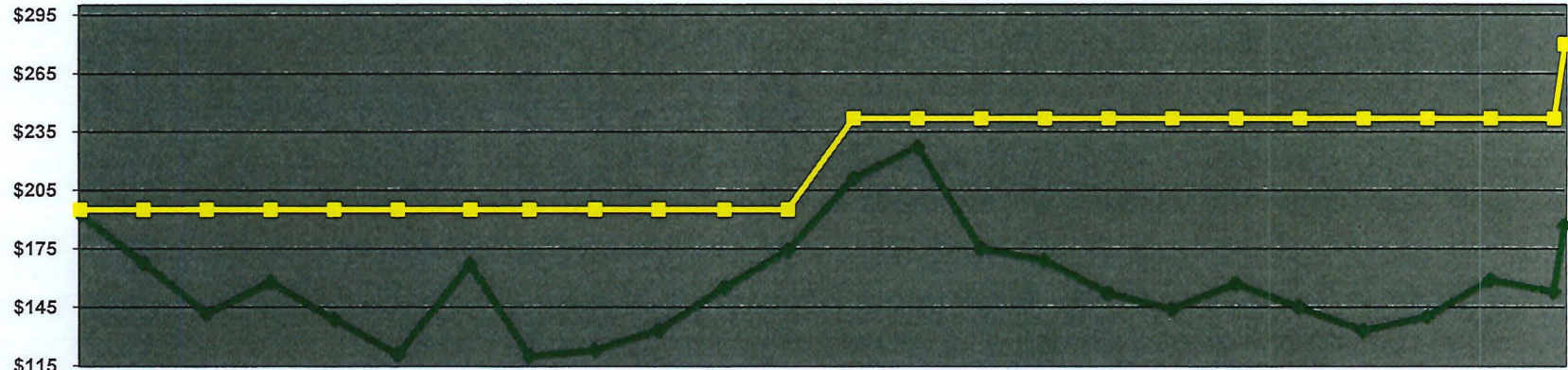
**FY 2021, 2022, and 2023 Crozet Water Comparison  
RWSA Flows & ACSA Customer Usage**

Flows & Usage (in Millions of Gallons)



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

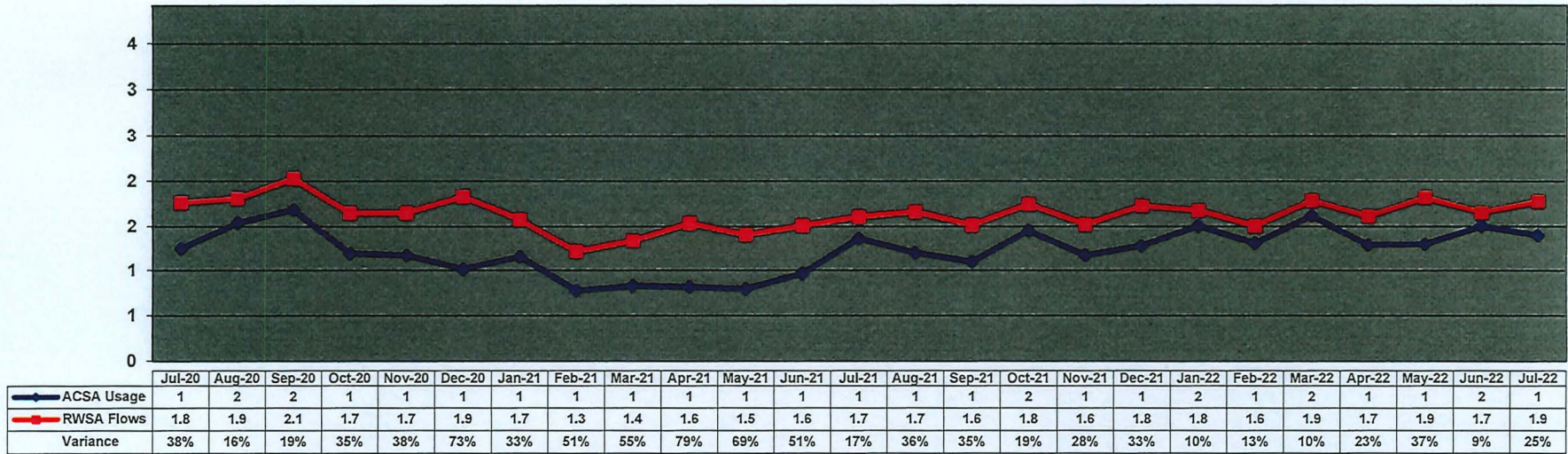
Charges and Revenues (in Thousands of Dollars)





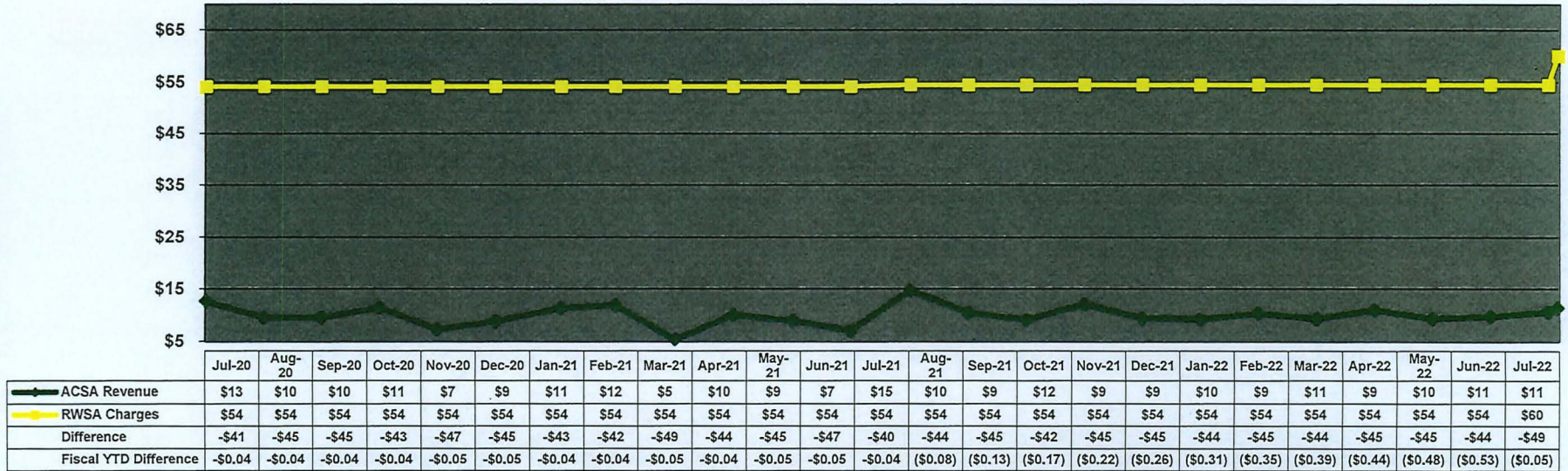
**FY 2021, 2022, and 2023 Scottsville Water Comparison  
RWSA Flows & ACSA Customer Usage**

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)

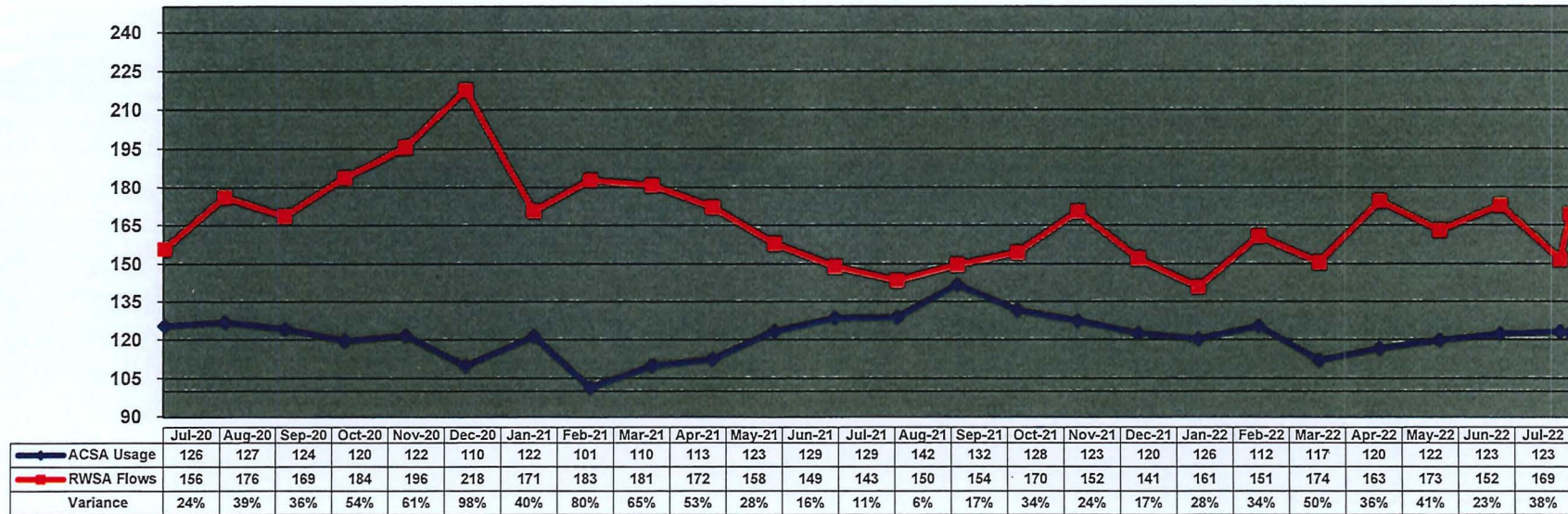




**FY 2021, 2022, and 2023 Urban (including Glenmore) & Crozet Sewer Comparison  
ACSA Customer Usage & RWSA Flows**

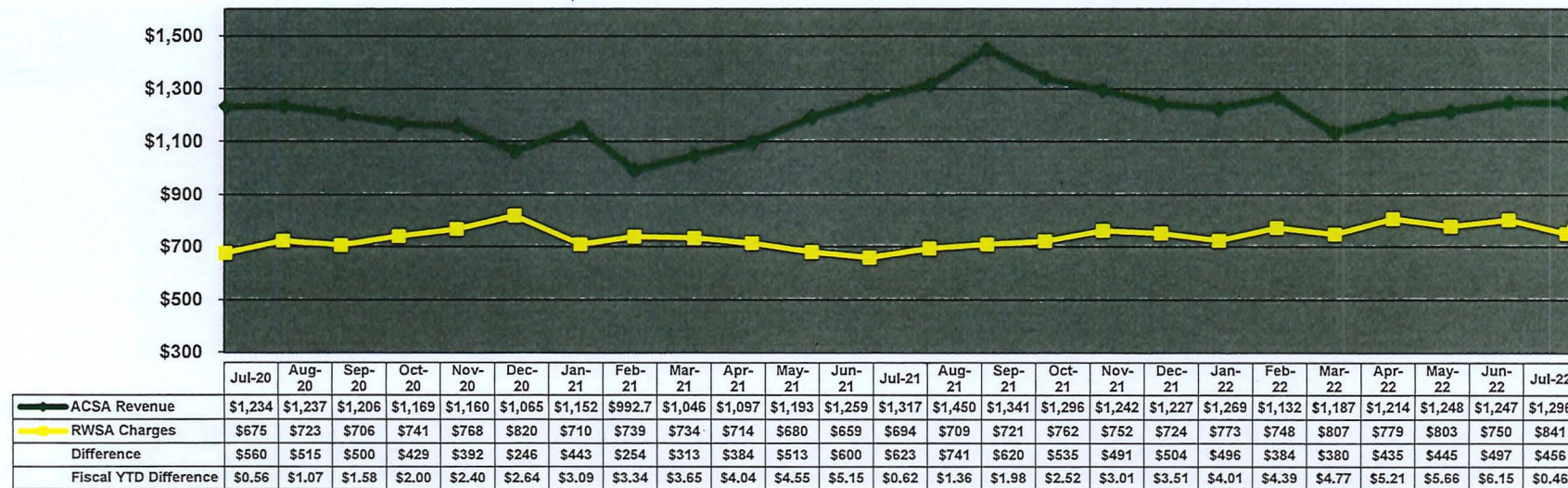
38

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**

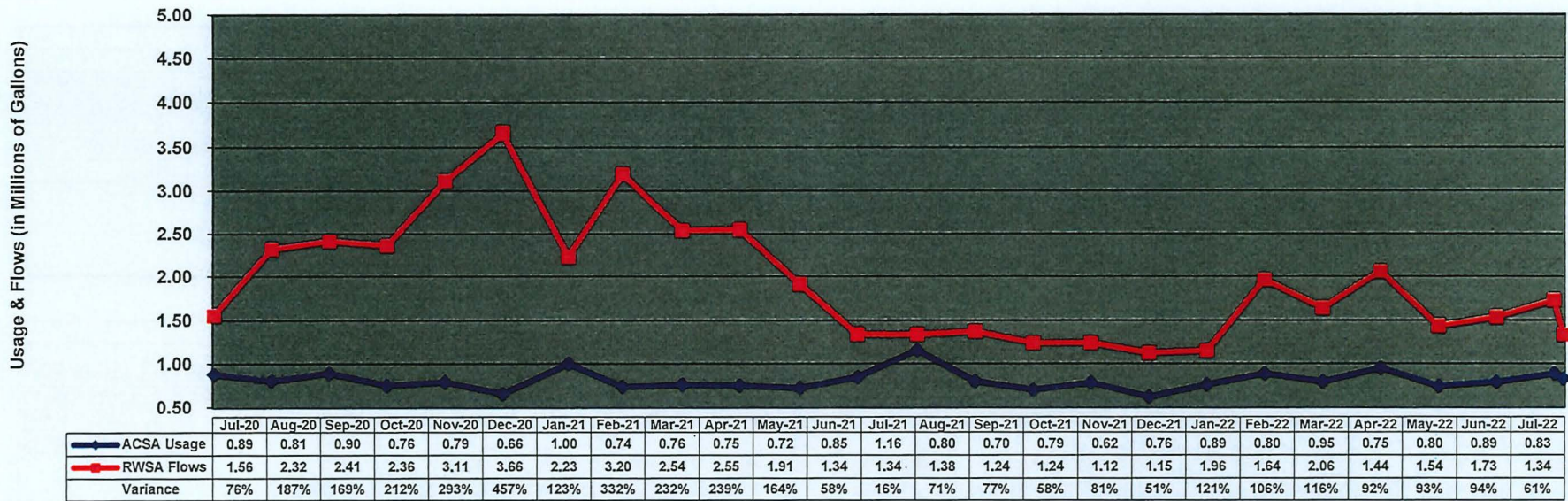
Charges & Revenues (in Thousands of Dollars)



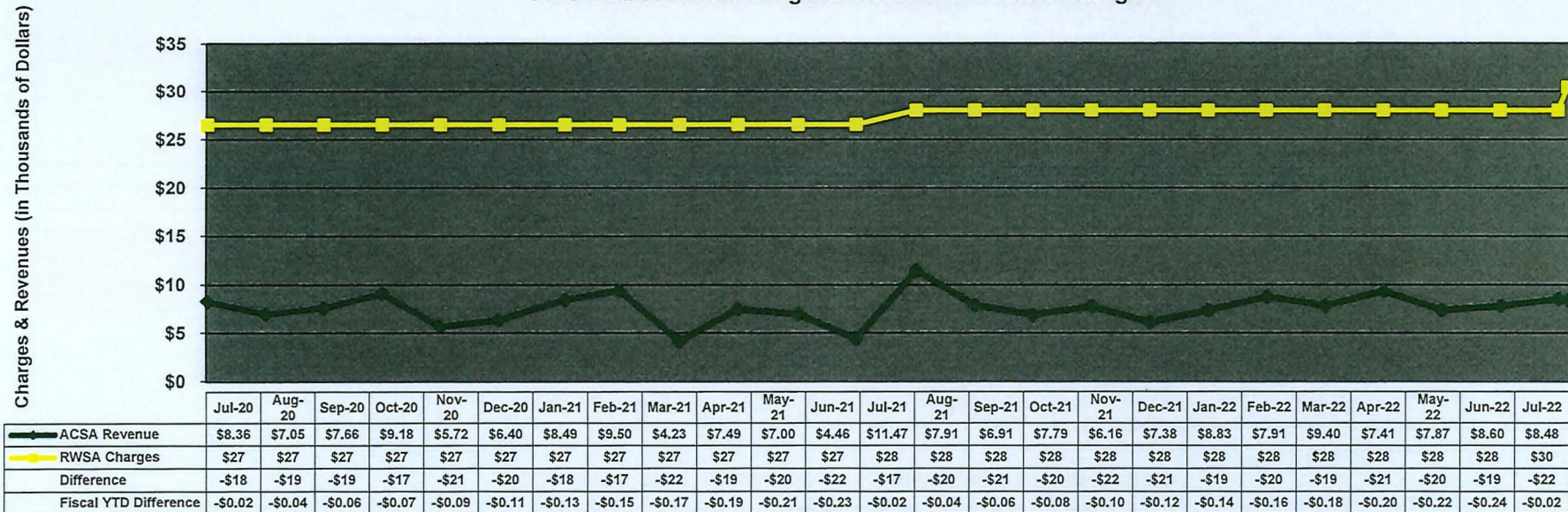
Note: Fiscal YTD Difference (ONLY) in Millions of Dollars



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

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

	FY 2023											
	July	August	September	October	November	December	January	February	March	April	May	June
Level 1 (0 - 3,000 gallons)	45,619,811											
Level 2 (3,001 - 6,000 gallons)	16,371,636											
Level 3 (6,001 - 9,000 gallons)	4,850,324											
Level 4 (over 9,000 gallons)	7,208,522											
Total	74,050,293	-	-	-	-	-	-	-	-	-	-	-

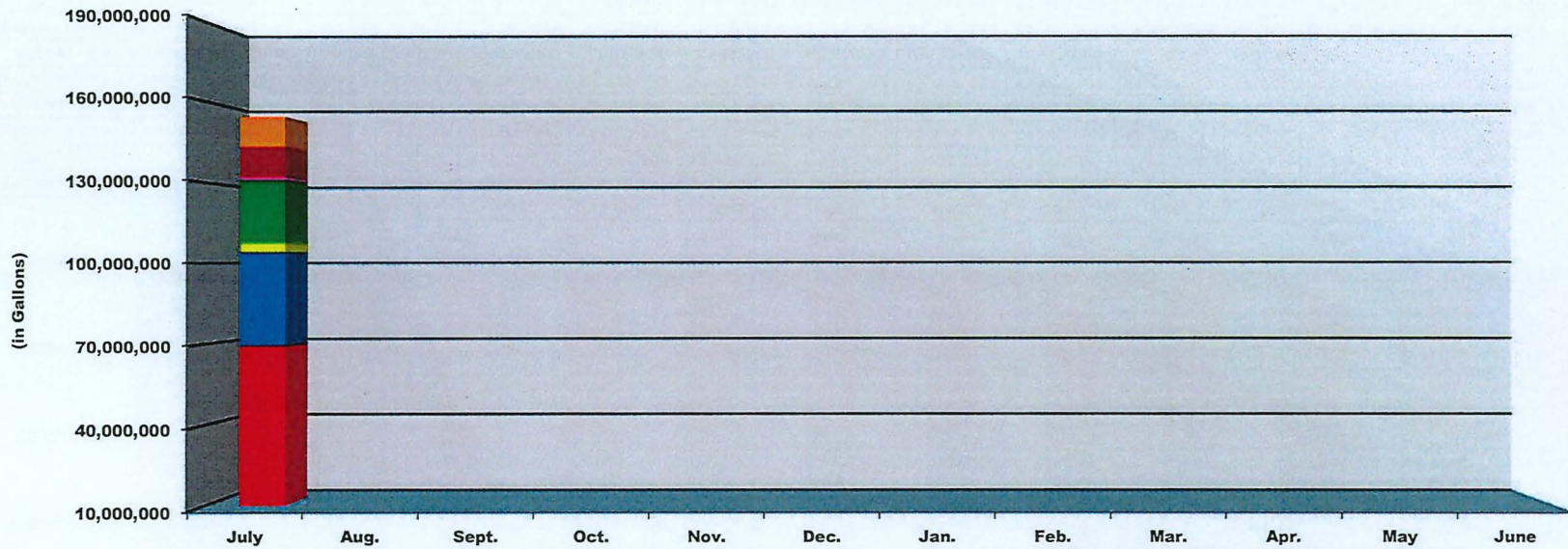
## System-Wide Irrigation Water Usage

(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											
Level 2 (3,001 - 6,000 gallons)	827,558											
Level 3 (6,001 - 9,000 gallons)	990,172											
Level 4 (over 9,000 gallons)	9,170,743											
Total	11,175,137	-	-	-	-	-	-	-	-	-	-	-



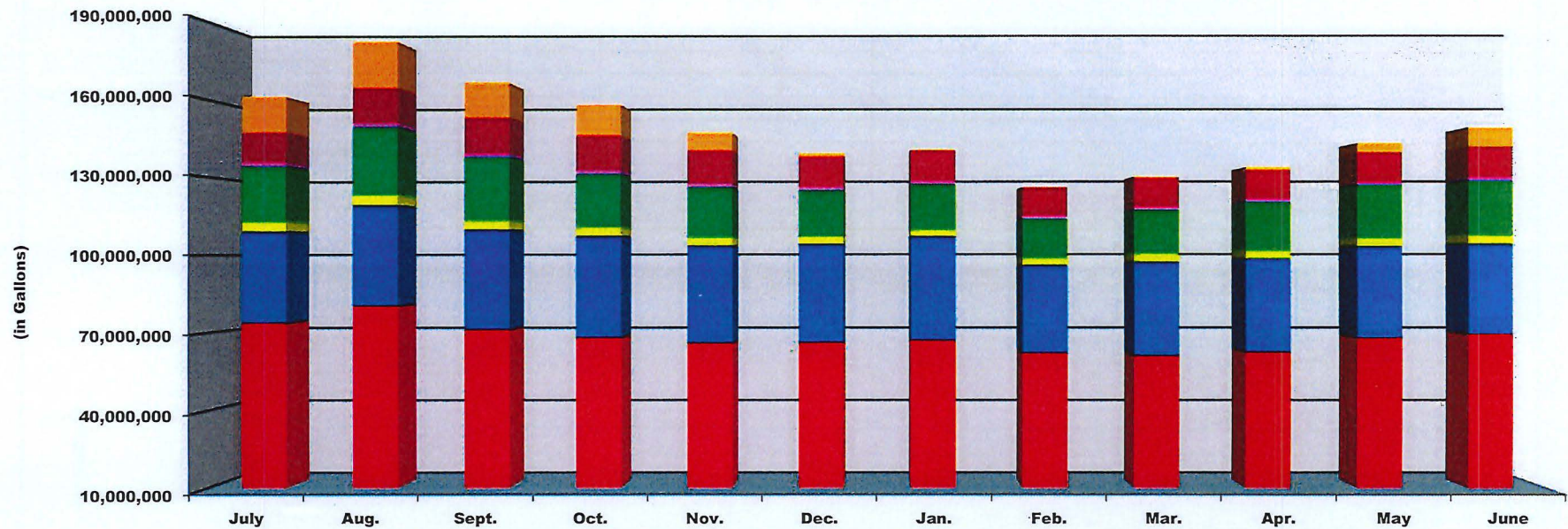
Monthly Water Consumption Fiscal Year 2023



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	7.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Irrigation	11,175,137											
Institutional - Domestic Consumption	11,319,291											
Industrial	939,061											
Comm. (Other) - Domestic Consumption	23,118,746											
Offices - Domestic Consumption	3,674,283											
MFR - Domestic Consumption	34,974,805											
SFR - Domestic Consumption	69,126,793											

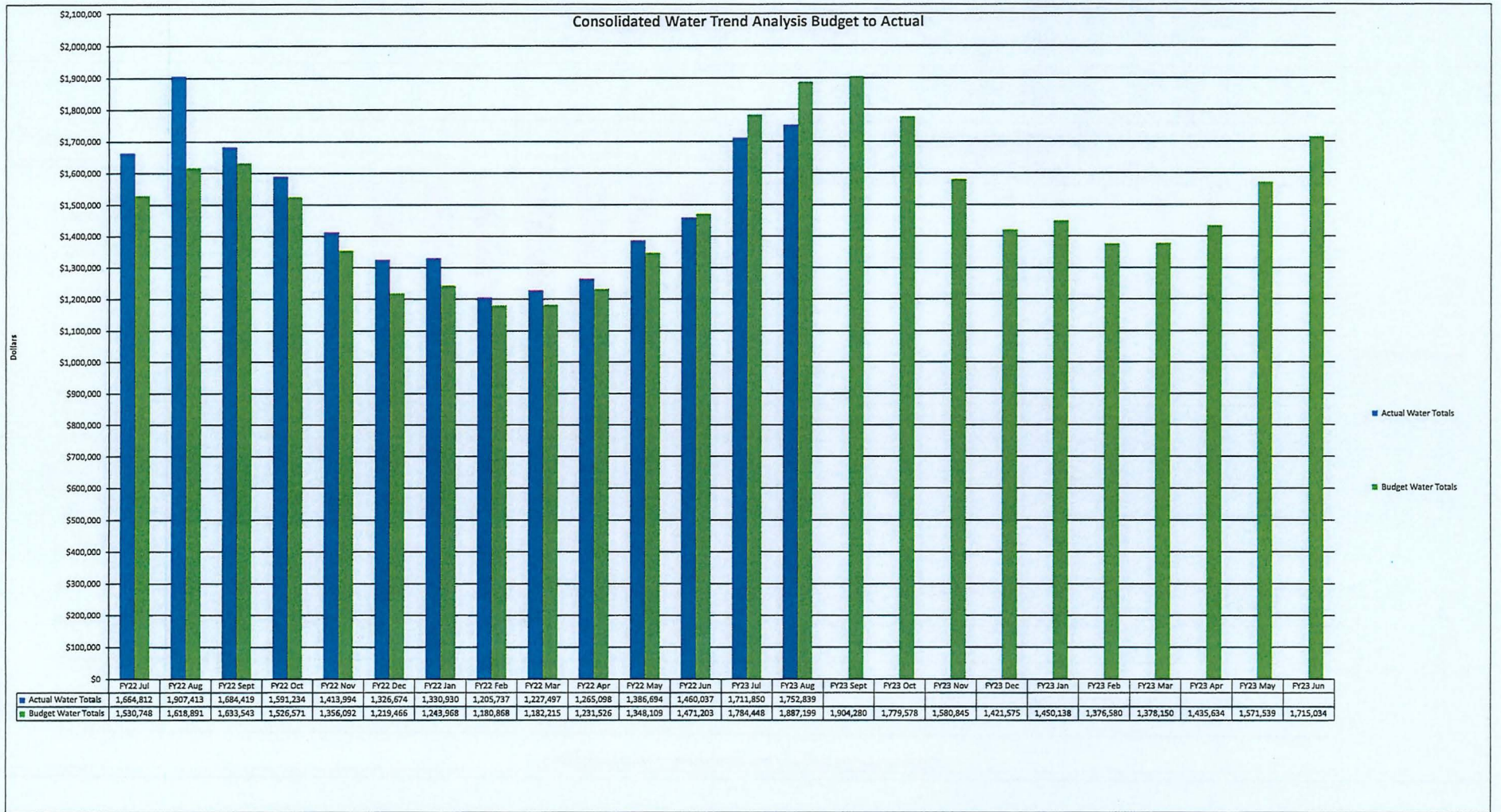


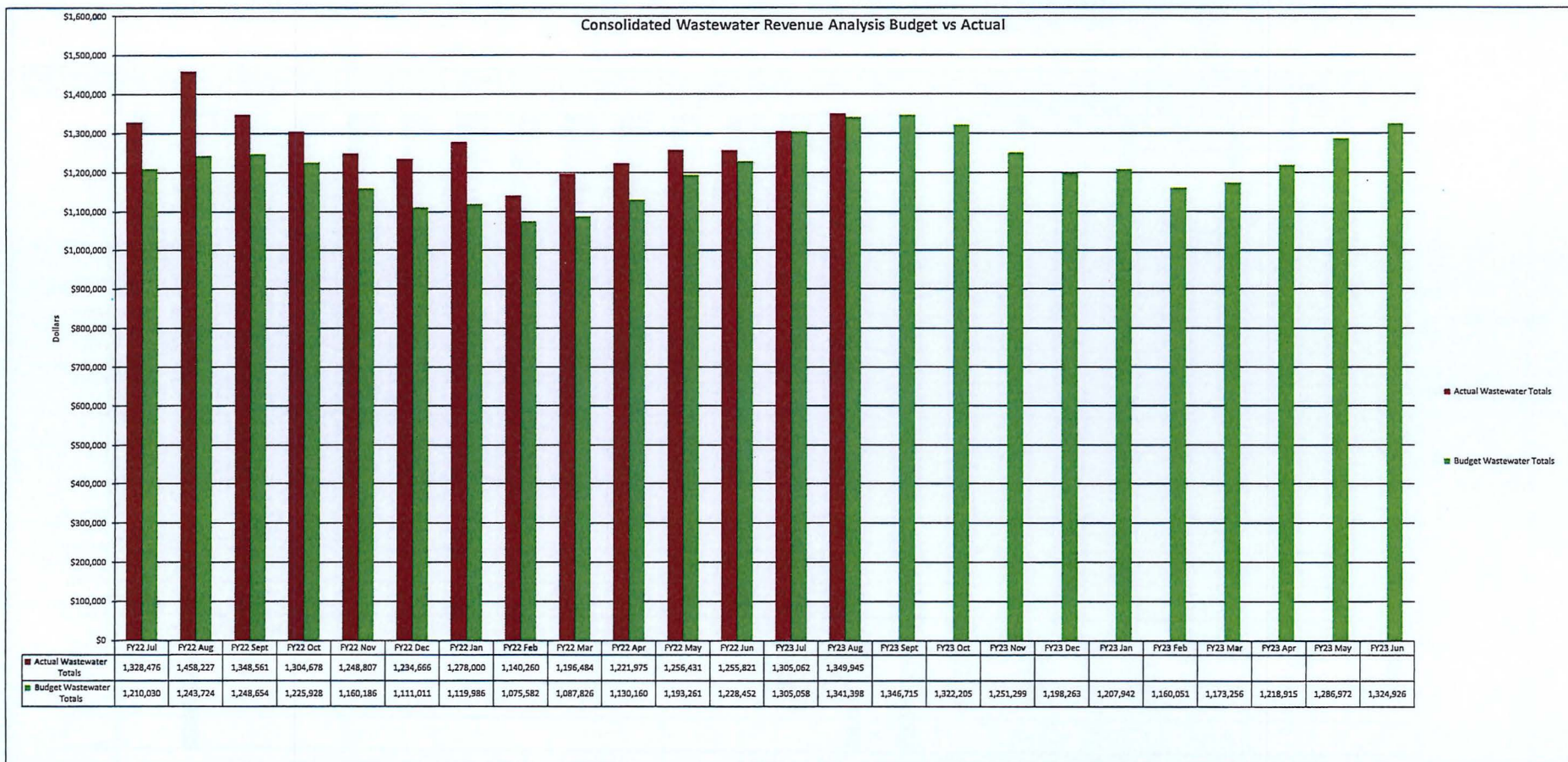
Monthly Water Consumption Fiscal Year 2022



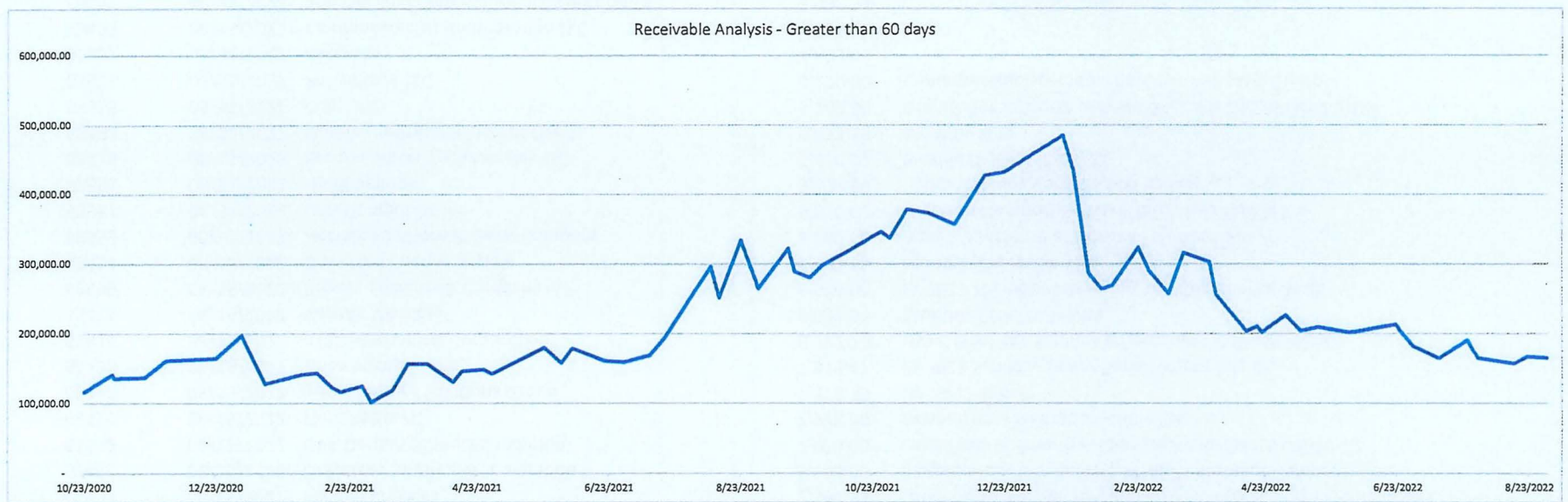
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	8.73%	9.74%	8.19%	7.63%	4.82%	1.01%	0.34%	0.28%	0.38%	0.79%	2.57%	5.03%
Total Irrigation	14,081,507	17,746,655	13,631,436	12,050,529	7,093,317	1,406,778	470,655	357,324	497,487	1,058,531	3,669,728	7,491,053
Institutional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













**Albemarle County Service Authority**  
**August 2022 Checks**

CHECK NUMBER	CHECK DATE	VENDOR NAME	AMOUNT	DESCRIPTION OF ITEMS OVER \$5,000
63467	08/15/2022	S L Williamson Company Incorporated	321,314.04	Hessian Hills WMRP Pavement Restoration
63494	08/15/2022	Metra Industries	214,776.64	Hessian Hills WMRP Construction Retainage
63570	08/31/2022	Prism Contractors	36,485.52	Hollymead Drainage Basin Rehab July 22
63512	08/31/2022	Core & Main LP	19,667.92	Inventory stock
63421	08/15/2022	Fortiline Incorporated	18,419.56	Frames, Covers & Valve Box Extensions
63407	08/15/2022	County of Albemarle	16,486.03	800 MHz Radio System Annual Infrast Cost 22-23
63565	08/31/2022	Paymentus	15,869.08	Transaction Fees for July 22
63546	08/31/2022	Mansfield Oil Company of Gainesville, Inc.	10,898.96	Monthly Fuel
63575	08/31/2022	RSG Landscaping LLC	10,431.42	Landscaping - July and August 2022
63397	08/15/2022	Bank of America	9,340.55	Office Supplies, Memberships, Tools, Travel, Software Renewals
63483	08/15/2022	University of Virginia Foundation	8,000.00	Ragged Mountain Phase 1 WMRP Easement Compensation
63482	08/15/2022	UVA Darden School Foundation	7,960.00	Lead Team 4 Growth & Change, A Morrison 9/26-30/22
63420	08/15/2022	Flora Pettit PC	7,938.00	General Representation - June 2022
63430	08/15/2022	Infrastructure Solutions Group	7,873.75	Unit #32 Repair
63438	08/15/2022	Linco Incorporated	7,313.47	FY 2022 Sanitary Sewer Replacement July 22
63525	08/31/2022	eTEC Mechanical Corporation	6,722.73	HVAC Final Pay Request w/Retainage Release July 22
63484	08/15/2022	Verizon Wireless	6,631.54	Monthly Cellular Service
63399	08/15/2022	Brown, Edwards & Company LLP	6,500.00	FY 2022 Financial Statement and Compliance Audit
63414	08/15/2022	Dominion Energy Virginia	6,403.65	Monthly Energy Service
63556	08/31/2022	Norfolk Southern Railway Company	6,240.00	Annual AMI lease at Norfolk Southern site
63517	08/31/2022	Daly Computers Inc	6,210.00	Unitrends Support Renewal 8/1/22-7/31/2023
63591	08/31/2022	USABlueBook	5,572.86	Hydrant Buddy Cordless and various
63416	08/15/2022	Evoqua Water Technologies LLC	5,470.92	Bioxide Delivery 7/15/22
63462	08/15/2022	Quarles Petroleum Incorporated	5,412.39	Monthly Fuel
63515	08/31/2022	Cues, Inc.	5,200.00	GraniteNet software renew6/24/22-6/23/23PO20220106
63571	08/31/2022	Provantage LLC	5,190.00	Computer Replacements for Environmental Group
63501	08/31/2022	Ascensus	4,800.00	
63405	08/15/2022	Commonwealth Underground LLC	4,500.00	
63552	08/31/2022	Michael Baker International Incorporated	3,906.97	
63523	08/31/2022	Ed's Floor Care Services LLC	3,703.33	
63398	08/15/2022	Beverage Tractor & Equipment Incorporated	3,668.43	
63472	08/15/2022	St John, Bowling, Lawrence & Quagliana LLP	3,625.00	
63513	08/31/2022	Cosner Brothers Body Shop Incorporated	3,530.02	
63422	08/15/2022	Frank & Associates Incorporated	3,500.00	
63487	08/15/2022	WaterPIO	3,500.00	
63406	08/15/2022	Core & Main LP	3,305.32	
63567	08/31/2022	PFM Asset Management LLC	2,979.73	
63457	08/15/2022	PFM Asset Management LLC	2,887.83	
63478	08/15/2022	Tyler Technologies Incorporated	2,608.00	

63522	08/31/2022	E Source Companies LLC	2,600.00
63536	08/31/2022	JDL Industries - Atlanta Inc.	2,591.66
63439	08/15/2022	Lowes Companies Incorporated	2,394.91
63606	08/31/2022	Minnesota Life Insurance Company	2,029.73
63520	08/31/2022	Dominion Energy Virginia	1,996.86
63572	08/31/2022	Rappahannock Electric Cooperative	1,894.82
63602	08/31/2022	Guardian	1,827.81
63589	08/31/2022	UniFirst Corporation	1,772.85
63498	08/31/2022	Amerigas	1,688.08
63480	08/15/2022	UniFirst Corporation	1,554.54
63465	08/15/2022	Rivanna Water & Sewer Authority	1,532.58
63440	08/15/2022	Luck Stone Corporation	1,482.66
63509	08/31/2022	Comcast Business	1,450.59
63485	08/15/2022	Virginia Utility Protection	1,444.80
63464	08/15/2022	Rivanna Solid Waste Authority	1,424.00
63543	08/31/2022	Michael R Lynn	1,197.33
63474	08/15/2022	Support Warehouse Limited	1,058.00
63441	08/15/2022	Mailing Services of Virginia	1,033.70
63527	08/31/2022	Ferguson Enterprises, LLC #1300	993.56
63410	08/15/2022	Cues Incorporated	881.09
63396	08/15/2022	Atlas Copco USA Holdings Incorporated	856.00
63390	08/15/2022	Advance Stores Company Incorporated	825.16
63577	08/31/2022	S L Williamson Company Incorporated	820.13
63490	08/15/2022	Winchester Building Supply Company Incorporated	760.00
63548	08/31/2022	Mayer Electric Supply Company Inc.	724.28
63461	08/15/2022	Prism Contractors	692.37
63435	08/15/2022	LB Technology Incorporated	687.50
63481	08/15/2022	HD Supply Facilities Maintenance LTD	684.81
63583	08/31/2022	Syn-Tech Systems	680.00
63598	08/31/2022	ACAC	676.00
63590	08/31/2022	United Rentals (North America), Inc.	673.30
63604	08/31/2022	Herbert Beskin Trustee	669.00
63419	08/15/2022	Ferguson US Holdings Incorporated	659.12
63508	08/31/2022	Comcast	636.96
63592	08/31/2022	VACORP	630.01
63446	08/15/2022	ODP Business Solutions LLC	604.73
63408	08/15/2022	Crown Communication LLC	515.00
63582	08/31/2022	Super Shoes Store/Macro Retailing, LLC	514.96
63443	08/15/2022	Mayer Electric Supply Company Incorporated	505.82
63596	08/31/2022	WA Wells Excavating, LLC	460.00
63500	08/31/2022	Aqua Air Laboratories Incorporated	450.00
63492	08/15/2022	Treasurer of Virginia	430.90

63610	08/31/2022	Treasurer of Virginia	430.90
63496	08/31/2022	Advance Auto Parts	425.10
63545	08/31/2022	Mailing Services of Virginia	418.60
63444	08/15/2022	Denis Muchiri	416.91
63542	08/31/2022	Luck Stone Corporation	404.24
63505	08/31/2022	Cardinal Home Center	341.82
63588	08/31/2022	Troy's Auto & Diesel LLC	324.89
63479	08/15/2022	U S Bank	305.01
63450	08/15/2022	Leanna Muthiah	300.00
63452	08/15/2022	Thomas Brady	300.00
63549	08/31/2022	Deanne McDaniel	287.50
63553	08/31/2022	Miller's Supplies at Work	286.70
63594	08/31/2022	VoiceLink Communications	284.82
63463	08/15/2022	Ricoh USA Incorporated	275.00
63574	08/31/2022	Ricoh USA Inc.	275.00
63516	08/31/2022	The Daily Progress	260.20
63607	08/31/2022	Piedmont Family YMCA	257.40
63608	08/31/2022	Snap Fitness	239.76
63504	08/31/2022	Beverly Campbell	231.24
63436	08/15/2022	Seanna Leath	230.03
63468	08/15/2022	Sherwin Williams Company	225.90
63530	08/31/2022	Anne Goodman	223.30
63499	08/31/2022	Appalachian Power	219.56
63473	08/15/2022	TSRC, Inc.	214.80
63557	08/31/2022	Veronica O'Brien	210.40
63529	08/31/2022	Gingerich Outdoor Power Specialist	204.96
63424	08/15/2022	Phillip Gerringer	203.15
63555	08/31/2022	Sumesh Nair	202.00
63534	08/31/2022	Jon Ihlefeld	201.45
63412	08/15/2022	Leslie Richard	200.00
63447	08/15/2022	Brenda Melan	200.00
63448	08/15/2022	Harold Hallock	200.00
63559	08/31/2022	Danielle Thorpe	200.00
63562	08/31/2022	Patrick Dougherty	200.00
63564	08/31/2022	Robert Kimball	200.00
63573	08/31/2022	Republic Services	198.93
63445	08/15/2022	Ernane Vieira Neto	195.51
63605	08/31/2022	Lendmark Financial Services	192.27
63580	08/31/2022	Nina Scott	183.18
63392	08/15/2022	Angie Akacki	175.67
63568	08/31/2022	Carlos Portillo	172.86
63488	08/15/2022	Shana Whindleton	171.76

63502	08/31/2022	Roland L Bega	163.00
63585	08/31/2022	Charles M Thomas	163.00
63417	08/15/2022	Flexible Benefit Administrators, Inc	160.25
63535	08/31/2022	James River Communications Incorporated	159.00
63532	08/31/2022	Sara Harrison	158.22
63493	08/15/2022	Virginia Department	150.00
63611	08/31/2022	Virginia Department	150.00
63460	08/15/2022	Priority Elevator	149.00
63495	08/31/2022	Action Lock	148.75
63540	08/31/2022	Elena Lavrentyeva	138.61
63442	08/15/2022	Mansfield Oil Company of Gainesville, Inc.	137.38
63475	08/15/2022	T&N Printing Incorporated	135.00
63404	08/15/2022	HTM/MTE Associates Incorporated	134.27
63427	08/15/2022	Hathaway	134.17
63603	08/31/2022	The Gym	130.00
63541	08/31/2022	Porsche Liggins	129.08
63503	08/31/2022	Better Living Incorporated	128.46
63433	08/15/2022	Azzaam Kapadia	125.60
63437	08/15/2022	Sarah Lennox	124.75
63456	08/15/2022	Nishant Patel	120.55
63401	08/15/2022	Jonathon Caylor	119.50
63415	08/15/2022	William Duff	119.50
63469	08/15/2022	Ronald Dwayne Shifflett	119.50
63471	08/15/2022	Jeffrey N Sprouse	119.50
63395	08/15/2022	American Pest Management Incorporated	118.00
63566	08/31/2022	Performance Signs LLC	115.00
63491	08/15/2022	Eric Woods	107.79
63434	08/15/2022	George Keen	105.90
63449	08/15/2022	James Garman	100.00
63451	08/15/2022	Margaret Phillips	100.00
63560	08/31/2022	George Evans	100.00
63558	08/31/2022	ODP Business Solutions LLC	99.45
63507	08/31/2022	Michael Collins	99.18
63537	08/31/2022	Jim Price Chevrolet	97.51
63423	08/15/2022	Laura Fraser	95.76
63579	08/31/2022	Beverly Scott	87.99
63551	08/31/2022	Sarah McDonald	85.57
63550	08/31/2022	Herman McDonald	82.28
63418	08/15/2022	FedEx Freight Incorporated	80.98
63411	08/15/2022	Peter Dailey	72.71
63391	08/15/2022	Advantage Office Systems	70.00
63486	08/15/2022	William A Wells	70.00

63519	08/31/2022	Document Destruction of Virginia LLC	69.95
63544	08/31/2022	Gregory MacDonald	67.12
63459	08/15/2022	Justin Platt	63.66
63511	08/31/2022	Susan Corbett	61.91
63576	08/31/2022	Kenneth Rublee	61.66
63586	08/31/2022	David Thompson	61.20
63510	08/31/2022	Commonwealth of Virginia/DOLI	60.00
63563	08/31/2022	Polly Sibert	60.00
63569	08/31/2022	Jennifer Powers	58.19
63431	08/15/2022	MyFleetCenter.com	56.68
63470	08/15/2022	Specialty Fasteners of Charlottesville	55.72
63531	08/31/2022	Grainger	54.48
63454	08/15/2022	Janina Painter	52.95
63526	08/31/2022	FedEx	51.26
63539	08/31/2022	Terri M Knight	50.86
63394	08/15/2022	Jason Amatucci	48.08
63497	08/31/2022	Albemarle Lock & Safe Company	48.00
63597	08/31/2022	Timothy Winchester	46.61
63413	08/15/2022	Data West Corporation	45.00
63584	08/31/2022	Brian Teachout	44.05
63593	08/31/2022	Venture Construction Company	40.78
63599	08/31/2022	Anytime Fitness-Pantops	40.00
63600	08/31/2022	Anytime Fitness-Ruckersville	40.00
63601	08/31/2022	Anytime Fitness - Zion VA	40.00
63609	08/31/2022	Snap Fitness Hollymead	39.96
63547	08/31/2022	Alexis Mason	39.74
63455	08/15/2022	Madelenne Parker	37.89
63426	08/15/2022	Jennifer Harmon	35.35
63538	08/31/2022	Danielle Joseph	34.99
63429	08/15/2022	Joyce Hockett	34.19
63402	08/15/2022	Central Virginia Electric Cooperative	32.78
63587	08/31/2022	James Travis	31.70
63521	08/31/2022	Janet Dragone	30.81
63506	08/31/2022	City of Charlottesville	30.10
63453	08/15/2022	Timothy Darrah	30.00
63561	08/31/2022	Joseph Lombardo	30.00
63554	08/31/2022	Loring Myles	24.79
63393	08/15/2022	Albemarle Lock & Safe Company	24.00
63533	08/31/2022	Jaime Henna	23.49
63425	08/15/2022	Mark Harder	21.96
63524	08/31/2022	Caroline Elvig	21.94
63432	08/15/2022	Price Chevrolet Company	20.00

63528	08/31/2022	Don S Garber	19.79
63428	08/15/2022	High Peak Sportswear	18.39
63466	08/15/2022	Evan Robinson	16.87
63581	08/31/2022	Robert B Spann	16.72
63578	08/31/2022	Ben Saul	16.01
63403	08/15/2022	City of Charlottesville	13.85
63595	08/31/2022	Brittney Whitside	13.70
63400	08/15/2022	Cardinal Home Center	11.01
63477	08/15/2022	Marife Toledo-Canete	6.98
63476	08/15/2022	Thryv, Inc.	6.50
63458	08/15/2022	Piedmont Power	5.99
63409	08/15/2022	Crozet Hardware	5.69
63489	08/15/2022	Chris Widick	5.37
63518	08/31/2022	Crystal Dickson	3.95
63514	08/31/2022	County of Albemarle	2.24
			<hr/> 889,530.22

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> FY 2023 Capital Improvement Program (CIP)	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Jeremy M. Lynn, P.E., Director of Engineering	<b>CONSENT AGENDA:</b>
	<b>ACTION:</b> ■ <b>INFORMATION:</b> ■
	<b>ATTACHMENTS:</b> YES

**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 for three 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**  
**September 2022**

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

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2023
Total Budget:	\$1,063,950
Appropriated Funds:	\$529,048

**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.

**9/7/2022:** ACSA staff and Dewberry have been working closely with Harrisonburg Construction Co., Inc. (HCC) to identify any cost savings through value engineering following receipt of their bid. A total reduction of \$6,000 was identified and the contract will be adjusted by change order following execution of the contract. A Board authorization is proposed for this project.

**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.

7/12/2022: The Draft Final Report has been received and is currently under review.

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

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	65%
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.

8/8/2022: Dewberry has finalized design of the stormwater connection for the future improvements to our Avon Street entrance. This storm pipe will be installed as part of the County's Avon Street Extended Sidewalk Project. The County is in the process of obtaining change order pricing from their contractor for installation of this stormwater stub-out.

**d) HVAC System Upgrade (Account Code 1619):**

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction

Percent Complete: 100%  
 Contractor: eTEC Mechanical Corporation (eTEC)  
 Construction Start: February 2019  
 Completion: August 2022  
 Total Budget: \$1,378,000  
 Appropriated Funds: \$1,034,297

**Project Description** - During recent years it has become apparent that the HVAC system serving the Administration Building is in need of replacement. This evaluation will review the existing HVAC system and recommend solutions and alternatives. HVAC efficiency and life cycle cost analysis will be performed as part of the evaluation.

**9/7/2022:** Closeout documents have been received and final payment to eTEC has been processed. This project will be removed from the CIP list.

**e) 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.

**9/7/2022:** ACSA staff have identified three phases for this project based on geographic areas. Phase 1 will be the Out of Bounds neighborhood which includes 24 homes. A Request for Quotes is currently being developed by ACSA staff.

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

**9/7/2022: F&R is scheduled to complete the geotechnical borings during the month of September 2022.**

**g) 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. This is the fourth of five phases that have been defined to carry out these improvements.

**9/7/2022: With a design revision, ACSA staff has been able to eliminate one of the remaining easements. To date 14 of 18 easements required for construction have been acquired.**

**h) 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:	2022
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.

8/8/2022: The Deed of Easement from University of Virginia Foundation has been executed and recorded in the Clerk's Office. VDOT has twice been unsuccessful in their advertisement of the Morey Creek Bridge Replacement and is evaluating their next steps.

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

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Construction
Percent Complete:	0%
Contractor:	Commonwealth Excavating, Inc. (CEI)
Construction Start:	2022
Completion:	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.

**9/7/2022: The Notice to Proceed date of August 29, 2022 has been established and construction activities are expected to begin the week of September 5, 2022.**

**j) 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: \$583,497

**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.

**9/7/2022: The VDOT Land Use Permit Application for the test holes and geotechnical borings has been received, and we are waiting on a schedule from F&R to complete this work.**

**k) Hessian Hills Water Main Replacement (Account Code 1753):**

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Construction
Percent Complete:	99%
Contractor:	Metra Industries, Inc. (Metra)
Construction Start:	April 2021
Completion:	August 2022
Total Budget:	\$5,070,000
Appropriated Funds:	\$5,107,562

**Project Description** - The water mains in the Hessian Hills area are of a similar age and material as the water mains in the Barterbrook Phase 2 Project, plus they are in the same general area. By extension we are assuming their condition is similar with respect to tuberculation and they are also undersized throughout most of the subdivision. This project follows our Strategic Plan goal to replace aging and undersized water mains throughout our system. It will also eliminate a small amount of PVC main installed in the early 1980's.

8/8/2022: All pavement restoration work is complete and S.L. Williamson is currently working on VDOT's punch-list.

**l) 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.

**m) 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.

8/8/2022: A site meeting was held on August 3, 2022 with Dewberry to incorporate several alignment revisions in advance of sharing the plans with the property owner.

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

Consultant:	Whitman, Requardt & Associates, Inc.
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.

8/8/2022: 90% Design Documents have been received and they are currently under review by ACSA staff.

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

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	0%
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.**

**p) Pantops Drainage Basin Rehabilitation (Account Code 1824):**

Consultant:	O'Brien & Gere Engineers, Inc. (OBG)
Project Status:	Construction
Percent Complete:	100%
Contractor:	Prism Contractors & Engineers, Inc. (Prism) & Linco, Inc. (Linco)
Construction Start:	March 2021
Completion:	August 2022
Total Budget:	\$400,700
Appropriated Funds:	\$515,056

**Project Description** - The wastewater flow metering in 2015 for the update of the RWSA sewer interceptor model has shown the Pantops Area is experiencing peak wet weather flows due to infiltration and inflow (I/I). This project will continue our efforts to maintain the integrity of our wastewater

collection system by reducing I/I. The sanitary sewer evaluation survey (SSES) will include the ACSA collection system east of the South Fork Rivanna River and north of I-64, including the Peter Jefferson Place Pump Station. The sanitary sewer evaluation survey (SSES) will consist of manhole inspections, sewer flow monitoring, smoke testing, night flow isolation and measurement, flooded dye testing and CCTV of sewer mains.

**9/7/2022: Prism has completed all of the rehabilitation efforts for the Pantops Drainage Basin. This project will be removed from the CIP list.**

**q) Hollymead Drainage Basin Rehabilitation (Account Code 1825):**

Consultant:	O'Brien & Gere Engineers, Inc. (OBG)
Project Status:	Construction
Percent Complete:	99%
Contractor:	Prism Contractors & Engineers, Inc. (Prism) & Linco, Inc. (Linco)
Construction Start:	October 2021
Completion:	October 2022
Total Budget:	\$454,700
Appropriated Funds:	\$472,786

**Project Description** - ACSA staff has identified other large drainage basins to be evaluated for infiltration and inflow (I/I) to continue our efforts to maintain the integrity of our wastewater collection system. The study area includes the oldest portions of the Hollymead Subdivision, as well as, the offsite portion of the sewer main that serves the westernmost area of Forest Lakes South. The Forest Lakes Offsite Sewer will be the primary collector for the upcoming extensive Brookhill development and the evaluation of this trunk main will provide an excellent baseline of pipe integrity in advance of the future construction activities around this sewer.

**9/7/2022: Prism has completed rehabilitation work on approximately 171 of 172 manholes.**

**r) 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.

**s) 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:	2022
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.

**8/8/2022:** Linco has received the final construction drawings and is currently preparing a fee proposal for the work. ACSA staff is still awaiting the approval of DEQ for the stream disturbance necessary for the project.

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

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	85%
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2020
Completion:	September 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.

**9/7/2022:** The final manhole rehabilitation in Belvedere has been completed, which closes out Work Order No. 2. On Work Order No. 6, the two manholes along Berkmar Drive have been rehabilitated.

**u) FY 2022 Miscellaneous Sewer Repair/Replacement (Account Code 1905):**

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	Underway
Contractor:	Linco, Inc. (Linco)
Construction Start:	December 2021
Completion:	October 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 make point repairs and undertake pipe replacement, which requires 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.

**7/12/2022:** Linco has completed the point repair of a gravity sewer main near the Fontaine Research Park associated with Work Order No. 1. ACSA Maintenance has performed some easement clearing in Highlands to provide access for Linco to complete another sewer point repair.

**v) 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:	October 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.

**9/7/2022: One manhole behind ConAgra under Work Order No. 2 has been rehabilitated.**

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

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	10%
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.

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

**x) 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:	2022
Completion:	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.

**9/7/2022:** The nearby developer has verbally agreed to reimburse the ACSA for the increased costs for the necessary upgrades. Upon receipt of the funds, a change order will be issued to ACI to incorporate these upgrades into the project.

**y) 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:	2022
Completion:	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.

8/8/2022: ECUC has performed field visits to each of the sites to confirm equipment measurements and has placed the order for the grinders.

**z) 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:	2022
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.

**9/7/2022: A site meeting with the HOA was held on August 23, 2022 to discuss the preliminary design. ACSA staff is currently putting together a summary of the benefits of the interconnect to pass along to the HOA.**

**aa) Huntington Village Water Connection (Account Code 1770):**

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2022
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.

**9/7/2022:** ACSA staff are waiting on pricing for preparation of a Maintenance of Traffic (MOT) plan from a local traffic control contractor.

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

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	60%
Contractor:	ACSA Maintenance Department
Construction Start:	October 2021
Completion:	August 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.

**9/7/2022:** The new standby generator has arrived in Richmond and ACSA staff is waiting on a delivery date to the site. After installation, minor gate modifications may be required to address an issue identified by the County Building Inspector.

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

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	26%
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. At that time the existing exclusion meters were grandfathered and allowed to stay in place unless the irrigation system was voluntarily abandoned. 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.

8/8/2022: ACSA Maintenance is currently working on exclusion meters in the vicinity of Darby Road (west) in advance of Glenmore's repaving efforts scheduled for late October 2022. This new group totals 69 private exclusion meters. There are currently 364 exclusion meters remaining in our system.

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

Consultant:	ACSA Engineering Department
Project Status:	Study
Percent Complete:	100%
Contractor:	Pure Technologies (Pure)
Construction Start:	N/A
Completion:	March 2020 (Study)
Total Budget:	\$149,468
Appropriated Funds:	\$228,745

**Project Description** - This project will address the ACSA's Strategic Plan to complete condition assessments on all sanitary sewer force mains at pump stations within the ACSA wastewater system. This project will utilize SmartBall and transient pressure monitoring technology to determine any problem areas that require correction or further detailed investigation. Following the Sewer Force Main Condition Assessment efforts, Pure Technologies recommended replacement of a portion of the Woodbrook Force Main due to thinning pipe wall conditions discovered.

8/8/2022: ACSA staff recently received a fee proposal from Ramboll for Design Phase Services, which was significantly higher than anticipated. ACSA staff will be meeting with Linco to determine if a GIS-based design would be acceptable as an alternative to a full design.

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

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2023

Total Budget: \$943,115  
Appropriated Funds: \$324,472

**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.

**9/7/2022: ACSA staff has completed the competitive negotiation stage and is recommending award of the construction contract to M.C. Dean. A Board authorization is proposed for this project.**

JML/jl  
060806CIPMonthly090722



Albemarle County Service Authority (ACSA)

CIP Schedule Revisions  
September 2022

1. The design phase of the Energy Audit Project has been extended to October 2022 and the construction phase extended to June 2023.
2. The design phase of the Briarwood Water Main Replacement Project has been extended to February 2023.
3. The design phase of the Airport Trunk Sewer Upgrade Project has been extended to December 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: September 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																											

In house construction

Engineering

Construction



**Albemarle County Service Authority (ACSA)**  
**Active Private Development Projects**  
**September 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. **Albemarle Business Campus – Block 5 (Scottsville)**: Water and sewer main extension to serve a storage facility and retail spaces between Old Lynchburg Road and Wahoo Way.
- c. **Ashcroft Phase 2 Sections 6 & 7 (Rivanna)**: Water main extension to serve 14 residences. The project is located at the upper end of Summit Ridge Trail.
- d. **Berkmar Drive Apartments (Rio)**: Water and sewer main extensions to serve 10 apartment buildings, totaling 261 units. The project is located along Berkmar Drive, south of the Forest Springs Mobile Home Park.
- e. **Boys and Girls Club – Drivers Ed Site (Jack Jouett)**: Water main extension to serve a new Boys and Girls Club. The project is located southeast of Jack Jouett Middle School.
- f. **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.
- g. **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.
- h. **Flow Automotive – 1300 Richmond Road (Rivanna)**: Water main extension to provide water service and fire protection to a new/renovated car dealership. This project is located along Richmond Road, across from People Place.
- i. **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.
- j. **Georgetown Hydraulic (Jack Jouett)**: Water main extension to serve a commercial office building at the intersection of Georgetown Road and Hydraulic Road.

- k. Glenbrook at Foothills Phase 3 (White Hall): Water and sewer main extensions to serve 120 residential units between the Parkside Village and Glenbrook at Foothills subdivisions along Park Ridge Drive.
- l. 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.
- m. 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.
- n. 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.
- o. PVCC - Advanced Technical Training Center (Scottsville): Water main extension to serve new building on PVCC campus off College Drive.
- p. 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.
- q. 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.
- r. 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.
- s. Southwood Phase 1 – Blocks 9-11 (Scottsville): Water and sewer main extensions to serve 70 single family units and 16 condominium units. This project is located west of Horizon Road and south of Hickory Street.
- t. Stonefield Block D1 (Jack Jouett): Water main extension to serve a 220 unit apartment building at the intersection of Inglewood Drive and Bond Street.
- u. 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.

- v. White Gables Major Amendment (Samuel Miller): Water main extension to serve three multi-family condominium buildings, with 30 units each. This site is located to the east of the existing White Gables neighborhood along Old Ivy Road.

JML/jl

0506 Active Private Development Projects 090722



## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> FY 2023 CIP Authorizations	<b>AGENDA DATE:</b> September 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:** Authorization for three CIP Projects, all of which have been included in the CIP Rate Model Budget. The first authorization is the award and funding of the construction of the Security Improvements – Priority One Project. The second authorization is the award and funding of the construction of the SCADA System Project – Phase 3. The third authorization is the funding to cover contract development and bid phase services for the On-Call Sanitary Sewer Repair/Rehabilitation Project.

**DISCUSSION:**

- ❖ Initiates construction of the priority items identified in the ACSA's Vulnerability Assessment.
- ❖ Initiates construction of the final phase of the SCADA System Project.
- ❖ Provides ACSA staff with the professional expertise of our term contract consultant during contract development and bid phase services of the On-Call Sanitary Sewer Repair/Rehabilitation Project.
- ❖ Continues the efforts of our "Find & Fix Program" to reduce I&I throughout our sanitary sewer system.

**BUDGET IMPACT:** The cost of the Security Improvements – Priority One Project are \$194,000 more than anticipated in the CIP Rate Model, however this should be offset by cost savings on other CIP projects. The cost of the SCADA System Phase 3 Project will be within the amount budgeted in the CIP Rate Model. The cost of contract development and bid phase services for the On-Call Sanitary Sewer Repair/Rehabilitation Project will be within the amount budgeted for under Miscellaneous Sewer Rehabilitation.

**RECOMMENDATIONS:** Authorize funding for these projects to keep our CIP Project Schedule moving forward and improving our utility system.

**BOARD ACTION REQUESTED:** Approve the Consent Agenda.

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

- ❖ Detailed memo of the proposed CIP authorizations.
- ❖ Recommendation of award prepared by Dewberry Engineers Inc. for the Security Improvements – Priority One Project.
- ❖ Recommendation of award prepared by Whitman, Requardt & Associates, LLP for the SCADA System Project – Phase 3.
- ❖ Proposal prepared by Ramboll for contract document development and bid phase services on the On-Call Sanitary Sewer Repair/Rehabilitation Project.



# MEMORANDUM

**To:** Board of Directors  
**From:** Jeremy M. Lynn, P.E., Director of Engineering  
**Date:** September 15, 2022  
**Re:** FY 2023 CIP Authorizations  
**cc:** James M. Bowling, IV

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The following projects require Board authorization:

- A. Security Improvements – Priority One Project:** On July 1, 2022, the ACSA accepted bids for the Security Improvements – Priority One Project. One (1) contractor, Harrisonburg Construction Company Inc., submitted a bid of \$311,000 on the project. Attached is a letter dated August 31, 2022, from Dewberry Engineers, Inc. recommending award of the contract to Harrisonburg Construction Co., Inc. for their bid of \$311,000. The ACSA staff concurs with Dewberry's recommendation.

**Board Action**

We request the Board of Directors appropriate \$311,000 from the FY 2023 3R Fund for the construction of the Security Improvements – Priority One Project.

- B. SCADA System Project - Phase 3:** On May 13, 2022, the ACSA accepted proposals for Phase 3 of our SCADA System Project. One (1) control systems integrator (CSI), M.C. Dean, submitted a proposal for the project. The proposal was evaluated and determined to meet the required elements as specified in the request for proposals. The negotiated price is \$900,446. The Engineer's Estimate was \$950,130. Attached is a letter, dated August 30, 2022, from Whitman, Requardt and Associates, LLP (WRA) recommending award of the contract to MC Dean for their proposed fee of \$900,446. The ACSA staff concurs with WRA's recommendation.

**Board Action**

We request the Board of Directors appropriate \$900,446 from the FY 2023 3R Fund for the construction of the SCADA System Project – Phase 3.

- C. **On-Call Sanitary Sewer Repair/Rehabilitation Project:** The current ACSA On-Call Sewer Rehabilitation and Replacement contracts have reached the maximum number of times they can be renewed and will end in October 2022. Ramboll has prepared the attached proposal letter, dated August 30, 2022, to update the Sewer Repair and Rehabilitation contract documents and bid phase services. The ACSA staff has reviewed this proposal and finds it satisfactory. The cost for updating the contract documents and providing bid phase services is \$33,000.

**Board Action**

We request the Board of Directors appropriate \$33,000 from the FY 2023 3R Fund for the On-Call Sanitary Sewer Repair/Rehabilitation Project.

JML/jml

Attachments

010101CIPAuthorizations091522



Dewberry Engineers Inc. | 804.290.7957  
4805 Lake Brook Drive, Suite 200 | 804.290.7928 fax  
Glen Allen, VA 23060 | www.dewberry.com

August 31, 2022

Mr. Alexander J. Morrison, P.E.  
Senior Civil Engineer  
Albemarle County Service Authority  
168 Spotnap Road  
Charlottesville, Virginia 22911

**RE: Security Improvements – Priority One Project  
Bid Evaluation and Recommendation**

Dear Mr. Morrison:

Dewberry has reviewed the bids received on July 1, 2022 for the above-referenced project. Our review indicates that the lowest, responsive and responsible bidder is:

**Harrisonburg Construction Co., Inc.  
1518 Viola Way  
Charlottesville, VA 22902**

**Total Bid Amount: \$311,000.00**

Based upon our review, we recommend that a contract be awarded to Harrisonburg Construction Co., Inc. for the Total Bid Amount shown above.

The above bid was the only bid received for the project. In our opinion, this was due to two main factors. One is that the nature of the project, with diverse improvements at several facilities, may have limited the number of capable bidders. The second factor is that contractors have been, and continue to be, extremely busy as a whole. That factor, as well as inflation and high volatility of supply prices, served to drive the price of this project well above the estimated project cost. Dewberry investigated some value engineering options, which will result in a slight reduction to the project cost. We don't anticipate that re-bidding the project would result in significantly lower bids and/or more bidders.

Should you have any questions or require additional information, please feel free to contact me at (804) 205-3338 or by email at [kpennock@dewberry.com](mailto:kpennock@dewberry.com).

Sincerely,

**Dewberry Engineers Inc.**

A handwritten signature in blue ink that reads "Kevin A. Pennock".

Kevin A. Pennock P.E.  
Associate, Senior Project Manager

Enclosures

P:\ACSA15\50119299\Construction\Construction Contract\2022.08.22 ACSA Priority One - Award Recommendation.docx





August 30, 2022

Mr. Alexander Morrison  
Senior Civil Engineer  
Albemarle County Service Authority  
168 Spotnap Road  
Charlottesville, Virginia 22911

Re: SCADA Implementation Project – Phase 3  
Recommendation of Project Award

Dear Mr. Morrison:

The intent of this letter is to complement the letter issued by WRA, dated June 2, 2022, regarding review of the received responses to Request for Proposal (RFP) No. 1605-3 for the referenced project. The June 2, 2022 letter summarized the review of received bids and recommended that competitive negotiations begin with M.C. Dean (MCD).

#### ***Competitive Negotiation Summary***

Following the issuance of the June 2, 2022 letter, the ACSA and WRA began competitive negotiations with MCD. The ACSA and WRA identified modifications to the project's scope of work for consideration by MCD. The modifications were outlined in a WRA memorandum, dated July 14, 2022, and transmitted to MCD. The memorandum is included as Attachment A.

The ACSA and WRA held a virtual meeting with MCD on July 21, 2022, to discuss the July 14, 2022 memorandum and project scope modifications. The meeting and discussion of the project scope modifications resulted in additional action items and cost reduction considerations for MCD. The additional cost reduction considerations are summarized as follows:

1. Finalize the mechanical and remaining costs for the Fontana and Camelot PRVs and submit the cost differences from what was bid.
2. Provide breakdown of mechanical costs at each facility.
3. Provide installation costs of doghouse manholes at all 5 required PRV locations that were excluded from the bid response.
4. Confirm electrical subcontract costs at all installations and provide price reductions where appropriate or applicable.
5. Identify additional risks and associated contingencies included in submitted bid price for possible risk reduction review.
6. Provide VE considerations following further review of Camelot or other PRV locations. Coordinate field review with the ACSA.

The additional cost reduction considerations were provided and clarified through email correspondence with MCD, through July 25, 2022. Since the July 21, 2022 meeting and follow up communications, MCD has provided responses to the ACSA for the project scope modifications and the additional cost reduction considerations.

The most recent cost review and response from MCD is dated August 25, 2022, and is included as Attachment B. The August 25, 2022, response from MCD specifically addresses the follow up action items and additional cost reduction considerations outlined above. The response also includes an updated summary of cost adjustments for the project as offered by MCD, along with future consideration of value engineering options following the completion of all required facility surveys and field reviews to be performed at the beginning of the construction phase.



The competitive negotiations with MCD resulted in an overall cost reduction of \$54,587 (5.7%), with the adjusted contract value reduced to \$900,446.60 by MCD. The corrected, adjusted contract value is \$900,446 due to the corrected bid price of \$955,033, summarized in the June 2, 2022 bid review letter.

***Award Recommendation***

With the completion of a successful competitive negotiation process and a cost reduction of 5.7%, it is WRA's understanding that the adjusted contract value of \$900,446 is within the ACSA's budget. The adjusted contract value is also below WRA's final construction cost estimate of \$950,130.

Based on the results of the competitive negotiation process, it is WRA's recommendation that the project proceeds to the construction phase, with MCD being awarded the project for the adjusted contract price of \$900,446.

WRA looks forward to working with the ACSA and MCD throughout the construction phase and through final completion of this important ACSA project.

Very truly yours,

Whitman, Requardt and Associates, LLP



Charles Luck, P.E.  
Vice President

cc: Jeremy Lynn – ACSA  
Greg Horn – WRA  
File 46480-020



**Attachment A**  
**Project Scope Modifications Memorandum**



## MEMORANDUM

Date: 07-14-2022

To: Alex Morrison  
From: Greg Horn  
Subject: Scope of Work Changes

Work Order Number: 46480.020

Project: SCADA Implementation Project Phase 3

CC: Charles Luck, Howard Anby

1. Fontana and Camelot PRV's:

- a. The "doghouse" manhole and insertion flow meters shown on the plans for these sites will not be installed. In lieu of these items, install a Cla-Val XP2F Flow Monitoring Kit with 4-20mA output on the existing 8" Cla-Valves in both PRV vaults.
- b. Install a 2" Sensus OMNI+ T2 Water Meter with pulse output electronic register and strainer on each of the 2" domestic water flow lines in both PRV vaults. Install the water meters between the existing 2" Cla-valves and the existing 1/4" turn brass shut off valves. Note that the existing 2" piping will need to be reworked to accommodate the new meters. Pulse output signals from the water meters shall be connected to PLC discrete inputs.
- c. Provide an adjusted unit cost reflecting paragraphs a and b above.

2. Woodlands and Forest Lakes PRV's:

- a. Provide normally closed (energize to open) solenoid control pilot kits on all 2" PRV's at these sites only.
- b. All other sites (less what is noted in 3B) will be normally open (energize to close) solenoid control pilot kits on the 2" PRV's.

3. Ashcroft Lower PRV:

- a. This site does not require an electrical service, freestanding outdoor electrical enclosure, PLC, OIT and associated panel hardware and components and a timber rail fence is required in lieu of bollards. Also, the two pressure transmitters and hatch intrusion switch are existing.
- b. The requirement for the installation of solenoid control and repair kits as well as valve position limit switches for the 2" inch PRV's is waived for this site only.
- c. Provide an adjusted unit cost reflecting paragraphs a and b above.

4. RFP Summary Fee Form:

- a. Item #6 description is listed as Four Seasons PRV Vault. Confirm that item #6 description should be listed as Glenmore PRV Vault.

A handwritten signature in blue ink that reads "Gregory Horn".  
\_\_\_\_\_  
Greg Horn

**Attachment B**

**MCD August 25, 2022 Cost Review Response**





180 W. Ostend Street Baltimore, MD 21230 Phone: (703) 802-6231	3014 Mudpike Road Christiansburg, VA 24068 Phone: (540) 585-4255 FAX: (540) 381-5731	1580 CF Pours Drive Harrisonburg, VA 22802 Phone: (540) 442-8270 FAX: (540) 442-1889	2315 Silverdale Drive Johnson City, TN 37601 Phone: (423) 283-7541 FAX: (423) 282-0560	10100 Nokesville Road Manassas, VA 20110 Phone: (703) 295-1068 FAX: (703) 361-	425 Southlake Boulevard, Suite 2B Richmond, VA 23238 Phone: (804) 378-0368 FAX: (804) 378-0368	199 Sulky Drive, Suite 3 Winchester, VA 22802 Phone: (540) 868-1085 FAX: (540) 868-1041
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August 25, 2022

Alexander Morrison PE  
Senior Civil Engineer  
Albemarle County Service Authority  
168 Spotnap Road  
Charlottesville, VA 22911

**Subject: SCADA Implementation Phase 3 - Response to Action Items for M.C. Dean from ACSA meeting.**

Dear Mr. Morrison:

On behalf of M.C. Dean, I would like thank you for the opportunity to let us respond to your inquires and action items listed below, dated July 25, 2022.

- 1. Finalize the mechanical and remaining costs for the Fontana and Camelot PRVs and submit the cost differences from what was bid.**

MCD Response: Based on our previous conversations and the information gained from our final site visit, additional questions and concerns remain about the installation at these sites. As a result, M.C. Dean has not provided any adjustment of cost for this item at this moment in alignment with your EMAIL of Tuesday 7/26/2022 at 11:53 AM.

- 2. Provide breakdown of mechanical costs at each facility.**

MCD Response: After a complete review from our internal Mechanical Installation team, the mechanical cost for each of the sites remains at \$16,293.59.

- 3. Provide installation costs of doghouse manholes at all 5 required PRV locations that were excluded from the bid response.**

MCD Response: After a complete review with our internal Mechanical Installation team, the total estimated cost for all 5 required PRV location is \$33,168 or \$6,633 per site with the following considerations and notes:

- All trenching/Digging will be performed with a standard excavator.
- Hydro excavation is not included in this estimate.

**NOTES:**

- Hydro Excavation is sometimes required when digging/trenching is performed within 10' of a live line.
- Hydro Excavation cost ranges from \$ 2500-\$ 3500/day plus Labor and other related cost.
- M.C. Dean suggests a full follow-up site review of exact trenching location and adjust costs as a change order after contract award.

- 4. Confirm electrical subcontract costs at all installations and provide price reductions where appropriate or applicable.**

MCD Response: After a complete review by our internal Electrical installation team, there will be a Total Price Reduction for all Sites of \$19,648 or \$ 2456 price reduction per site.



**ACSA – PHASE 3 – Pricing Review  
SCADA Implementation Project**

**CO Response  
August 15, 2022**

**5. Identify additional risks and associated contingencies included in submitted bid price for possible risk reduction review.**

MCD Response: After a complete review from our Controls & Instrumentation, Mechanical, and Electrical resources, no excess contingencies or unmitigated risks not specifically called out herein were identified. As such, the line item costs will remain unchanged.

**6. Provide VE considerations following further review of Camelot or other PRV locations. Coordinate field review with the ACSA.**

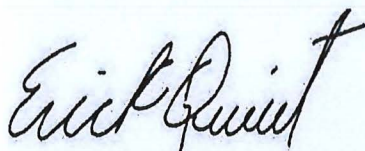
MCD Response: After a complete review from our internal mechanical installation team, M.C. Dean still has concerns about the installation of the planned flow meters at these locations. After contract award, we will work with Albemarle County to complete full site surveys and analysis at all locations to determine the best Value Engineering approach to this challenge.

As a result of the above responses, please see our updated Summary of Costs below:

ITEM	PUMP STATION/PRV	Old Budget	Adjustment	New Budget
1	Northfields PS	\$125,119.41		\$122,663
	Doghouse Manholes		\$ -	
	Electrical Contractor		\$ (2,456.00)	
2	Woodlands PRV	\$115,768.13		\$ 119,945.13
	Doghouse Manholes		\$ 6,633.00	
	Electrical Contractor		\$ (2,456.00)	
3	Ivy PRV	\$115,768.13		\$ 119,945.13
	Doghouse Manholes		\$ 6,633.00	
	Electrical Contractor		\$ (2,456.00)	
4	Camelot PRV	\$115,768.13		\$ 113,312.13
	Doghouse Manholes		\$ -	
	Electrical Contractor		\$ (2,456.00)	
5	Forest Lakes North PRV	\$116,500.70		\$ 120,677.70
	Doghouse Manholes		\$ 6,633.00	
	Electrical Contractor		\$ (2,456.00)	
6	Glenmore PRV	\$116,500.70		\$ 120,677.70
	Doghouse Manholes		\$ 6,633.00	
	Electrical Contractor		\$ (2,456.00)	
7	Fontana PRV	\$116,500.70		\$ 114,044.70
	Doghouse Manholes		\$ -	
	Electrical Contractor		\$ (2,456.00)	
8	Ashcroft Lower PRV	\$116,500.70		\$52,573.70
	Descope Labor		\$ (19,910.00)	
	Descope Material		\$ (20,570.00)	
	Descope Equipment		\$ (597.00)	
	Descope Subcontractors		\$ (22,850.00)	
9	Contingency Item	\$16,607.00	0	\$ 16,607.00
GRAND TOTAL		\$955,033.60	\$ (54,587.00)	\$ 900,446.60

All of us at M.C. Dean appreciate the opportunity to explore these questions with you in an open and collaborative manner. Our entire team is excited at working with Albemarle County again on the next phase of their improvements program. If you have any further questions or concerns, please do not hesitate to contact me via phone or email

Regards,

A handwritten signature in black ink that reads "Erick Quint". The signature is written in a cursive style with a large, stylized "Q" and a long horizontal stroke at the end.

Erick Quint

Project Leader

[Erick.Quint@mcdean.com](mailto:Erick.Quint@mcdean.com)

571-355-5489





## WATER

Mr. Richard Nelson  
 Civil Engineer  
 Albemarle County Service Authority  
 168 Spotnap Road  
 Charlottesville, VA 22911

**Response to RFP for Miscellaneous Sewer Repair/Rehabilitation  
 Contracts – Development of Contract Documents**

Date August 30, 2022

Dear Richard,

As requested, please find attached Ramboll's proposed fee estimate and scope for the subject project. These documents were developed based upon previous work performed by Ramboll as well as subsequent discussions with ACSA personnel. The following clarifications and assumptions were made in development of this fee:

Ramboll  
 4435 Waterfront Drive  
 Suite 205  
 Glen Allen, VA 23060  
 USA

**SCOPE – CLARIFICATIONS AND ASSUMPTIONS**

**GENERAL**

- Existing bid documents (developed for the 2019 contract) will be utilized as the basis for the bid documents provided under this contract.
- Ramboll will update two (2) separate project manuals for the purpose of bidding one Replacement Contract and one Rehabilitation (trenchless) Contract.
- Ramboll will prepare for and attend two separate prebid meetings.
- Ramboll will review bids received and provide a letter of recommendation for each contract.
- The project is generally divided into the following distinct tasks:
  - Task 1 – Project Initiation
  - Task 2 – Review Existing Information
  - Task 3 – Update/Develop Bid Documents
  - Task 4 – Bid Phase Services

T 804-822-4200  
 F 804-270-5808  
<https://ramboll.com>

**TASK 1 – PROJECT INITIATION**

- A project kick-off meeting will be held to review the project scope, schedule and objectives as well as to discuss ACSA preferences for bid items to include and technical specifications to develop. Communication points of contact and



reporting protocols will be established to ensure the timely exchange of project information. The kick-off meeting will also serve as a means to obtain relevant existing information available for review during the following task, including the following:

- Current construction contract – overview of items under each contract;
- History of usage (i.e. quantity of each bid item used annually);
- ACSA General Water and Sewer Specifications updates (upcoming modifications to be incorporated);
- ACSA standard front-end documents.

#### **TASK 2 – REVIEW EXISTING INFORMATION**

- A review of the information referenced above will be performed. The primary purpose of this task will be to identify/confirm specific bid items that will be included in the Bid Documents as well as technical specifications that will be developed to supplement the ACSA General Water and Sewer Specifications.
- Ramboll will review the identified bid items against the ACSA standards to determine where technical specifications are required.
- Ramboll will review the previous contract as well as ACSA historical use of the contract to develop proposed quantities to be included in the Bid Form.
- Upon completion of this task, Ramboll will provide ACSA with the proposed Bid Form (including proposed quantities) as well as a list of proposed technical specifications. Upon receipt of comments/agreement from ACSA on the information provided, Ramboll will begin work on developing the required bid documents (Task 3, detailed below)

#### **TASK 3 – DEVELOP BID DOCUMENTS**

- Ramboll will prepare 90% complete and Final Bid Document Submittals consisting of Contract Specifications (Front-end documents and Technical Specifications) for ACSA's open-ended sanitary sewer rehabilitation and replacement contracts.
- Ramboll will annotate the ACSA standard front-end documents as required and will prepare technical specifications for items to be included in the bid form.
- Ramboll will utilize previously developed contracts as a basis for items to include.
- The technical specifications will be prepared in CSI/Masterformat, will detail the requirements for the installation and rehabilitation of pipelines and miscellaneous items and will be thoroughly coordinated with the ACSA General Water and Sewer Specifications and standard details.
- For the purpose of this proposal it is assumed that Ramboll will submit 2 hard copies and 1 electronic copy of each 90% submittal (2 contracts) as well as 2 hard copies and 1 electronic copy of each Final Bid Ready Submittal (2 contracts); it is assumed that contractor copies will be distributed electronically.

#### **TASK 4 – BID PHASE SERVICES**

- Ramboll will provide Bid Phase Services for both contracts.
- Ramboll will prepare for and attend 2 prebid meetings.
- Ramboll will issue 2 addenda (one for each contract)
- Ramboll will review bids received and provide recommendation of award for each contract.
- Attendance at the bid opening is not included.



We propose to perform this work under the terms and conditions of our Annual Services Contract. The fee for services as set forth and described above shall be calculated on the basis of Ramboll's 2022 Hourly Billing Rate sheet for employees by job category as set forth in the contract fee schedule, plus reimbursable expenses at cost. The estimated not to exceed budget is \$33,000. Project costs will be tracked and invoiced monthly on a time-and-materials basis.

Upon your review, please contact me at your convenience with any questions or comments. We look forward to continuing our successful working relationship with you and the Authority on this project.

Yours sincerely,

**Ramboll**

A handwritten signature in black ink that reads "RE Bell Jr." in a cursive style.

**Robert E. Bell, Jr.**

Vice President  
Water

2022 Sanitary Sewer Rehabilitation Contract - 2 CONTRACTS  
 Albemarle County Service Authority

TASK	LABOR CLASSIFICATIONS					TOTAL (HRS)	DIRECT EXPENSES (\$)	COST PER TASK (\$)
	Officer 2	Project Manager 2	Engineer 3	Eng Tech 3 (Drafter	Admin. Assist. 2			
	\$240	\$210	\$182	\$131	\$91			
	(HRS)	(HRS)	(HRS)	(HRS)	(HRS)			
PROJECT INITIATION								
Project Initiation/Review Existing Information	2	6	12	0	2	22		\$4,106.00
SUB-TOTAL	2	6	12	0	2	22	\$120.00	\$4,226.00
DEVELOP AND SUBMIT 90% PROJECT MANUAL								
Update Front End Documents	0	4	8	0	8	20		\$3,024.00
Update Bid Tab	0	4	6	0	0	10		\$1,932.00
Update Technical Specification Sections	2	4	8	0	6	20		\$3,322.00
Update Project Details/Drawings	0	2	4	4	0	10		\$1,672.00
Develop Bid Documents	2	2	8	2	6	20		\$3,164.00
SUB-TOTAL	4	16	34	6	20	80	\$185.00	\$13,299.00
DEVELOP AND SUBMIT FINAL PROJECT MANUAL								
Address Comments from ACSA	1	4	6	2	4	17		\$2,798.00
Develop Final Bid Documents	1	2	4	0	4	11		\$1,752.00
SUB-TOTAL	2	6	10	2	8	28	\$215.00	\$4,765.00
BID PHASE SERVICES								
Preparation for and attendance at 2 prebid meetings	0	12	8	2	0	22		\$4,238.00
Issue addenda, as required	2	4	8	0	2	16		\$2,958.00
Review bids received and provide recommendation of award	2	4	10	0	2	18		\$3,322.00
SUB-TOTAL	4	20	26	2	4	56	\$190.00	\$10,708.00
TOTALS						186	\$710.00	\$32,998.00

## AGENDA ITEM EXECUTIVE SUMMARY

## CONSENT AGENDA

<b>AGENDA TITLE:</b> Air Relief Valves	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Roland Bega & Weasel Roach	<b>ACTION:</b> None
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** Air release valves are an important part of a water system. The ARVs will discharge air from a non-pressurized pipe enabling the efficient filling of the pipeline and continuously releasing air from a pressurized environment. This prevents the build up of air pockets within the pipeline and admits large amounts of air into the system when vacuum conditions could cause possible collapse.

**DISCUSSION:** Air relief valves protect the pipeline and maintain its efficiency. These valves are perfect for venting large quantities of air when filling water lines. They can also allow air back into the system when emptying a water line. This is important because some pipe or tanks can collapse under negative pressure which is known as air lock. An air lock is a restriction or complete stoppage of water flow caused by vapor trapped in a high point within the distribution system. The air relief valve must be sized properly to function properly.

Water pipelines and sewer force mains are common areas to find ARVs. There are 296 ARVs in the Service Authority system.

As air accumulates at high points in the system, a line restriction can occur and cause pressure surges or water hammers. This can cause pipes to burst from pressure or cause pump failure.

ARV valves are installed at the highest points in a pipeline where air naturally collects. Air bubbles enter the valve and displace the liquid inside, lowering the liquid level. When the level drops to where it no longer buoys the float, the float drops, this motion pulls the seat away from the orifice triggering the valve to open and vent the accumulated air into the atmosphere (Attachment 1).

Air Control is important for four reasons:

1. Corrosion Prevention ( Air Discharge)
2. Increasing System Efficiency (Air Discharge)
3. Hydraulic Protection (Air Intake & Discharge)
4. Contamination Prevention (Air Intake)



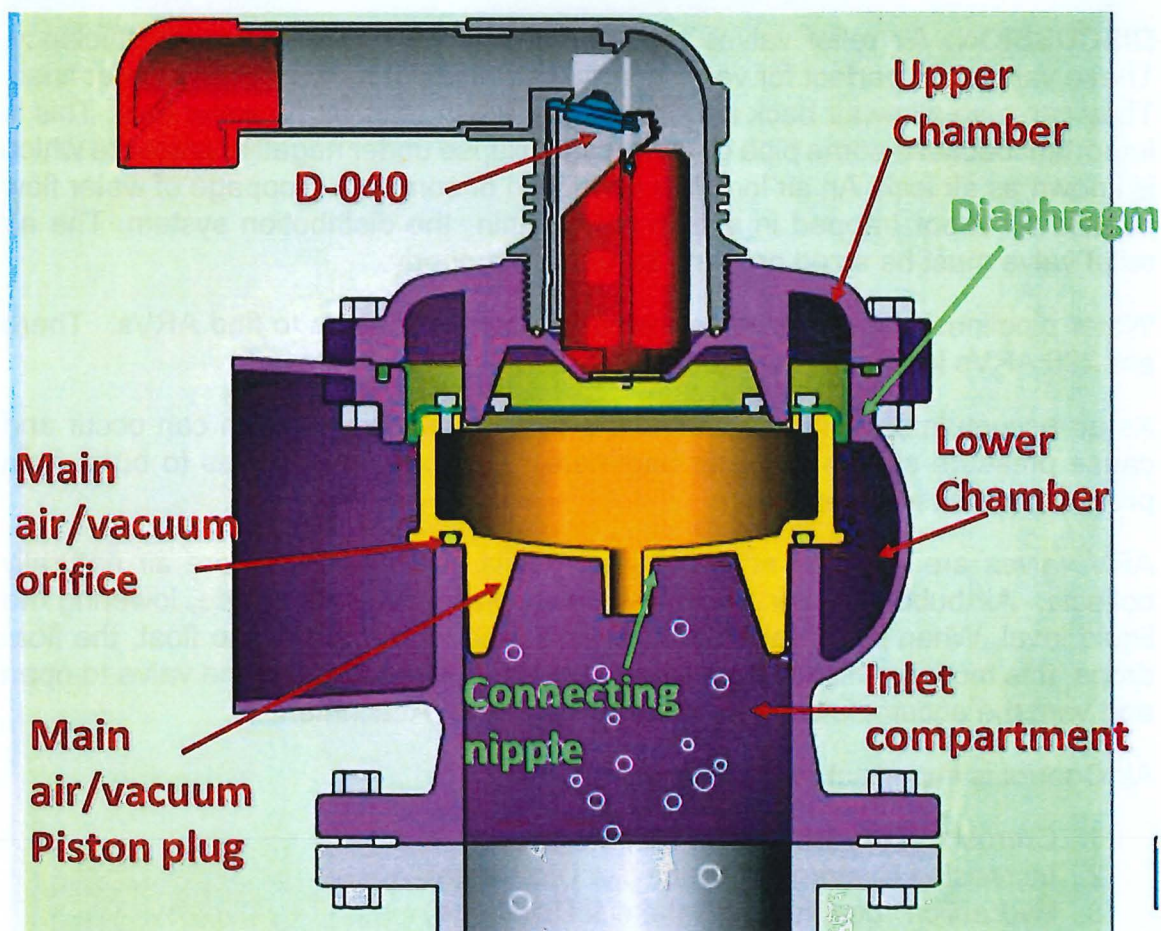
There are three basic types of ARV: Air-Release, Air/Vacuum and Combination Air Valves for water and sewer service. Additionally, there are different types of Air Relief Valves for water(Attachment 2) and sewer (Attachment 3)

Per health department regulations, The Maintenance Department Uses Cityworks to inspect ARVs annually (Attachment 4).

**BOARD ACTION REQUESTED: None**

#### ATTACHMENTS:

Attachment 1 Cutaway View of an ARV



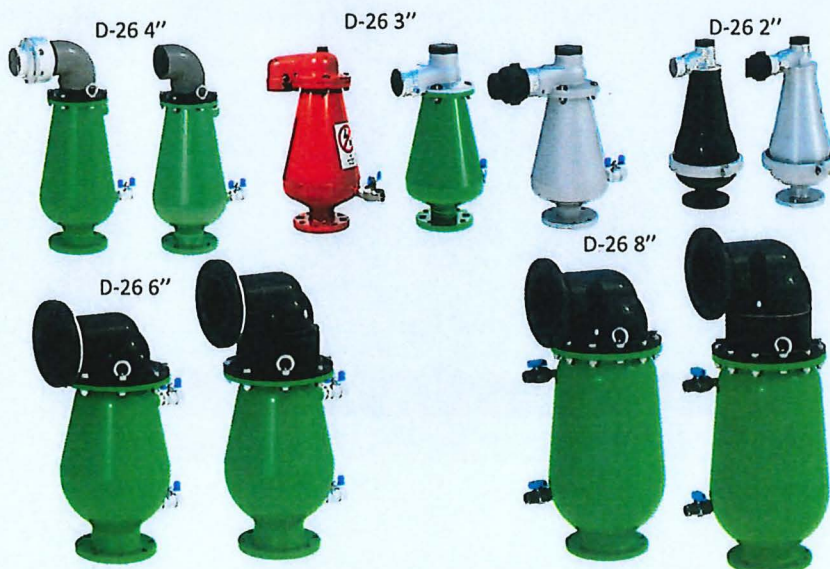
AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

Attachment 2 Water ARVs



Attachment 3 Sewer ARVs








## Attachment 4 Cityworks Water ARV Inspection

**Cityworks**

[Inbox](#) [New ▾](#) [Search ▾](#) [Saved Searches ▾](#) [Manager ▾](#)

☒ Inspection ▾ ☐ Email ☐ Print ☐ Save ☒ Close   

Inspection

Details

Attachments


Type: Water ARV Inspection

Inspection ID: 31163 ▾

Location: Bargamin Branch Road

Priority: 3-Medium ▾

Status: Complete ▾

Insp. Date: 09/7/2022 9:49 AM  Inspected By: Duff, Jake ▾

Asset Information

[Highlight](#) [Get from Map](#) [History](#) [Remove](#) [Asset Costs](#)






Update Inspection XY when adding/removing asset? ☒

Editable Fields: ☒ All Fields: ☐

WATER ANCILLARY VALVE

Observations

Valve Observations ▴


External Drainage?	Yes ▾	
Ball Valve?	No ▾	
Gravel Needed?	No ▾	
Internal Drainage?	Yes ▾	
Standing Water?	No ▾	

Reset

Comments

Resolution: Pass ▾

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Rivanna Water & Sewer Authority (RWSA) Monthly Update	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Gary O'Connell, Executive Director 	<b>CONSENT AGENDA:</b> Informational
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** This report continues the monthly updates on the Rivanna Water & Sewer Authority (RWSA) projects and Board meetings. Below are some updates on RWSA major projects and issues, including updates from the August 23<sup>rd</sup> RWSA Board Meeting and other communications.

RWSA Board Meeting and other Updates and Approvals at the August 23<sup>rd</sup> Board Meeting:

- **Wholesale Metering Report for July 2022:** Update on the metering system installed at the City-County border as part of the Water Supply Plan. The current water use average is City at 48.6% and ACSA at 51.4%. The ACSA has a maximum capacity of 11.9 MGD and the City has a maximum capacity of 6.71 MGD under the terms of the Agreement (see attached memorandum).
- **Drought Monitoring Report:** Our region is at normal for all indicators, with all urban reservoirs at 100% capacity. Total rainfall observed for 2022 (January through July) is 27.69 inches (see attached memorandum).
- **Resolution to Amend FY 2022 – 2023 Water Rates and Charges:** In June 2022, the City, ACSA and the RWSA entered into a “Northern Area Drinking Water Projects Agreement” to allocate the debt service costs for four new drinking water infrastructure projects and all future capacity and non-capacity water facilities located north of the South Fork Rivanna River. As part of this Agreement, debt service costs for these projects were shifted from the City to the ACSA, resulting in a change in the charges for FY 2022 – 2023. RWSA is required to hold a public hearing after adopting a preliminary rate schedule to make this change. It is proposed that the Public Hearing be held on September 27, 2022, with the charges to be retroactively effective on July 1, 2022 (see attached memorandum).



## ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

**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:	67%
Completion Date:	May 2023
Base Construction Contract:	\$37,467,169.49
Approved Capital Budget:	\$43,000,000

**Current Status:**

The new Administration Building has been completed at the SRWTP. Improvements to the new Lab/Control Room in the Filter Building and final modifications to various chemical feed processes continues. Work at the OBWTP 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 – February 2023.

**History:**

The Observatory project will consider 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

## AGENDA ITEM EXECUTIVE SUMMARY

Percent Complete:	15%
Completion Date:	December 2023
Base Contract:	\$8,520,312
Budget:	\$10,000,000

Current Status:

1,100 feet of pipe has been installed at the Kohl's site. Clearing and grubbing of the pump station site is complete and grading will begin this month.

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 (20%)
Construction Start:	2025
Completion:	2028
Current Project Estimate:	\$29,375,000

Current Status:

Preparation of engineering plans and specifications is underway. Topographic survey work to the East of the proposed pump station site has been completed, with efforts at the proposed PS site underway as well. Easement negotiations with one private owner, UVA, and the UVA Foundation continue. In a follow-up from staff's meeting with the UVA Foundation on Foxhaven Farm in June, discussion continues on a portion of the proposed pipe alignment on the farm, just South of the Birdwood Golf Course.

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

# ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

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 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:	\$1,980,000

### 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. A railroad permit has been submitted and County permitting can begin once all easements are finalized.

### 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

## AGENDA ITEM EXECUTIVE SUMMARY

Construction Start:	2024
Completion:	2027
Budget:	\$30,870,000

Current Status:

A Joint Permit Application and supporting documents will be submitted to VDEQ this month. Remaining NRCS requirements, including review and approval of the planning study, are scheduled for completion this winter with submission of the revised Plan Environmental Assessment to the NRCS this month. An application for design funding from NRCS will be submitted in 2022.

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. 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:	50% Design
Construction Start:	Spring 2023
Completion:	April 2024
Budget:	\$5,850,000

Current Status:

Baker has recommended a water line route that will include a 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 will begin soon and will include a water line easement on County of Albemarle property for Brook Hill River Park along Rio Mills Road.



## ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

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.

- **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 our 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

## AGENDA ITEM EXECUTIVE SUMMARY

Current Status

After a recent meeting with City and County staff, RWSA is preparing 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
Project Status:	100% (Phase 1) 90% (Phase 2)
Completion:	December 2022
Budget:	\$22,969 (Phase 1) \$116,401 (Phase 2)

Current Status:

Phase 2 of the study continues with detailed reservoir water quality modeling performed by DiNatale Water Consultants. The more detailed modeling work has been completed, and staff has a meeting with the Consultant to review findings and determine overall next steps for the project.

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 – Routing Study**

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	7% Design

## ALBEMARLE COUNTY SERVICE AUTHORITY

## AGENDA ITEM EXECUTIVE SUMMARY

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

Current Status:

Detailed field investigation and design are underway. The RWSA Board approved the Southern (Cherry) Route in June 2022.

History:

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

- **Security Enhancements**

Construction Contractor:	Security 101
Construction Start:	March 2020
Percent Complete:	50% (WA 5), 0% (WA6)
Based Construction Contract + Change Orders to Date = Current Value:	\$718,428 (WA1) + \$91,130 (WA2) +128,166 (WA3) + \$189,698 (WA4) +76,920 (WA5) + \$120,994 (WA6) = \$1,325,339 (total)
Completion:	October 2022 (WA5), May 2023 (WA6) February 2022 (WA 4)
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 by Security 101. WA6 will include card access installation at RWSA's remote sites, including all dams and pump stations. This work was authorized in early August, with completion scheduled for May 2023.

**AGENDA ITEM EXECUTIVE SUMMARY**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.

010101RWSAUpdateExecSumm091522



## MEMORANDUM

**TO:** RIVANNA WATER & SEWER AUTHORITY  
BOARD OF DIRECTORS

**FROM:** JENNIFER WHITAKER, DIRECTOR OF ENGINEERING &  
MAINTENANCE

**REVIEWED BY:** BILL MAWYER, EXECUTIVE DIRECTOR

**SUBJECT:** WHOLESALE METERING REPORT FOR JULY 2022

**DATE:** AUGUST 23, 2022

The monthly and average daily Urban water system usages by the City and the ACSA for July 2022 were as follows:

	<i>Month</i>	<i>Daily Average</i>	
City Usage (gal)	148,779,466	4,799,388	48.6%
ACSA Usage (gal)	157,417,994	5,078,000	51.4%
<b>Total (gal)</b>	<b>306,197,460</b>	<b>9,877,337</b>	

The *RWSA Wholesale Metering Administrative and Implementation Policy* requires that water use be measured based upon the annual average daily water demand of the City and ACSA over the trailing twelve (12) consecutive month period. The *Water Cost Allocation Agreement (2012)* established a maximum water allocation for each party. If the annual average water usage of either party exceeds this value, a financial true-up would be required for the debt service charges related to the Ragged Mountain Dam and the SRR-RMR Pipeline projects. Below are graphs showing the calculated monthly water usage by each party, the trailing twelve-month average (extended back to July 2021), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA). Completed in 2019 for a cost of about \$3.2 M, our Wholesale Metering Program consists of 25 remote meter locations around the City boundary and 3 finished water flow meters at treatment plants.

Note: Staff detected a read issue with Meter Site 15 – Ivy Road at Colonnade Drive in March and has determined that the meter’s register will require replacement. Staff will report a flow estimate for this site using available data until the issue is resolved. Staff ordered a new register and meter but has not received them due to supply chain issues.

Note: Staff detected a read issue with Meter Site 9 – Moores Creek Lane in June and has resolved the issue with the meter. RWSA will begin using data from the meter for next month.

++Note: Staff detected a read issue with Meter Site 24 – Greenbrier Terrace in late July and staff has resolved the issue. Staff reported a flow estimate for this site using available data from the current month and an average, and will use actual data from the date of repair.

Note: Staff detected a read issue with Meter Site 32 – Fontaine Ave in July and has determined that the meters register needs to be replaced. Staff ordered a new register and meter but has not received them due to supply chain issues. Staff will report a flow estimate for this site using available data from the current month and an average until the issue is resolved.



Figure 1: City of Charlottesville Monthly Water Usage and Allocation

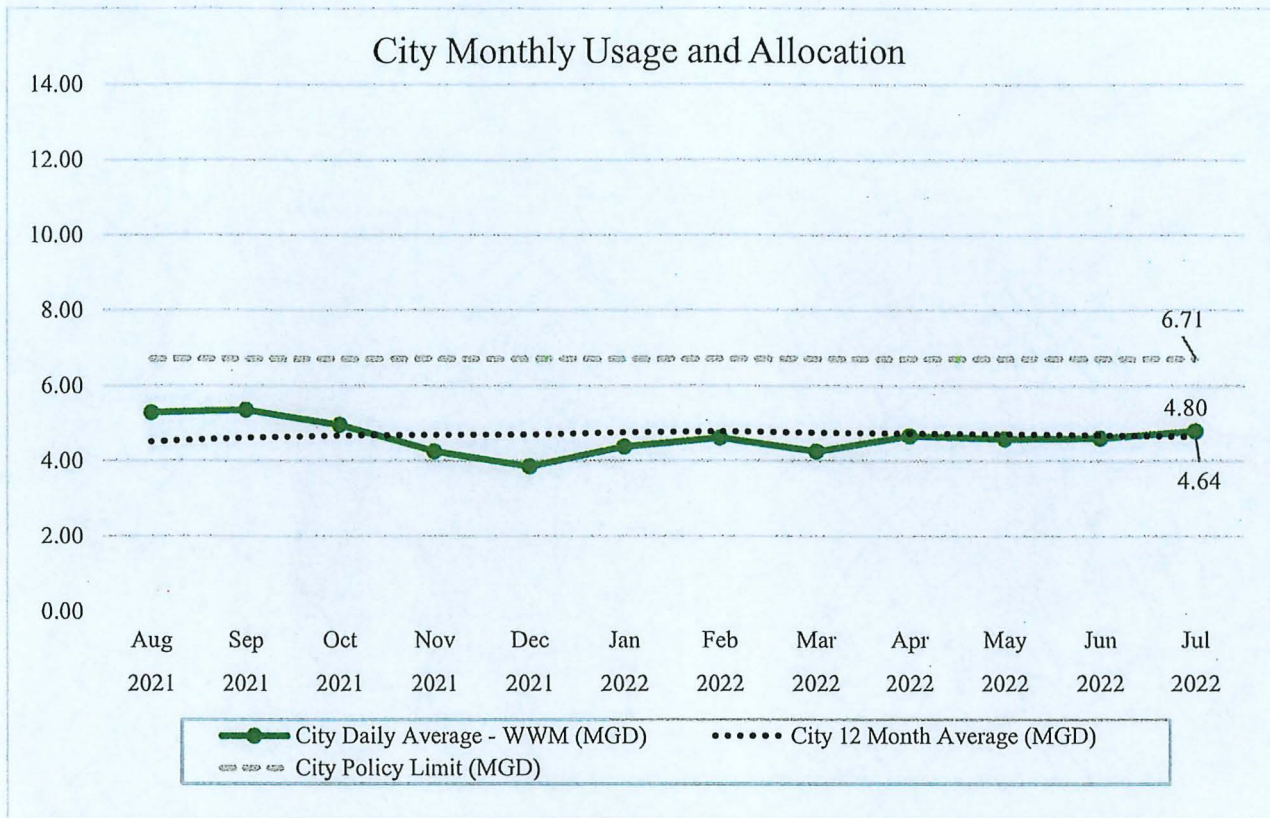
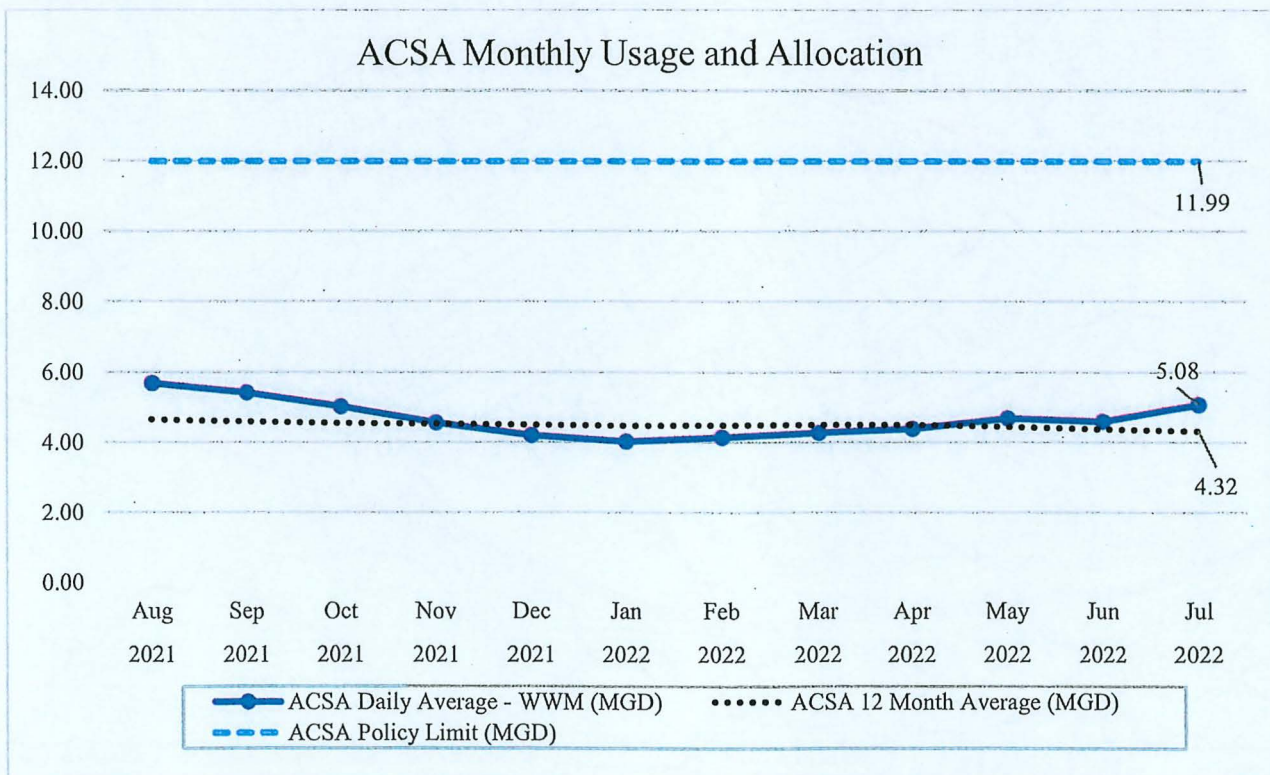


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation





# Meter Locations for the Wholesale Water Metering Project



Miles  
0 0.25 0.5

Date: 4/21/2017

**RIVANNA**  
WATER & SEWER AUTHORITY

695 Moores Creek Lane  
Charlotteville, VA 22902  
p.434-977-2970  
www.rivanna.org  
www.rivannagis.org

**Water Site Locations - WWSMP**

- 01, Pepsi Place
- 02, Michael Pl / Wilson Ct
- 03, Walder Dr
- 06, Long St / Raver Rd

- 08, Franklin St / Carlton Ave / Broadway St
- 09, Moores Creek Ln
- 11, Avon St
- 12, Loma Ln / Harris Rd
- 14, Old Lynchburg Rd
- 15, Ivy Rd / Colonade Dr

- 16, Rucky Rd / Barracks Rd
- 17, Rucky Rd (near Wynne Ave)
- 18, North Berkshire Rd
- 19, Hydraulic Rd / Ingleswood Dr
- 20, Trader Joes
- 22, Rio Rd @ Church of Our Savior

- 23, Greenbrier Dr / Rio Rd
- 24, Greenbrier Thr
- 25, University Heights Apts
- 26, Seminole Trl
- 28, Rio Rd / Marlborough Rd
- 29, Pen Park Ln

- 30, Darden Tower Park
- 31, Scribble Ave
- 32, Fontaine Ave



**TO: RIVANNA WATER & SEWER AUTHORITY  
BOARD OF DIRECTORS**

**FROM: JENNIFER WHITAKER, DIRECTOR OF ENGINEERING &  
MAINTENANCE**

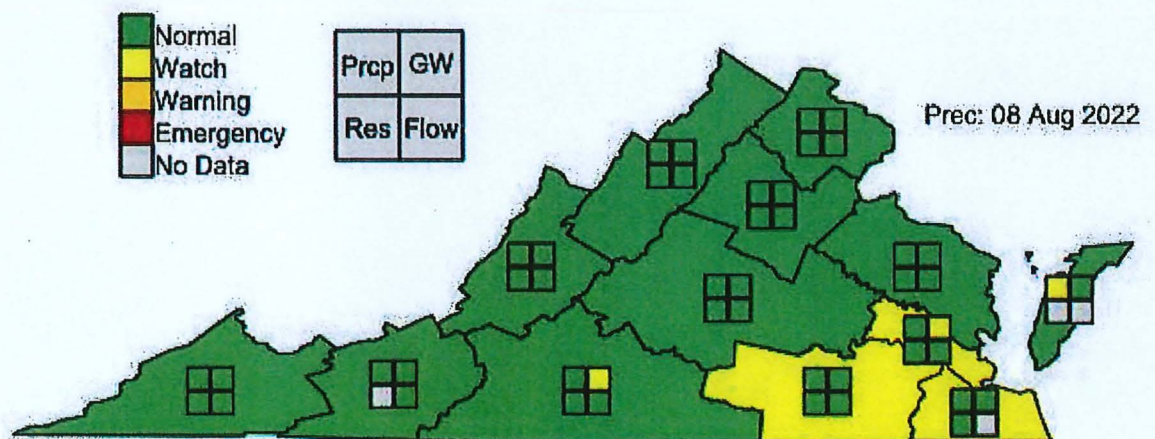
**REVIEWED: BILL MAWYER, EXECUTIVE DIRECTOR**

**SUBJECT: DROUGHT MONITORING REPORT**

**DATE: AUGUST 23, 2022**

Drinking Water Supply and Drought Monitoring, as of August 11, 2022:

- A. U.S. Drought Monitoring Report:
- No drought phases have been initiated. Albemarle County is noted to be normal.
- B. VDEQ Drought Status Report:
- Our region is at normal for all indicators.



- C. Urban Reservoirs Status (Sugar Hollow, South Rivanna, Ragged Mountain):
- 100 % full.

**Precipitation**

<b>Charlottesville Precipitation</b>				
<b>Year</b>	<b>Month</b>	<b>Observed (in.)</b>	<b>Normal (in.)</b>	<b>Departure (in.)</b>
<b>2021</b>	<b>Total: Jan - Dec</b>	<b>33.82</b>	<b>41.61</b>	<b>-7.79</b>
<b>2022</b>	January	3.79	2.96	0.83
	February	1.48	2.35	-0.87
	March	3.19	3.54	-0.35
	April	3.05	3.17	-0.12
	May	6.17	4.17	2.00
	June	3.66	4.38	-0.72
	July	6.35	3.37	2.98
	<b>Total: Jan - July</b>	<b>27.69</b>	<b>23.94</b>	<b>+3.75</b>

Source: National Weather Service, National Climatic Data Center.



**MEMORANDUM**

**TO: RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

**FROM: LONNIE WOOD, DIRECTOR OF FINANCE & ADMINISTRATION**

**REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR**

**SUBJECT: RESOLUTION TO AMEND FY 2022 - 2023 WATER RATES AND CHARGES; AUTHORIZATION TO SCHEDULE A PUBLIC HEARING**

**DATE: AUGUST 23, 2022**

This recommendation is to approve the Preliminary Rate Schedule and authorize a Public Hearing during the September Board meeting to consider changes to the debt service charges for drinking water in the Urban area in FY 2022 - 2023. Charges will increase \$22,000 per month for the Albemarle County Service Authority (ACSA) and decrease by the same amount for the City.

**Background**

The City, ACSA and the Authority entered into a "Northern Area Drinking Water Projects Agreement" in June 2022 to allocate the debt service costs for four new drinking water infrastructure projects and all future capacity and non-capacity water facilities located north of the South Fork Rivanna River. As part of this Agreement, debt service costs for these projects were shifted from the City to the ACSA, resulting in a change in the charges for FY 2022 - 2023.

The Authority is required to hold a public hearing after adopting a preliminary rate schedule to make this change. This rate schedule will then be published twice at least 14 days before the Public Hearing and at least 6 days apart. The attached Preliminary Rate Schedule includes all of the proposed rates and charges, with only the water debt service charges being different than the charges adopted in May 2022. It is proposed that the Public Hearing be held on September 27, 2022, with the charges to be retroactively effective on July 1, 2022. Additionally, since the monthly invoices for July, August and September 2022 will have already been posted and paid, there will be a retroactive adjustment occurring in the October invoice to the ACSA and to the City.

**Board Action Requested:**

Approve the Preliminary Rate Schedule and authorize a Public Hearing to be held during the September 27, 2022 regular meeting of the Board of Directors to set the Urban Water rates and charges for FY 2022 - 2023 to be retroactively effective on July 1, 2022.

Attached: Preliminary Rate Schedule  
Public Notice





## RESOLUTION

### PRELIMINARY RATE SCHEDULE

WHEREAS, the Rivanna Water and Sewer Authority Board of Directors has reviewed the proposed budget and associated water rates and charges for Fiscal Year 2022-2023; and

WHEREAS, Section 15.2-5136 (G) of the Code of Virginia requires the adoption of the preliminary rate schedule for notification of a public hearing prior to fixing rates for water charges; of which there is at least a 14 day requirement between the date of the last of two public notices and the actual date fixed for the public hearing;

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water and Sewer Authority hereby approves the preliminary rate schedule for purposes of notification of a public hearing to be held on September 27, 2022 at 2:15 p.m. during the regularly scheduled Board of Directors meeting, with charges to be retroactively effective July 1, 2022.

#### Preliminary Rate Schedule

##### Water Rates and Charges

		Adjusted*	As Adopted			
<u>Urban Area</u>		FY 2023	FY 2023	\$ Change	% Change	
ACSA & City	Operating	\$ 2.653	\$ 2.653	No Change	No change	Per 1,000 gallons
City	Debt Service	\$ 249,497	\$ 271,527	\$ (22,030)	-8.1%	Per month
ACSA	Debt Service	\$ 442,355	\$ 420,325	\$ 22,030	5.2%	Per month

\* - adjusted for Northern Area Cost Agreement

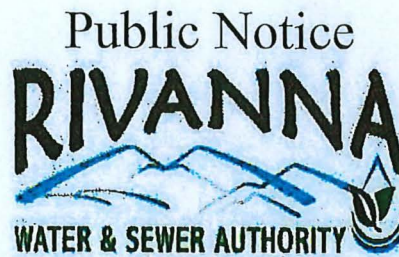
##### Crozet

ACSA	Operating	\$ 99,757	Per month
ACSA	Debt Service	\$ 180,142	Per month

##### Scottsville

ACSA	Operating	\$ 47,463	Per month
ACSA	Debt Service	\$ 12,525	Per month





**RIVANNA WATER & SEWER AUTHORITY  
PUBLIC HEARING CONCERNING THE  
PRELIMINARY RATE SCHEDULE FOR FY 2022 – 2023  
RETROACTIVELY EFFECTIVE ON JULY 1, 2022**

**Public Hearing:**

Rivanna Water & Sewer Authority will hold a public hearing on Tuesday, September 27, 2022, at 2:15 p.m. during the regular Rivanna Water & Sewer Authority Board of Directors meeting. The purpose of the public hearing is to consider the following wholesale water rates and charges to the City of Charlottesville and the Albemarle County Service Authority, to be retroactively effective July 1, 2022. Adopted rates may or may not be what are advertised.

**Preliminary Rate Schedule**

**Water Rates and Charges**

		<b>Adjusted*</b>	<b>As Adopted</b>			
<b>Urban Area</b>		<b>FY 2023</b>	<b>FY 2023</b>	<b>\$ Change</b>	<b>% Change</b>	
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**Crozet**

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**Scottsville**

ACSA	Operating	\$ 47,463	Per month
ACSA	Debt Service	\$ 12,525	Per month

The Rivanna Water & Sewer Authority (Rivanna) was created by the City of Charlottesville (City) and the County of Albemarle to supply and treat water for drinking and to provide wastewater treatment. The above fees represent Rivanna's fees and charges to the City and the Albemarle County Service Authority (ACSA) for these services and are not the same as the City and ACSA charges to individual residents and businesses. Debt Service covers capital related project costs and are different for the City and ACSA reflecting terms of contractual agreements.

**The City and the ACSA distribute drinking water and collect wastewater from individual residents and businesses and charge retail rates that combine charges from the above schedule to reflect their service costs, including Rivanna's costs.**

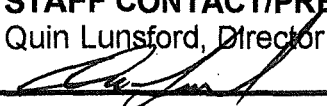
Information about the proposed budget may be obtained on the Rivanna website at [www.rivanna.org](http://www.rivanna.org). Please call 977-2970 ext. 0 or send e-mail to [info@rivanna.org](mailto:info@rivanna.org) with any questions you may have.



ACSA Board Future Policy Issues Agendas 2022-2023

Regular 3rd Thursday Monthly Meetings	Oct. '22	Nov. '22	Dec. '22	Jan. '23	Feb. '23	March '23	April '23	May '23	June '23	Pending Issues
	October 20th Recognitions	November 17th Recognitions	December 15th Recognitions	January 19th Recognitions	February 16th Recognitions	March 16th Recognitions	April 20th Recognitions	May 18th Recognitions	June 15th Recognitions	Water Supply Plan Project Status Reports Water Treatment Plants RWSA CIP Central Water Line
	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	
	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorization	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	
	Operational Presentation - Training and BizLibrary	Operational Presentation - Exclusion Meter Program - Maintenance	Operational Presentation - 4 Story Backflow	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Board Organizational Meeting each January
										Annual Report - January
	Energy Audit Report	Annual Financial Report	Budget Guidelines and Schedule for FY '24 Budget	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	Water Audit and Energy Audit
	Recognition for Tony Gibson	Water Audit Report	Annual Investment Report	ACSA Annual Report 2021	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	Strategic Plan Updates-2023-2025 January and July
	Operational Presentations - ARV's and Auto Flushers		Recognition for Jim Bowling	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	Annual Water Conservation Report - January
	Construction and Engineering Contracts - Processes		New Attorney Appointment	Water Supply Plan and Treatment Projects Updates	Customer Experience Report		Resolution Scheduling Budget and Rates Public Hearing for June 15, 2023			National Drinking Water Week-April Imagine a Day Without Water - September
			Recognition for Calvin Underwood	Annual Water Conservation Report (Consent Agenda)	Best Practices Review Panel - Report		National Drinking Water Week Resolution			AMI Updates - Customer Portal Video
			Customer Survey							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 Session	Executive Director Mid-Year Performance Review				Executive Director Annual Review				

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Advanced Metering Infrastructure (AMI) Monthly Update	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT/PREPARER:</b> Quin Lunsford, Director of Finance 	<b>ACTION:</b> Informational
	<b>ATTACHMENTS:</b> 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.
- While supply chain disruptions continue to impact meter/meter component orders, our vendor is accumulating meters for the ACSA's project. Currently, we have 2,000 meters and 800 smart points/radios on hand and expect delivery of another 1,600 meters and 3,500 smart points/radios within the next 1-2 weeks. We remain hopeful that orders continued to be fulfilled over the course of the next few months so coordination for full deployment can begin early in calendar year 2023.
- Our Engineering Department continues to leverage information available in the AMI system to monitor different aspects of the water system and address possible issues or evaluate abnormalities. We have strategically deployed a small population of enhanced meters that in addition to recording consumption also monitor pressure and temperature. Automated reports have also been created to monitor daily consumption data on ACSA auto flushers to ensure they are operating as intended.

**BUDGET IMPACT:** Informational only.

**RECOMMENDATIONS:** None

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

**ATTACHMENTS:** N/A

## AGENDA ITEM EXECUTIVE SUMMARY

## CONSENT AGENDA

<b>AGENDA TITLE:</b> Exploring a New Strategic Plan for 2023	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Gary O'Connell, Executive Director	<b>ACTION:</b> Yes
	<b>ATTACHMENTS:</b> No

**BACKGROUND:** The current 2020-2022 Strategic Plan is coming to an end at the end of the year. We will be doing a final presentation and update on the current Strategic Plan that is scheduled for next January.

**DISCUSSION:** We have been at work on preparing for this fall the upcoming new Strategic Plan that would cover the next three years (2023-2025).

Listed below are several strategy processes that we have scheduled for further assessment and review:

- We are scheduled to conduct customer and employee surveys this fall as part of the Customer Experience Project to use as feedback in the strategic planning process.
- Scheduling another Best Practices Review Panel (of three experienced utility general managers) to help us take a look at where we are and strategically where we should be heading.
- Allison Linney, local organizational and strategy consultant who we have worked with, will be facilitating a workshop with the Leadership Team in early December to assist us in developing the plan. If the Board concurs, we would like to conduct individual Board interviews on your thoughts on the strategic plan and issues you believe we should be addressing in the future.

We likely will see these items to consider as part of a Strategic Plan, some are new and some are carryovers for completion:

- Explore our vision statement again – it is currently “serve and conserve”;
- Lessons learned from the Customer Experience (CX) assessment – looking organizationally at how we serve our customers in some depth and some specific new actions to address (new);
- New billing system to replace a 30+ year old billing software (RFP being developed on this), this a major project for the ACSA;
- Data warehouse (dashboards; continuation and expansion of current work);
- Urban water audit (continuation and expansion of current work to the Urban water system);



- Unidirectional flushing (new);
- Succession (continuing focus and effort);
- Diversity, recruitment (new and relook at some current Human Resource processes);
- Avon Satellite facility (current project to be completed in the 2025 timeframe);
- Completion of AMI (schedule dependent on meter delivery);
- Best Practices Review Panel strategic recommendations: customer survey feedback to address;
- Document management (new software system to take our paper documents digital);
- Technology plan update, and maybe others.

We have scheduled for a February 2023 presentation to the Board a draft of the new Strategic Plan.

**BOARD ACTION REQUESTED:** As part of this proposed process update, I ask the Board to provide some feedback on the process, the issues, and any strategic policy areas you would like us to explore. As mentioned earlier, if the Board concurs, that we schedule this fall individual Board discussions on the strategic issues you see for our future.

**ATTACHMENTS:** None

## AGENDA ITEM EXECUTIVE SUMMARY

<p><b>AGENDA TITLE:</b> ACSA Operations Center Fire Suppression System Replacement Project – Request to use a Design/Build Contract</p> <p><b>STAFF CONTACT(S)/PREPARER:</b> Alexander J. Morrison, P.E., Senior Civil Engineer</p>	<p><b>AGENDA DATE:</b> September 15, 2022</p> <p><b>ACTION:</b> <input type="checkbox"/> <b>INFORMATION:</b> <input type="checkbox"/></p> <p><b>CONSENT AGENDA:</b></p> <p><b>ACTION:</b> <input checked="" type="checkbox"/> <b>INFORMATION:</b> <input type="checkbox"/></p> <p><b>ATTACHMENTS:</b> NO</p>
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**BACKGROUND:** ACSA Facilities staff have recently utilized our *Fire Alarm & Life Safety Services* contract with Siemens Industry, Inc. (Siemens), for maintenance and repairs on the existing fire suppression system. During these repairs, it was noted that the existing piping has severe internal corrosion and wall thickness degradation. An in-depth review was conducted by Siemens and it was determined that the existing piping is beyond its useful life, requiring continued repairs. The existing piping has been in service for 29 years and the useful life is generally 10-20 years. A complete system replacement is recommended. The negative impact that the pipe corrosion and wall thickness degradation will have during full use of the fire suppression system is unclear. Due to the high risk and consequence of failure, the use of a lengthy sealed bidding process is not practical, and the use of a Design/Build Contract is practical and fiscally advantageous.

**DISCUSSION:** In accordance with Chapter 43.1 (Construction Management and Design-Build Contracting) of the *Code of Virginia*, the use of a Design/Build Contract requires Board of Director's approval. The criticality of a timely replacement is outlined in the *Background* section above. Specific items related to this request, as well as the proposed scope of work, are listed below:

- The *Fire Alarm & Life Safety Services* contract with Siemens does not include the scope of work for a system replacement.
- The sealed bidding process would require the use of a term contract engineer to develop bid documents. This procedure would increase the length of time to reach construction and would increase the overall cost of the project.
- The system replacement will include both the Administration Building system and the Maintenance Building system.
- Existing piping beyond the riser will be replaced in place.
- Existing antiquated fire suppression control panels, which are slated for replacement, will be included in this project.

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

- A nitrogen generator will be installed with each fire suppression system which will double the useful life of the new piping system.
- Timely replacement of the existing piping will ensure proper operation of the fire suppression system in the event of a fire.

**BUDGET IMPACT:** None at this time.

**RECOMMENDATIONS:** Approve the use of a Design/Build Contract for the ACSA Operations Center Fire Suppression System Replacement Project.

**BOARD ACTION REQUESTED:** Authorize ACSA staff to utilize a Design/Build Contract for the ACSA Operations Center Fire Suppression System Replacement Project.

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Imagine a Day Without Water	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Emily Roach, Human Resources & Administration Manager	<b>ACTION:</b> Yes
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** “Imagine a Day Without Water” is an annual, national campaign held to educate communities on how essential and valuable water is, and the need for further investment in this precious resource. Held on October 20, 2022 this year, the day was envisioned as a day of advocacy and education to encourage Americans to think about what it would mean to go without water for one day. With an estimated 2.2 million Americans living without water service and the stress of climate change and aging infrastructure, there is growing concern about the stability of water supplies and service. Raising awareness about the state of water infrastructure is a crucial step to ensuring water systems keep flowing for generations to come.

This year, as part of the eighth annual celebration, the ACSA, RWSA, and City of Charlottesville will once again host their annual “Imagine a Day Without Water” student art contest. This year, students are being asked to convey the theme “Value of Water.” The contest will be open to all youth in grades K-12 that live in the City of Charlottesville and/or Albemarle County. There will be gift card prizes awarded to the winners of each grade category (K-2, 3-4, 5-6, 7-8, and 9-12), as well as a “fan favorite” selected by the community.

**BOARD ACTION REQUESTED:** Approve the attached Resolution proclaiming October 20, 2022 as “Imagine a Day Without Water”.

**ATTACHMENTS:** Imagine a Day Without Water Flyer & Art Contest Entry Form  
Imagine a Day Without Water Resolution



# 2022 Youth Art Contest

## Imagine a Day without Water

129

### Open to:

All Youth that live in the  
City of Charlottesville  
& Albemarle County in  
Grades K to 12th.

### Theme: "Value of Water"

Water is essential for life. You need water for everything from brushing your teeth, growing the food you eat, and making the things you use everyday. This year tell us why or how you value water and save water in our community.

SEP 28<sup>TH</sup> - OCT 31<sup>ST</sup>

## Contest Rules

All entries must convey the theme of the contest:

**"Value of Water"**

- ✎ Entries must be the work of one individual student, no collaborations.
- ✎ Multiple entries from the same student will be accepted.
- ✎ Original artwork or photography only. Entries submitted with copyrighted characters or images will not be accepted.
- ✎ Artwork can be any 2-dimensional size. Suggestion sizes are horizontal 11" x 8.5" for drawings and 4:3 ratio for photography.
- ✎ Any medium may be used (paint, colored pencils, crayons, markers, photography, etc.) No 3-D entries, please.
- ✎ Teachers may submit for students or students can submit independently through their parents.
- ✎ Submission Options:
  - Submit digitally through our Art Contest Platform Upload Form (accepts: JPEG/JPG, PNG, or GIF images).
  - Mail your entry to Water Conservation, 305 4th Street NW, Charlottesville, VA 22903.
  - In person at JMRL Central, Northside, and Crozet branches. Check JMRL.org for hours of service.

## PRIZES

### ✓ For the Students:

**\$200 gift card**

One winner in each category

- Grades K-2
- Grades 3-4
- Grades 5-6
- Grades 7-8
- Grades 9-12
- Fan Favorite (voting Nov 14<sup>th</sup> - 28<sup>th</sup>)

### ✓ For the Teacher:

Teachers that have their students participate with be eligible for **\$200 gift card** for classroom projects.

- Most classroom submissions
- A random winner each from a CCS, ACPS, and a private school or organization

**The more students that participate will increase the odds of winning!**



Imagine a Day Without Water  
October 20, 2022



[www.charlottesville.gov/artcontest](http://www.charlottesville.gov/artcontest)



# Official Entry Form



## 2022 Charlottesville "Imagine a Day without Water" Art Contest: Value of Water

Name: \_\_\_\_\_

Age: \_\_\_\_\_

School: \_\_\_\_\_

Grade: \_\_\_\_\_

Division Category: Grades: K-2 ☐ Grades: 3-4 ☐ Grades: 5-6 ☐  
(Please check one)

Grades: 7-8 ☐ Grades: 9-12 ☐

Teacher Sponsor Name (if applicable): \_\_\_\_\_

Home Phone Number: (\_\_\_\_) \_\_\_\_\_

(Parent/Teacher signature)

E-mail Address: \_\_\_\_\_

*If you are submitting in person or through mail, you must completely fill this out to be a valid entry.*

**Please write legibly! Electronic submissions will fill this out as part of your digital submission.**

*Posters become the property of the contest sponsors (City of Charlottesville, ACSA and RWSA) and will not be returned. The contest sponsors have the right to display or otherwise use the submissions for future promotions.*

**Deadline for all poster entries is Monday, Oct. 31<sup>st</sup>, 2022! Please attach this form to the back of your poster!**

- ✍ Winners will be recognized through a press release and their work will be exhibited in public venues.
- ✍ A panel of judges (to be selected by the contest sponsors) will select the winning posters for each grade division.
- ✍ Posters will be judged on message (keep in mind the theme), originality, creativity and overall presentation.
- ✍ Posters must be submitted by October 31<sup>st</sup> using one of the official submission processes by the end of business day.
- ✍ The Fan Favorite winner will be selected by online voting from the top entries (number based on entries). The link with the eligible entries will be available at [www.charlottesville.gov/artcontest](http://www.charlottesville.gov/artcontest) starting on November 14<sup>th</sup> through November 28<sup>th</sup>.
- ✍ One student may not win both the fan favorite and judges pick, and if the student is chosen for both, the fan favorite runner-up will win the Fan Favorite prize.
- ✍ The winners of all categories will be announced by December 7<sup>th</sup>, 2022.

For updates and full list of rules and contest information, please go to our website. [www.charlottesville.gov/artcontest](http://www.charlottesville.gov/artcontest).

### Submit Online:

[www.charlottesville.gov/artcontest](http://www.charlottesville.gov/artcontest).

### Submit by Mail:

Water Conservation, 305 4th Street NW,  
Charlottesville, VA 22903.

### Submit in Person:

At JMRL Central, Northside, and Crozet  
branches. Check [JMRL.org](http://JMRL.org) for hours of service.

## QUESTIONS?

Contact:

Jill Greiner

Water Efficiency Program Coordinator

434-970-3877

[waterconservation@charlottesville.gov](mailto:waterconservation@charlottesville.gov)

Important: Each poster mailed or delivered in person **MUST** have the official entry form attached to the back.

All information must be filled in completely and legibly. Illegible and incomplete entries will be disqualified. Please print or type ALL information. **Entry forms may be copied if needed.**

**RESOLUTION PROCLAIMING  
IMAGINE A DAY WITHOUT WATER  
OCTOBER 20, 2022**

**WHEREAS**, water is essential for everything we do in life; and

**WHEREAS**, we need water to make a cup of coffee, fight fires, swim on a hot summer day, or even take a bath; and

**WHEREAS**, most sectors of our economy rely on water, and without water our economy would grind to a halt; and

**WHEREAS**, while nature provides water, it takes pipes, pumps, treatment plants, and people working 24/7 to deliver clean, safe water to our homes and businesses, and then remove and treat wastewater so it can safely be returned to the environment; and

**WHEREAS**, water infrastructure is largely invisible because it is out of sight and out of the minds of most people and needs our attention;

**NOW, THEREFORE, BE IT RESOLVED** that the Albemarle County Service Authority Board of Directors hereby proclaims October 20, 2022 as "Imagine a Day Without Water" to help Albemarle County residents and Albemarle County Service Authority customers recognize the value of safe, clean water to our community.

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Certified to be a true copy of a Resolution adopted by the Albemarle County Service Authority Board of Directors at a regularly scheduled meeting on September 15, 2022 by a vote of \_ to \_.

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Clarence Roberts, Chair - ACSA Board

## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Customer Account Arrearages Report – Status Update	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT/PREPARER:</b> Quin Lunsford, Director of Finance	<b>ACTION:</b> Informational
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** In March of 2020, the ACSA instituted a moratorium on disconnections for non-payment to ensure customers impacted by the COVID-19 Pandemic were not disconnected from water/sewer service. Through two Federal/State utility relief grant programs (CARES Act and ARPA), the ACSA was able to apply over \$375,000 in assistance to eligible customer accounts.

Collections on arrearages over 60 days have improved from a high of nearly \$500,000 in January 2022 to approximately \$165,000 at the end of August but further improvement is needed to return to pre-pandemic levels.

At the February 17, 2022, Board meeting, staff requested and the Board approved an end to the moratorium for water disconnections for non-payment. The end of the moratorium allowed staff an opportunity to begin conversations with customers in arrears to request payment, establish payment-plans for those not able to pay in-full, and ultimately disconnect service if contact was not able to be established.

**DISCUSSION:** Beginning in late February, the ACSA contacted customers in arrears via phone, mail, and email to begin attempting to collect in earnest and/or establish payment plans for customers that were unable to pay in full. These efforts have resulted in 95 individual customer payment plans being established which total over \$74,000 in arrearages or an average of \$800 per account.

Each customer that established a payment plan was required to make payment on their current amount due. Customers were permitted to establish payment terms that were manageable for their current financial situation and range from 6 - 24 months in length. In addition to the monthly amount due on the payment plan, customers are also required to pay the current amount due for water/sewer use. The ACSA's Customer Service Team has worked tirelessly to assist these customers in need and continue to do so.

We have unfortunately encountered about 50 customers that are unresponsive to telephone inquiry, mail, or email that continue to use ACSA services. All communication attempts with these customers have been documented. In a final effort to establish contact and initiate payment, beginning the week of September 6<sup>th</sup>, the ACSA has mailed "certified" letters (attached) to each of these customers. This letter requests that they make payment or contact the ACSA within the next two weeks to avoid disconnection.

The ACSA team is working hard to ensure collections for services rendered occur while understanding hardships many have been endured over the last two years. Our team will continue to work with customers on an individual basis to ensure our customers are served well and treated fairly.



## **ALBEMARLE COUNTY SERVICE AUTHORITY**

### **AGENDA ITEM EXECUTIVE SUMMARY**

**BUDGET IMPACT:** Informational only.

**RECOMMENDATIONS:** None

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

**ATTACHMENTS:** Certified Letter – Request for Payment on Arrearages



September 9, 2022

ACSA Customer  
Customer's Mailing Address  
Charlottesville, VA 22901

**Account Number: OXXXXXXX-XX**  
**Service Address: Customer's Service Address**

The Albemarle County Service Authority (ACSA) records indicate that you have not made payment on your water and/or sewer account since **January 5, 2022**. Your current outstanding balance is **\$951.92**.

To avoid disconnection of water service, please contact the ACSA's Customer Service team at 434-977-4511, option 1 or [custserv@serviceauthority.org](mailto:custserv@serviceauthority.org) to arrange payment.

The ACSA understands that some customers may not be able to pay the entire outstanding balance and is encouraging those customers to establish a payment plan to pay on past due accounts.

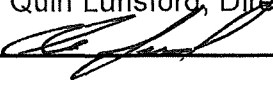
**If arrangements for payment are not made within two weeks of the date on this letter, your water service will be scheduled for disconnection.**

If you have any questions, comments, or concerns please let us know.

Sincerely,

Quin Lunsford  
Director of Finance  
Albemarle County Service Authority

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

<b>AGENDA TITLE:</b> Update Report – Supplier Issues	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT/PREPARER:</b> Quin Lunsford, Director of Finance 	<b>ACTION:</b> Informational
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** The ACSA, like other water/sewer utilities across the country and world, has been impacted by supply chain challenges over the past two and a half years. These challenges derive from COVID-19 impacts, military conflicts, labor issues and hacking attacks resulting in delays, shortages, and cost increases for many of the different materials, equipment, and services the ACSA requires.

A short presentation has been prepared to illustrate specific impacts as they relate to the ACSA and action taken by staff to ensure our customers receive clean, safe, and reliable water and wastewater services.

**DISCUSSION:** The national and worldwide economies continue to recover from COVID-19 disruptions. The pandemic continues to impact many of the ACSA's vendors who have encountered considerable difficulties procuring raw materials, electrical, computer chip, and other components in addition to labor shortages.

The ACSA has taken action to mitigate impacts from these delays and shortages to the extent possible. The presentation today focuses on the following specific challenges:

- Water/Wastewater pipes for repair, replacement, and new construction
- Water/sewer hardware
- Energy, specifically gasoline and diesel fuel
- Information technologies
- Fleet vehicles/heavy machinery
- Generators
- Water meters/meter components
- Training and other 3<sup>rd</sup> party services

Additionally, we will review steps taken to mitigate issues related to critical components and limited or delayed availability.

**BUDGET IMPACT:** Informational only.

**RECOMMENDATIONS:** None

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

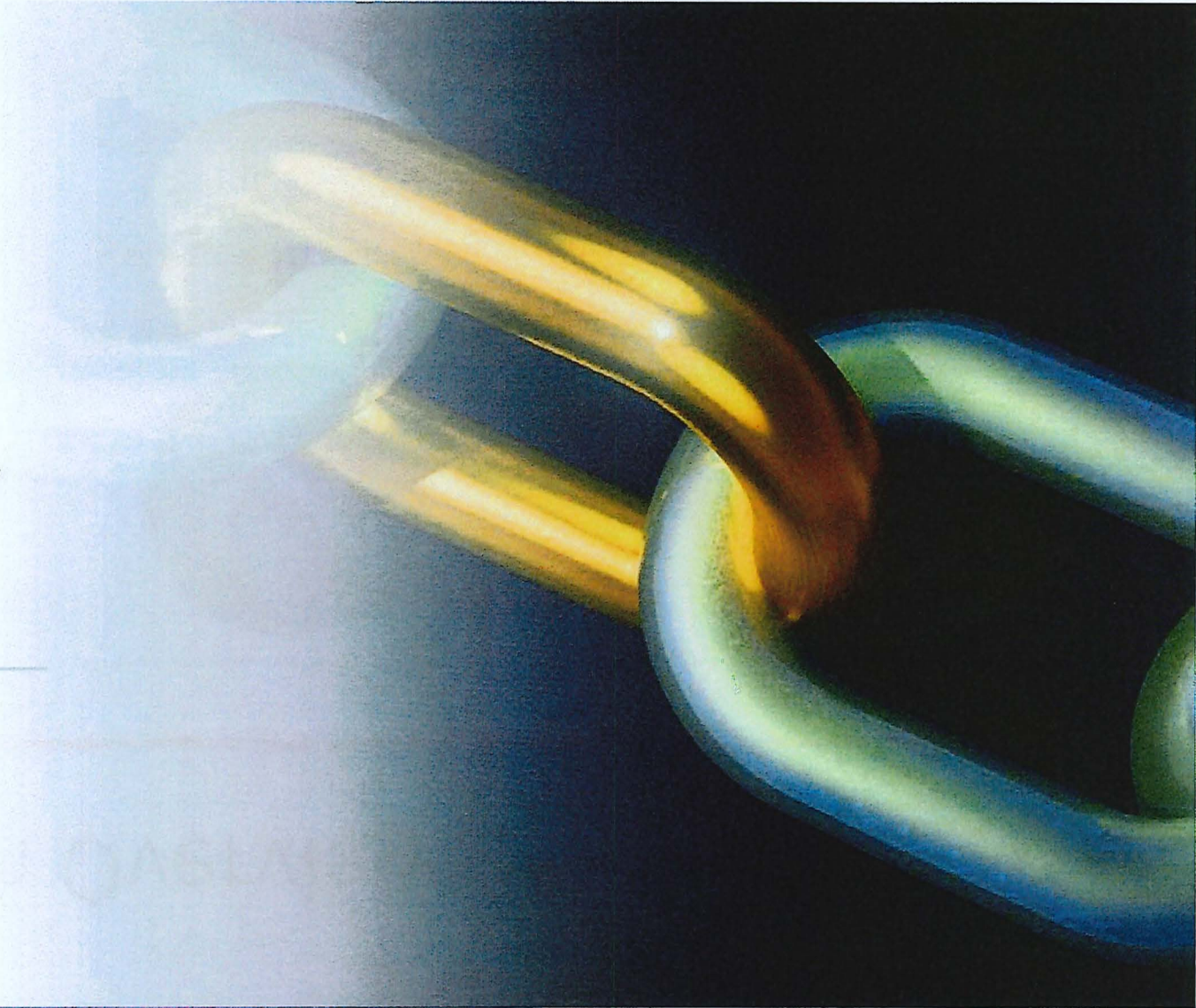
**ATTACHMENTS:** PowerPoint presentation – Supply Chain and Continuity Challenges



# Supply Chain and Continuity Challenges

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September 15, 2022



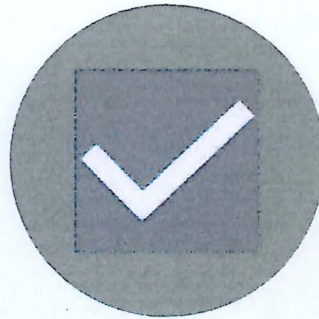


# Presentation Overview

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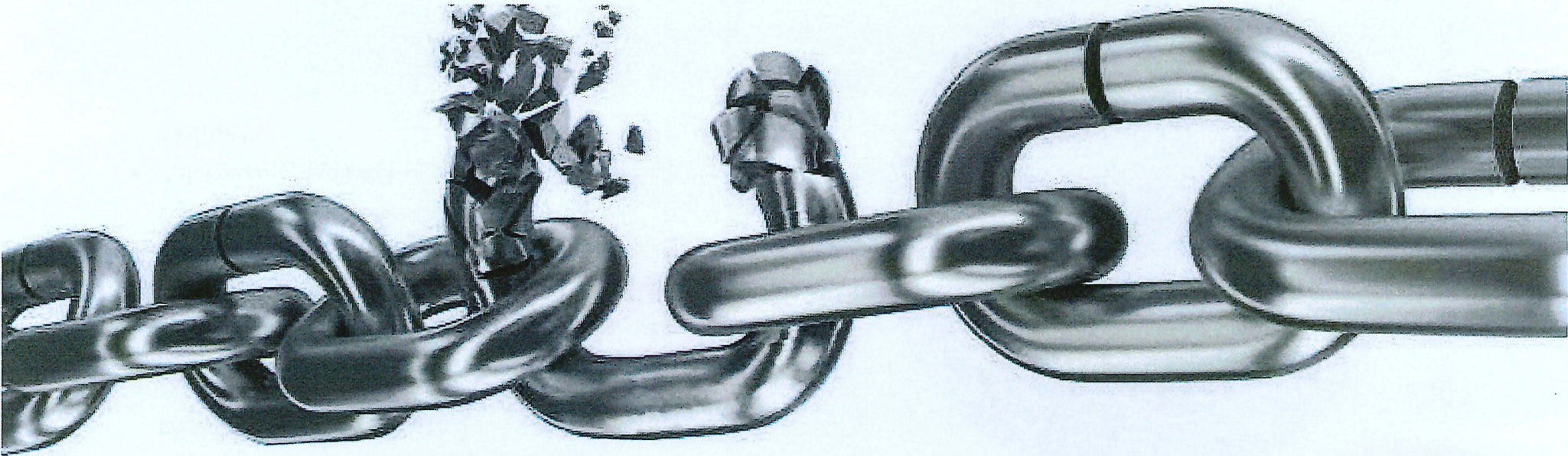
WATER/WASTEWATER UTILITY SUPPLY  
CHAIN DISRUPTIONS AND CHALLENGES



ACSA SPECIFIC DISRUPTIONS AND  
RESPONSES



MOVING FORWARD



## Overview of Supply Chain Disruptions

### Material

- Water and Sewer Pipes
- Water/Sewer hardware (fittings, manholes, vaults, etc.)
- Gasoline/Diesel

### Equipment

- Information Technology
- Fleet Vehicles
- Heavy Machinery
- Generators
- Meters/Meter Components

### Other

- Training
- 3<sup>rd</sup> party services



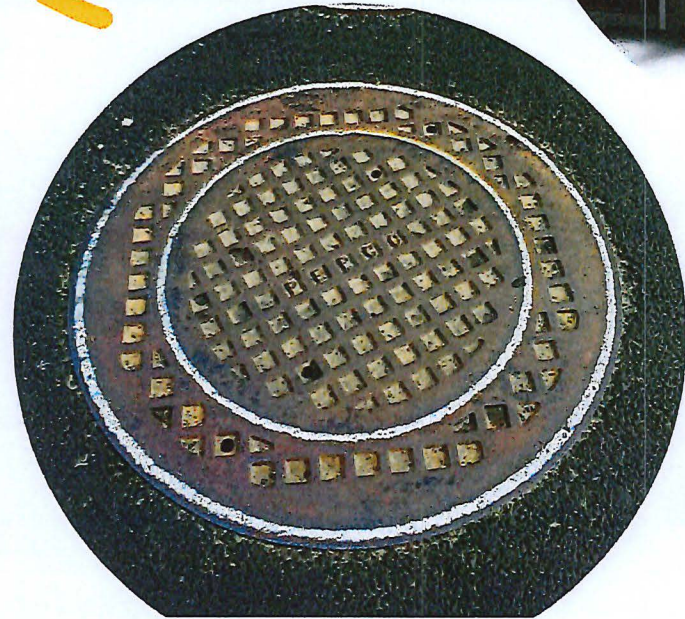
# Maintenance

## Material

- Water and Sewer Pipes – New Installations and Repairs
- Water/Sewer hardware (fittings, manholes, vaults, etc.)
- Gasoline/Diesel fuel

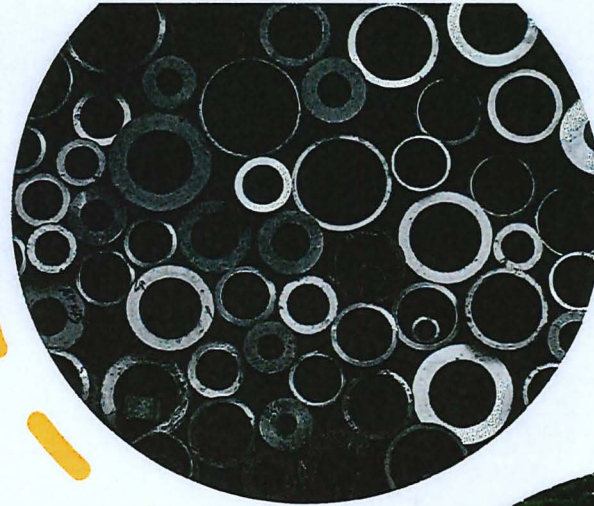
## Equipment

- Ford F-550 – waiting on installation of dump bed/power take-off
- All-terrain forklift – 65 week for order delivery





# Engineering



## Material

Jefferson Village Water Main Replacement Project

- Notice of Award provided in March 2022; 40-week lead time estimated for pipe shipments



## Equipment

80 KW Cummins Generator and ASCA Automatic Transfer Switch – ordered 8/30/21, delivered 7/21/22



## 3<sup>rd</sup> Party Services

Significant delays for Food Service Establishments needing grease interceptors serviced

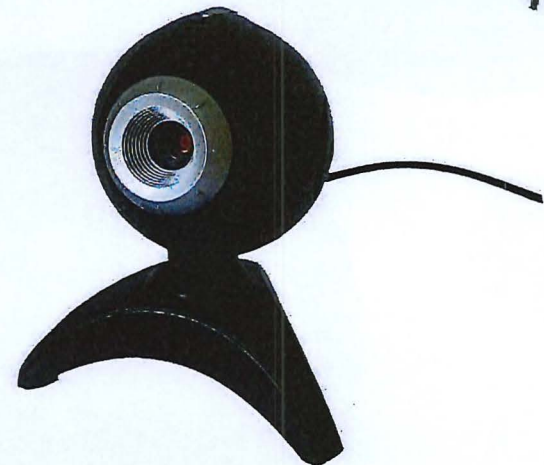




# Information Technology

## Equipment

- IT Hardware – In-Office
  - Computers
  - Servers
  - Printers
- Work from home hardware
  - Webcams
  - MiFi's
  - Keyboard/mice
  - Audio headsets



# Administration

## 3<sup>rd</sup> Party Services

- Onboarding/Employee Service Providers
  - New employee drug screening
    - Significant delays in results, delaying start dates
  - Delays/lack of response for workers compensation inquiries
- Training/Trainers
  - Difficulties finding available trainers
    - CPR
    - Asbestos Training





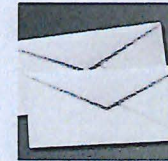
# Finance

## Material

- Envelopes
- Lead-time more than tripled

## Equipment

- Meters/Meter Components
  - Significant delays in AMI project
  - Inventory for regular replacement/new connections
- Hydrant Meter availability



# Moving Forward

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- Longer view/projections on future material/equipment needs
- Enhanced monitoring of inventory on-hand
  - Pipe/fittings/etc.
  - Meters/meter components
- Consideration of alternatives
- Retention of assets/equipment
  - Fleet vehicles
  - IT hardware





# Questions?

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## AGENDA ITEM EXECUTIVE SUMMARY

<b>AGENDA TITLE:</b> Transfer of Ownership to Upper Woodbrook Interceptor	<b>AGENDA DATE:</b> September 15, 2022
<b>STAFF CONTACT(S)/PREPARER:</b> Gary O'Connell, Executive Director	<b>ACTION:</b> Yes
	<b>ATTACHMENTS:</b> Yes

**BACKGROUND:** In the Spring of 2022, Rivanna Water and Sewer Authority (RWSA) rehabilitated a significant portion of the Woodbrook Interceptor (WBI) (see attached map). The upper portion of the WBI originates just northeast of the Fashion Square Mall and contains approximately 3,400 LF of 8" ductile iron and 10" vitrified clay piping and 13 manholes. Upper WBI carries on average approximately 130,000 gallons per day of dry weather sanitary sewage, mostly from residential and small non-residential sewer connections. The nature and volume of the discharges into this sewer aligns better with sewers owned and operated by the Albemarle County Service Authority (ACSA), thus our staff recommends that ownership of the Upper WBI be transferred to ACSA. The RWSA Board recently took similar action on this request.

The Woodbrook Interceptor (WBI) was constructed in 1973-1977 and carries sanitary sewage from the Urban Area of north Albemarle County to the Rivanna Interceptor and the Moores Creek Advanced Water Resource Recovery Facility. The uppermost reach of WBI is known as the Upper WBI and is an 8-10" sanitary sewer that originates just northeast of the Fashion Square Mall. From the first manhole (MH-34A) to the manhole on WBI where the 8" and 10" come together (MH26), the sewer is characterized by small residential and non-residential direct connections and acts as a low-flow collector sewer. At WBI-MH-26, the 8" and 10" portions of WBI come together and upsize to 12", and the downstream portions of WBI function as a more typical RWSA Interceptor, with higher flows and fewer direct connections. At the time of construction, the ACSA and RWSA established an understanding that these smaller diameter, lower flow sections would eventually revert to ACSA ownership.

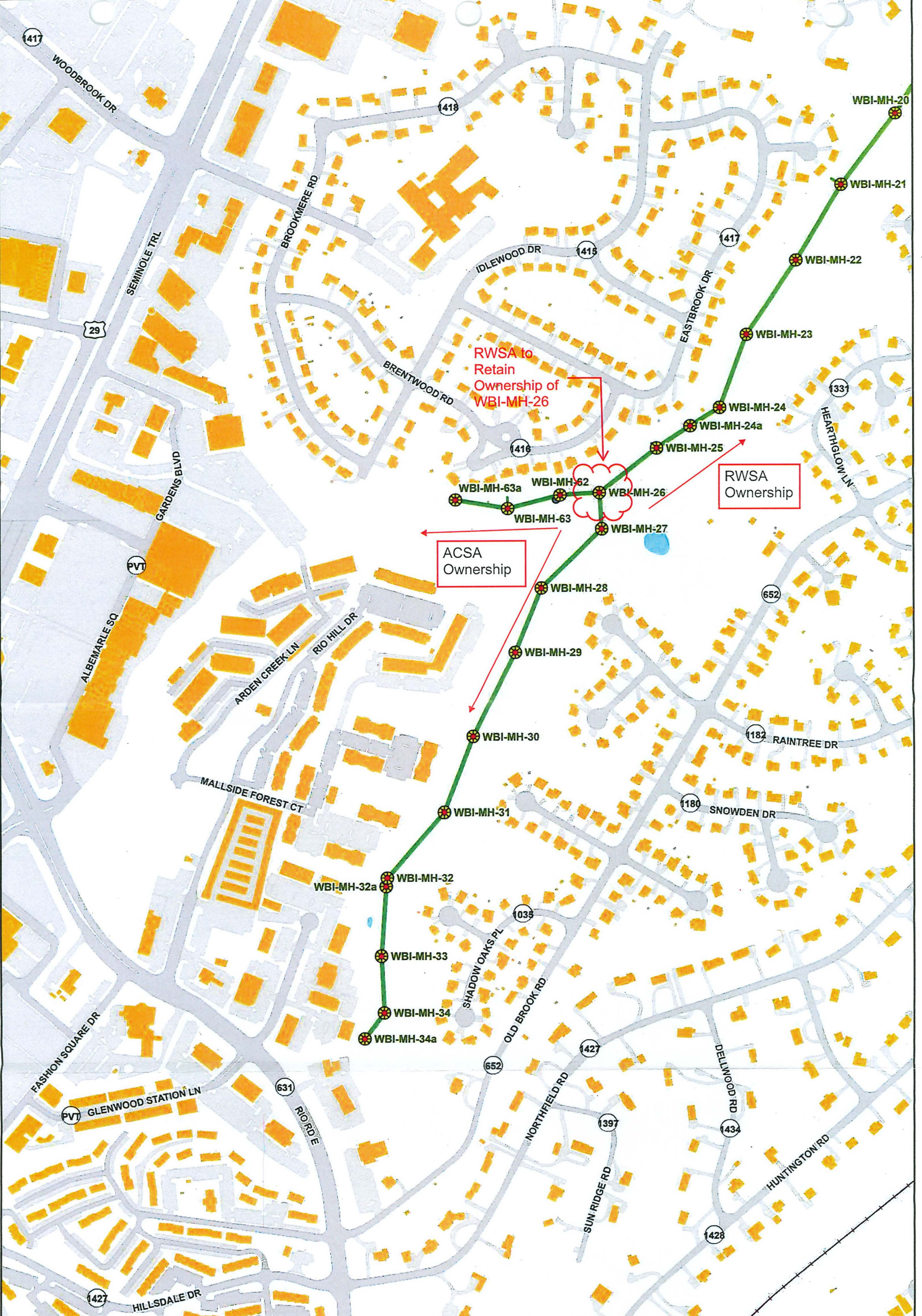
In the fall of 2021, Closed-Circuit Television footage revealed that the 10" vitrified clay portion of Upper WBI needed significant sewer and manhole rehabilitation, to include cured in place piping (CIPP) and manhole coatings. These efforts were completed by RWSA in June 2022. With the 10" vitrified clay portion of the Upper WBI rehabilitated to the confluence at MH-26 and the overall lower flow characteristics of Upper WBI, our staff recommends the Upper WBI (8" and 10" sections) from WBI-MH-34A and WBI-MH-63A, respectively, to WBI-MH-26 be transferred to the ACSA.

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

**BOARD ACTION REQUESTED:** Authorize the Executive Director to execute a deed with the Rivanna Water and Service Authority (RWSA) that will transfer ownership of approximately 3,400 LF of the Woodbrook Interceptor upstream of WBI-MH-26 to the ACSA. RWSA will retain ownership of MH-26 and all of WBI downstream of this manhole.

**ATTACHMENTS:** Map of Woodbrook (WBI) Interceptor Sewer Lines





**RWSA WBI Transfer to ACSA**