



BOARD OF DIRECTORS' MEETING
February 17, 2022
9:00 A.M.

AGENDA

This meeting is being held pursuant to and in compliance with the Albemarle County Emergency Ordinance No. 20-E (2); An Emergency Ordinance to Ensure Continuity of Government during the Covid-19 Disaster. The ACSA Board of Directors is responsible for receiving public comment. The opportunities for the public to access and participate in the electronic meeting are as follows: Join the meeting virtually through Zoom by visiting our website at www.serviceauthority.org; call in and leave a message prior to the meeting at (434) 977-4511, or email the Board prior to the meeting at board@serviceauthority.org.

9:00 a.m.	1. Call to Order and Establish a Quorum –Statement of the Board	
9:05 a.m.	2. Approve Minutes of January 20, 2022	Motion, Second
9:10 a.m.	3. Matters from the Public	
9:25 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. CMMS/Cityworks (Work Order System) Update Report	
	h. Advanced Metering Infrastructure (AMI) Project Update	
9:50 a.m.	6. Customer Assistance Grants Program Update	
10:10 a.m.	7. Disconnection Policy Recommendation	Motion, Second, Roll-Call Vote
10:25 a.m.	8. ERP – New Munis Financial/Human Resources System -PowerPoint	
10:45 a.m.	9. Cybersecurity assessment report update - PowerPoint	
11:00 a.m.	10. ACSA Operational Presentation – Easement Clearing	
11:15 a.m.	11. AMI (Advanced Metering Infrastructure) Project Status Report-PowerPoint	
11:30 a.m.	12. Items Not on the Agenda	
	13. Adjourn	Motion, Second

ACSA CHAIR'S TRANSCRIPT FOR OPENING THE FEBRUARY 17, 2022 MEETING

CALL TO ORDER

STATEMENT OF CHAIR TO OPEN MEETING

I am Clarence Roberts, Board Chair of the Albemarle County Service Authority.

I would like to call this February 17, 2022 meeting of the Board of Directors to order.

Notwithstanding any provision in our Bylaws to the contrary, as permitted under Va. Code Section 2.2-3708.2(A)(3); Albemarle County's Continuity of Government Ordinance; Albemarle County's and the City of Charlottesville's declaration of a local state of emergency, the catastrophic nature of which makes it impracticable or unsafe to assemble a quorum in a single location; and the Resolution of this body adopted on May 21, 2020, we are holding this meeting by real time electronic means with no Board member physically present at a single, central location. All Board members are participating electronically. This meeting is being held in accordance with Section 6 of the County's Continuity of Government Ordinance. All Board members will identify themselves and state their general physical location by electronic means during the roll call which we will hold next.

This meeting is being recorded and will be uploaded to the County's website.

The public has real time audio-visual access to this meeting over Zoom and real time audio access over telephone, both as provided in the lawfully posted meeting notice. The public is also invited to offer live comment during the meeting's Public Comment period. Comments are limited to three minutes and must be germane to matters on today's agenda. The public is also invited to send questions, comments, and suggestions to the Board through the Albemarle County Service Authority's Executive Director at any time.

ROLL CALL:

Dr. Palmer: Please state your full name and location.

Mr. Armstrong: Please state your full name and location.

Mr. Tolbert: Please state your full name and location.

Mr. Parcels: Please state your full name and location.

Mr. Moore: Please state your full name and location.

And I am Clarence Roberts, and I am located at _____.

Joining us today electronically are the following Authority staff members:

Gary O'Connell, Pete Gorham, Quin Lunsford, Michael Lynn, Emily Roach, April Walker, and Danielle Trent [name any others]

We are also joined electronically by Jim Bowling, counsel to the Authority.

A resolution to implement the procedures outlined in the above-mentioned Continuity of Government Ordinance was adopted by the ACSA Board of Directors at the May 21, 2020 ACSA virtual Board meeting. That resolution (i) approves our conducting this meeting and future meetings electronically consistent with Albemarle County's Continuity of Government Ordinance adopted on April 15, 2020, as amended; [and] (ii) approves our conducting the public comment portion of the meetings required for adoption of budgets and rate settings. I note that the public notice for this meeting was given in conformity with these ordinances and resolution.

1 The Board of Directors of the Albemarle County Service Authority
2 (ACSA) met virtually in a regular session on January 20, 2022, at 9:00 a.m.
3 through Zoom. Mr. Roberts joined the virtual meeting at the Administration
4 and Operations Center at 168 Spotnap Road in Charlottesville, Virginia.

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

8 **Members Absent:** None.

9 **Staff Present:** Jim Bowling, Tim Brown, Daniel Fouch, Pete Gorham, Quin
10 Lunsford, Jeremy Lynn, Michael Lynn, Alex Morrison, Gary O'Connell, Terri
11 Knight, Emily Roach, Danielle Trent, and April Walker.

12 **Staff Absent:** None.

13 **Public Present:** Michael Derdeyn, Flora Pettit; Jennifer Sulzberger,
14 Former ACSA Board Member; Neil Williamson, Free Enterprise Forum;
15 Alison Wrabel, The Daily Progress.

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

18 Gary O'Connell, Secretary-Treasurer, called the meeting to order
19 and a quorum was established. He then read the Board Chair statement
20 declaring an electronic meeting (Attached as Page _____).
21

22 2. Election of Officers – Annual Board Organizational Meeting

23 Mr. O'Connell stated that he would now open the floor for
24 nominations for the office of Chair.

25 ***Mr. Tolbert nominated Mr. Roberts, seconded by Mr. Parcels.***
26 ***There being no further nominations, the floor was closed for***
27 ***nominations. All members voted aye. Mr. Roberts was re-elected as***
28 ***Chair.***

29 Mr. O'Connell returned the Chair to Mr. Roberts. Mr. Roberts stated
30 that he appreciates the confidence that the Board has in him. He stated
31 that perhaps, during the next year, someone else can prepare to possibly

Albemarle County Service Authority Board of Directors

1 serve as Chair in the future. He stated that he believes others should have
2 the experience of serving as Chair as well.

3 Mr. Roberts stated that he would now open the floor for
4 nominations for the office of Vice-Chair.

5 ***Mr. Roberts nominated Mr. Tolbert for the office of Vice-Chair,***
6 ***seconded by Mr. Parcells. There being no further nominations, the***
7 ***floor was closed for nominations. All members voted aye. Mr. Tolbert***
8 ***was elected as Vice-Chair.***

9 Mr. Roberts stated that the next nomination would be for the office
10 of Secretary-Treasurer. He stated that over the years, this office has
11 traditionally been filled by the ACSA's Executive Director. He stated that
12 the floor was now open for nominations for the office of Secretary-
13 Treasurer.

14 ***Mr. Tolbert nominated the Executive Director, Gary O'Connell,***
15 ***for Secretary-Treasurer, seconded by Mr. Armstrong. There being no***
16 ***further nominations, the floor was closed for nominations. All***
17 ***members voted aye. Mr. O'Connell was re-elected as Secretary-***
18 ***Treasurer.***

19
20 3. Recognitions – Jennifer Sulzberger – Service Award

21 Mr. Roberts stated that Ms. Sulzberger has served the ACSA
22 Board well and has been a wonderful person to work with. He stated that
23 she has also served as Vice-Chair and has been unbelievably reliable. He
24 asked the Board clerk to read the recognition resolution for adoption
25 (Attached as Page _____).

26 ***Dr. Palmer moved to approve the resolution as presented to***
27 ***the Board, seconded by Mr. Armstrong. The Chair asked for a roll-call***
28 ***vote: Mr. Armstrong, aye; Mr. Moore, aye; Dr. Palmer, aye; Mr.***
29 ***Parcells, aye; Mr. Tolbert, aye; Mr. Roberts, aye.***

30 Dr. Palmer stated that when she asked Ms. Sulzberger to serve on
31 the ACSA Board, she was looking for someone that was dependable,

1 intelligent, and would contribute in that way. She mentioned that this Board
2 is very important to her, and to the community, as water and sewer are vital
3 services. She added that she was very pleased when Ms. Sulzberger
4 agreed to join the Board, and she greatly appreciates her service in that
5 role over the last 8 years.

6 Mr. Armstrong stated that he went to law school with Ms. Sulzberger
7 and has been a terrific person since the first time he met her. He stated
8 that her service on the ACSA Board was invaluable. He noted that she was
9 a steadying influence and the person who always paid attention to the
10 details, read the minutes thoroughly, and gave appropriate feedback. He
11 added that the Board will miss her as they welcome Dr. Palmer.

12 Mr. Tolbert stated that it was nice sitting next to Ms. Sulzberger
13 during the time the Board met in person. He stated that he hopes to see
14 her more in the future, at the Colonnade Club.

15 Ms. Sulzberger stated that she hopes to come to a public hearing
16 when the Board resumes in-person meetings, as she misses seeing
17 everyone in person. She thanked the Board for their kind words and the
18 lovely resolution. She mentioned that she loved the two terms that she
19 served on the ACSA Board, and that it was an honor to do so. She stated
20 that she was lucky to serve with other community members who were
21 engaged and thoughtful. She mentioned that everyone on the Board came
22 from different backgrounds and interests, which made for a very strong
23 group. She stated that she wanted to thank Mr. Roberts for his wonderful
24 leadership throughout her time on the Board as well. She mentioned that
25 she also wanted to thank Mr. Bowling, Mr. O'Connell, Mr. Lunsford, Mr.
26 Gorham, Mr. Lynn, Ms. Roach, Ms. Walker, Ms. Trent, and others that are
27 on the call currently, for sharing and explaining their work, their patience,
28 and their dedicated service to the ACSA and its customers. She added that
29 she has been impressed during her time on the Board, with the ACSA
30 staff's professionalism and the care they have taken, particularly during the
31 past two very challenging years.

Albemarle County Service Authority Board of Directors4. Approve Minutes of December 16, 2021

There were no corrections or additions to the minutes of December 16, 2021. Dr. Palmer stated that she would abstain from voting on the approval of the minutes, given that she was not on the Board during the time covered by the minutes.

Mr. Tolbert moved to approve the minutes, seconded by Mr. Armstrong. All members voted aye. Dr. Palmer stated that she would abstain from voting on the approval of the minutes, given that she was not on the Board during that time.

5. Matters from the Public

There were no matters from the public.

6. Response to Public Comment

There was no response to public comment.

7. Consent Agenda

- a. Monthly Financial Reports** – Mr. Parcels stated that the arrearages total is over \$300,000, which seems concerning to him. Mr. Lunsford replied that the ACSA is in the process of applying the funds received from ARPA earlier this month. He stated that Mr. O'Connell shared a draft of a letter that the ACSA would like to send out to those customers that receive relief under the program. He mentioned that this letter would be a first step towards lifting the moratorium on disconnections for nonpayment. He stated that until the moratorium is lifted, the arrearage issue is not going to resolve itself. He noted that while the funding received was substantial, it will not eliminate all the arrearages. Mr. O'Connell added that there will be a policy before the Board, at February's meeting, to resume disconnection for nonpayment.

1 **b. Monthly CIP Report** – Mr. Parcels stated that he is curious about the
2 easement negotiations with the UVA Foundation. He stated that it
3 seems for the past two years, in every update report on the pipeline
4 route from South Rivanna to Ragged Mountain, there is a note that the
5 ACSA is in negotiations. He asked what the hold up was.

6 Mr. Gorham replied that as the Board may recall, the ACSA made
7 an initial offer for the easement across a piece of property on the
8 Buckingham Circle side of Morey Creek. He stated that there is to be a
9 water main and PRV vault there. He mentioned that the UVA
10 Foundation made a counteroffer, which was way beyond what the
11 ACSA believes the actual value to be. He stated that the ACSA made
12 its case and offered a counter to their counteroffer. He noted that the
13 ball is now in their court, but the ACSA has yet to hear anything since
14 its last offer. He added that Jeremy Lynn has reached out several
15 times. Mr. Lynn confirmed that there has been no response from the
16 Foundation since the ACSA's counter counteroffer.

17 Mr. Parcels asked if there was a deadline by which the ACSA
18 needed to have the easements, or if they could proceed with the
19 design. Mr. Gorham replied that the design has been ongoing and is
20 90% complete. He stated that as far as timing for construction, the
21 ACSA must wait until VDOT is finished with their project of replacing
22 the culvert box over Morey Creek. He noted that given that fact, the
23 ACSA has time to acquire the necessary easement. He added that
24 perhaps there is a possibility of filing a certificate of take unless the
25 UVA Foundation is considered a state agency.

26 Mr. Bowling stated that there is an old agreement between the
27 County and UVA, which carved out the Foundation from UVA as to the
28 power to bring imminent domain proceedings. He stated that his belief
29 is that the ACSA does have the ability to file a certificate of take. He
30 added that perhaps Dr. Palmer could speak to this as well.

1 Dr. Palmer stated that she is not sure, as there have been some
2 changes. She stated that she is curious about when the counteroffer
3 was made. Mr. Lynn stated that it was several months ago. He stated
4 that in response to Mr. Parcell's question about the project schedule,
5 VDOT's bridge replacement project is scheduled to be advertised in
6 March 2022. He mentioned that after advertising, the project must be
7 awarded and constructed. He noted that the ACSA did reach an
8 agreement with VDOT to include the casing pipe as part of their bridge
9 project.

10 Mr. O'Connell stated that RWSA has several negotiations
11 underway for projects that involve the UVA Foundation, the biggest
12 one being the raw water pipeline between the two reservoirs. He stated
13 that there is also UVA Foundation land that is involved in the new
14 pump station and the water line route from Observatory to Ragged
15 Mountain.

16 Dr. Palmer stated that there has been some turnover in the UVA
17 Foundation staff, which is why she asked how many months ago the
18 ACSA made its counteroffer. She stated that she wonders if the matter
19 has just been forgotten, given all the RWSA negotiations that have
20 been going on lately. She stated that she would advise the ACSA to
21 reach out again, as they may have lost track of the project.

22 Michael Derdeyn, attorney for Flora Pettit, stated that he does not
23 feel there is an impediment to filing a certificate of take. He stated that
24 the UVA Foundation is a private foundation, not an agency or arm of
25 the State.

26 Mr. Parcells stated that his next question is about several projects
27 in the CIP summary that seem out of date. He stated that page 99-101
28 list projects ee, ff, and hh. He noted that they are all old and are still
29 showing on the list, although they should have been closed out early
30 last year. He mentioned that it is nice to get the updates but was
31 wondering why they have not been completed.

1 Mr. Gorham replied that the first project, ee, is the Redfields Pump
2 Station Abandonment project. He stated that this project is essentially
3 complete and could probably be taken off the list. He mentioned that
4 he left it on the list because the shared driveway with the residence in
5 front of the pump station needs to be repaved, and there have been
6 issues getting three prices for the paving work. He stated that once the
7 paving is done, the project will be closed out. He stated that ff is the
8 Sewer Force Main Condition Assessment project. He stated that the
9 assessment has been done, and there was a section of force main in
10 the Woodbrook subdivision that was found to have eroded wall
11 thickness due to pockets of hydrogen sulfide gas. He mentioned that
12 the ACSA is looking to have a term contract consultant do the design
13 for the project. He noted that the thought is that the pipe can be
14 shortened, instead of replacing the full length of pipe. He stated that
15 the resolution would be to replace that section of pipe, which is why it
16 has remained on the schedule. He stated hh, the third project, is the
17 Ashcroft Pump Stations #2 and #3 Capacity Improvement project,
18 which is virtually complete. He noted that some rewiring had to be
19 done because the backup radio system was interfering with the
20 operation of the pump station. He stated that once IT staff does a
21 review of the wiring, the project will be complete.

22 **c. Monthly Maintenance Update –**

23 **d. Rivanna Water and Sewer Authority (RWSA) Update –** Mr. Moore
24 stated that it was not actually in the monthly update, but he was
25 wondering if Gary could speak to RWSA's cost of living proposal about
26 a week ago. Mr. O'Connell replied that he just received RWSA's
27 meeting agenda yesterday, in which they have proposed a 6% cost of
28 living wage increase, based on inflation. He stated that has already
29 expressed a concern via email about the proposal, given that it is a
30 mid-year budget change. He stated that RWSA does not have any
31 additional revenues for a mid-year change unless they seek it from the

1 ACSA or go inside of their budget. He stated that there is also a
2 proposal for a change to their pay plan on the agenda, which typically
3 happens in July. He added that both the City and the County
4 governments have provided a mid-year inflationary increase, primarily
5 because they received some additional funds that were not estimated
6 in the budget. He noted that this was not the case with RWSA. He
7 stated that in terms of ACSA employees, there is a pay study proposal
8 to make pay adjustments effective July 1 and will consider inflation and
9 competitiveness in the marketplace.

10 Mr. Parcels stated that he thought RWSA said there would not be
11 any change in their rates to the ACSA because of the mid-year pay
12 increase. Mr. O'Connell stated that RWSA is using savings from staff
13 turnover, as far as he can figure out. He stated that the issue with
14 doing this, is that when those vacancies are filled, the funding will not
15 be there, and they will have to increase the customer cost. Mr. Moore
16 asked if RWSA considered giving employees a one-time bonus, as
17 opposed to a base pay increase. Mr. O'Connell replied that he had that
18 discussion with RWSA's executive director, but he proposed that it be
19 a base pay increase.

20 Dr. Palmer stated that she wanted to point out, coming from the
21 Albemarle County Board of Supervisors and seeing bonuses given to
22 frontline workers, that the County was no longer competitive, and was
23 having a difficult time hiring people. She stated that neither RWSA nor
24 the ACSA should be put in the position where they cannot fill
25 vacancies due to low salaries.

26 **e. ACSA Board Policy Future Issues Agenda 2021 –**

27 **f. CMMS/Cityworks (Work Order system) Update Report –**

28 **g. Advanced Metering Infrastructure (AMI) Project Update –**

29 **h. ACSA FSA Benefit Plan Amendments – New Plan Administrator –**

30 **i. Annual Water Conservation Report –**

31 **j. Strategic Plan Update –**

1 ***Mr. Parcels moved to approve the Consent Agenda,***
2 ***seconded by Mr. Moore. All members voted aye.***
3

4 8. Amendments to the ACSA Rules and Regulations – Backflow
5 Prevention, Exclusion Meters, and Irrigation

6 Mr. Gorham stated that there were some changes the ACSA staff
7 noticed over the past few months with regards to the Rules and
8 Regulations, thus they decided to consolidate them. He stated that there
9 were several programs, such as the Cross-Connection Control and
10 Backflow Prevention program, that had not been comprehensively
11 reviewed since they were put in the Rules and Regulations years ago. He
12 mentioned that most of the changes are housekeeping items to keep the
13 language consistent and make the text clearer to the reader.

14 Mr. Gorham stated that the most changes were to Sections 8 and
15 19, the Cross-Connection Control and Backflow Program and the Fats,
16 Oils, and Grease program, respectively. He stated that many of those
17 changes were to reflect changes that have already been implemented. He
18 mentioned, for example, that DPOR is the only certification allowed for
19 backflow prevention assembly testers in Virginia. He stated that this has
20 been the practice for the past four years. He noted that all the testers were
21 notified, and the ACSA has been enforcing it, but the text of the Rules and
22 Regulations did not reflect that.

23 Mr. Gorham stated that changes to Section 13 and 16 were minor.
24 He stated that the changes in Section 13 involved adding confiscated
25 hydrant meters to the list of items that would incur a meter tampering fee.
26 He stated that the changes in Section 16 had to do with why there is
27 reference to irrigation exclusion meters when the ACSA has abandoned
28 them or converted them to auxiliary meters.

29 Mr. Roberts asked if ACSA attorney, Jim Bowling, has had a
30 chance to review the changes. Mr. Bowling replied that he has reviewed
31 the changes and found them to be in order.

1 ***Mr. Parcels moved to approve the resolution as presented to***
2 ***the Board, seconded by Mr. Tolbert. The Chair asked for a roll-call***
3 ***vote: Mr. Armstrong, aye; Mr. Moore, aye; Dr. Palmer, aye; Mr.***
4 ***Parcels, aye; Mr. Tolbert, aye; Mr. Roberts, aye.***

5
6 9. Imagine a Day Without Water – Student Art Contest Winners

7 Mrs. Roach stated that the ACSA has participated in this annual art
8 contest for a few years now, as part of the Imagine a Day Without Water
9 celebration. She stated that this is the second year that the art contest has
10 taken place during the pandemic, but that there were several opportunities
11 for students to submit artwork including electronic submissions. She stated
12 that typically, there is an award ceremony after the contest, but that it had
13 to be put on hold due to Covid. She added that in lieu of the awards
14 ceremony, a video was created that students can share with their family
15 and friends.

16
17 10. Rate Study – Preliminary Recommendations and Update

18 Mr. Lunsford stated that today's presentation (Attached as Pages
19 _____) is a regroup from the meeting in November, to review some of
20 the preliminary findings that NewGen Strategies has compiled related to
21 the rate study. He stated that Michael Maker, Deputy Director with
22 NewGen, would be giving a high-level presentation of what is being seen
23 as the rate model is compiled, based on financial and operational
24 information provided from the ACSA.

25 Mr. Maker stated that today he would go over costs to the system
26 and what is driving cost increases. He stated that NewGen will eventually
27 develop more concrete recommendations, which will be shared at the next
28 Board meeting. He stated that in addition to what is driving the rate
29 increases, he would also discuss some study assumptions, revenue
30 requirements, current charges and fees, and next steps.

1 Mr. Maker moved to the first slide, which outlined the guiding
2 principles and objective of the rate study. He stated that included in the
3 guiding principles is the notion that water and sewer rates should be kept
4 as low as possible over time. He stated that the goal is to ensure rates are
5 stable through sound financial management and system maintenance. He
6 noted that to achieve this goal, it is important to review water and sewer
7 funds, and prepare a long-term financial plan that includes capital
8 investments.

9 Mr. Maker stated that the next slide listed the various factors that
10 affect charges and rates. He stated that the first one is O&M expenses
11 (operating and maintenance) such as salaries, benefits, and supplies. He
12 mentioned that the ACSA's largest O&M expense is the purchase of water
13 and wastewater treatment from RWSA. He noted that based on the latest
14 document from RWSA, the ACSA can expect about an 8% increase in
15 water costs, and about a 7% increase in wastewater treatment costs. He
16 stated that outside of expenses from RWSA, the ACSA is looking at about
17 a 2.5% escalation rate for other expenses. He added that other factors that
18 can affect the charges and rates are CIP plans, debt service, customer
19 changes, miscellaneous revenue charges, and reserve targets.

20 Mr. Maker stated that the chart on the next slide shows the
21 relationship between user rates and system development fees. He stated
22 that operating expenses are paid for through user rates. He mentioned,
23 however, that capital expenses can either be non-growth related or growth-
24 related. He stated that both growth and non-growth-related expenses can
25 either be cash or debt funded, but that non-growth-related costs are
26 covered through user rates, and growth-related costs are covered through
27 system development fees. He noted that if system development fees are
28 set at less than cost or the anticipated growth does not occur, then the
29 difference will have to be covered through higher user rates to existing
30 customers.

1 Mr. Maker moved to the next slide, which contained a graphical
2 representation of revenue requirements. He stated that O&M expenses,
3 outstanding debt, planned CIP, and contributions to reserves all combine to
4 make up the ACSA's annual revenue requirement. He stated that the
5 annual revenue requirement less any miscellaneous revenue, is the net
6 revenue requirement.

7 Mr. Maker stated that the next slide shows a snapshot of FY 2022
8 budgeted expenses for water and sewer, at \$18.36 million and \$13.63
9 million respectively. He stated that for water and sewer, the largest
10 expense is the cost from RWSA. He stated that the following slide takes
11 these numbers and increases it each year by the cost escalation rates
12 mentioned in the study assumptions, for the next five years.

13 Mr. Maker stated that the ACSA does not have a lot of debt, as
14 shown in the bar graph on the next slide. He stated that the ACSA has
15 about \$5 million in debt, a majority of which is growth-related. He stated
16 that those debt costs that are growth-related will be collected from the
17 system development fees. He stated that the next slide shows a similar
18 graph for planned capital projects. He stated that the water projects are
19 almost completely non-growth related as they deal with issues like main
20 replacements. He noted, however, that the sewer projects are almost
21 entirely growth-related, as they deal with items like expansion and capacity
22 upgrades.

23 Mr. Maker moved to the next slide, showing a table of the water
24 system development fee cash flow over the next five years. He pointed out
25 that currently, the ACSA sees about \$3.6 million in development fees. He
26 stated that overall, the table shows that the ACSA's current growth-related
27 cash is enough to account for the expenses. He stated that the same
28 scenario is true for sewer system development fee cash flow, as shown in
29 the next slide. He noted that again, the chart shows that revenues and cash
30 balances are high enough to offset the expenses.

1 Mr. Maker stated that looking at reserves on the next slide, the first
2 is the O&M reserve. He stated that this serves as working capital for the
3 gap between revenues received and expenses that need to be paid. He
4 mentioned that the recommendation is to maintain a balance in this reserve
5 equal to 90 days of operating expenses. He stated that the second reserve
6 is the 3R reserve (repair, renewal, and replacement). He stated that the
7 recommendation for this reserve is to maintain a balance equal to 2% of
8 the system value. He stated that the third reserve is the Capacity and
9 Growth reserve. He noted that growth-related charges should be funded
10 through this reserve.

11 Mr. Maker stated that he would next discuss some of the rate costs.
12 He stated that in terms of the revenue requirements for water, the ACSA
13 would need \$18.4 million in 2023, which increases to \$25 million in FY
14 2027. He noted that the major driver of this increase is the purchase of
15 water from RWSA, as well as some cash funded capital projects. He
16 stated that on the sewer side, depicted on the next slide, required revenue
17 increases from \$14.6 million in FY 2023 to \$17.4 million in FY 2027.

18 Mr. Roberts stated that the revenue requirements for water jumps
19 \$3 million dollars from FY 2025 to FY 2026. He asked if that meant there
20 would be a significant rate increase that year. Mr. Maker replied that the
21 reason they look out five years, is to smooth out those rate increases. He
22 stated that they take a holistic look at the costs and revenue requirements
23 over those five years, with the goal of having a certain cash balance at the
24 end of those five years. He added that there would be similar increases
25 each year over the course of the five years.

26 Mr. Maker stated that the next steps in the rate study are to verify
27 and refine the revenue requirements and reserve recommendations,
28 develop rate structure recommendations, and evaluate the system
29 development fees and miscellaneous fees.

30 Dr. Palmer stated that, in looking at the slide that outlined the
31 various reserves the ACSA has, it shows a minimum recommendation for

1 the capacity and growth reserve. She asked if there was a maximum
2 amount suggested for that reserve. She mentioned that there is the
3 possibility of being criticized by the public for not using reserves in an
4 appropriate or timely manner. Mr. Maker replied that the most important
5 thing related to the use of that reserve is to make sure any revenue
6 received from system development fees goes to that specific reserve, and
7 that any growth-related expenses are paid for from that reserve. He added
8 that there is no maximum, but it is important that the funds are allocated
9 properly. Dr. Palmer asked if he thought there was a reserve amount that
10 could be considered too much. She mentioned that when she was on the
11 ACSA Board the last time, the consultants that conducted the rate study
12 said that there was too much in the reserves. Mr. Maker replied that in his
13 opinion, there can never be too much in a reserve.

14 Mr. Lunsford stated that as ACSA staff completes and submits their
15 departmental budgets, that information will be provided to Mr. Maker to
16 input into the rate model to ensure the assumptions he has used are
17 reasonable. He mentioned that the same will be done with RWSA's
18 information as well once they finalize their costs.

19 Mr. Parcels asked if it would be possible, or even practical, to
20 develop a rate model option that incorporates some debt. Mr. Maker stated
21 that it can be done. He stated that the model is already built, so it is easy to
22 change allocations to evaluate various scenarios. He mentioned that
23 typically, the recommendation would be to debt-fund large projects as
24 opposed to recurring maintenance projects. Mr. Lunsford added that, to Mr.
25 Roberts' point earlier, some of the larger CIP projects hit the budget around
26 FY 2024-2025 and may be good projects to target for debt-funding.

27
28 11. ACSA Annual Report

29 Mr. O'Connell stated that the beginning of the new year is a good
30 time to look back at some of the ACSA's successes and accomplishments,
31 particularly from an ACSA staff perspective. He mentioned that the Annual

1 Report was shared in the form of a brochure last year, which required a lot
2 of energy and time. He stated that this year's report will be shared in the
3 form of a Power Point presentation (Attached as Pages_____),
4 which is a better way to present the information.

5 Mr. O'Connell stated that the ACSA's vision and mission is part of
6 what drives the Strategic Plan. He stated that the most important goal is to
7 provide the highest quality customer service and meet customer
8 expectations, as well as providing high quality water. He stated that the
9 Covid-19 has created many different challenges for the ACSA over the past
10 few years. He stated that there has been a lot of time and effort spent in
11 responding to the pandemic. He mentioned that ACSA staff has done an
12 amazing job in being flexible and making necessary changes. He noted
13 that the ACSA has fully maintained operations throughout the pandemic
14 and has continued to provide high quality water that is safe to drink.

15 Mr. O'Connell stated that there was a six-month update on the
16 Strategic Plan in the Board packet this month. He stated that the Strategic
17 Plan was a 3-year blueprint, with a particular focus on customer and
18 technology improvements. He stated that the update shows how the ACSA
19 is making great progress on all the key initiatives.

20 Mr. O'Connell stated that the ACSA Lead Team set the
21 administrative policy and direction for the ACSA. He stated that he wanted
22 to give a special thanks to them and their staff for working through what
23 has been a trying and unpredictable year. He mentioned that he also
24 wanted to thank the ACSA employees as a group. He stated that he has
25 been very proud of the high value placed on customer service and being
26 responsive to customer needs.

27 Mr. O'Connell stated that he would go through the past year's
28 achievements departmentally, beginning with Human Resources and
29 Administration. He stated that the HR & Admin team have been an active
30 part of the ERP implementation, as the ACSA updates business processes
31 that will now be done electronically. He mentioned that the ACSA is in the

1 midst of a salary survey, and the recommendations from that survey will be
2 presented as part of next year's budget. He stated that Human Resources,
3 particularly Emily Roach, has been actively involved with managing
4 operations during Covid and determining the safest way for the
5 organization remain fully operational. He added that the ACSA continues to
6 participate in community events like Imagine a Day Without Water and,
7 despite the pandemic, they have still been fun with good results.

8 Mr. O'Connell stated that moving on to the Engineering department,
9 most of the focus has been on CIP projects, with an \$11 million CIP
10 program. He noted several examples of accomplishments made by Pete
11 Gorham and his staff, including the ongoing efforts with the sewer system
12 evaluation and rehabilitation. He stated that there has also been a multi-
13 year conversion of private service meters, with about 20% of the system
14 complete. He mentioned that there has been a lot of work done at the
15 ACSA Operations Center on Spotnap Road, including a big paving project
16 and internal renovations.

17 Mr. O'Connell stated that there have been a number of successes
18 for Quin Lunsford and his staff in the Finance department. He stated that
19 Paymentus, the new online portal, is one of the most significant ones. He
20 stated that the new financial system, Munis, went live on January 1st. He
21 mentioned that there was a significant amount of work done over the past
22 year to transition from the old system, Dynamics, to Munis. He stated that
23 the MyWater program kicked off last year with the first phase of the AMI
24 meters. He noted that 500 meters were deployed, with 19,500 left to install.
25 He mentioned that there is still a global chip issue, but the hope is that it
26 will be resolved in 2022. He stated that there have been a couple of federal
27 grants to assist with customer bills, such as the CARES Act and ARPA
28 funding. He noted that there has been a tremendous effort from ACSA staff
29 to reach out to customers and assist them with the application process, as
30 well as applying those funds to customer accounts.

1 Mr. O'Connell stated that the past year has been one of transition
2 for the Information Technology (IT) department, under the new leadership
3 of April Walker and new staff members that joined the team in the last
4 week or so. He stated there has been a major focus on security projects to
5 strengthen IT networks, as well as a new Technology Plan that will guide
6 the ACSA over the next five years. He mentioned that the new software
7 system for work orders and customer requests, CityWorks, is fully
8 operational and is being used more and more to help manage the ACSA.

9 Mr. O'Connell stated that in the Maintenance department, under
10 Mike Lynn's leadership, there are a number of ongoing things daily and the
11 staff is extremely responsive to customer issues. He stated that there are
12 several projects that were completed in 2021, including the completion and
13 exercising of a new Emergency Management Plan. He mentioned that
14 there has also been a continuous effort to utilize CityWorks.

15 Mr. O'Connell stated that in terms of looking to the future, the
16 ACSA will continue to improve upon the high-quality service to its
17 customers. He stated that as he mentioned earlier, the AMI project is
18 underway, and the hope is to make major strides in the upcoming year. He
19 noted that this, however, will depend on the global chip and meter delivery
20 issues. He stated that the ACSA will continue to deal with Covid, with the
21 goal of continuing to keep customers and employees safe while remaining
22 fully operational. He stated that the budget will come before the Board in
23 the spring, beginning with the CIP budget. He stated that there will be a
24 continued focus on customer communication through the quarterly
25 newsletter that is sent out with customer bills and is also available on the
26 website and various social media platforms. He stated that the staff will
27 continue to work on the Strategic Plan, which will close out at the end of
28 this year. He mentioned that work on a new strategic plan will need to
29 begin, and there has already been consideration of a customer survey to
30 gather feedback for the new plan.

1 Mr. Parcels stated that this was a great summary of the past year.
2 He stated that, from a customer perspective, the quarterly newsletters are
3 very helpful and informative. He mentioned the Emergency Response Plan
4 that Mr. O'Connell highlighted earlier in his presentation and asked if
5 everything went as planned with the recent power outages in the area. Mr.
6 O'Connell replied that he would not say everything went exactly as
7 planned, but the ACSA did remain fully operational. He stated that there
8 are generators at most of the pump stations and some were automatic with
9 no issues, while others required some additional fuel and monitoring. He
10 stated that from a customer standpoint, water and wastewater treatment
11 processes were fully in service.

12 Mr. Parcels asked what kind of role benefits play in the salary
13 study. Mr. O'Connell replied that benefits are considered in the study, but
14 that it would mostly focus on pay. He stated that he feels the ACSA's
15 benefits are strong relative to the marketplace. He noted that the area
16 where the ACSA will probably be behind is pay, particularly in the
17 construction marketplace.

18 Mr. Roberts asked how many employees were affected by Covid-
19 19. Mr. O'Connell replied that the number of employees that tested positive
20 has been small. He noted that there have been several employees that
21 have had to quarantine due to close contact or possible exposure. He
22 mentioned that two weeks ago, there were about 5 employees that were in
23 quarantine for various reasons, most of those being in the Maintenance
24 department.

25 Mr. O'Connell stated that he wanted to share a quick overview of
26 the presentation he gave to the Albemarle County Board of Supervisors.
27 He stated that the ACSA delivers safe, clean, drinking water to its
28 customers, and has continued to do so throughout the pandemic. He
29 mentioned that the advanced GAC filtration process adds an extra layer of
30 protection to assure the safety of the water. He noted that there are over
31 400,000 water tests conducted annually to ensure the safety of the water

1 as well. He stated that the ACSA presents a detailed annual water quality
2 report, which is provided to customers and posted on the ACSA website.

3 Mr. O'Connell stated that there are new regulations that are on the
4 horizon. He noted that the ACSA does not have lead pipes in its system
5 and there will be a detailed inventory to ensure that, so lead regulations
6 should not be an issue. He stated that detailed testing has been conducted
7 at the tap in a number of households, with more testing to come. He stated
8 that there also no PFAS chemicals (per- and poly-fluoroalkyl substances) in
9 the drinking water. He stated that PFAS are used to make clothing,
10 carpets, and couches water-resistant. He mentioned that there have been
11 several rounds of testing to confirm this as well.

12 Mr. O'Connell stated that the ACSA's water system is a reliable
13 one. He stated that through the recent winter storms and power outages,
14 the water and wastewater systems remained fully operational. He noted
15 that regular maintenance and replacement programs help with the reliability
16 of the system. He mentioned that the ACSA staff has worked hard to create
17 redundancy in the system and ensure backup capabilities during
18 emergencies. He added that the ACSA's Emergency Plan was thoroughly
19 updated this past year, with a fall exercise to practice the plan. He stated
20 that overall, the ACSA water is safe, clean, and reliable to customers, and
21 there are various ways this is achieved.

22
23 12. Items Not on the Agenda

24 Mr. O'Connell stated that the County will be reevaluating virtual
25 meetings at their April Board meeting, and his suggestion to the ACSA
26 Board would be to continue with virtual meetings until that time. He
27 mentioned that the IT department is preparing for a hybrid meeting model,
28 giving the public an opportunity to continue joining the meetings virtually
29 once they return to an in-person format.

1 13. Adjourn

2 *There being no further business, Mr. Tolbert moved that the*
3 *meeting be adjourned, seconded by Mr. Parcels. All members voted*
4 *aye.*

5

6

7

8

9

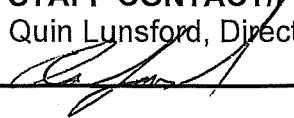
Gary B. O'Connell, Secretary-Treasurer

10

11

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Monthly Financial Reports STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance 	AGENDA DATE: February 17, 2022 ACTION: Informational ATTACHMENTS: Yes
---	--

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

DISCUSSION:

- Water consumption for the month of December decreased 5.4% compared to November. Water consumption for the month of December 2021 compared to December 2020 increased 8.5%.
- RWSA's invoice of \$1,743,520 for the month of December was paid on January 10, 2022.
- Unearned water and sewer connection charges totaled \$1,671,973 at month end.
- System connection charges were above budgeted expectations with \$363,690 recognized in December. Total system connection charges for FY 2022 are less than those in FY 2021 by 9%.
- Water and Wastewater revenues for FY 2022 are above budgeted expectations by 12.8%. Please see the water/wastewater trend analysis included illustrating that when adjustment for expected variations in seasonal consumption, revenues are 9.1% higher than expectations.
- The Authority successfully deployed its new Enterprise Resource Planning (ERP) or financial system on January 1, 2022 and will present a summary of this process at today's meeting. The team continues to work with the consultant in variety of areas including financial reporting and other information that is included within the financial consent agenda. Please note changes to the January check register included near the end of this agenda item. The new system automatically produces a simplified, streamlined check register that we believe is an improvement and provides information in a format that we hope enhances your review of Authority disbursements. We appreciate any feedback and will work to incorporate requests in the future. As the system and our internal processes continue to stabilize, we look forward to reviewing other available information or formats of presentation the Board may find helpful.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

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
January 31, 2022

ASSETS

Cash and cash equivalents	\$ 8,070,185
Accounts receivable	4,617,495
Investments	43,200,613
Capital assets: (net of accumulated depreciation)	174,521,313
Inventory	496,939
Prepays	46,805
Cash and cash equivalents, restricted	<u>414,057</u>
Total assets	<u>231,367,407</u>

DEFERRED OUTFLOWS OF RESOURCES

Combined deferred outflows of resources	<u>1,856,772</u>
---	------------------

LIABILITIES

Accounts payable	2,110,777
Accrued liabilities	524,022
Compensated absences	693,271
Net pension liability	3,659,743
Other post-employment benefits	1,448,953
Unearned connection fees	1,671,973
Long-term debt	<u>5,142,353</u>
Total liabilities	<u>15,251,092</u>

DEFERRED INFLOWS OF RESOURCES

Combined deferred inflows of resources	<u>584,136</u>
--	----------------

NET POSITION

217,388,951

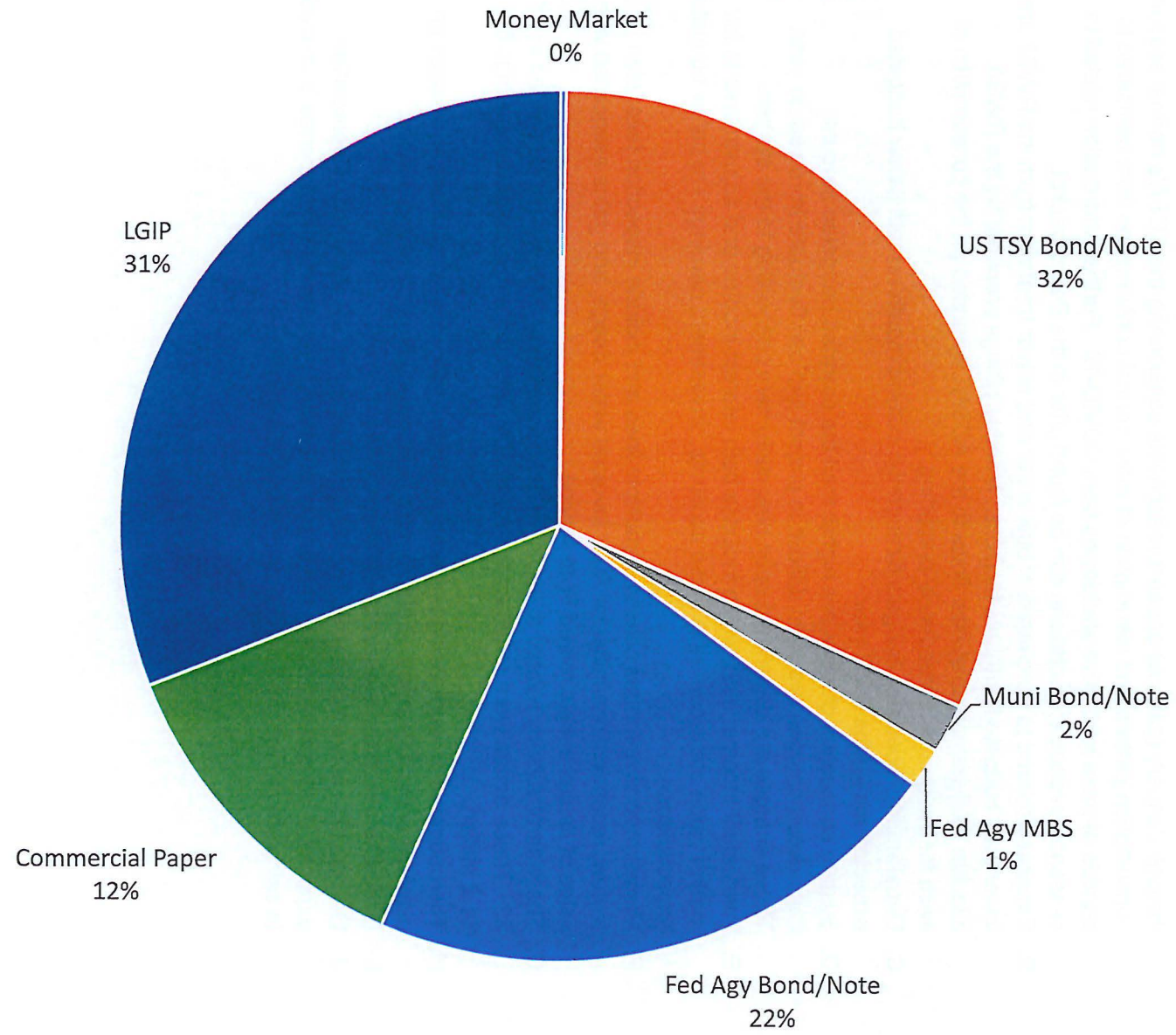
ALBEMARLE COUNTY SERVICE AUTHORITY
For the Six Months Ending Tuesday, January 31, 2022

	Budget FY 2022	Budget Year-to-Date 2022	January Actual Year-to-Date	Actual vs. Budget	Variance Percentage
Revenues					
Water Sales	16,543,400.	9,650,317.	10,919,477.	1,269,160.	13.15%
Sewer Service	14,034,800.	8,186,967.	9,201,415.	1,014,448.	12.39%
Total operating revenues	30,578,200.	17,837,283.	20,120,892.	2,283,609.	12.80% A
Operating Expenses					
Purchase of bulk water	(12,450,600.)	(7,262,850.)	(7,323,691.)	(60,841.)	0.84% B
Purchase of sewer treatment	(9,685,800.)	(5,650,050.)	(5,483,902.)	166,148.	(2.94%) B
Administration	(1,253,400.)	(731,150.)	(609,542.)	121,608.	(16.63%) C
Finance	(2,243,574.)	(1,308,752.)	(1,224,507.)	84,245.	(6.44%) C
Information Technology	(1,162,387.)	(678,059.)	(637,431.)	40,628.	(5.99%) C
Engineering	(2,107,300.)	(1,229,258.)	(1,111,208.)	118,050.	(9.60%) C
Maintenance	(4,018,540.)	(2,344,148.)	(1,832,131.)	512,017.	(21.84%) C
Total operating expenses	(32,921,601.)	(19,204,267.)	(18,222,412.)	981,855.	(5.11%)
Operating gain(loss)	(2,343,401.)	(1,366,984.)	1,898,480.	3,265,464.	(238.88%)
Nonoperating Revenues					
System connection charges	7,000,000.	4,083,333.	4,892,445.	809,112.	19.81% D
Investment/Interest Income	200,000.	116,667.	(223,315.)	(339,982.)	(291.41%) E
Rental income	16,000.	9,333.	8,514.	(819.)	(8.78%)
Miscellaneous revenues	455,000.	265,417.	429,487.	164,070.	61.82% F
Federal subsidy, Build America Bonds	87,000.	50,750.	0.	(50,750.)	(100.00%) G
Total nonoperating revenues (expenses)	7,758,000.	4,525,500.	5,107,131.	581,631.	12.85%
Nonoperating Expenses					
Miscellaneous expenses	(304,179.)	(177,438.)	(338,667.)	(161,229.)	90.87% H
Bond interest charges	(274,436.)	(160,088.)	(317,822.)	(157,734.)	98.53% I
Depreciation	0.	0.	(2,395,703.)	(2,395,703.)	0.00% J
Total nonoperating revenues (expenses)	(578,615.)	(337,525.)	(3,052,192.)	(2,714,667.)	804.29%
Capital contributions	0.	0.	1,474,825.	1,474,825.	0.00%
Change in Net Position	4,835,984.	2,820,991.	5,428,244.	2,607,253.	92.42%

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

- A. Water and sewer revenues exceed budgeted amounts by 12.80%. Consumption through January (gallons) appears reasonable considering the ACSA's normal seasonal consumption pattern and resumption of more normal consumption from compared to periods of more restrictive shutdowns from COVID-19. 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 0.8%. 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(loss), which includes both interest income and adjustments to fair market value are recorded in these accounts. Investment earnings are below budgeted expectations.
- 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 federal subsidy related to the 2010 debt issuance of BAB will not be earned in FY 22. These bonds were refunded in August 2021 yielding a net budgetary savings of \$1.2 million.
- H. The budgeted amount includes expected outlays for capital equipment and losses on disposal of capital assets. Equipment is capitalized when placed in service.
- I. Bond interest charges are recorded as incurred.
- J. 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

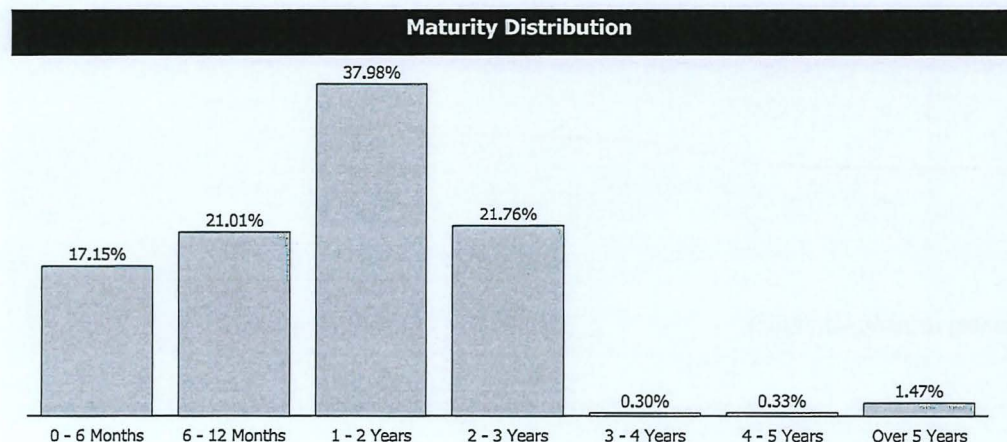
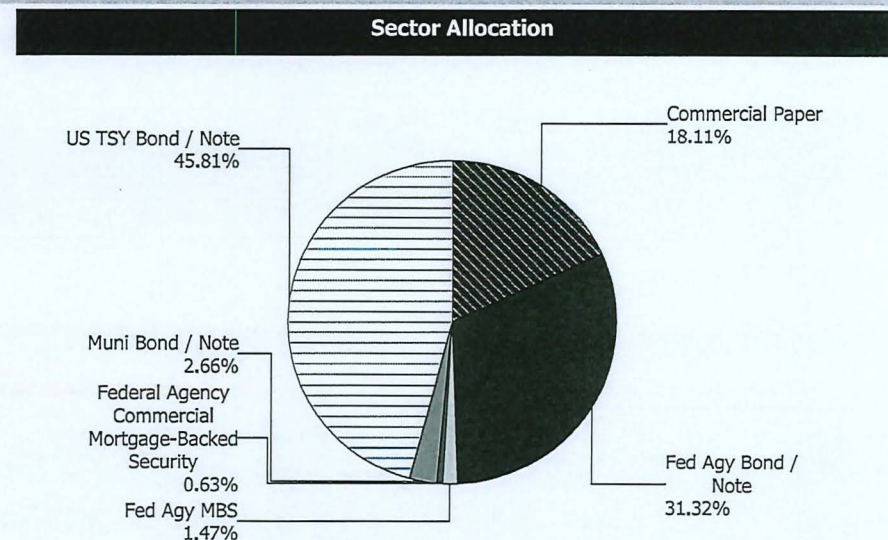


Portfolio Summary and Statistics

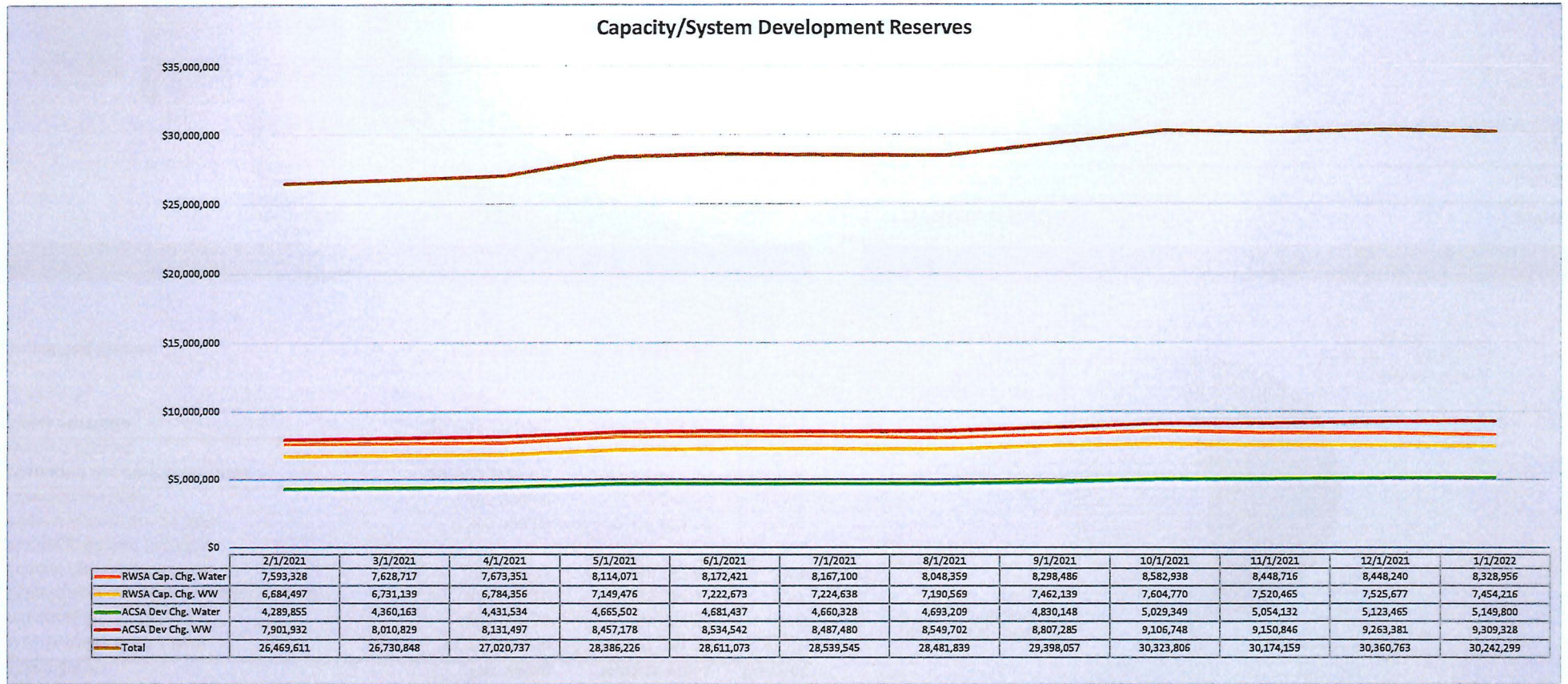
For the Month Ending **January 31, 2022**

ACSA OPERATING FUNDS - 03100100

Account Summary			
Description	Par Value	Market Value	Percent
U.S. Treasury Bond / Note	13,750,000.00	13,621,281.17	45.81
Municipal Bond / Note	800,000.00	791,584.50	2.66
Federal Agency Mortgage-Backed Security	422,323.10	438,674.67	1.47
Federal Agency Commercial Mortgage-Backed Security	191,505.31	186,357.61	0.63
Federal Agency Bond / Note	9,360,000.00	9,316,022.24	31.32
Commercial Paper	5,400,000.00	5,387,041.50	18.11
Managed Account Sub-Total	29,923,828.41	29,740,961.69	100.00%
Accrued Interest		41,761.33	
Total Portfolio	29,923,828.41	29,782,723.02	
Unsettled Trades	600,000.00	596,368.50	



Characteristics	
Yield to Maturity at Cost	0.39%
Yield to Maturity at Market	0.89%
Weighted Average Days to Maturity	541



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
December 2021**

Area	December 2021 Monthly Connection Fees	December 2020 Monthly Connection Fees	\$ Change	% Change
Crozet	\$ 134,700	\$ 107,760	\$ 26,940	25%
Urban	228,990	121,145	107,845	89%
Scottsville	-	-	-	-
Total Connection fees	\$ 363,690	\$ 228,905	\$ 134,785	59%
Through December				
Area	YTD FY 2022 Connection Fees	YTD FY 2021 Connection Fees	\$ Change	% Change
Crozet	\$ 727,380	\$ 1,573,005	\$ (845,625)	-54%
Urban	3,889,100	3,519,060	370,040	11%
Scottsville	-	-	-	-
Total Connection fees	\$ 4,616,480	\$ 5,092,065	\$ (475,585)	-9%

Area	December 2021 ERC's	December 2020 ERC's	Change	% Change
Crozet	10	8	2	25%
Urban	17	10	7	70%
Scottsville	-	-	-	-
Total ERC's	27	18	9	50%
Through December				
Area	YTD FY 2022 ERC's	YTD FY 2021 ERC's	Change	% Change
Crozet	54	117	(63)	-54%
Urban	289	261	28	11%
Scottsville	-	-	-	-
Total ERC's - YTD	343	378	(35)	-9%

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
December 2021**

Area	December 2021 ERC's	December 2020 ERC's	December 2019 ERC's
Crozet	10	8	10
Urban	17	10	26
Scottsville	-	-	-
Total ERC's	27	18	36

Through December			
Area	YTD 2022 ERC's	YTD 2021 ERC's	YTD 2020 ERC's
Crozet	54	117	95
Urban	289	261	331
Scottsville	-	-	1
Total ERC's - YTD	343	378	427

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 2022 appear reasonable considering continued deveopment within the ACSA's service area.

**Albemarle County Service Authority
Consumption Analysis
Fiscal Year 2022**

	FY 2022 Consumption	FY 2021 Consumption		Monthly Precipitation (In.)	
				FY 2022	FY 2021
July	162,247,194	158,247,100	2.53%	2.30	3.94
August	183,549,927	160,498,300	14.36%	4.60	7.90
September	167,986,757	152,817,725	9.93%	5.46	4.90
October	159,438,005	146,675,175	8.70%	5.26	5.90
November	148,641,595	143,888,525	3.30%	1.01	4.84
December	140,551,064	129,490,677	8.54%	0.26	5.70
January		141,920,135	-100.00%		2.37
February		119,808,532	-100.00%		4.51
March		128,124,393	-100.00%		2.13
April		131,020,458	-100.00%		3.24
May		145,813,573	-100.00%		0.81
June		161,128,651	-100.00%		2.80
	962,414,542	1,719,433,244		18.89	49.04
YTD	962,414,542	891,617,502	7.94%	18.89	33.18

Note: Consumption through December 2021 is 7.94% more than the same period in fiscal year 2021. 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)

December 2021

Billed by Area:	Water	Sewer
Crozet	15,854,500	14,699,600
Scottsville	1,361,600	761,300
Urban	123,304,464	109,695,105
Red Hill	30,500	0
Total	140,551,064	125,156,005

Billing by Sewer Plant:	
AWT	124,394,705
less Glenmore	(3,948,800)
Urban Total	120,445,905
Scottsville	761,300
Total	121,207,205

Number of Installed Meters:	
Urban	23
Crozet	12
Scottsville	0
Total	35

Metered Consumption (billed by invoice):

Urban	362,500
Crozet	0
Scottsville	0
Total	362,500

Unmetered Consumption:	
ACSA Fire Flow Consump.	19,890
Total	19,890

Unmetered Leak Consumption:

N/A	-
Total	0

Billed Consumption for Selected Customers

	<u>Water</u>	<u>Sewer</u>		<u>Water</u>	<u>Sewer</u>
*Virginia Land Holding	510,000	510,000	Boar's Head Inn	472,500	417,300
Southwood Mobile Homes	1,807,000	2,716,306	Farmington, Inc.	611,500	419,624
Turtle Creek Apts.	1,330,900	1,330,000	Westgate Apts.	1,161,000	1,160,700
Barracks West Apartments	1,424,300	1,424,300	Abbington Crossing	1,723,000	1,723,000
Monroe Health & Rehab.	770,000	770,000	Four Seasons Apts	1,693,000	1,693,000
Sunrise Senior "Colonnades"	905,000	898,700	Ch'ville/Alb Airport	96,800	97,431
ACRJ	1,341,380	1,303,380	State Farm Insurance	65,540	47,540
Westminster Canterbury	1,199,110	1,139,110	Hyatt @ Stonefield	344,000	344,000
SEMF Charleston	1,629,200	1,629,200	Doubletree	730,000	730,000
Martha Jefferson Hospital	1,440,670	1,134,170	Arden Place Apts	493,700	493,700
Crozet Mobile Home Village	251,400	251,400	Hilton Garden Inn	261,000	261,000
Fashion Square Mall	146,000	146,000	Ridgewood Homes	328,000	n/a
County of Albemarle	1,117,742	995,542	The Lodge @ Old Trail	230,000	230,000
University of Virginia	1,479,470	1,400,900	Gov't-Defense Complex	438,300	438,300
Wegmans	306,000	306,000	Harris Teeter Stores	101,000	101,000

* indicates Industrial Discharge Permit Holders

December 2021

WATER

Class Type	Number of Connections by Area			Total
	<u>Urban</u>	<u>Crozet</u>	<u>Scottsville</u>	
Single-Family Residential	15,473	3,627	196	19,296
Multi-Family Residential	539	43	3	585
Commercial (Offices)	203	12	5	220
Commercial (Other)	908	76	52	1,036
Industrial	36	9	4	49
Institutional	171	31	12	214
Total Water Accounts	17,330	3,798	272	21,400
Plus Multiple Units	12,525	748	89	13,362
Total Water Units	29,855	4,546	361	34,762

SEWER

Class Type	Number of Connections by Area			Total
	<u>Urban</u>	<u>Crozet</u>	<u>Scottsville</u>	
Single-Family Residential	13,167	3,348	158	16,673
Multi-Family Residential	508	41	4	553
Commercial (Offices)	187	12	5	204
Commercial (Other)	704	52	44	800
Industrial	15	5	1	21
Institutional	133	24	10	167
Total Sewer Accounts	14,714	3,482	222	18,418
Plus Multiple Units	12,108	745	56	12,909
Total Sewer Units	26,822	4,227	278	31,327

POPULATION SERVED

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

	<u>Urban</u>	<u>Crozet</u>	<u>Scottsville</u>	<u>Total</u>
Total Water Customers	69,995	10,938	713	81,645
Total Sewer Customers	63,188	10,233	535	73,955

Albemarle County Service Authority
Major Customer Analysis
December 2021 and November 2021

	December 2021		November 2021		Increase(Decrease) Water Consumption	Increase(Decrease) Sewer Usage
	Water*	Sewer*	Water*	Sewer*		
Four Seasons Apts.	1,693,000	1,693,000	1,526,000	1,526,000	10.94%	10.94%
Westgate Apts.	1,161,000	1,160,700	1,088,000	1,088,000	6.71%	6.68%
Turtle Creek Apts.	1,330,900	1,330,000	1,287,200	1,286,000	3.39%	3.42%
Abbingdon Crossing	1,723,000	1,723,000	1,677,400	1,677,400	2.72%	2.72%
Southwood Mobile Homes	1,807,000	2,716,306	1,782,000	3,329,180	1.40%	-18.41%
Old Salem Apts.	1,424,300	1,424,300	1,464,400	1,464,400	-2.74%	-2.74%
Martha Jefferson Hospital	1,440,670	1,134,170	1,505,252	946,252	-4.29%	19.86%
County of Albemarle	1,117,742	995,542	1,286,363	1,143,363	-13.11%	-12.93%
ACRJ	1,341,380	1,303,380	1,568,990	1,411,990	-14.51%	-7.69%
SEMF Charleston	1,629,200	1,629,200	1,940,400	1,940,400	-16.04%	-16.04%
University of Virginia	1,479,470	1,400,900	1,966,069	1,896,400	-24.75%	-26.13%
Westminster Canterbury	1,199,110	1,139,110	1,811,270	1,459,270	-33.80%	-21.94%

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
December 2021 and December 2020**

	December 2021		December 2020		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
County of Albemarle	1,117,742	995,542	450,500	392,100	148.11%	153.90%
Westgate Apts.	1,161,000	1,160,700	920,000	919,800	26.20%	26.19%
Westminster Canterbury	1,199,110	1,139,110	1,138,000	1,097,000	5.37%	3.84%
University of Virginia	1,479,470	1,400,900	1,463,600	1,459,200	1.08%	-4.00%
Martha Jefferson Hospital	1,440,670	1,134,170	1,446,300	1,066,300	-0.39%	6.37%
Four Seasons Apts.	1,693,000	1,693,000	1,713,000	1,713,000	-1.17%	-1.17%
Old Salem Apts.	1,424,300	1,424,300	1,490,300	1,490,300	-4.43%	-4.43%
Abbingtion Crossing	1,723,000	1,723,000	1,824,800	1,824,800	-5.58%	-5.58%
Southwood Mobile Homes	1,807,000	2,716,306	1,973,000	1,672,263	-8.41%	62.43%
ACRJ	1,341,380	1,303,380	1,502,000	1,457,000	-10.69%	-10.54%
SEMF Charleston	1,629,200	1,629,200	1,905,250	1,905,250	-14.49%	-14.49%
Turtle Creek Apts.	1,330,900	1,330,000	2,813,000	2,812,000	-52.69%	-52.70%

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 -- December

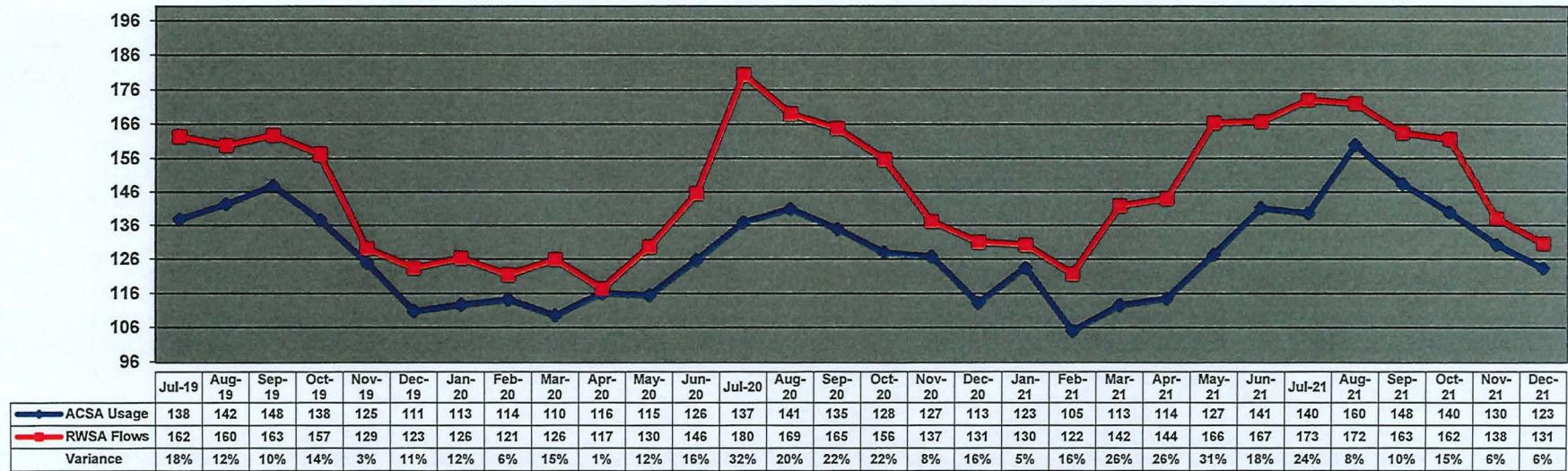
	YTD FY 2022		YTD FY 2021		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
County of Albemarle	9,405,626	7,133,626	6,639,300	4,561,100	41.67%	56.40%
Martha Jefferson Hospital	12,757,033	6,407,933	10,630,600	6,030,800	20.00%	6.25%
Westminster Canterbury	10,588,380	9,016,380	9,244,000	8,739,000	14.54%	3.17%
University of Virginia	15,635,420	15,344,493	13,994,200	13,470,300	11.73%	13.91%
SEMF Charleston	13,323,850	13,323,850	12,510,475	12,510,475	6.50%	6.50%
Westgate Apts.	7,369,000	7,360,000	7,089,000	7,075,800	3.95%	4.02%
Four Seasons Apts.	9,582,000	9,582,000	9,584,000	9,584,000	-0.02%	-0.02%
ACRJ	9,463,190	8,462,190	9,579,000	8,794,000	-1.21%	-3.77%
Abbingdon Crossing	10,539,200	10,539,200	10,964,400	10,964,400	-3.88%	-3.88%
Southwood Mobile Homes	11,677,000	22,361,550	12,450,000	15,936,419	-6.21%	40.32%
Old Salem Apts.	8,724,300	8,724,300	9,941,600	9,941,600	-12.24%	-12.24%
Turtle Creek Apts.	7,631,200	7,624,000	11,273,200	11,266,000	-32.31%	-32.33%

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.

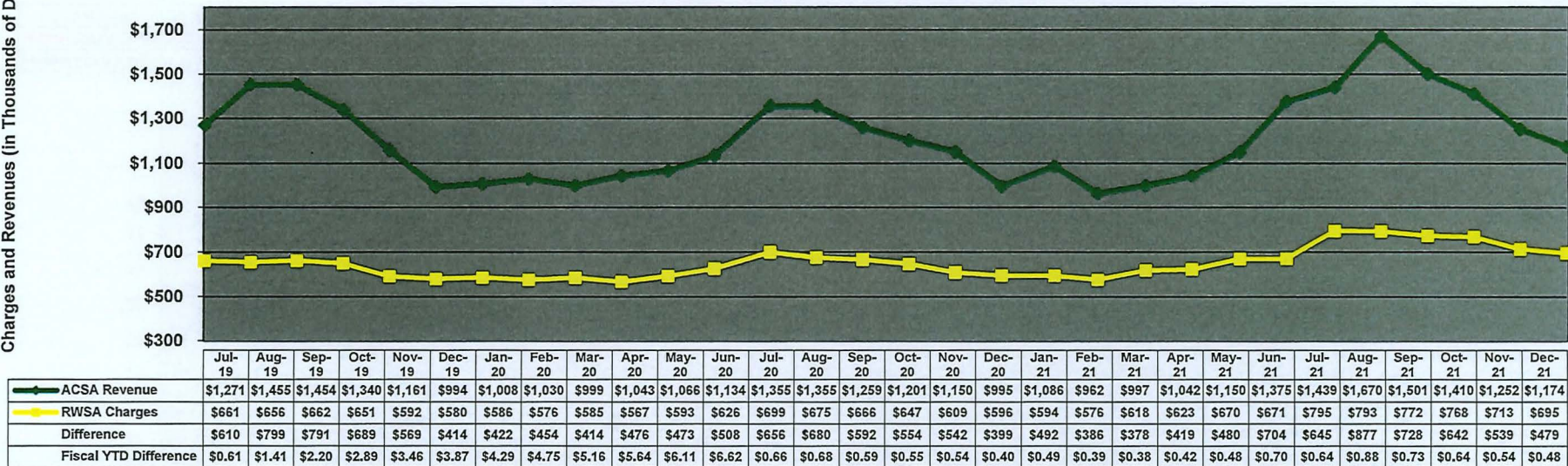
FY 2020, 2021, and 2022 Urban Water Comparison RWSA Flows & ACSA Customer Usage

Flows & Usage (in Millions of Gallons)



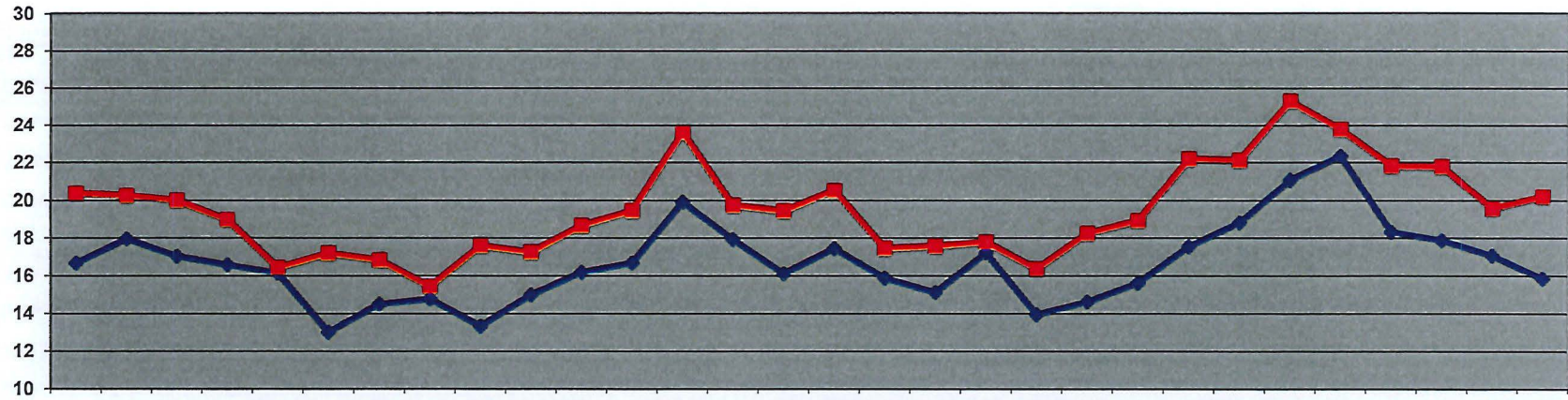
FY 2020, 2019, and 2022 Urban Water Comparison RWSA Billed Water Charges & ACSA Billed Water Revenues

Charges and Revenues (in Thousands of Dollars)



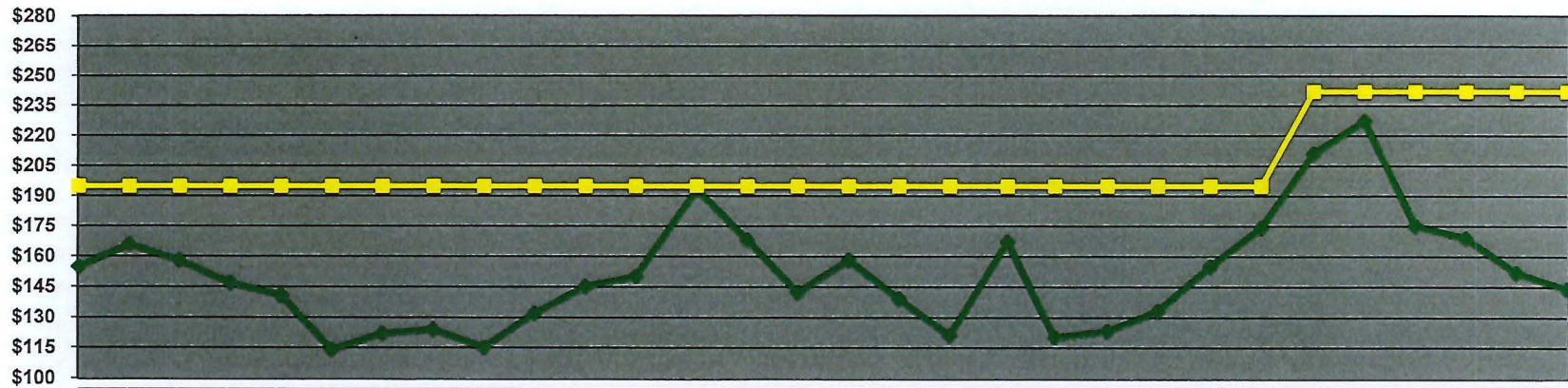
Note: Fiscal YTD Difference (ONLY) in Millions of Dollars

FY 2020, 2021, and 2022 Crozet Water Comparison RWSA Flows & ACSA Customer Usage



	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
ACSA Usage	17	18	17	17	16	13	15	15	13	15	16	17	20	18	16	17	16	15	17	14	15	16	18	19	21	22	18	18	17	16
RWSA Flows	20	20	20	19	16	17	17	15	18	17	19	19	24	20	19	21	17	18	18	16	18	19	22	22	25	24	22	22	20	20
Variance	22%	13%	17%	14%	2%	32%	16%	4%	32%	15%	15%	17%	18%	10%	21%	18%	10%	16%	3%	17%	25%	21%	26%	18%	20%	6%	19%	22%	15%	27%

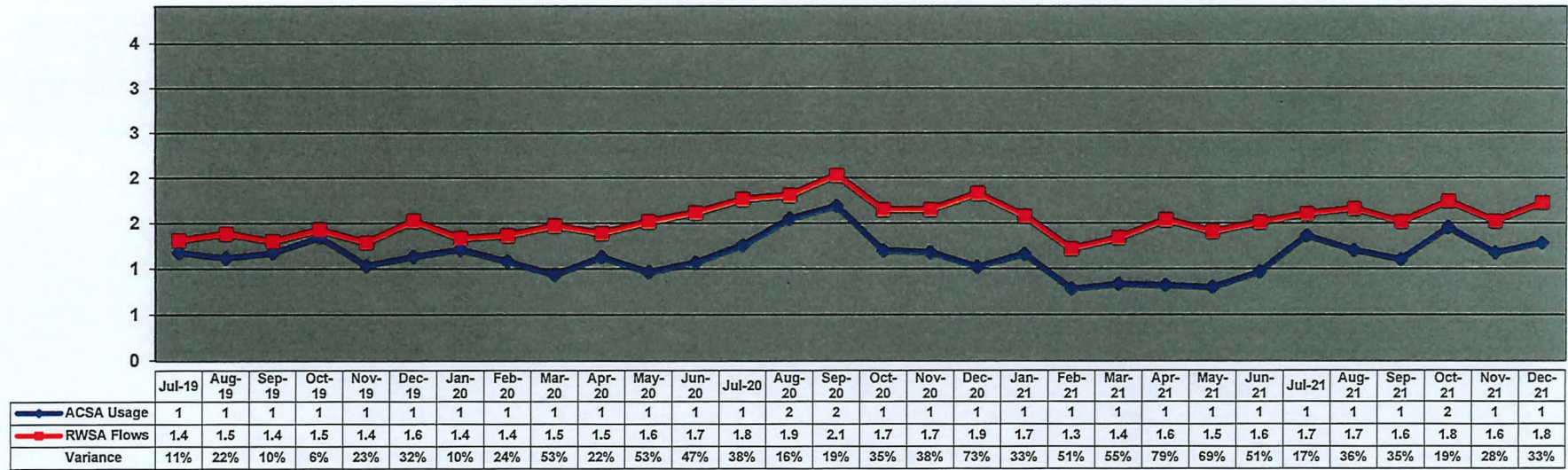
FY 2020, 2021, and 2022 Crozet Water Comparison RWSA Billed Water Charges & ACSA Billed Water Revenues



	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
ACSA Revenue	\$155	\$166	\$158	\$147	\$141	\$114	\$122	\$124	\$115	\$132	\$145	\$150	\$193	\$168	\$142	\$158	\$139	\$121	\$167	\$120	\$123	\$133	\$155	\$174	\$211	\$227	\$175	\$169	\$152	\$144
RWSA Charges	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$195	\$242	\$242	\$242	\$242	\$242	\$242
Difference	(\$40)	(\$29)	(\$37)	(\$48)	(\$54)	(\$81)	(\$73)	(\$71)	(\$80)	(\$63)	(\$50)	(\$45)	(\$2)	(\$27)	(\$53)	(\$37)	(\$56)	(\$74)	(\$28)	(\$75)	(\$72)	(\$62)	(\$40)	(\$21)	(\$31)	(\$15)	(\$67)	(\$73)	(\$90)	(\$98)
Fiscal YTD Difference	-\$0.04	-\$0.07	-\$0.11	-\$0.15	-\$0.21	-\$0.29	-\$0.36	-\$0.43	-\$0.51	-\$0.58	-\$0.63	-\$0.67	\$0.00	-\$0.03	-\$0.05	-\$0.04	-\$0.06	-\$0.07	-\$0.03	-\$0.08	-\$0.07	-\$0.06	-\$0.04	-\$0.02	-\$0.03	-\$0.02	-\$0.07	-\$0.07	-\$0.09	-\$0.10

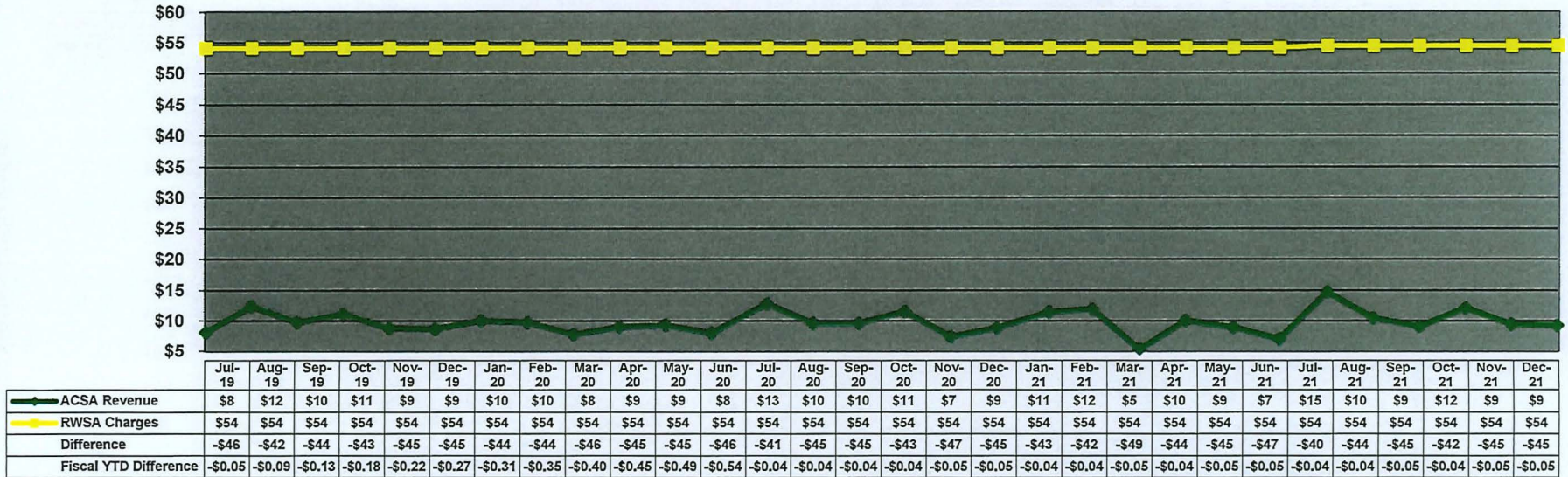
FY 2020, 2021, and 2022 Scottsville Water Comparison RWSA Flows & ACSA Customer Usage

Flows & Usage (in Millions of Gallons)



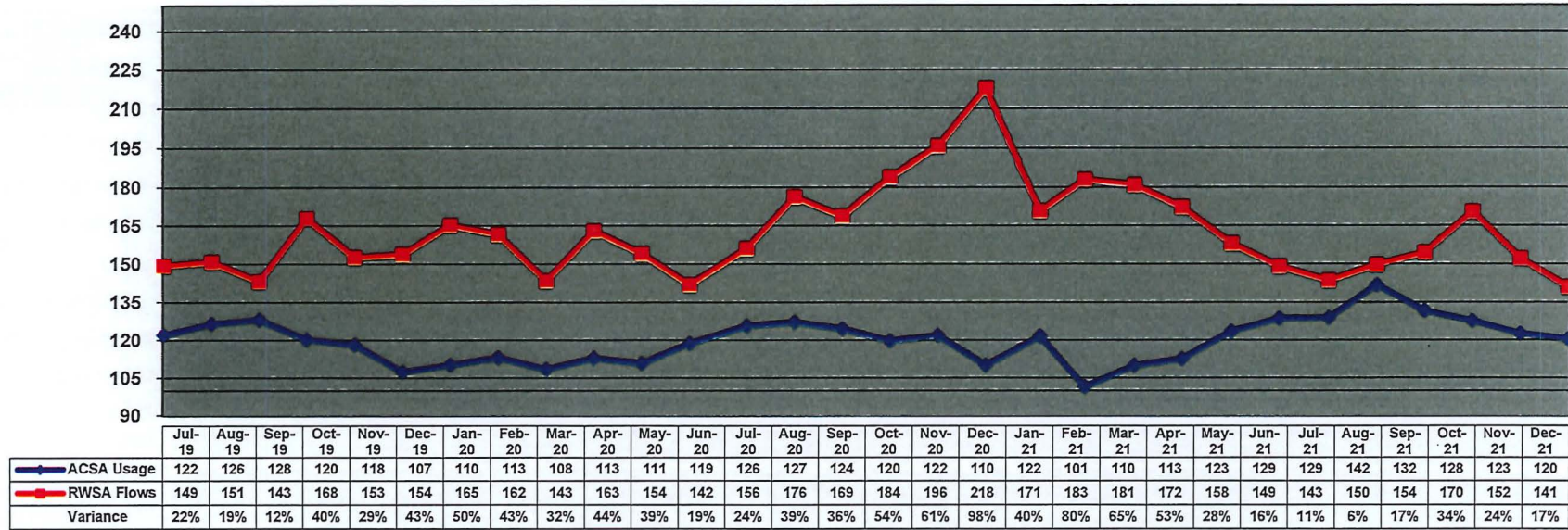
FY 2020, 2021, and 2022 Scottsville Water Comparison RWSA Billed Water Charges & ACSA Billed Water Revenues

Charges and Revenues (in Thousands of Dollars)



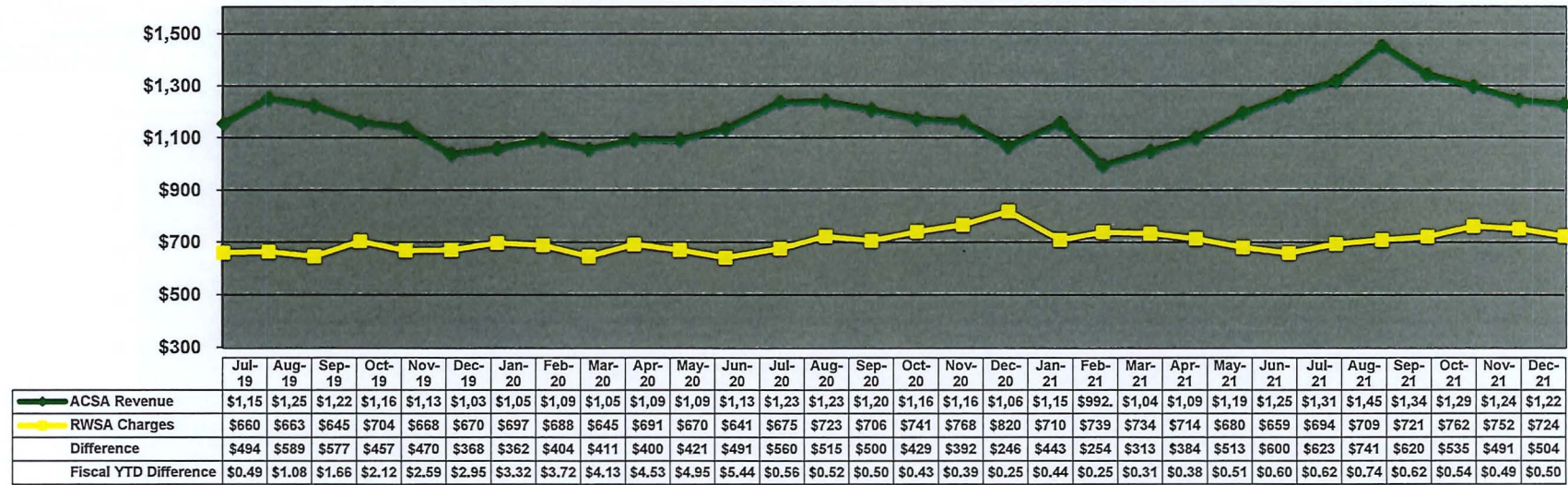
**FY 2020, 2021, and 2022 Urban (including Glenmore) & Crozet Sewer Comparison
ACSA Customer Usage & RWSA Flows**

Usage & Flows (in Millions of Gallons)



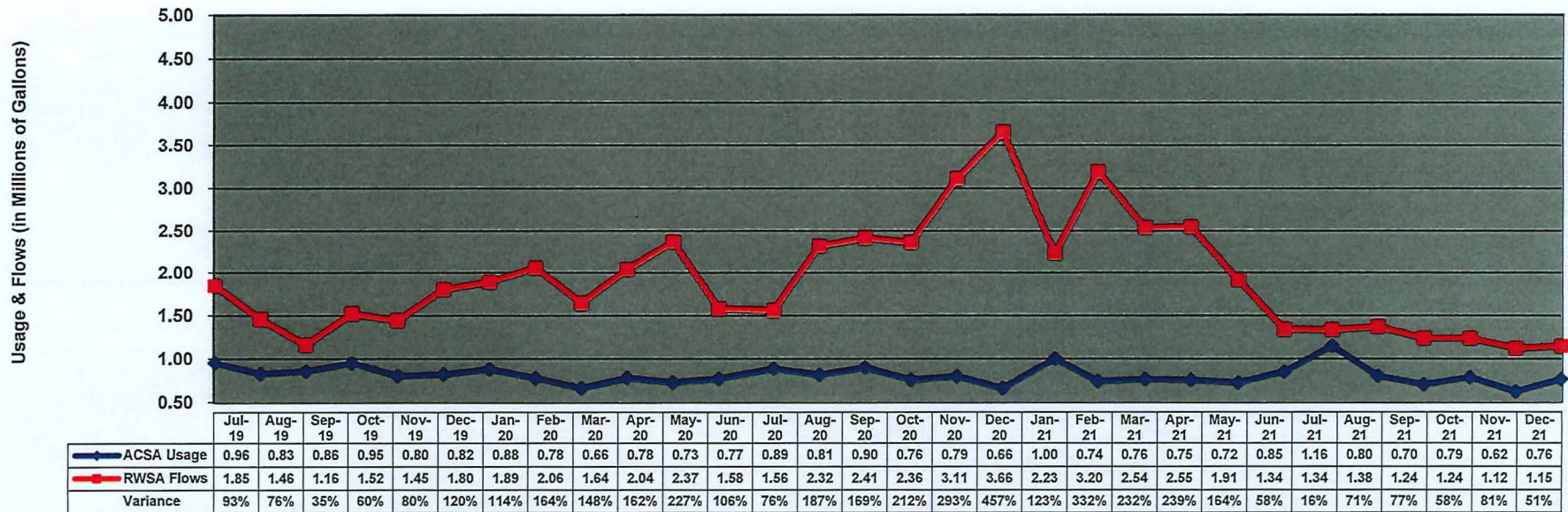
**FY 2020, 2021, and 2022 Urban (including Glenmore) & Crozet Sewer Comparison
ACSA Billed Sewer Usage & RWSA Billed Sewer Charges**

Charges & Revenues (in Thousands of Dollars)

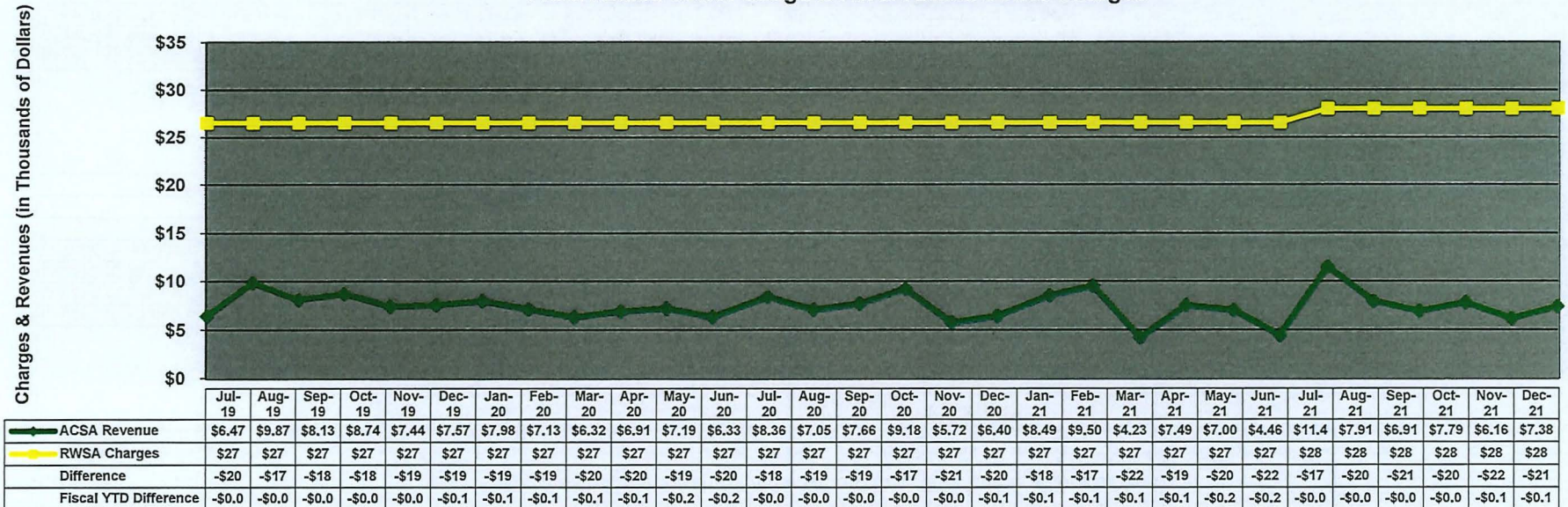


Note: Fiscal YTD Difference (ONLY) in Millions of Dollars

FY 2020, 2021, and 2022 Scottsville Sewer Comparison ACSA Customer Usage & RWSA Flows



FY 2020, 2021, and 2022 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 2020											
	July	August	September	October	November	December	January	February	March	April	May	June
Level 1 (0 - 3,000 gallons)	42,713,300	43,137,333	43,334,400	43,096,780	42,936,430	42,119,430	42,703,630	42,241,370	41,816,500	44,763,900	44,866,800	45,270,400
Level 2 (3,001 - 6,000 gallons)	15,949,700	16,292,100	16,866,900	16,130,400	14,335,400	12,178,000	13,878,000	12,751,500	11,702,100	17,979,400	18,259,500	19,520,800
Level 3 (6,001 - 9,000 gallons)	4,810,200	5,067,100	5,227,300	5,376,600	3,511,800	2,062,800	2,654,300	2,244,300	1,845,500	4,227,900	4,419,500	5,469,300
Level 4 (over 9,000 gallons)	7,075,500	7,794,200	8,297,500	8,434,400	3,764,200	1,254,000	1,733,000	1,154,300	2,152,500	1,849,800	2,662,900	3,968,100
Total	70,548,700	72,290,733	73,726,100	73,038,180	64,547,830	57,614,230	60,968,930	58,391,470	57,516,600	68,821,000	70,208,700	74,228,600

	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

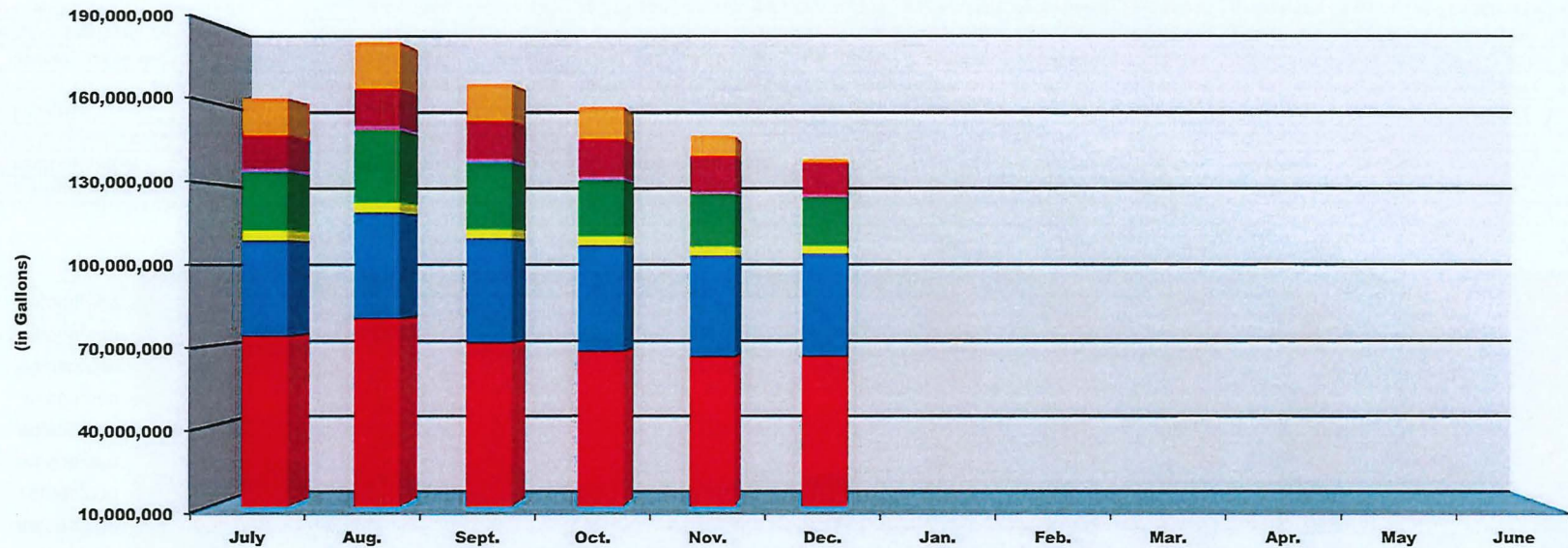
	FY 2022											
	July	August	September	October	November	December	January	February	March	April	May	June
Level 1 (0 - 3,000 gallons)	45,715,768	46,650,649	45,763,766	45,032,204	45,171,862	45,419,967						
Level 2 (3,001 - 6,000 gallons)	18,273,794	20,170,499	17,049,266	15,725,032	15,151,382	14,875,487						
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						
Level 4 (over 9,000 gallons)	8,544,212	14,373,474	7,815,394	7,173,929	4,280,811	2,811,464						
Total	78,657,214	88,634,512	75,729,236	72,548,592	68,412,866	66,103,699	-	-	-	-	-	-

System-Wide Irrigation Water Usage

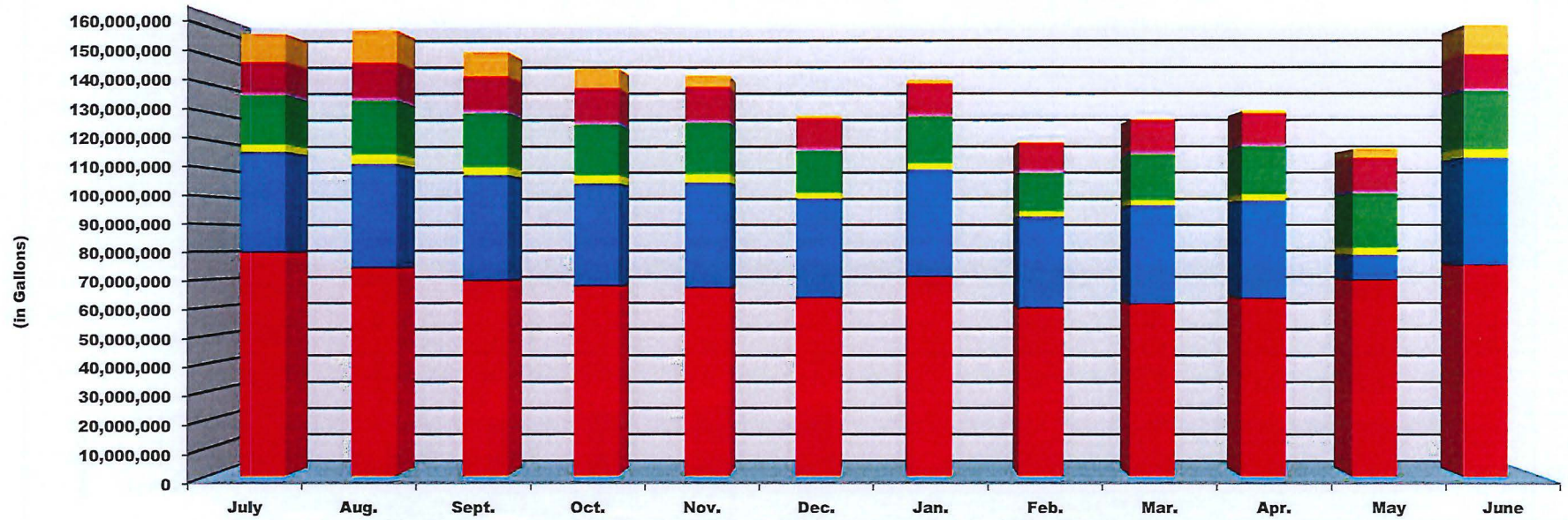
(All usage measured through exclusion, irrigation, and auxiliary meters)

FY 2022	July	August	September	October	November	December	January	February	March	April	May	June
Level 1 (0 - 3,000 gallons)	227,735	245,814	228,478	203,450	155,121	17,400						
Level 2 (3,001 - 6,000 gallons)	962,522	1,040,603	904,153	849,482	602,101	69,638						
Level 3 (6,001 - 9,000 gallons)	1,134,487	1,351,889	1,085,629	1,060,900	690,400	56,305						
Level 4 (over 9,000 gallons)	11,756,763	15,108,350	11,413,176	9,936,698	5,645,695	1,263,435						
Total	14,081,507	17,746,655	13,631,436	12,050,529	7,093,317	1,406,778	-	-	-	-	-	-

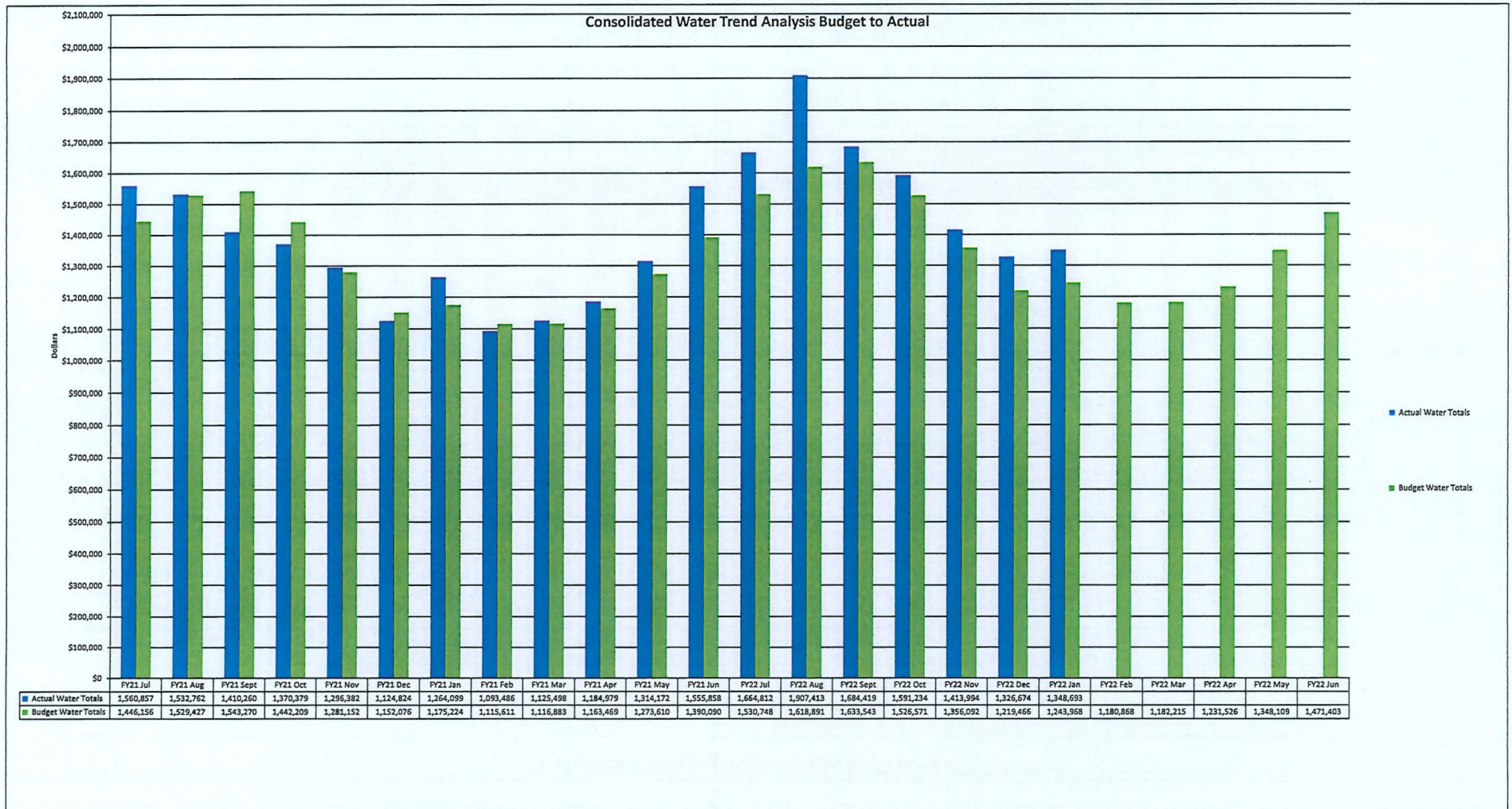
Monthly Water Consumption Fiscal Year 2022

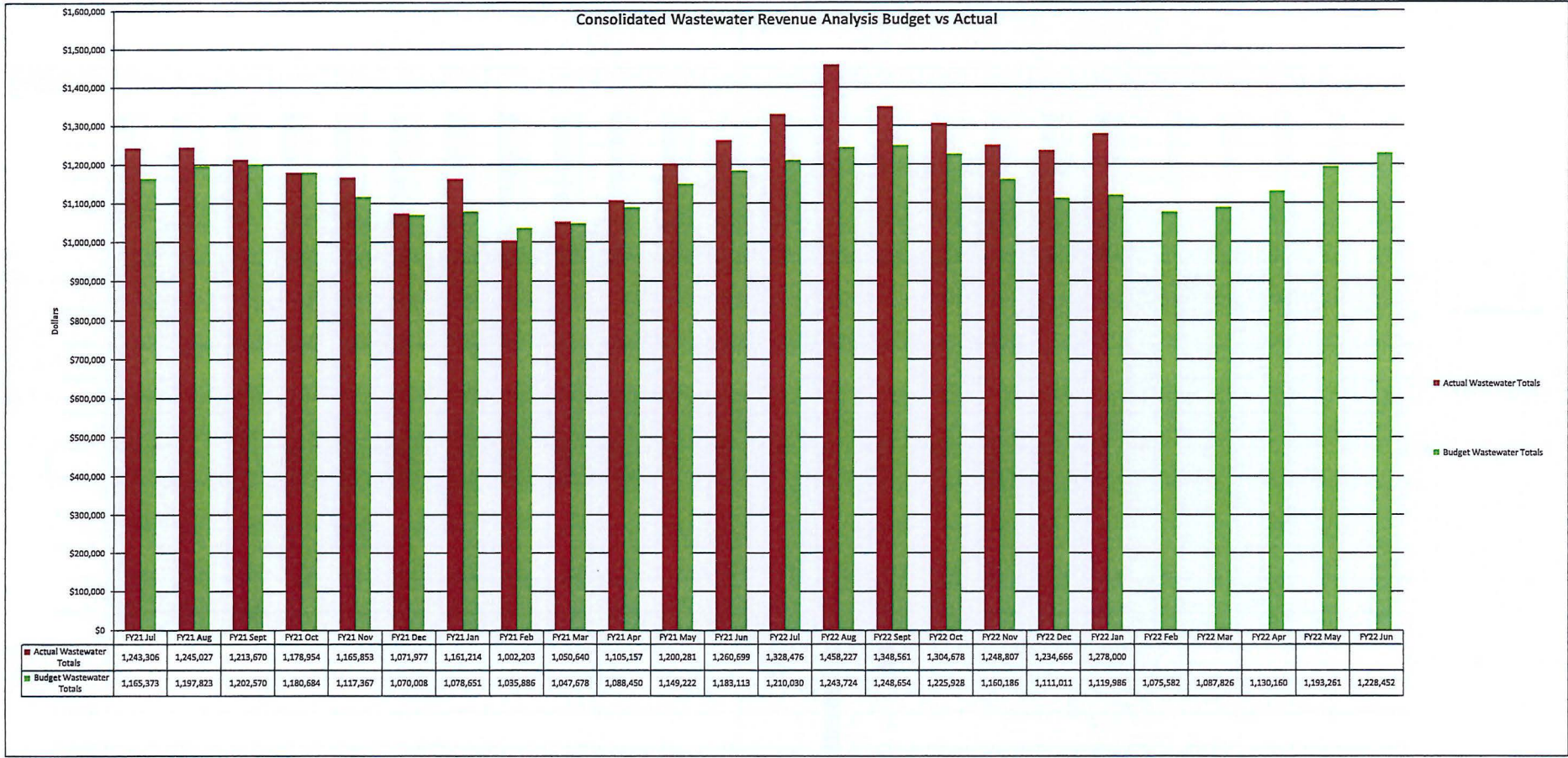


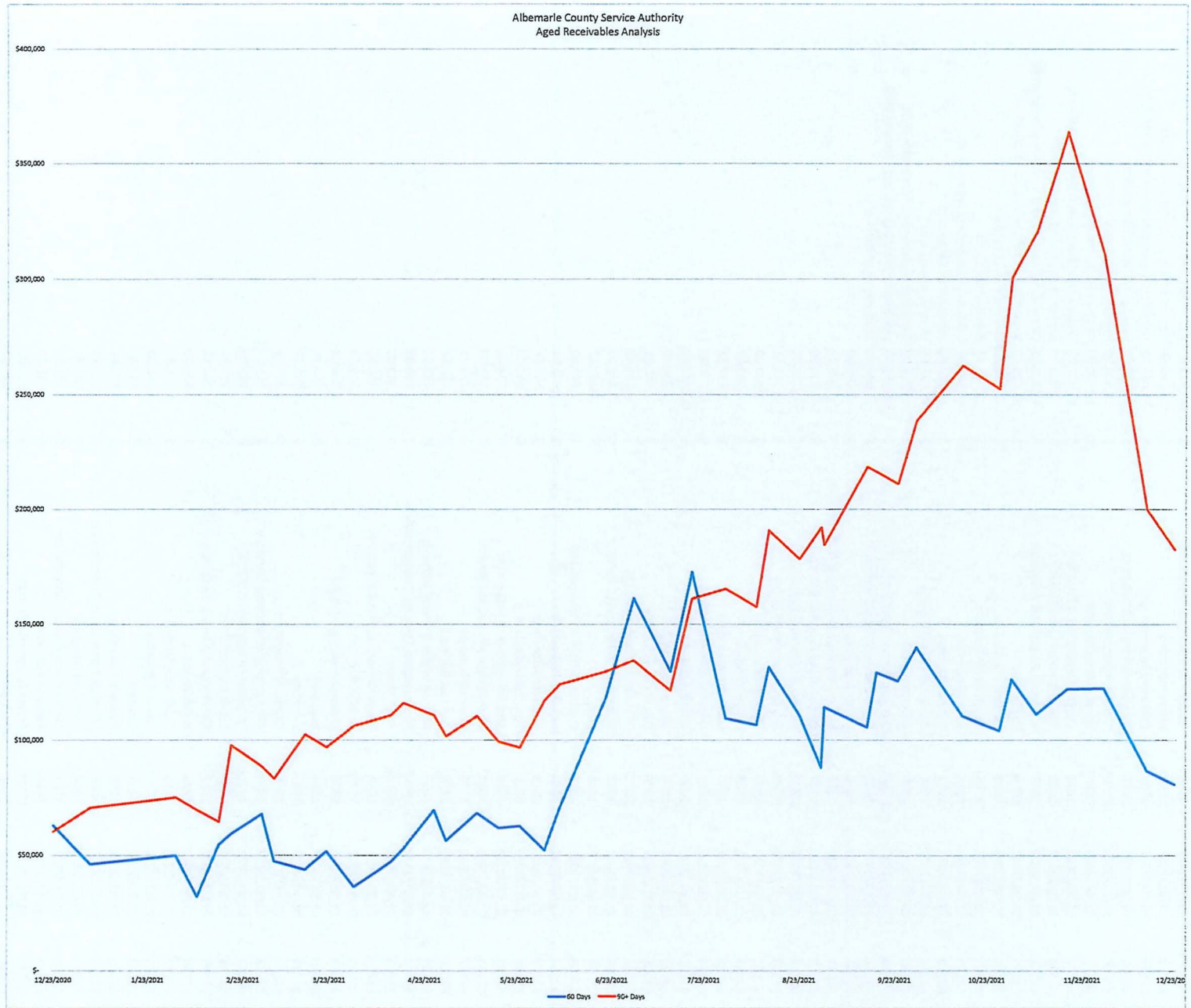
Monthly Water Consumption Fiscal Year 2021



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	6.43%	7.32%	5.75%	5.06%	2.94%	0.85%	0.99%	0.38%	0.35%	0.69%	2.81%	6.44%
Total Irrigation	10,119,091	11,616,375	8,666,494	7,348,137	4,183,034	1,083,884	1,388,900	448,272	442,048	894,200	3,277,869	10,315,679
Institutional - Domestic Consumption	10,568,409	12,140,425	11,678,506	11,592,763	11,532,166	10,326,116	10,458,000	9,512,728	11,284,152	10,850,000	11,623,430	11,941,286
Industrial	886,300	1,008,000	998,100	964,600	959,200	898,200	866,700	1,017,500	887,700	842,500	942,247	919,754
Comm. (Other) - Domestic Consumption	17,206,900	18,949,400	18,962,000	17,753,400	17,829,600	14,671,800	16,424,700	13,374,600	15,838,400	16,733,200	19,222,088	20,173,174
Offices - Domestic Consumption	2,911,400	3,649,600	3,121,500	3,109,800	3,273,900	2,403,400	2,476,900	2,068,300	2,213,000	2,563,700	2,911,328	3,450,136
MFR - Domestic Consumption	36,132,000	37,252,500	37,977,025	37,009,175	37,967,925	35,675,750	38,491,150	32,947,050	35,512,025	35,090,050	8,922,190	38,394,860
SFR - Domestic Consumption	79,627,400	74,038,200	69,379,800	67,387,100	66,738,600	63,181,700	70,731,000	59,544,933	61,021,500	63,113,371	69,645,238	75,023,673







Albemarle County Service Authority
January 2022 Check Registers

CHECK NUMBER	CHECK DATE	VENDOR NUMBER	VENDOR NAME	Check Amount	Description of Payment (Payments over \$5,000)
Wire	01/10/2022	1016	Rivanna Water & Sewer Authority	\$ 1,743,519.60	Bulk Water and Sewer Treatment
62192	01/31/2022	12350	Metra Industries	\$ 375,880.88	Hessian Hills Project - December 2021
62113	01/14/2022	2503	Dewberry Engineers Inc	\$ 51,049.00	Barracks West Project - period thru 11/26/2021
62196	01/31/2022	13307	NewGen Strategies & Solutions	\$ 18,285.00	Rate Study Desing/Consultation
62096	01/11/2022	13310	Frank & Associates Inc	\$ 17,500.00	Pay Plan Study, interim payment
62155	01/14/2022	13310	Frank & Associates Inc	\$ 17,500.00	Pay Plan Study, interim payment
62220	01/31/2022	1024	Virginia Department of Health	\$ 15,903.00	Waterworks Operations Fee-third installment
62130	01/14/2022	1013	Michael Baker International Inc	\$ 12,280.50	Airport Trunk, Crozet & Hessian Hills
62151	01/14/2022	1006	Whitman, Requaardt & Associates	\$ 11,903.16	Office HVAC, Scottsville & SCADA Implementation
62199	01/31/2022	12774	Paymentus	\$ 10,816.40	Electronic payment processing charges
62185	01/31/2022	1061	LB Water Service Inc	\$ 10,363.25	Inventory - meter boxes
62202	01/31/2022	2705	Quarles Petroleum Inc	\$ 9,062.42	Fuel for operations
62101	01/14/2022	1014	Bank of America	\$ 6,889.09	Software, membership renewals, etc.
62148	01/14/2022	1032	Verizon Wireless	\$ 6,679.00	Monthly cellular service
62115	01/14/2022	1019	Dominion Energy Virginia	\$ 5,871.64	Monthly energy cost
62135	01/14/2022	7070	Provantage, LLC	\$ 5,750.00	Computer replacements for Finance Dept.
62213	01/31/2022	12635	Synigent Technologies Inc	\$ 5,160.00	Monthly IT consulting services - January 2022
62118	01/14/2022	1045	Evoqua Water Technologies LLC	\$ 5,080.14	1521 gallons of bioxide
62201	01/31/2022	7070	Provantage, LLC	\$ 4,150.00	
62141	01/14/2022	1026	St John, Bowling, Lawrence & Quagliana LLP	\$ 4,040.00	
62169	01/31/2022	1127	Consolidated Pipe & Supply Co Inc	\$ 3,870.00	
62175	01/31/2022	10685	Eds Floor Care Services LLC	\$ 3,703.33	
62225	01/31/2022	10685	Eds Floor Care Services LLC	\$ 3,703.33	
62150	01/14/2022	8524	Michael Sean McGill	\$ 3,500.00	
62132	01/14/2022	1189	Office Depot Inc	\$ 3,395.07	
62218	01/31/2022	1034	UniFirst Corporation	\$ 3,137.12	
62174	01/31/2022	1019	Dominion Energy Virginia	\$ 3,074.89	
62108	01/14/2022	1009	Core & Main LP	\$ 3,052.60	
62125	01/14/2022	1038	Lowe's Companies Inc	\$ 2,974.39	
62105	01/14/2022	1086	City of Charlottesville	\$ 2,972.63	
62133	01/14/2022	11720	PFM Asset Management LLC	\$ 2,885.85	
62176	01/31/2022	1021	Ferguson Enterprises LLC #1300	\$ 2,471.69	
62171	01/31/2022	1046	Cues	\$ 2,457.22	
62203	01/31/2022	4827	Quarles Petroleum Incorporated	\$ 2,082.10	
62154	01/14/2022	1058	County of Albemarle	\$ 1,953.59	
62172	01/31/2022	1113	Culpeper Auto Parts	\$ 1,698.94	
62143	01/14/2022	1015	Tyler Technologies Inc	\$ 1,650.00	
62193	01/31/2022	1013	Michael Baker International Inc	\$ 1,638.00	
62149	01/14/2022	1062	Virginia Utility Protection Service	\$ 1,545.60	
62107	01/14/2022	1258	Comcast Business	\$ 1,422.71	
62168	01/31/2022	1258	Comcast Business	\$ 1,420.52	
62138	01/14/2022	1016	Rivanna Water & Sewer Authority	\$ 1,412.00	
62208	01/31/2022	10884	Servicemaster Cleaning Charlottesville	\$ 1,400.00	
62189	01/31/2022	13330	Keith Mann	\$ 1,350.00	
62204	01/31/2022	1042	Rappahannock Electric Cooperative	\$ 1,256.55	
62120	01/14/2022	1078	Fortiline Inc	\$ 1,245.00	
62187	01/31/2022	1036	Mailing Services of Virginia	\$ 1,056.00	
62230	01/31/2022	8103	Guardian	\$ 899.18	
62240	01/31/2022	8103	Guardian	\$ 855.08	
62163	01/31/2022	1049	Campbell Equipment	\$ 839.96	
62243	01/31/2022	1079	Minnesota Life Insurance Company	\$ 808.62	
62119	01/14/2022	1021	Ferguson Enterprises LLC #1300	\$ 798.10	
62145	01/14/2022	1034	UniFirst Corporation	\$ 786.69	
62233	01/31/2022	1079	Minnesota Life Insurance Company	\$ 734.80	
62179	01/31/2022	4796	Hydraflo, Inc.	\$ 675.00	
62142	01/14/2022	1116	Super Shoe Stores Inc	\$ 654.43	
62210	01/31/2022	8114	Siemens Industry Inc	\$ 650.00	
62167	01/31/2022	1259	Comcast	\$ 632.37	
62156	01/31/2022	1088	Advance Auto Parts	\$ 602.81	
62211	01/31/2022	1066	Specialty Fasteners of Charlottesville	\$ 581.76	
62215	01/31/2022	1084	Tiger Fuel Company	\$ 544.79	
62129	01/14/2022	1109	Mayer Electric Supply Company Inc	\$ 521.67	
62097	01/14/2022	1088	Advance Auto Parts	\$ 516.87	
62170	01/31/2022	11105	Crown Communication LLC	\$ 515.00	
62219	01/31/2022	1161	VACORP	\$ 480.02	
62116	01/14/2022	13317	Ennas Technology Systems Integration Inc	\$ 480.00	
62127	01/14/2022	1036	Mailing Services of Virginia	\$ 478.20	
62177	01/31/2022	1183	Fisher Auto Parts Inc	\$ 475.72	
62212	01/31/2022	1094	The Supply Room Companies Inc	\$ 455.89	

62134	01/14/2022	1171	Pitney Bowes Global Financial Services LLC	\$	441.60
62152	01/14/2022	1030	Treasurer of Virginia	\$	430.90
62246	01/31/2022	1030	Treasurer of Virginia	\$	430.90
62131	01/14/2022	1122	Moore's Electrical & Mechanical Construction Inc	\$	426.25
62161	01/31/2022	1092	Appalachian Power	\$	394.98
62166	01/31/2022	1281	Colonial Auto Center	\$	387.41
62157	01/31/2022	1188	Advantage Office Systems	\$	367.98
62111	01/14/2022	1046	Cues	\$	365.70
62232	01/31/2022	8472	Herbert Beskin Trustee	\$	334.50
62242	01/31/2022	8472	Herbert Beskin Trustee	\$	334.50
62206	01/31/2022	1151	Rivanna Solid Waste Authority	\$	320.00
62226	01/31/2022	1448	ACAC	\$	312.00
62236	01/31/2022	1448	ACAC	\$	312.00
62221	01/31/2022	1119	VoiceLink Communications	\$	306.39
62144	01/14/2022	10736	U S Bank	\$	304.09
62121	01/14/2022	8288	Hathaway	\$	303.35
62122	01/14/2022	1526	James M. Cox Company, Inc.	\$	303.00
62126	01/14/2022	1047	Luck Stone Corporation	\$	302.91
62112	01/14/2022	13314	Delano Erwin	\$	300.00
62205	01/31/2022	1110	Ricoh USA Inc	\$	275.00
62224	01/31/2022	2671	Xylem Dewatering Solutions, Inc.	\$	246.52
62110	01/14/2022	1058	County of Albemarle	\$	229.79
62234	01/31/2022	8185	Piedmont Family YMCA	\$	203.85
62117	01/14/2022	13316	Ernest and Terri Pugh	\$	200.00
62136	01/14/2022	13315	Rebecca A. Hutton Campbell	\$	200.00
62214	01/31/2022	1400	Thomas, Julian D.	\$	200.00
62137	01/14/2022	10281	Red Wing Business Advantage Account	\$	199.74
62106	01/14/2022	1259	Comcast	\$	189.85
62165	01/31/2022	1086	City of Charlottesville	\$	178.83
62222	01/31/2022	1196	Water Environment Federation	\$	165.00
62180	01/31/2022	4754	James River Communications Inc	\$	159.00
62159	01/31/2022	1215	Always Batteries Inc	\$	157.56
62139	01/14/2022	1073	Safeware Inc	\$	153.00
62153	01/14/2022	1070	Virginia Department	\$	150.00
62247	01/31/2022	1070	Virginia Department	\$	150.00
62124	01/14/2022	1280	Phillip Weatherly/LD&B Insurance Agency Inc	\$	144.15
62098	01/14/2022	12261	American Pest	\$	142.60
62160	01/31/2022	12261	American Pest	\$	142.60
62194	01/31/2022	1202	Miller's Supplies at Work	\$	139.85
62244	01/31/2022	8185	Piedmont Family YMCA	\$	132.75
62235	01/31/2022	1257	Snap Fitness	\$	119.88
62245	01/31/2022	1257	Snap Fitness	\$	119.88
62200	01/31/2022	1260	Ferguson Enterprises LLC #3326	\$	118.00
62216	01/31/2022	8862	Timmons Group, Inc.	\$	112.50
62184	01/31/2022	13328	K. Wayne & Joan Kirby	\$	100.00
62198	01/31/2022	13329	Mark Passarella	\$	100.00
62207	01/31/2022	13347	Hendra Sanusi	\$	100.00
62223	01/31/2022	13331	Wayne Willis	\$	100.00
62147	01/14/2022	1457	USABlueBook	\$	91.28
62123	01/14/2022	1097	Jim Price Chevrolet	\$	91.05
62158	01/31/2022	1243	Aireco Supply Inc	\$	88.95
62100	01/14/2022	1089	Bailey Printing Inc	\$	85.00
62209	01/31/2022	2606	Shade Equipment Company, Inc.	\$	80.00
62178	01/31/2022	1082	Gingerich Outdoor Power Specialist	\$	74.85
62114	01/14/2022	10620	Document Destruction of Virginia, LLC	\$	69.95
62190	01/31/2022	1186	Mansfield Oil Company	\$	67.46
62140	01/14/2022	1250	Southern States	\$	64.99
62197	01/31/2022	1189	Office Depot Inc	\$	62.44
62195	01/31/2022	1298	Morrison, Alexander J	\$	56.91
62103	01/14/2022	5119	Central Virginia Electric Cooperative	\$	56.73
62188	01/31/2022	1037	Malloy Ford	\$	54.40
62217	01/31/2022	7074	Troy Thomas	\$	53.02
62164	01/31/2022	6876	City Electric Supply	\$	42.12
62128	01/14/2022	1186	Mansfield Oil Company	\$	41.24
62146	01/14/2022	1102	University Tire & Auto Center Inc	\$	41.00
62229	01/31/2022	7900	Anytime Fitness - Zion VA	\$	40.00
62239	01/31/2022	7900	Anytime Fitness - Zion VA	\$	40.00
62181	01/31/2022	1194	MyFleetCenter.com	\$	39.04
62231	01/31/2022	6658	The Gym	\$	32.50
62241	01/31/2022	6658	The Gym	\$	32.50
62104	01/14/2022	1086	City of Charlottesville	\$	30.91
62102	01/14/2022	1131	Central Battery Specialist	\$	29.91
62099	01/14/2022	1282	Cooperative Financial Solutions	\$	27.98
62182	01/31/2022	1097	Jim Price Chevrolet	\$	20.00

62227	01/31/2022	1256	Anytime Fitness	\$	20.00
62228	01/31/2022	2761	Anytime Fitness	\$	20.00
62237	01/31/2022	1256	Anytime Fitness	\$	20.00
62238	01/31/2022	2761	Anytime Fitness	\$	20.00
62191	01/31/2022	1512	Martin Hardware Company	\$	18.16
62186	01/31/2022	1280	Phillip Weatherly/LD&B Insurance Agency Inc	\$	15.00
62109	01/14/2022	1058	County of Albemarle	\$	6.81
62173	01/31/2022	1214	DexYP	\$	6.50
62183	01/31/2022	1274	John Deere Financial	\$	5.57
62162	01/31/2022	1252	AutoZone Inc	\$	4.09

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: FY 2022 Capital Improvement Program (CIP)	AGENDA DATE: February 17, 2022
STAFF CONTACT(S)/PREPARER: Peter C. Gorham, P.E., Director of Engineering	CONSENT AGENDA:
	ACTION: ■ INFORMATION: ■
	ATTACHMENTS: 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 nine 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
February 2022

a) Risk Assessment Improvements Phase 1 (Account Code 1621-100):

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2022
Total Budget:	\$1,476,050
Appropriated Funds:	\$518,898

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 the next two to three fiscal years based upon priority.

2/8/2022: The installation of the 360 degree security camera and the final work on the pedestrian gates card swipe mechanisms have been rescheduled for the week of February 7, 2022. ACSA staff are investigating spring-loaded closure hardware to install on the pedestrian gates.

b) Energy Audit (Account Code 1625-100):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Study
Percent Complete:	85%
Contractor:	Unknown
Construction Start:	N/A
Completion:	June 2022 (Study)
Total Budget:	\$300,000

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.

2/8/2022: ACSA staff held a follow-up meeting with Ramboll to discuss the Electric Vehicle (EV) approach for fleet replacement and a final review of the existing fleet data is underway by ACSA staff to clarify remaining questions.

c) Avon Street Maintenance Yard (Account Code 1622-100):

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	60%
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.

2/8/2022: ACSA staff have received initial comments from the County Engineering Department related to the Water Protection Ordinance (WPO) and the Virginia Stormwater Management Plan (VSMP). We anticipate a complete set of responses on the site plan from the County by mid-February.

d) HVAC System Upgrade (Account Code 1619-100):

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	95%
Contractor:	eTEC Mechanical Corporation (eTEC)
Construction Start:	February 2019
Completion:	March 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.

2/8/2022: The programming contractor has addressed all the punch list items, however heating in some parts of the building remains slow at the start of the work day when outside temperatures are very low. WRA is evaluating possible programming adjustments to correct.

e) Four-Story Backflow Prevention Device Retrofit (Account Code 1765-100):

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	65%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2022
Total Budget:	\$348,000
Appropriated Funds:	\$353,000

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) device on the domestic water service line to high rise structures, defined as four (4) or more stories.

2/8/2022: ACSA staff have obtained responses from 82 of the original 87 customers identified for retrofits of BFP assemblies and data acquisition is complete for 50 customers. Further data collection is on-going as final edits are being made to the bidding documents. ACSA staff is creating an agreement for customers to execute to accept ownership and future maintenance of the BFP assemblies once installed. A bid schedule will be determined in the near future in coordination with other CIP projects.

f) Scottsville Phase 4 Water Main Replacement (Account Code 1758-100):

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2024
Total Budget:	\$4,369,900
Appropriated Funds:	\$346,000

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 occur until FY 2022 and FY 2023.

1/12/2022: WRA continues to work on the revisions to the 50% design documents. The number of geotechnical bores and test holes has increased and ACSA staff will bring an additional proposal to the Board for appropriation at a future meeting.

g) Crozet Phase 4 Water Main Replacement (Account Code 1756-100):

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2023
Total Budget:	\$5,432,700
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.

2/8/2022: ACSA staff have eliminated one more easement leaving seven to acquire, with a verbal commitment from one customer to grant the easement on their property.

h) Ragged Mountain Phase 1 Water Main Replacement (Account Code 1760-100):

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2023
Total Budget:	\$696,000
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.

2/8/2022: ACSA staff has received a response from the UVA Foundation concerning our easement counteroffer that rejects our assertion of the value of our project to the future development of their impacted property. ACSA staff is making arrangements for a third-party appraisal of the easement value to assist us in further negotiations.

i) Jefferson Village Water Main Replacement (Account Code 1747-100):

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2022
Total Budget:	\$2,451,000
Appropriated Funds:	\$191,190

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.

2/8/2022: An advertisement for construction bids was issued on January 30, 2022. A pre-bid meeting is scheduled for February 10, 2022 and bids will be opened on February 23, 2022.

j) Northfields Water Main Replacement (Account Code 1764-100):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2023
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.

2/8/2022: The additional surveying for the sewer main design is underway and impacted customers have been notified. ACSA staff will prepare a questionnaire for customers potentially served by the new sewer mains to determine the presence of basements and any associated plumbing to assist Ramboll in the design. A draft map of the geotechnical bore locations has been submitted by Ramboll and it is currently under review.

k) Hessian Hills Water Main Replacement (Account Code 1753-100):

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Construction
Percent Complete:	83%
Contractor:	Metra Industries, Inc. (Metra)
Construction Start:	April 2021
Completion:	April 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.

2/8/2022: The water main crossings of Barracks Road for Bennington Road, Surrey Road, and Chaucer Road have been installed. Night work continues with three more mains to cross Barracks Road, as well as those along Georgetown Road. Pavement restoration of the remaining neighborhood streets is scheduled for the week of February 7, 2022, which will include Woodstock Drive, a portion of Angus Road, and Court Place. Additionally, repairs are being made to pavement patches along Barracks Road and Georgetown Road.



l) Briarwood Water Main Replacement (Account Code 1766-100):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	25%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2026
Total Budget:	\$2,650,000
Appropriated Funds:	\$210,822

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 2022. Construction is expected to take place in FY 2025 and FY 2026.

2/8/2022: Ramboll has prepared a proposal for the additional design work along Dickerson Road, as well as plat preparation for the whole project. A Board authorization is proposed for this project.

m) Barracks West Water Main Replacement (Account Code 1796-100):

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	20%
Contractor:	Undetermined
Construction Start:	2024
Completion:	2025
Total Budget:	\$2,728,100
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.

2/8/2022: The title search of the Barrack West property is complete and it confirms the lack of a recorded water main easement. Per the Four Party Agreement the ACSA purchased these water mains from

the City of Charlottesville in 1975. With the operation, maintenance, and repair of these mains by ACSA to provide water service for a time period greater than 10 years, it can be assumed the ACSA holds a prescriptive easement covering these water mains and appurtenances.

n) Broadway Street Water Main Replacement (Account Code 1768-100):

Consultant:	Whitman, Requardt & Associates, Inc.
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2023
Total Budget:	\$1,043,800
Appropriated Funds:	\$99,820

Project Description - This project will replace the ductile iron water main that was installed in the early 1970's and has been found to be in deteriorating condition based on recent excavations. With the redevelopment of the Woolen Mills Factory and Albemarle County's increased attention on economic revitalization of this corridor, replacement of this water main is crucial in transforming this area.

12/7/2021: The 50% design documents have been forwarded to the City and RWSA for their input since their water mains are impacted by this project. Any comments they have will be combined with ours and returned to WRA.

o) Pantops Drainage Basin Rehabilitation (Account Code 1824-199):

Consultant:	O'Brien & Gere Engineers, Inc. (OBG)
Project Status:	Construction
Percent Complete:	95%
Contractor:	Prism Contractors & Engineers, Inc. (Prism) & Linco, Inc. (Linco)
Construction Start:	March 2021
Completion:	February 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.

2/8/2022: Work by Prism in the Pantops Drainage Basin has been delayed due to an equipment failure.

p) Hollymead Drainage Basin SSES (Account Code 1825-100):

Consultant:	O'Brien & Gere Engineers, Inc. (OBG)
Project Status:	Construction
Percent Complete:	10%
Contractor:	Prism Contractors & Engineers, Inc. (Prism) & Linco, Inc. (Linco)
Construction Start:	October 2021
Completion:	June 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.

2/8/2022: Prism has completed rehabilitation on 25 of 174 manholes.

q) Airport Trunk Sewer Upgrade (Account Code 1828-100):

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	90%
Contractor:	Undetermined
Construction Start:	2024
Completion:	2025
Total Budget:	\$5,793,800
Appropriated Funds:	\$363,467

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.

1/12/2022: A second round of offer letters are expected to be mailed out in the next couple of weeks for the first batch of easement documents that have been completed. ACSA staff continues to meet with customers to discuss individual easements, as needed.

r) Biscuit Run Sewer Replacement (Account Code 1830-100):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	90%
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.

1/12/2022: The Joint Permit Application (JPA) has been sent to the Commonwealth of Virginia representative to get their signature prior to submitting it to the VMRC for approval.

s) FY 2021 Miscellaneous Sewer Rehabilitation (Account Code 1904-100):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	75%
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2020
Completion:	February 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.

12/7/2021: The relining of the sewer main at the Barracks Road and Georgetown Road intersection has been completed under Work Order No. 5, which only leaves the relining of a sewer main in Riverrun to finish this work order.

t) FY 2022 Miscellaneous Sewer Repair/Replacement (Account Code 1905-100):

Consultant: OBG, A Ramboll Company (Ramboll)
 Project Status: Construction
 Percent Complete: 0%
 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.

1/12/2022: Linco had renewed their annual contract with some adjustments to unit pricing in accordance with the specifications.

u) FY 2022 Miscellaneous Sewer Rehabilitation (Account Code 1906-100):

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.

11/9/2021: Work Order No. 1 has been issued for the rehabilitation of 10 manholes at various locations throughout our sanitary sewer system. To date 8 of the 10 manholes have been completed.



v) **Oak Forest Pump Station Abandonment (Account Code 1807-100):**

Consultant:	O'Brien & Gere Engineers, Inc. (OBG)
Project Status:	Construction
Percent Complete:	75%
Contractor:	Linco, Inc. (Linco)
Construction Start:	July 2020
Completion:	June 2022
Total Budget:	\$1,410,800
Appropriated Funds:	\$2,391,752

Project Description - This wastewater pump station was constructed 35 years ago by private development and the original equipment is wearing down. The building and wet well are also undersized and deteriorating. With the development of the Stonefield Area between Route 29 and Commonwealth Drive ACSA staff has identified a sewer main extension project that could eliminate this aging pump station and avoid an expensive upgrade.

2/8/2022: Due to underlying unstable soils the manhole immediately upstream of the bore casing has settled a few inches. Linco has excavated the manhole and placed additional stone bedding beneath it. Schnabel Engineering, the soils subcontractor, will continue to monitor and troubleshoot this area to determine if added supports will be required to stabilize the manhole.



w) **Bellair – Liberty Hills Sewer (Account Code 1829-100):**

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	0%
Contractor:	Undetermined
Construction Start:	2024
Completion:	2025
Total Budget:	\$2,049,715
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.

1/12/2022: The additional field surveying required to pick up more details of the existing conditions in parts of the subdivision is anticipated to be completed by mid-February 2022.

x) **Madison Park Pump Station Upgrade (Account Code 1735-100):**

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2022
Total Budget:	\$1,125,000
Appropriated Funds:	\$393,831

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.

1/12/2022: Comments on the 100% design documents have been returned to WRA to prepare the final bidding documents. ACSA staff is currently working out the optimum bidding schedule based upon other active projects and availability of personnel.

y) Sewer Pump Station Comminutors (Account Code 1827-100):

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

2/8/2022: The product submittals have been reviewed by WRA and comments have been returned to ECUC for revisions.

z) Lewis Hill – West Leigh Water Connection (Account Code 1754-100):

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	95%
Contractor:	ACSA Maintenance Department
Construction Start:	2022
Completion:	2022
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.

2/8/2022: ACSA staff will plan to reach out to the HOA in March 2022 to renew the discussion for easement acquisition so that the design can be finalized.

aa) Huntington Village Water Connection (Account Code 1770-100):

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	0%
Contractor:	ACSA Maintenance Department
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.

1/12/2022: The AutoCAD files for the base mapping have been received from Draper Aden Associates, which will allow ACSA staff to begin work on the construction drawings.

bb) Briarwood Pump Station Generator (Account Code 1767-100):

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	50%
Contractor:	ACSA Maintenance Department
Construction Start:	October 2021
Completion:	April 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.

2/8/2022: The fence contractor is currently on site making the planned security modifications to the fence ahead of the delivery of the standby generator.

cc) Exclusion Meters Replacement (Account Code 1759-100):

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	20%
Contractor:	ACSA Maintenance Department
Construction Start:	September 2019
Completion:	2024
Total Budget:	\$1,237,500
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.

1/12/2022: In Group Six 7 of 18 exclusion meters having been replaced to date. There are currently 394 exclusion meters remaining in our system.

dd) Redfields Pump Station Abandonment (Account Code 1823-100):

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	99%
Contractor:	Linco, Inc. (Linco)
Construction Start:	February 2020
Completion:	August 2020
Total Budget:	\$59,800
Appropriated Funds:	\$86,785

Project Description - This wastewater pump station was constructed 23 years ago by private development and the parcel is too small to add an emergency standby generator. The Maintenance Department must rely on a portable pump to operate this station during power outages. With the development of Wintergreen Farm Subdivision, ACSA staff saw an opportunity for a sewer main extension that could eliminate this pump station. Now that the sewer main extension is in place the timing is perfect for abandoning this wastewater pump station. The work will be completed using our new Miscellaneous Sewer Rehabilitation contract to bypass the pump station with a gravity main and have Maintenance handle the building decommissioning and demolition.

2/8/2022: The only item remaining to close out this project is the repaving of the shared driveway that serves our adjacent customer. ACSA staff will push for competitive pavement restoration estimates as the weather becomes more conducive for this work. This project is essentially complete and will be removed from this monthly report.

ee) Sewer Force Main Condition Assessment (Account Code 1826-100):

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.

4/5/2021: ACSA staff are researching the possibility of shortening the Woodbrook Pump Station sewer force main to connect into a closer manhole, thereby eliminating a portion of the force main that requires replacement. A portion of this force main has developed a loss of wall thickness from exposure to a gas pocket, which could eventually lead to pipe failure.

ff) SCADA System Phase 3 (Account Code 1605-100):

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

2/8/2022: ACSA staff are completing a final review of the bidding documents and are exploring the possibility of combining the contractor pre-qualification process with the competitive negotiation method to speed up the start of this final phase of our SCADA System project.

gg) Ashcroft Pump Stations #2 and #3 Capacity Improvement (Account Code 1879-100):

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	100%
Contractor:	Fielders Choice Enterprises, Inc. (FCE)
Construction Start:	October 2018
Completion:	February 2021
Total Budget:	\$1,043,121
Appropriated Funds:	\$1,229,163

Project Description - In order to meet current domestic demand, fire flow requirements and future development in Ashcroft, the pumps in stations #2 and #3 will need to be upgraded. This project will evaluate all the

alternatives for increasing the pumping capacity within the limits of space and available electrical service.

2/8/2022: Only the final check of the radio wiring remains to be completed by IT staff and the final submission of record drawings is anticipated in the very near future. This project is essentially complete and will be removed from this monthly report.

PCG/dmg

060806CIPMonthly020822

Albemarle County Service Authority (ACSA)

CIP Schedule Revisions
February 2021

1. The design phase of the Risk Assessment Improvements Project has been extended to February 2022.
2. The construction phase of the HVAC System Upgrade Project has been extended to March 2022.
3. The design phase of the Four-Story BFP Assembly Retrofit Project has been extended to March 2022.
4. The design phase of the Ragged Mountain Phase 1 Water Main Replacement Project has been extended to March 2022.
5. The design phase of the Broadway Street Water Main Replacement Project has been extended to April 2022.
6. The design phase of the Biscuit Run Sewer Replacement Project has been extended to March 2022.
7. The construction phase of the Oak Forest Pump Station Abandonment Project has been extended to June 2022.
8. The design phase of the Bellair – Liberty Hills Sewer Project has been extended to June 2022.
9. The design phase of the Huntington Village Water Connection Project has been extended to April 2022.

Capital Improvement Program				2021	2022		2020	2020	2020	2020	2020	2020	2020	2021	2021	2021	2021	2021	2021		2021	2021	2021	2021	2021	2021	2022	2022	2022	2022	2022	2022
Proposed Project Schedule Worksheet: February 2022	Acct. #	Percent 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	1621-100	0%	AM		117,000																											
ERP Transition	1611-100	0%	AM	500,000																												
Energy Audit	1625-100	0%	AM																													
Avon Street Maintenance Yard	1622-100	100%	AM	265,000	60,000																											
ACSA Facilities - Restrooms and Customer Service	1624-100	0%	AM	125,000																												
HVAC System Upgrade	1619-100	100%	AM																													
AMI Implementation	1620-100	15%	PG		5,000,000																											
Four-Story Backflow Prevention Assembly Retrofit	1765-100	0%	AM	348,000																												
Camelot Water Main Replacement	1737-100	0%	RN	328,000																												
Scottsville Phase 4 Water Main Replacement	1758-100	0%	AM	103,000																												
Crozet Phase 4 Water Main Replacement	1756-100	0%	JL																													
Ragged Mountain Phase 1 Water Main Replacement	1760-100	0%	JL																													
Jefferson Village Water Main Replacement	1747-100	0%	RN	1,646,650	262,300																											
Northfields Water Main Replacement	1764-100	0%	RN																													
Hessian Hills Water Main Replacement	1753-100	0%	JL	1,243,325	3,456,675																											
Briarwood Water Main Replacement	1766-100	0%	AM	220,000																												
Barracks West Water Main Replacement	1796-100	0%	JL		452,500																											
Broadway Street Water Main Replacement	1768-100	0%	RN	142,800																												
Raintree and Fieldbrook PVC Water Main Replacement		0%	JL		432,300																											
Pantops Drainage Basin Rehabilitation	1824-100	0%	RN																													
Hollymead Drainage Basin Rehabilitation	1825-100	0%	RN																													
Airport Trunk Sewer Upgrade	1828-100	100%	JL	368,800																												
Biscuit Run Sewer Replacement	1830-100	0%	RN		206,000																											
FY 2021 Miscellaneous Sewer Repair/Replacement	1903-100	0%	JL	200,000																												
FY 2021 Miscellaneous Sewer Rehabilitation	1904-100	0%	JL	200,000																												
FY 2022 Miscellaneous Sewer Repair/Replacement	1905-100	0%	JL		200,000																											
FY 2022 Miscellaneous Sewer Rehabilitation	1906-100	0%	JL		200,000																											
Oak Forest Pump Station Abandonment	1807-100	0%	JL	535,800																												
Bellair - Liberty Hills Sewer	1829-100	100%	JL	313,200	80,515																											
Madison Office Park Pump Station Upgrade	1735-100	0%	JL	371,625	123,875																											
Sewer Pump Station Comminutors	1827-100	0%	RN		291,300																											
Lewis Hill - West Leigh Water Connection	1754-100	0%	RN																													
Parkview Drive Water Connection		0%																														
Huntington Village Water Connection	1770-100	0%	RN	60,700																												
Briarwood Pump Station Generator	1767-100	0%	AM	40,000																												
Exclusion Meters Replacement	1759-100	0%	JL	247,500																												
Pipe Saddles Replacement	1763-100	0%		50,000																												
SCADA System Phase 3	1605-100	100%	AM		186,800																											
Developer Participation		100%		100,000	100,000																											
Total Capital Projects to be appropriated in the Fiscal Year				\$ 7,409,400	\$ 11,169,265																											

In house construction

Engineering

Construction

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

- a. Airport Road Sheetz (Rio): Water main extension to serve a Sheetz, located at the corner of Airport Road and Route 29.
- 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. Avon Park Phase 2 (Scottsville): Water and sewer main extension to serve 28 residential units. This project is located along the southern end of Hathaway Street.
- e. Beaver Creek – Medical Office Building (Jack Jouett): Water main extension to serve the proposed medical office building to be located on the 2246 and 2248 Ivy Road parcel.
- f. 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.
- g. Boys and Girls Club – Drivers Ed Site (Jack Jouett): Water main extension to serve a new Boys and Girls Club. The project is located south east of Jack Jouett Middle School.
- h. 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.
- i. Farmington Country Club – Phase 1 (Jack Jouett): Water main extension to provide fire protection to the future Farmington Country Club expansion. An existing cottage will be replaced with 3 new cottages, totaling 12 units. This project is located at the intersection of Farmington Drive and Tennis Road.
- j. 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.
- k. Georgetown Hydraulic (Jack Jouett): Water main extension to serve a commercial office building at the intersection of Georgetown Road and Hydraulic Road.
- l. Hollymead Town Center Hotel (Rio): Water main extension and sewer relocation to serve an 81 room hotel near the intersection of Seminole Trail and Timberwood Blvd.

- m. Ivy Road Sidewalk Project (Jack Jouett): Replacement of 1,000 LF of water main to facilitate the installation of a sidewalk and associated storm water infrastructure. This project is located along Ivy Road, between Still fired Lane and Colonnade Drive.
- n. Jarmans Gap Development (White Hall): Water and sewer main extensions to serve 5 residential units, located along the southern side of Jarmans Gap Road west of Millstream Drive.
- o. **Malloy Ford Sewer Line Extension (Rio): Sewer main extension across the Malloy Ford dealership to serve an undeveloped parcel to the north. This project is located west of Route 29, across from Carrsbrook Drive.**
- p. MJH Presidio Apartments (Rivanna): Water and sewer main extensions to serve 250 multi-family residential units along Peter Jefferson Parkway across from the Martha Jefferson Hospital.
- q. Polo Grounds Road Improvements – Phase 2 (Rivanna): Water main extension along sections of Polo Grounds Road to serve eastern blocks of the Brookhill Subdivision. This project is located east of Route 29, along Polo Grounds Road.
- r. 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.
- s. 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.
- t. **Sleep Number – Charlottesville (Rio): Water service and sewer main extension to serve commercial retail space along U.S. Route 29 North across from 29th Place.**
- u. Southwood Redevelopment - Village 1 (Scottsville): Water and sewer main extensions to serve 49 residential units and future commercial blocks. This project is located east of Old Lynchburg Road and south of I-64.
- v. Spring Hill Village (Scottsville): Water and sewer main extensions to serve 100 residential units. This project is located between Avon Street Extended and Route 20 South, across from Avon Park.

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: FY 2022 CIP Authorizations	AGENDA DATE: February 17, 2022
STAFF CONTACT(S)/PREPARER: Peter C. Gorham, P.E., Director of Engineering	ACTION: <input type="checkbox"/> INFORMATION: <input type="checkbox"/>
	CONSENT AGENDA:
	ACTION: <input checked="" type="checkbox"/> INFORMATION: <input type="checkbox"/>
	ATTACHMENTS: (YES)

BACKGROUND: Authorization for two CIP Projects, both of which have been included in the CIP Rate Model Budget. The first authorization is for funding to cover additional Design Phase Services for the Briarwood Water Main Replacement Project, as well as deed of easement preparation. The second authorization is for funding to cover Design Phase Services for the Raintree and Fieldbrook PVC Water Main Replacement Project.

DISCUSSION:

- ❖ Provides for the replacement of an additional length of PVC water main and installation of a future tie-in for the North Pines Water Main Replacement Project.
- ❖ Allows ACSA staff to implement our Strategic Plan goal to replace all PVC water mains within our system that were installed prior to 1990.

BUDGET IMPACT: The additional design cost for the Briarwood Water Main Replacement Project will be within the amount budgeted in the CIP Rate Model. The cost of Design Phase Services for the Raintree and Fieldbrook PVC Water Main Replacement Project is within the amount budgeted in the CIP Rate Model.

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.

ATTACHMENTS:

- ❖ Detailed memo of the proposed CIP authorizations.
- ❖ Proposal prepared by Ramboll for additional Design Phase Services on the Briarwood Water Main Replacement Project.
- ❖ Proposal prepared by Michael Baker International, Inc. for Design Phase Services on the Raintree and Fieldbrook PVC Water Main Replacement Project.

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

RE: Briarwood Water Main Replacement Project – Change Order
 Proposal for Additional Design Efforts
 FILE: 1940100728.Briarwood-WMR\Agree

Dear Alex,

Date: January 25, 2022

As requested, please find attached Ramboll's change order proposal and fee estimate for the subject project. These documents were developed based upon Ramboll's understanding of the additional design efforts required for the replacement of the additional 400' (approximately) of 10" PVC water main along Dickerson Road between the northern end of Austin Drive and the southern end of Lonicera Way. The following clarifications and assumptions were made in the development of this proposal and fee:

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

SCOPE – CLARIFICATIONS AND ASSUMPTIONS

GENERAL

- The additional effort will be focused in the area identified in Figure CO-1.

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



Figure CO-1

- The new 10" DIP water main alignment will be alongside the existing 10" PVC water main (to be abandoned) that parallels Dickerson Road. The new main will connect to the existing 8" DIP main at the intersection of Dickerson Road with Austin Drive and to the existing 10" main (valve on western branch of tee) at the intersection of Dickerson Road with Lonicera Way. The total length of new 10" DIP water main is estimated to be approx. 520'. The intent of this realignment is to replace the section of 10" PVC water main and allow for the abandonment of the existing PVC interconnection located between parcels. The new 10" water main along Dickerson will be located within the road right of way.
- The specification and design of polyethylene encasement (e.g. "polywrap") or other corrosion and cathodic protection measures will be dependent on the results of geotechnical investigations (see below). Efforts to implement corrosion and cathodic protection measures into the design are not included.
- The Authority's cooperation and assistance in the provision of base information regarding the water lines and at intervals in the design process is anticipated in this proposal.
- The Authority's water main design standards will be used as the basis for design. The pipelines are assumed to be hydraulically suitable for potable water and fire flow demands and the system pressure. Efforts associated with hydraulic modeling or demand projections are not included.
- For the purposes of this proposal and fee estimate, we have assumed that the new water main will be installed parallel to the existing water main. Temporary water service design is excluded from the scope of this project.

SURVEY & FIELD INVESTIGATIONS

- Surveying for proposed utility installation will be performed along a 40' to 60' wide corridor along the southeast edge of Dickerson Road between Austin Drive and Lonicera Way.
- Survey will be based on the NAD 83 horizontal and NAVD 88 vertical data, in U.S. Survey Feet with benchmarks every 300 feet.
- The surveyor will call Miss Utility and wait for markings prior to survey. Survey will include marked utility lines and visible above-grade evidence of utilities, including: manholes; drop inlets; yard drains; pipe ends; gate valves; hydrants; utility poles; switch boxes; utility vault pedestals, etc. Sanitary and storm sewer structures will be opened and pipe sizes and depths to inverts will be obtained, where accessible.
- Additional geotechnical explorations are included and consist of **three** borings (for rock determination) along the proposed water main route. Borings will extend to a depth of 6 feet. Soils will be tested at **two** of the three boring locations to determine corrosiveness of soils. These three locations will be determined by ACSA in review of a boring layout map. Moisture content (% water content) will be obtained at all three boring locations. Results from borings and soil testing will be provided to the Authority in a letter report format and included in the 90% Design submittal.
- Results from geotechnical explorations will be used to establish restrained joint lengths. Ramboll will provide no evaluation of thrust block design; it is assumed that ACSA details are sufficient for concrete thrust restraint.
- It is assumed that up to **five** additional test holes will be completed in an effort to identify and locate the existing main and/or conflicts with other existing utilities at locations identified between the 50% and 90% design submissions. Test holes will be surveyed, and their locations will be incorporated into the Plans.
- The fee estimate includes the preparation of **nine** plats associated with the replacement, relocation, or addition of new hydrants. Additional plat preparation, associated with water main alignments



and/or water meter locations, is not anticipated to be required at the time of this proposal. The need for additional plat preparation will be revisited once design efforts have been advanced and alignments have been finalized. Plat preparation will be at a unit cost of \$1,250.

DELIVERABLES AND COORDINATION

- Deliverables and coordination items identified in the initial letter of authorization for this project (dated February 19, 2021) will remain the same. The additional scope identified herein will be incorporated into the associated deliverables.

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 2021 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 \$42,716. 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

Briarwood Water Main Replacement Project - Change Order #1
 Albemarle County Service Authority

TASK	LABOR CLASSIFICATIONS						TOTAL (HRS)	DIRECT EXPENSES (\$)	COST PER TASK (\$)
	Officer 2 \$240 (HRS)	PM-1 \$191 (HRS)	Engineer 2 \$130 (HRS)	Eng. Tech 3 (Drafter) \$117 (HRS)	Field Technician 2 \$80 (HRS)	Admin. Asst. 2 \$80 (HRS)			
PRELIMINARY ENGINEERING & SURVEY									
Project Kick-Off Meeting							0	\$0	\$0
Existing Data Collection and Assimilation							0	\$0	\$0
Right-of-Way Investigation for Alternative Routes							0	\$0	\$0
Criteria Collection, Analysis, and Reconciliation							0	\$0	\$0
Corridor Reconnaissance			4				4	\$68	\$588
Survey & Mapping				8			8	\$5,186	\$6,122
SUB-TOTAL	0	0	4	8	0	0	12	\$5,254	\$6,710
50% DESIGN DOCUMENT DEVELOPMENT									
Alignment Adjustment							0	\$0	\$0
Alignment Coordination							0	\$0	\$0
Geotechnical Investigation			2	2			4	\$8,130	\$8,624
50% Preliminary Design Documents	2	4	8	12			26	\$203	\$3,891
Public Outreach							0	\$0	\$0
50% Responsiveness Summary							0	\$0	\$0
SUB-TOTAL	2	4	10	14	0	0	30	\$8,333	\$12,515
90% DESIGN DOCUMENT DEVELOPMENT									
Plats		2	4	8			14	\$11,370	\$13,208
Test Holes			2	2			4	\$4,880	\$5,374
90% Preliminary Design Documents		4	4	8			16	\$143	\$2,363
Utility and Agency Submittal							0	\$36	\$36
90% Responsiveness Summary							0	\$0	\$0
SUB-TOTAL	0	6	10	18	0	0	34	\$16,429	\$20,981
FINAL DESIGN DOCUMENT DEVELOPMENT									
100% Final Design Documents		4	4	8			16	\$291	\$2,511
Provide Remaining Permit Applications							0	\$0	\$0
SUB-TOTAL	0	4	4	8	0	0	16	\$291	\$2,511
TOTALS							92	\$30,306	\$42,716

February 1, 2022

Mr. Jeremy M. Lynn, P.E.
 Albemarle County Service Authority
 168 Spotnap Road
 Charlottesville, VA 22911-8690

*Transmitted electronically to:
 jlynn@serviceauthority.org*

RE: Raintree and Fieldbrook PVC Water Main Replacement Project
 Design Phase Services

Dear Mr. Lynn:

Pursuant to your request on January 18, 2022, Michael Baker International, Inc. (Michael Baker) is pleased to provide our Labor and Cost Breakdown spreadsheet to accompany the Scope of Services provided by the Albemarle County Service Authority (ACSA), dated January 18, 2022. Michael Baker's proposal consists of the following components:

- | | |
|---|---|
| 1. Design Phase Services: Lump Sum | \$158,295.00 |
| 2. Boundary and Topographic Survey: Not to Exceed..... | \$113,724.00 |
| 3. Geotechnical Engineering Services: Not to Exceed | \$18,867.60 |
| 4. Easement Plats: Unit Rate | \$1,458.00 per plat, additional service |

In addition to the Scope of Services outlined by ACSA, Michael Baker offers the following clarifications:

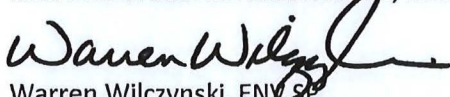
1. In addition to the lines designated for existing water main replacements (magenta) on the provided Capital Improvement Project map, the limits of survey shall include four (4) street intersections, curb return to curb return, to ensure enough survey information is collected at required interconnection locations.
2. Section II.F on page 2 indicates "Existing underground utilities will be shown in accordance with existing records and as located in the field." Subsurface utility designations will be performed using Miss Utility Designer Ticket(s). If determined at a later date utility test holes (Quality Level A) are required, they will be performed as an additional service.
3. Existing easements shall be reflected on the base mapping, as indicated in Section II.F on page 2. Typically our survey subconsultant will show easements if detected as part of research efforts. However, in order to ensure all existing easements are shown, a separate title report will be required for each property. Michael Baker and ACSA will further evaluate the need for, and quantify the number of, title reports based on the proposed water main locations. The ACSA's attorney will coordinate any title reports that are determined to be necessary.
4. The scope for Geotechnical Investigations as indicated in Section III.C on Page 3 has been revised to include "borings at a depth of seven (7) feet each", as previously performed on other projects, in order to account for areas where deflection under existing utilities may be required.

5. Section III.D on page 3 states "No environmental investigations are anticipated for this project." It is expected all alignments will be contained within the limits of the existing road rights-of-way, with no adjacent or crossing waterways being observed on USGS 7.5-Minute quadrangle mapping. Therefore, impacts to streams or wetlands are unexpected. However, if unanticipated impacts are determined at a later date, environmental investigations and required permitting will be performed as an additional service.
6. Easement plats will be provided as an additional service as required, billed at the unit rate of \$1,458.00 per plat (\$1,350.00 per plat plus 8% markup), as noted under Section IV.A on page 4. Property owner notification and easement acquisition will be completed by ACSA, unless otherwise requested as an additional service.
7. The Program Manager for this work will be Scott Quast (757-631-5424), and the Project Engineer will be Warren Wilczynski (757-631-5451).

Additionally, we have provided an anticipated Project Schedule for each of the project tasks, based on an anticipated start date for the project of March 1, 2022. A virtual Kick-off Meeting will be scheduled shortly thereafter, and we will coordinate with ACSA for available dates and times.

Upon execution, please issue to us a formal Notice to Proceed. If you have any questions or need additional information, please do not hesitate to contact me at (757) 631-5451 or warren.wilczynski@mbakerintl.com. As always, we thank you for this opportunity to provide engineering services to the Albemarle County Service Authority.

Sincerely yours,
MICHAEL BAKER INTERNATIONAL, INC.



Warren Wilczynski, ENV SP
Associate | Technical Specialist

Enclosures: Michael Baker Labor and Cost Breakdown
Michael Baker Anticipated Project Schedule
ACSA Scope, dated January 18, 2022
Revised Capital Improvement Project Location Map, dated February 4, 2022

cc: Scott Quast, PE (Michael Baker)
Project File

TASK	LABOR CLASSIFICATIONS				TOTAL (HRS)	DIRECT EXPENSES (\$)	COST PER TASK (\$)
	Program Manager \$ 225.00 (HRS)	Project Manager \$ 180.00 (HRS)	CADD Technician \$ 95.00 (HRS)	Clerical \$ 75.00 (HRS)			
PRELIMINARY ENGINEERING & SURVEY							
Project Kick-Off Meeting	4	8		2	14		\$ 2,490.00
Existing Data Collection and Assimilation	1	4		1	6	\$ -	\$ 1,020.00
Right-of-Way Investigation for Alternative Routes	4	8			12	\$ 400.00	\$ 2,740.00
Criteria Collection, Analysis, and Reconciliation	1	8		2	11	\$ -	\$ 1,815.00
Corridor Reconnaissance	8	12			20	\$ 900.00	\$ 4,860.00
Survey & Mapping ⁽¹⁾	2	2	6		10	\$ 113,724.00	\$ 115,104.00
SUB-TOTAL	\$ 4,500.00	\$ 7,560.00	\$ 570.00	\$ 375.00	73	\$ 115,024.00	\$ 128,029.00
50% DESIGN DOCUMENT DEVELOPMENT							
Alignment Adjustment	16	76	148		240	\$ -	\$ 31,340.00
Alignment Coordination	8	12	4	1	25	\$ -	\$ 4,415.00
Geotechnical Investigation ⁽¹⁾	1	4			5	\$ 18,867.60	\$ 19,812.60
50% Preliminary Design Documents	16	92	154	12	274	\$ 800.00	\$ 36,490.00
Public Outreach	2	8	8	4	22	\$ 1,350.00	\$ 4,300.00
50% Responsiveness Summary	4	16		4	24	\$ 350.00	\$ 4,430.00
SUB-TOTAL	\$ 10,575.00	\$ 37,440.00	\$ 29,830.00	\$ 1,575.00	590	\$ 21,367.60	\$ 100,787.60
90% DESIGN DOCUMENT DEVELOPMENT							
Easement Plats ⁽²⁾⁽⁴⁾							\$ -
Utility Designations and Test Holes ⁽³⁾⁽⁴⁾							\$ -
90% Preliminary Design Documents	12	92	154	38	296	\$ 800.00	\$ 37,540.00
Utility and Agency Submittal	1	12		4	17	\$ 950.00	\$ 3,635.00
90% Responsiveness Summary	4	16		4	24	\$ 275.00	\$ 4,355.00
SUB-TOTAL	\$ 3,825.00	\$ 21,600.00	\$ 14,630.00	\$ 3,450.00	337	\$ 2,025.00	\$ 45,530.00
FINAL DESIGN DOCUMENT DEVELOPMENT							
100% Final Design Documents	10	32	62	12	116	\$ 550.00	\$ 15,350.00
Provide Remaining Permit Applications	1	4	1	2	8		\$ 1,190.00
SUB-TOTAL	\$ 2,475.00	\$ 6,480.00	\$ 5,985.00	\$ 1,050.00	124	\$ 550.00	\$ 16,540.00
					1,124	\$ 138,966.60	\$ 290,886.60

⁽¹⁾ Includes 8% markup permitted under the Agreement for Engineering Services, dated August 10, 2020.

⁽²⁾ Easement plats will be provided as an additional service as required, billed at the unit rate of \$1,458.00 per plat (\$1,350.00 per plat plus 8% markup).

⁽³⁾ Subsurface utility designations will be performed using Miss Utility. If utility test holes (Quality Level A) are required, they will be performed as an additional service.

⁽⁴⁾ Michael Baker will submit proposed hours as part of additional services, for coordination, review and acceptance of sub-consultant(s)' services, if required.

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

AGENDA TITLE: CityWorks Streamlines Work Order Processes	AGENDA DATE: February 17, 2022
STAFF CONTACT(S)/PREPARER: Mike Lynn, Operations Manager	ACTION: Informational
	ATTACHMENTS: Yes

BACKGROUND: CityWorks Brings Tracking Workorders Out Of The Paper Age Into The Digital Age.

DISCUSSION: For as long as I have been with the ACSA, we kept spiral notebooks to log workorders in (Attachment 1). We would assign each workorder a sequential number, the date work was done, provide an address and a short description of the work performed.

Any questions or follow-up inquiries required us to spend an enormous amount of time looking through notebooks trying to locate the workorder in question.

We eventually started using an in-house designed workorder form (Attachment 2) that staff would fill out using their computer, print off the workorder, then finally submit for review and approval. Using this paper form still required substantial time to manually search for a specific workorder.

For example, if asked how many service upgrades or how many 1" taps were done in the last 12 months, we would have to look through the notebooks or workorder sheets covering that period to answer those questions.

On October 13, 2020, the CityWorks program went live. Maintenance staff can now create, view and update workorders from their iPads (Attachment 3) . CityWorks allows us to track Inspections, Service Requests and Work Orders (Attachment 4). These reports can now be searched by crew, individual, address, type of workorder, date and other queries.

BOARD ACTION REQUESTED: None

ATTACHMENTS: Attachment 1 ACSA Work Order Log (February 2007)

2893	2-22-07	2244 Old Ivy Replace Box
2894	2-22-07	2525 Kimbrough Ct Replace Box
2895	2-20-07	Winfield Ct Capital Job.
2896	2-19-07	Scottsville Valve Install
2897	2-22-07	Univ. Village Repair Hydrant
2898	2-26-07	1550 Pantops At Rd Replace Valve box
2899	2-28-07	Mill Creek 2nd Park Replace frame & cover
2900	2-27-07	434 Stagecoach Rd Capital Job
2901	3-02-07	Rt 250 + 29 Raise Manhole

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

Job Order

Date of Order: 9/3/2019	Date of Job Start: 9/3/2019
	Date of Job End: 9/3/2019
Michael Hager	Job Order #: W 8945
Capital Job Code:	
Location: 4659 and 4661 briarwood	
Job: briarwood upgrades	

Names:	Reg Hours:	OT Hours:	Names:	Reg Hours:	OT Hours:
Michael Hager	5				
Mitchell Batten	5				

Equipment:**Hours:**

B19MN 2018 Chevy 3500 Maintenance Truck Unit 19

Insert item

Job Code

Inventory Materials:

Quantity:

100-5502-550 W A10-100540 StrghtCpl3/4"GJ2olPThrd 2

100-5502-550 W A60-100820 CprStr5/8"x3/4"mlr9"H 2

Insert item

Non-Inventory Materials:	Qty:	Non-Inventory Materials:	Qty:
grass seed	1lb		
straw	1 bale		
Water Loss (gallons):			

Approvals

Occurred	Description	Outcome
9/4/2019 7:40:16 AM	Approval was started. Participants: Rol	
9/4/2019 7:40:17 AM	Task created for Roland Bega. Due by:	
9/9/2019 10:22:35 AM	Task assigned to Roland Bega was app: Approved by Roland Bega	

Attachment 3 ACSA CityWorks Work Order (July 2021)

Search...

Inbox New Search Saved Searches Manager

Work Order

Description: **Repair Valve Box**

WO Id: 1078

Show in GraniteNet

Entity Type: WATER SYSTEM VALVE

Change

Show in GraniteNet Web

Priority: 3-Medium

Status: Open

Cancel WO? ☐

Initiated By: Dennis, Jimmy

Init. Date: 01/8/2021 1:16 PM

Requested By: Bega, Roland

Supervisor: Bega, Roland

Submit To: Nelson, Richard

Submit Date: 07/28/2021 3:42 PM

Projected Start: 01/8/2021 1:16 PM

Projected Finish: 01/8/2021 1:16 PM

Instructions:

Location Information

Facility Id:

Level Id:

Address Unknown but between units 1640 and 1653 at courtyard

X Location: 11,497,074.10605100

Y Location: 3,001,593.92947452

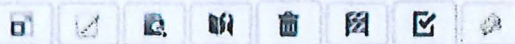
Location Details Riverside Village

Assets

Total Entities: 1

<input type="checkbox"/> Asset	Asset Id	Asset Uid	Location	Warranty Date	W
<input type="checkbox"/> WATER SYSTEM VALVE	110883	465-2-2h	Riverwalk Xing		

Pink - Pink rows indicate inventory still under warranty



Start GraniteNet Inspection

Update Work Order XY when adding/removing assets? ☒

Related Work Activities

Service Requests

Link Request:

Inspections

Link Inspection:

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

<input type="checkbox"/>	Id	Type	Description	Link Type	Entity Id	Entity Type
<input type="checkbox"/>	3979	INSP	Water Valve Inspection	Related	465-2-2h	WATER SYSTEM

Open Inspections Remove

Work Orders

Link Work Order:

Create Child Work Order Remove

Reservations

Equipment ID	Employee	Start Date	End Date	Comments
No records to display.				

Checked Out Equipment

Equipment ID	Employee	Check Out Date	Due Date	Comments
No records to display.				

Job Information

Actual Start: Actual Finish:

Completed By:

Contractor:

Resolution: Work Billable:

Work Cycle

Comments

Comments: Add Comment Sort ▲

Dennis, Jimmy 01/8/2021 1:56 PM
Observations: Top section valve box little crooked and cracked on two ...

Dennis, Jimmy 01/8/2021 1:56 PM
Top section valve box cracked and crooked in payment

Roach, William 07/28/2021 3:42 PM
This should be under warranty. Is it ?

Attachments

Add attachment...

Drag and drop files here to attach them.

Details

Category:

Shop:

Project Tree

Project: ▼

Account:

Labor Cost: **\$0.00** Material Cost: **\$0.00**

Equipment Cost: **\$0.00** Permit Cost: **\$0.00**

Total WO Cost: **\$0.00**

Map Layer Fields

Reset

Attachment 4 ACSA CityWorks Report

Inspections		Work Orders	
INSPTEMPLATENAME	COUNT	DESCRIPTION	COUNT
Water Valve Inspection	4825	CCTV Gravity Main	353
Hydrant Inspection	3794	CCTV Sewer Manhole	351
Manhole Inspection	3098	Upgrade Setter	347
CCTV Inspection	2019	Update GIS	285
Sewer Pump Station Inspection	1109	Repair Sewer Manhole	199
Water Pump Station Inspection	866	Flush Gravity Main	173
Monthly Vehicle Inspection	678	Repair Fire Hydrant	134
Water ARV Inspection	162	Repair Valve Box	129
Water Ancillary Valve Inspect	45	Fleet Planned Maintenance	83
Hydrant Inspection	33	Clean Valve	79
Sprinkler System Inspection	24	Site Restoration	77
UAS Facility Inspection	12	Clean Around Hydrant	75
Storage Tank Inspection	4	Fleet Repair	64
Hydrant Water Flushing	2	Raise / Lower Meter Box or Setter	55
Auto Flushing Assembly Inspect	2	Adjust Sewer Manhole Height	53
Water Blow Off Valve Inspect	2	Install Water Service Line	48
Total	16675	Repair Automatic Flushing Assembly	38
		Flush Fire Hydrant	37
		Paint Fire Hydrant	36
		Repair Water Service Line	28
		Inspect Automatic Flushing Assembly	24
		Locate Manhole	21
		Generator Maintenance	18
		Replace Valve Box	16
		Cost Summary	16
		Replace Meter Box	16
		Flush Sewer Manhole	15
		Right of Way Clearing	15
		Repair Gravity Main	15
		Raise / Lower Meter Box	13
		Repair Water Main	12
		Abandon Water Service Line	12
		Repair/Adjust Ancillary Valve	11
		Replace Ancillary Valve	11
		Repair Water Valve	10
		Abandon Water Valve	9
		Fleet Accessory Install	8
		Install Ancillary Valve	7
		Repair Blow Off Box	6
		Replace Water Valve	6
		Install Water Valve	5
		Abandon Gravity Main	4
		Replace Water Service Line	4
		Abandon Ancillary Valve	4

Service Requests	
DESCRIPTION	COUNT
Water Leak	155
Water Pressure Complaint	67
Water Quality Complaint	45
Sewer Stoppage/Backup	24
General Water Service Request	20
No Water	16
Account Close/Transfer Request	14
Sewer Odor	12
Miss Utility Locating	12
Sewer Overflow	11
Hydrant Damaged	9
Hydrant Open/Running/Leaking	7
Valve Lid Damaged or Missing	7
Sewer Manhole Cover Missing or Dam	6
Meter Turn On - Maintenance	6
Meter Missing/Damaged	5
Meter Turn Off - Maintenance	5
General Sewer Service Request	4
Meter Cover Missing or Damaged	3
Meter Locate	1
Billing Question	1
Fire Line Turn Off	1
Total	431


ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

Motor Maintenance	4
Install Water Service	4
Install Water Fitting	4
Facilities Maintenance	4
Install Sewer Pump	3
Water Pump Station Abandon/Retire	3
Repair Sewer Lateral	3
Sanitary Sewer Overflow	3
Replace Blow Off Box	3
New Tap	3
Exercise Sewer Valve	2
Clean Sewer Force Main	2
Generator Repair	2
CCTV Sewer Lateral	1
Locate Sewer Lateral	1
Install Automatic Flushing Assembly	1
Abandon Force Main	1
Repair / Replace Meter Box	1
Abandon Automatic Flushing Assembly	1
Replace Fire Hydrant	1
Sewer Pump Station Abandon/Retire	1
Install Gravity Main	1
Abandon Pressure Reducing Valve	1
Install Fire Hydrant	1
Water Pump Station Install	1
Install Blow Off Box	1
Replace Water Fitting	1
Generator Install	1
Install Water Main	1
Loan Materials	1
Replace Sewer Manhole	1
Abandon Sewer Lateral	1
Total	2981

AGENDA ITEM EXECUTIVE SUMMARY

<p>AGENDA TITLE: Rivanna Water & Sewer Authority (RWSA) Monthly Update</p> <p>STAFF CONTACT(S)/PREPARER: Gary O'Connell, Executive Director </p>	<p>AGENDA DATE: February 17, 2022</p> <p>CONSENT AGENDA: Informational</p> <p>ATTACHMENTS: Yes</p>
---	---

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 January 25th RWSA Board Meeting and other communications.

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

- New Board Members – City Councilor Brian Pinkerton and Board of Supervisor Ann Mallek.
- Cost of Living Increase – The Board approved a 6% pay increase effective February 1, on a 4-2 vote. Also a 4% increase to the RWSA Pay Plan was approved.
- Moore's Creek Wastewater Plant Lighting – The incorrect lights were installed at the plant as part of a replacement project to meet County zoning lighting requirements. The installed lights have shone into the adjacent neighborhoods. The lighting will be replaced with additional shielding, at the expense to the engineer who specified the wrong lighting product.
- Central Water Line – An important project to connect the expanded Observatory Water Treatment Plant and Ragged Mountain Reservoir to the Urban system. The pipe that leaves Observatory is too small and needs enlarging and replacing. Also and more importantly, the Urban Water Master Plan identified a number of piping gaps in the “hydraulic connectivity” to the Urban service area. The overall goals of the project are to improve the flow, pressure and build in more redundancy in particular for emergencies. A detailed study of various route alignments has been completed and recommends a central (inside City) route. That route was presented to the RWSA Board, and is called the “Southern Corridor” concept in the attached presentation. The RWSA Board supported this concept and authorized staff to proceed with further design. In the meantime, the RWSA will present the proposed alignment to City Council, as well as to some of the impacted neighborhoods. This is a multi-year project: design, permitting and bidding 2021-2024; construction 2024-2029 at a cost estimate of \$31 million. There also needs to be a Cost Allocation Agreement to replace a 1987 Agreement that has an outdated, very southern route that hydraulically is not effective in today's system.

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:	50%
Completion Date:	March 2023
Base Construction Contract:	\$37,223,349.89
Approved Capital Budget:	\$43,000,000

Current Status:

Work continues on the South Rivanna Water Treatment Plant with completion of the filter building expansion and the Alum and Fluoride Chemical Storage Building, and continued construction of the Administration Building, sedimentation basin improvements and the replacement of high service pumps and VFDs. Also the filter media is being installed with startup of the two filters. Work at the Observatory Water Treatment Plant includes foundation work associated with the new chemical storage building, coordination with Dominion Power and UVA on a new electrical service, and expansion of the filter building and installation of the new backwash pumps.

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.

- **Crozet Flow Equalization Tank**

Design Engineer:	Schnabel Engineering
Construction Start:	September 2020
Percent Complete:	80%

AGENDA ITEM EXECUTIVE SUMMARY

Expected Completion Date:	November 2022
Base Contract	\$4,406,300
Total Capital Project Budget:	\$5,400,000

Current Status:

Interior concrete tank construction continues and the second phase of bypass pumping of the existing pump station is being set up to allow for the final stage of pump, piping and valve installation.

History:

A 2016 update to the 2006 wastewater model was completed which evaluated the I&I (Infiltration and Inflow) reduction goals previously established and future capital project needs. Based on the results of that study, it was determined that the Crozet Interceptor system and namely the existing Crozet Pump Stations (1 through 4) have adequate capacity to handle the 2015 peak wet weather flow from the Crozet service area during a two-year storm. However, as the projected growth in the Crozet service area occurs, peak wet weather flows in the area, under the storm conditions established in the updated model, will begin to exceed the firm capacities of the pump stations by 2025.

A flow equalization tank is under construction which would also provide a significant benefit to the maintenance of the Crozet Pumping Station system which currently lacks system storage necessary to allow adequate time to perform repairs on the pumps and the associated force mains while the system is down.

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

Contractor:	Anderson Construction
Bidding:	
Construction Start:	December 2021
Percent Complete:	5%
Completion Date:	December 2023
Base Contract:	\$8,520,312.50
Budget:	\$10,000,000

Current Status:

The contractor has begun submitting shop drawings. There is currently a 5-7 month lead time for ductile iron pipe, fittings, and some pump station materials, so contractor mobilization to the site may not be until spring 2022.

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

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

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

Design Engineer:	Michael Baker International (Baker)
Project Start:	August 2018
Project Status:	Design (8%) and Easement Acquisition in Progress
Construction Start:	2025
Completion:	2028
Current Project Estimate:	\$29,375,000

Current Status:

Preparation of engineering plans and specifications is underway. Survey work along portions of the water main alignment is underway, along with cultural resources investigations. A hydraulic evaluation of the future South Fork Rivanna Reservoir (SRR) to Ragged Mountain Reservoir (RMR) transfer system is also underway, which will further inform design of the RMR Pump Station and associated yard piping. Once the topographic survey data for the portions of the new waterline west of the proposed RMR Pump Station site is received by Kimley-Horn, additional design will commence. Easement negotiations with one private owner, UVA, and the UVA Foundation continue.

History:

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

AGENDA ITEM EXECUTIVE SUMMARY

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:	Summer 2022
Completion:	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 the 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. Design documents have been submitted to local regulatory authorities for review.

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 and Pump Station and Piping Improvements**

Design Engineer:	Schnabel Engineering (Dam)
Design Engineer:	Hazen and Sawyer (Pump Station)
Project Start:	February 2018
Project Status:	70% NRCS Planning Process
Construction Start:	2024
Completion:	2026
Budget:	\$30,870,000

Current Status:

RWSA staff is moving forward with development of a Joint Permit Application and supporting documents for submission to DEQ in early 2022. Remaining NRCS requirements including review and approval of the planning study, are scheduled for completion by September 2022. An application for design and construction funding from NRCS will be submitted in early 2022.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

History:

RWSA operates the Beaver Creek dam and reservoir as the sole raw water supply for the Crozet area. In 2011, an analysis of the Dam Breach inundation areas and changes to Virginia Department of Conservation and Recreation (DCR) *Impounding Structures Regulations* prompted a change in hazard classification of the dam from significant to high hazard. This change in hazard classification requires that the capacity of the spillway be increased, and the dam be replaced. This CIP project includes investigation, preliminary design, public outreach, permitting, easement acquisition, final design, and construction of the anticipated modifications. Work for this project includes a new relocated raw water pump station and intake. A federal grant totaling \$341,000 was secured from the National Rural Conservation Service (NRCS) to cover the costs of an Environmental Assessment for the dam modifications. Staff will continue to pursue federal funding in the 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:	35% Design
Construction Start:	January 2023
Completion:	April 2024
Budget:	\$5,850,000

Current Status:

Baker has recommended a water line route that will cross 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. A technical memorandum is being finalized to summarize the recommendation.

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.

AGENDA ITEM EXECUTIVE SUMMARY

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

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

Progress continues in RWSA efforts to acquire 8 miles of easements and agreements (with VDOT) for this 36" water line. Discussions continue on 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.

- **Urban Finished Water Infrastructure Master Plan**

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2018
Project Status:	99% complete
Completion:	February 2022
Total Capital Project Budget:	\$253,000

Current Status:

A final draft of the Master Plan is being provided this month for review.

History:

As identified in the 2017 RWSA Strategic Plan, the Authority has a goal to plan, deliver and maintain dependable infrastructure in a financially responsible manner. RWSA staff has identified asset master planning as a priority strategy to improve overall system development. Many previously identified projects in the urban finished water treatment and distribution system are in preliminary engineering design, or construction. As such, RWSA staff has identified a need to develop a current and ongoing finished water master plan.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

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

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

Current Status

A revised draft alignment of the sewer line being installed within easements and out of the roadway have been completed and are being shared with the City of Charlottesville and Albemarle County for review.

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

Design Engineer:	SEH
Project Start:	August 2020
Project Status:	100% (Phase 1) 50% (Phase 2)
Completion:	July 2022
Budget:	\$22,969 (Phase 1) \$98,629 (Phase 2)

Current Status:

Phase 1, analysis of existing water quality and seasonal weather data, has been completed. SEH and staff have finalized the memo for this portion of the study. Phase 2 of the study has begun and includes detailed reservoir water quality modeling performed by DiNatale Water Consultants. DiNatale is working through scenarios utilizing a desktop model. Once these runs have been completed and the technical memo has been finalized, work on a more detailed reservoir model will likely commence, which will help better represent the future conditions at Ragged Mountain Reservoir based upon the known characteristics of the proposed transfer system.

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.

AGENDA ITEM EXECUTIVE SUMMARY

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:	5% Design
Construction Start:	January 2024
Completion:	June 2026
Budget:	\$31,000,000

Current Status:

Survey and utility designation work will begin this month and continue along the proposed 5-mile alignment through May 2022. The Central Water Line Routing Study was added to our website in December 2021. RWSA will complete a drone survey of the proposed CWL alignment this month and post it on our web page. RWSA will be meeting with affected neighborhoods.

History:

Route alignment determination, hydraulic modeling, and preliminary design were underway in 2017. Due to the complicated nature of RWSA finished water systems, it was decided at the August 2018 Board meeting that a more comprehensive approach was warranted, and that RWSA should complete an Urban Finished Water Master Infrastructure Plan prior to moving forward with final design and construction of a Central Water Line. The hydraulic connectivity in the Urban System is less than desired, creating operational challenges and reduced system flexibility and redundancy. In 1987, the City and ACSA developed the Southern Loop Agreement which laid out two key phases (with the first being built at the time). The 1987 Agreement and planning efforts were a starting point for this current project. 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:	98% (WA 2 & 3) 35% (WA 4)

**MEMORANDUM**

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

**FROM: JENNIFER A. WHITAKER, DIRECTOR OF ENGINEERING AND
MAINTENANCE**

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

**SUBJECT: CONSTRUCTION CHANGE ORDER AUTHORIZATION –
MOORES CREEK AWWRF LIGHTING IMPROVEMENTS
PROJECT – PYRAMID ELECTRICAL CONTRACTORS, LLC**

DATE: JANUARY 25, 2022

The memo is to request an increase to the project contingency from \$35,000 (10%) to \$90,000 (35%) to provide light fixtures compliant with our requirements. Most of this increase will be reimbursed by our lighting engineer.

Background:

Our engineering consultant, Hazen and Sawyer, developed a preliminary engineering report (PER) and site plan amendment for lighting modifications at Moores Creek that considered site safety requirements and the need to bring the facility into compliance with the Albemarle County lighting ordinance. Following submission of the site plan amendment, staff divided the over 300 fixtures to be installed or replaced into two groups; fixtures to be modified in-house by the Maintenance Department and fixtures to be installed by an outside electrical contractor. The Maintenance Department has completed the lighting modifications they were capable of and a contract was awarded to Pyramid Electrical Contractors on January 26, 2021 to perform the remaining work.

During the course of the project, additional existing lights were added to the project for replacement since they were not working properly. Costs associated with these unforeseen issues have been estimated to exceed the 10% contingency originally approved by the Board when the contract was awarded. Additionally, it was recently determined that there was misapplication of the lighting model by the consultant which resulted in specification of noncompliant light fixtures around the aeration basins at the plant. This lighting was found to be noncompliant with the Albemarle County ordinance and is being replaced. Additional funds to replace the light fixtures, approximately \$60,000, are being requested. The engineering consultant will reimburse the Authority for the additional expense thru engineering services associated with our Urban Wastewater rate center. This increase will result in total contingency of \$122,150 or an increase of \$87,250 from what was originally approved.

Board Action Requested:

Authorize an increase in construction contingency funding of \$55,000 for the MCAWRRF Lighting Improvements Project. This would bring the total Board authorized contingency to \$122,150. The total costs remain within the CIP Budget of \$1,900,000 for this project.

MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY
BOARD OF DIRECTORS

FROM: JENNIFER WHITAKER, DIRECTOR OF ENGINEERING AND
MAINTENANCE

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: CONTRACT AWARD – CROZET INTERCEPTOR SYSTEM
ODOR CONTROL – EVOQUA WATER TECHNOLOGIES, LLC

DATE: JANUARY 25, 2022

Wastewater from Crozet is connected to the main portion of RWSA's interceptor system through a series of pump stations and processed at the Moores Creek WW Treatment Plant. As a result of this conveyance process, the wastewater ages to the point where its oxygen content is depleted, and the formation of hydrogen sulfide occurs. The formation of hydrogen sulfide is a concern for several reasons, including: the presence of foul odors in and around the conveyance infrastructure, health and safety depending on the concentration of the gas, and the corrosion of conveyance infrastructure due to the formation of sulfuric acid as the released hydrogen sulfide gas combines with moisture. To alleviate these concerns, RWSA has previously entered into agreements with an odor control vendor to install, operate, and maintain an odor control chemical feed system in the Crozet Interceptor. The previous contract had an initial two-year term and was renewed annually after that up to the maximum five-year term. As a result of reaching the maximum term limit, it was necessary to re-procure these services for an additional term.

To procure these services in the most appropriate and advantageous method, RWSA selected a competitive negotiation process. This allows RWSA to evaluate not only the merits of the odor control technologies proposed by interested contractors, but also their management approaches and qualifications of key personnel, all while still allowing RWSA to factor the total estimated annual price for services into the decision-making process.

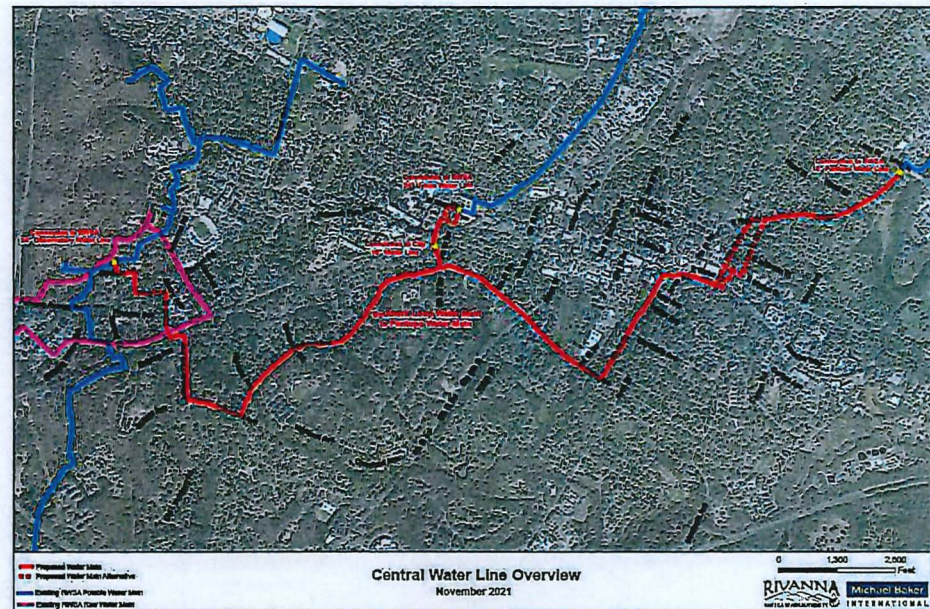
The RFP was advertised on December 15, 2021, a pre-proposal meeting was held on December 22, 2021, and proposals were due on January 11, 2022. Two proposals were received. The RFP indicated that interviews may be conducted to assist RWSA in determining the preferred Offeror, but it was not a requirement. Based on the content of the two proposals, it was determined that interviews would not be necessary in order to determine the preferred Offeror. The RFP also included provisions for pilot testing of submitted technologies; however, if the preferred Offeror had previous experience providing odor control services to RWSA, the pilot testing could be avoided. Since the preferred Offeror met these requirements, no pilot testing was necessary. The selection committee reviewed the two proposals and based on the contents of the proposal, the Offeror's previous experience with RWSA, and the best pricing of \$4.15/gallon for peroxide and \$2.98/gallon for bioxide, with both products required to reduce odors, and determined that Evoqua Water Technologies, LLC was the most meritorious candidate.

Board Action Requested:

Authorize the Executive Director to execute a contract with an initial term of two (2) years with options to renew the contract following the initial term for a total term not to exceed five (5) years with Evoqua Water Technologies, LLC for odor control services in the Crozet Interceptor System with an estimated annual expense of \$390,000.

Central Water Line Project

*to support the
Urban Drinking Water
System*



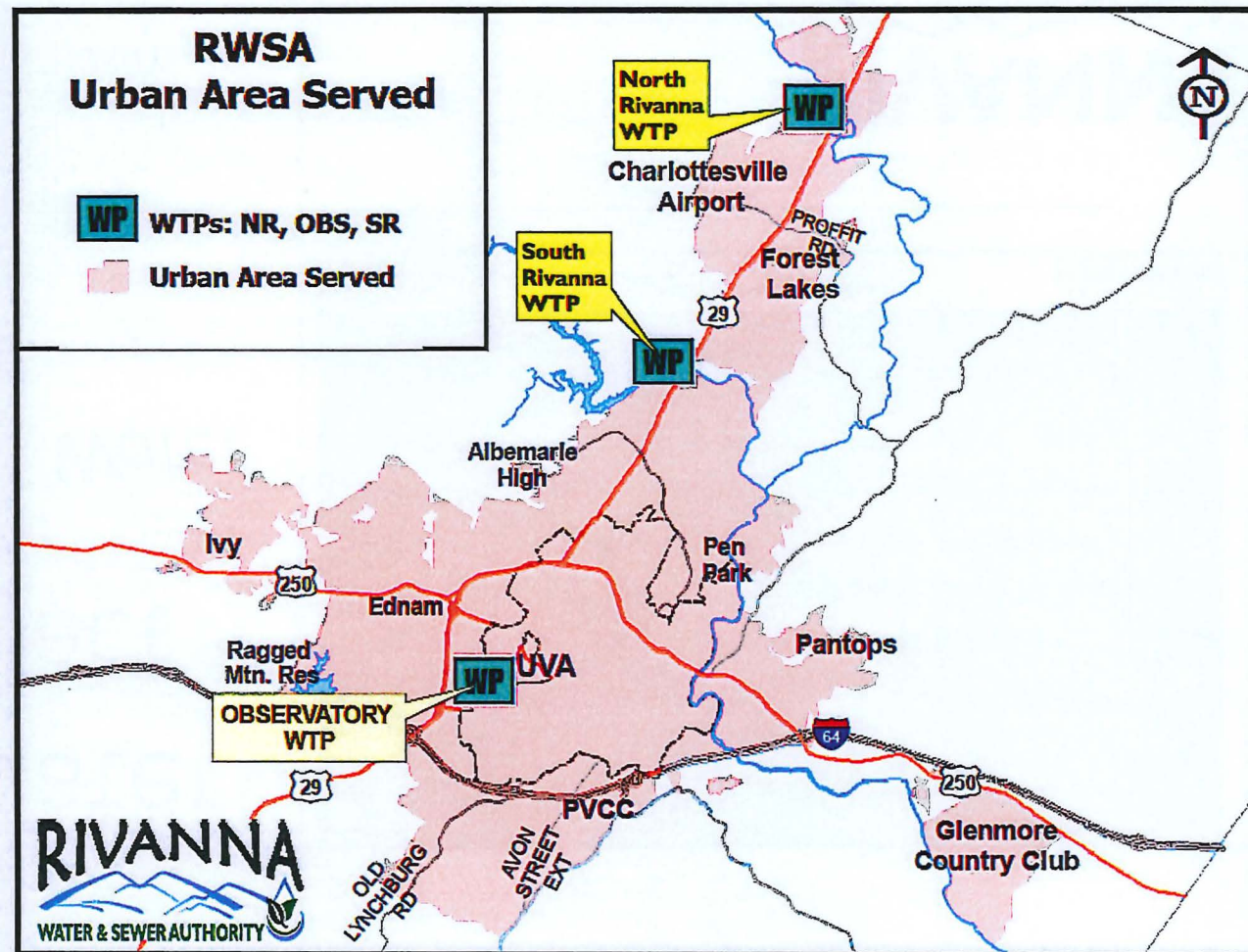
RIVANNA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS MEETING
JANUARY 25, 2022



Urban Water Treatment System

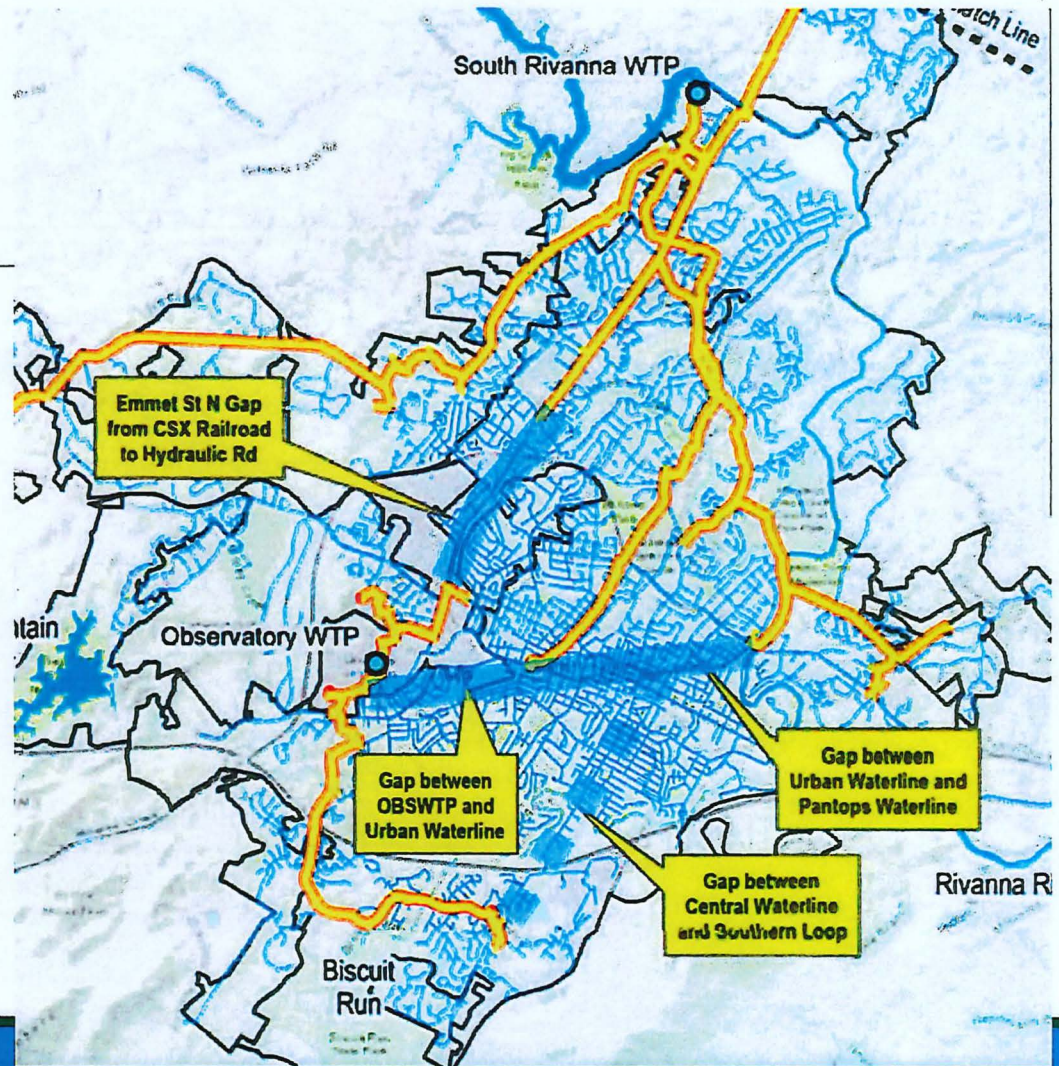
S. Rivanna WTP	12 MGD
Observatory WTP*	7.7 MGD
N. Rivanna WTP	1 MGD
	<u>20.7 MGD</u>

*Upgrade to 10 MGD in progress



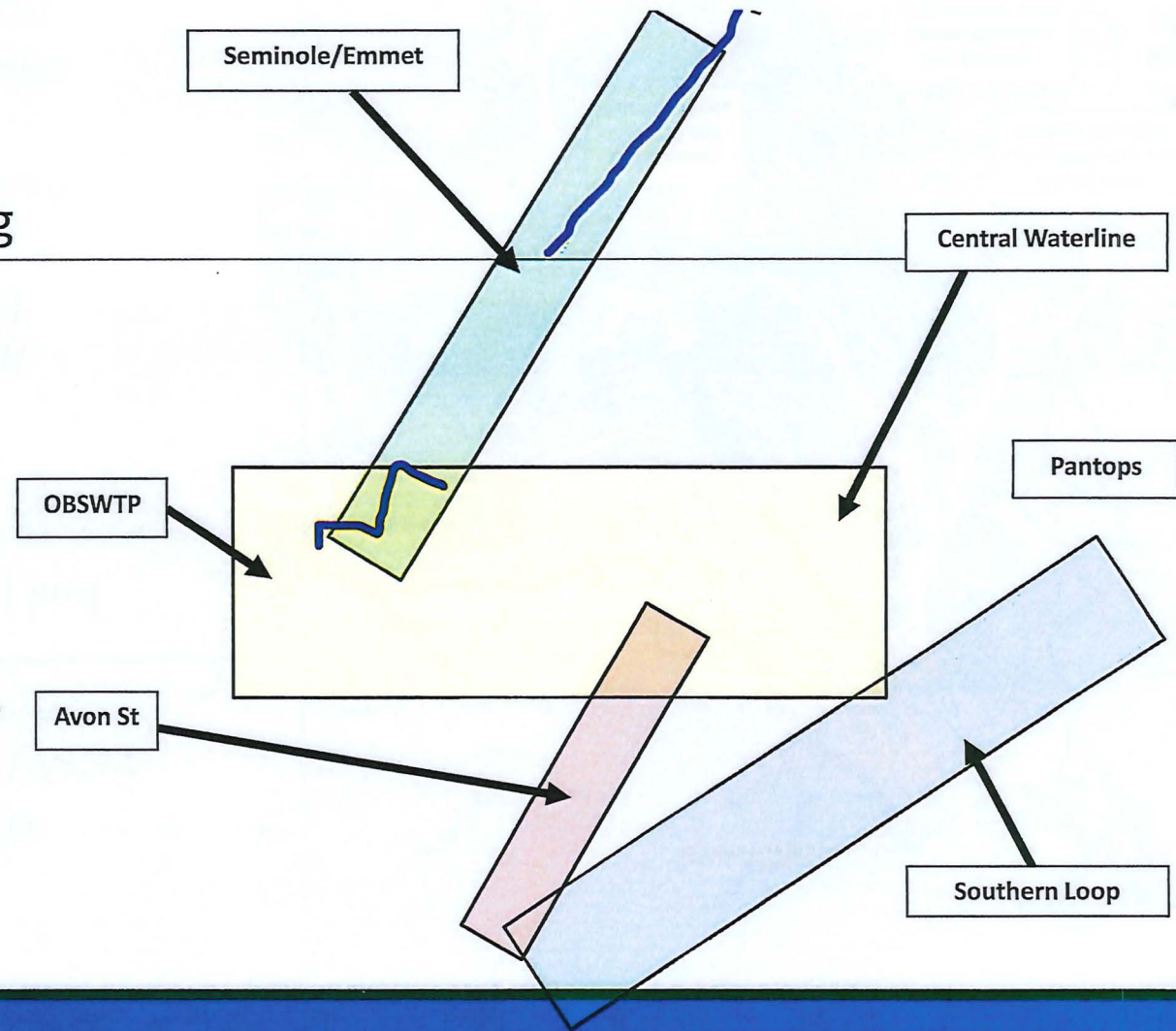
Background Work: Avon to Pantops Study & Finished Water Master Plan

- **Goals:** Address operational and hydraulic inefficiencies in moving water across distribution system and improving system flexibility.
- **Results:** It was determined that a lack of hydraulic connectivity across the Urban Service Area is primarily caused by gaps in RWSA large diameter water transmission mains.



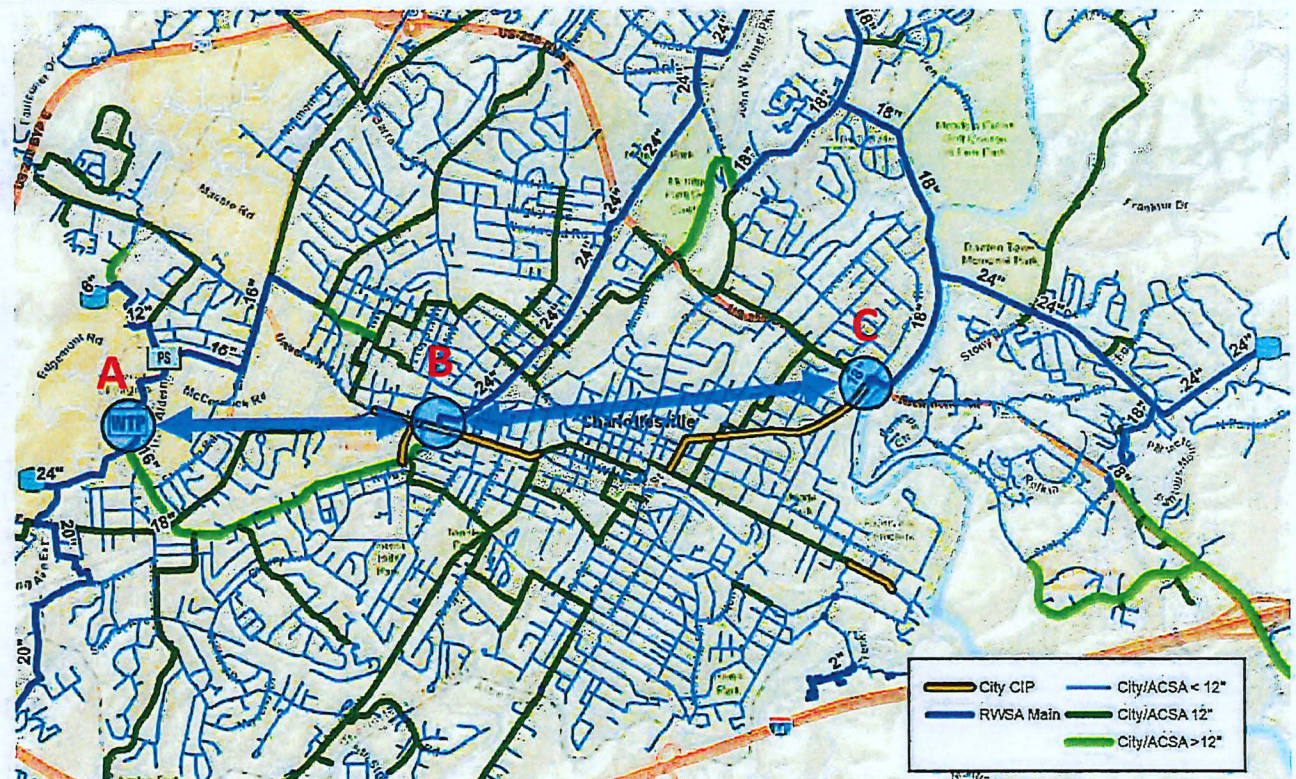
Finished Water Master Plan Modeling

- Started with multiple options to connect the gaps in the water system
- Modeling determined which options met our goals
- Central water line corridor provided the best hydraulic connectivity



Objectives: Improve Flow, Pressure, Redundancy

More efficiently convey water from the Observatory Water Treatment Plant to the City, County and UVA and generally strengthen the Urban water system



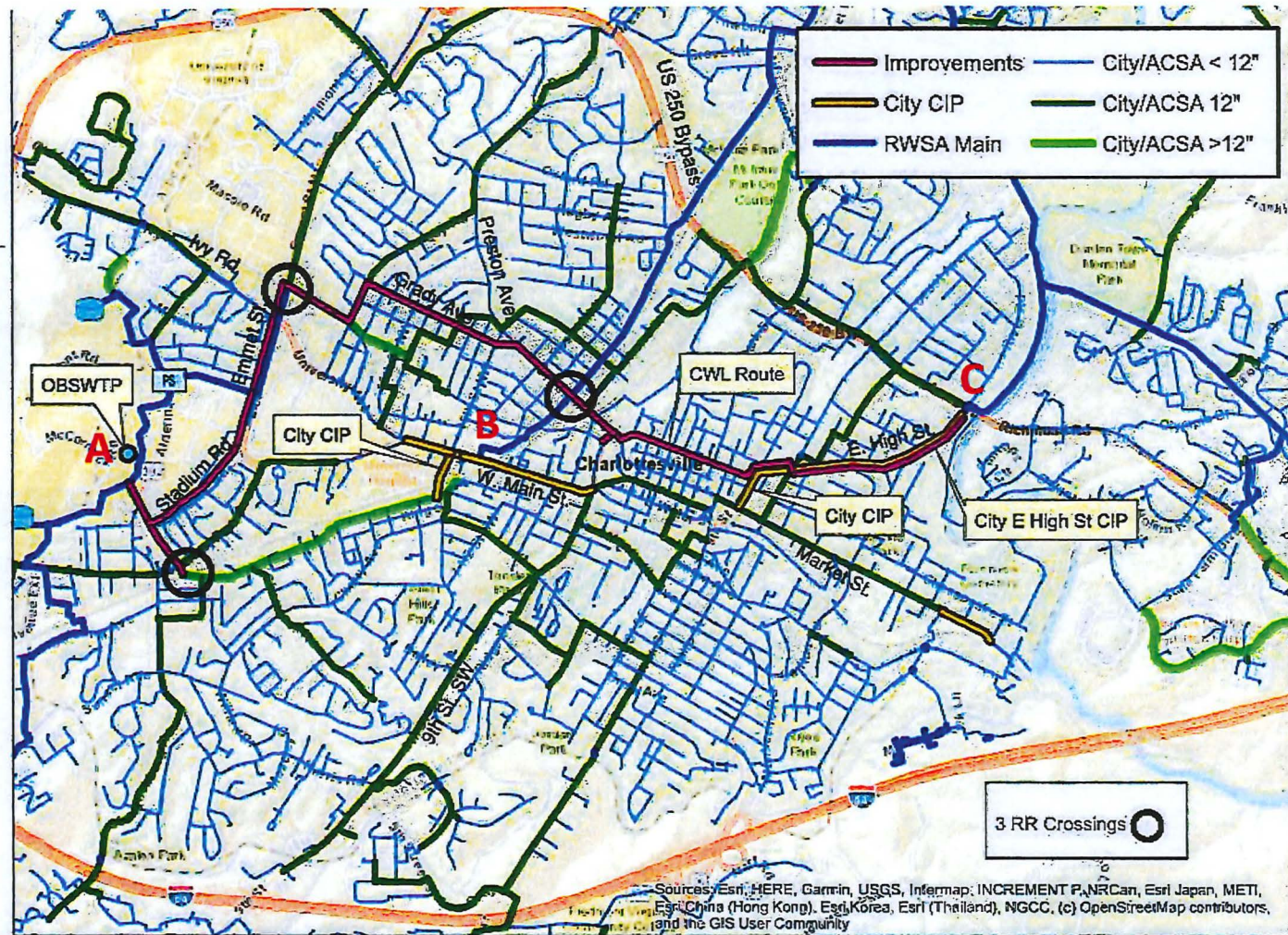
Northern Corridor Concept

Pros:

- Opportunity to upgrade existing 16" RWSA cast iron main with Emmet Streetscape Project

Challenges:

- Narrow and congested neighborhood streets
- Heavy traffic in downtown area
- Minimum hydraulic connectivity to southern portions of the City
- 3 railroad crossings



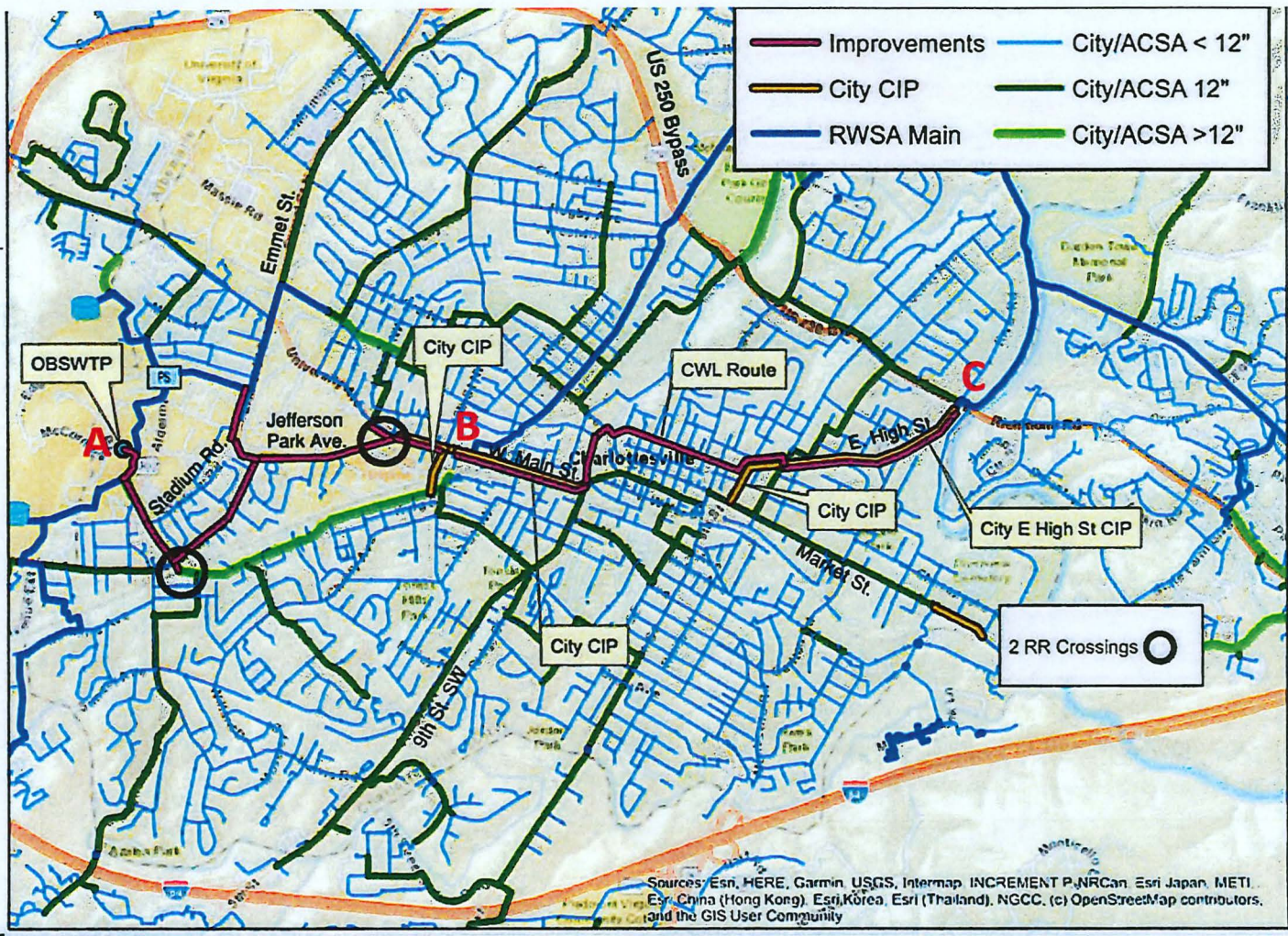
Middle Corridor Concept

Pros:

- Shortest route

Challenges:

- Narrow and congested neighborhood streets
- Heavy traffic in downtown area
- Minimum hydraulic connectivity to southern portions of the City



Southern Corridor Concept

Pros:

- Utilizes streets with wider rights-of-way which provides less impacts to traffic
- Better hydraulic connectivity to the southern portions of the City and Avon Tank

Challenges:

- Longest route



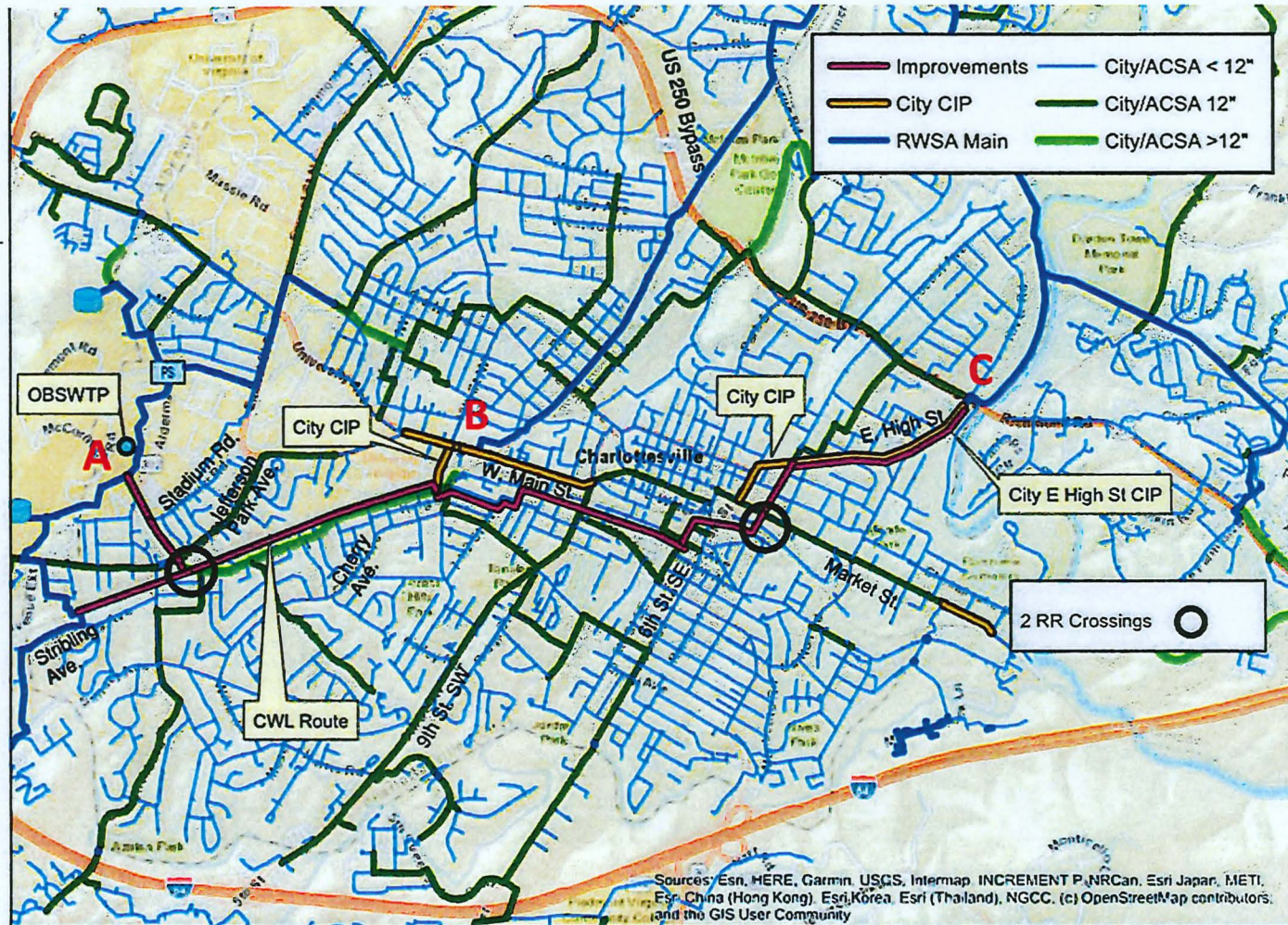
Railroad Corridor Concept

Pros:

- Second shortest route

Challenges:

- Grading, existing structures, and environmental concerns along railroad
- Railroad permitting for parallel WL installation may be difficult
- Extensive private easements needed and tree buffer clearing between homes and railroad

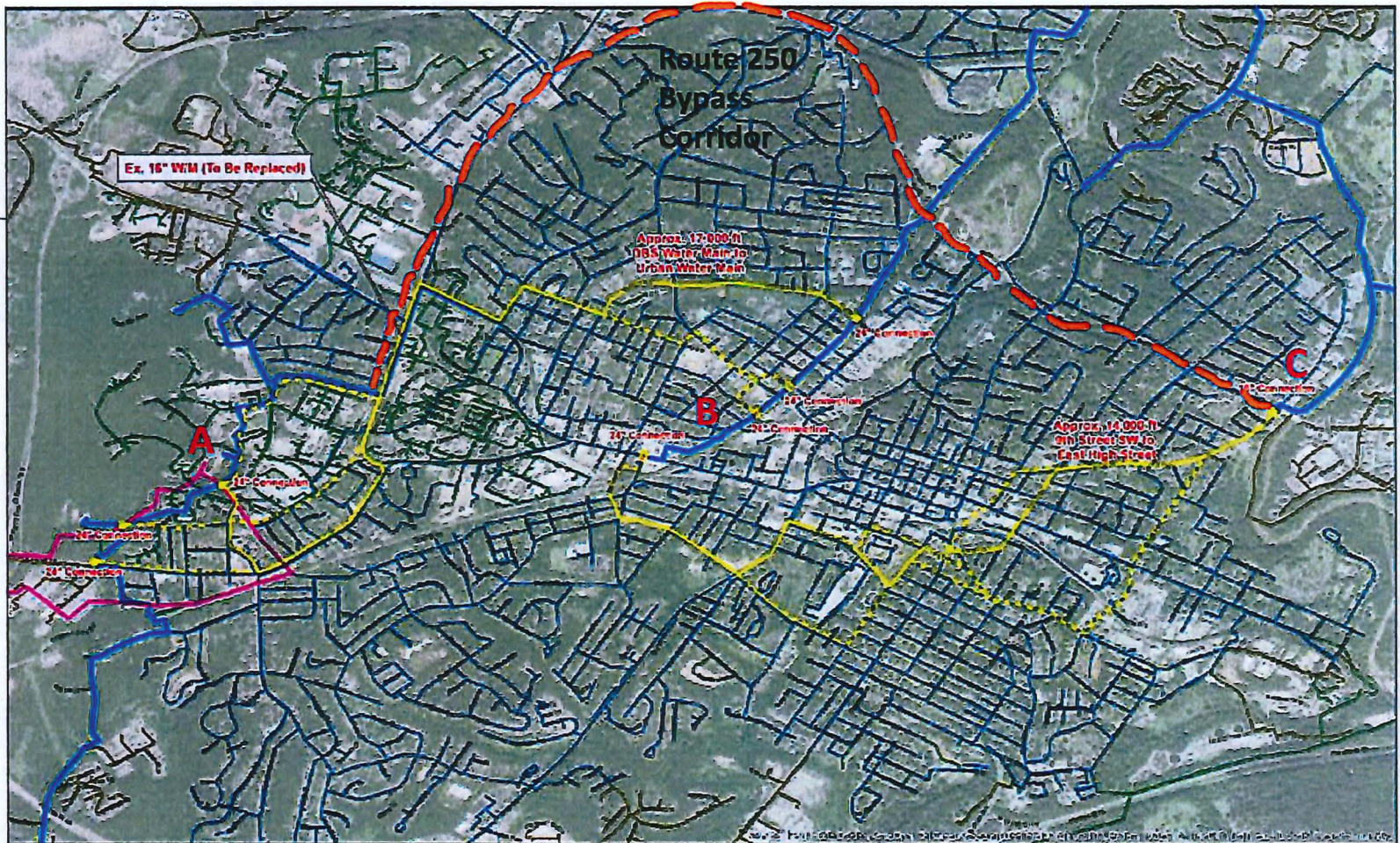


Other Options:

- Hybrid Corridor Concept (yellow)
- Route 250 Bypass Corridor Concept (orange)

Challenges:

- Longest, most expensive routes
- Significant impacts to traffic and residential neighborhoods
- Less hydraulic benefit



CWL Routing Study

- Following multiple workshops and coordination with City of Charlottesville Utilities, City Traffic (NDS), and ACSA, the Southern Corridor Concept was selected for further evaluation
- Study located on our website at:
[Central-Water-Line-Routing-Study-Final-Tech-Memo-2021.12.14.pdf \(rivanna.org\)](#)



Technical Memorandum Work Authorization No. 4

Central Water Line Routing Study

Baker Project No. 182779



December 14, 2021

Final VERSION

Prepared by:

Michael Baker
INTERNATIONAL
We Make a Difference
10611 Balls Ford Road,
Suite 140
Manassas, VA 20109

Routing Study Criteria Evaluated

- Constructability
- Traffic, Parking, and Sidewalk Impacts
- Neighborhoods and Public Impacts
- Railroad Crossing Locations
- Existing Underground and Overhead Utility Congestion
- Access
- Construction Cost
- Opportunities to Coordinate with City Projects
- Easements
- Permitting

Routing Study Alternatives

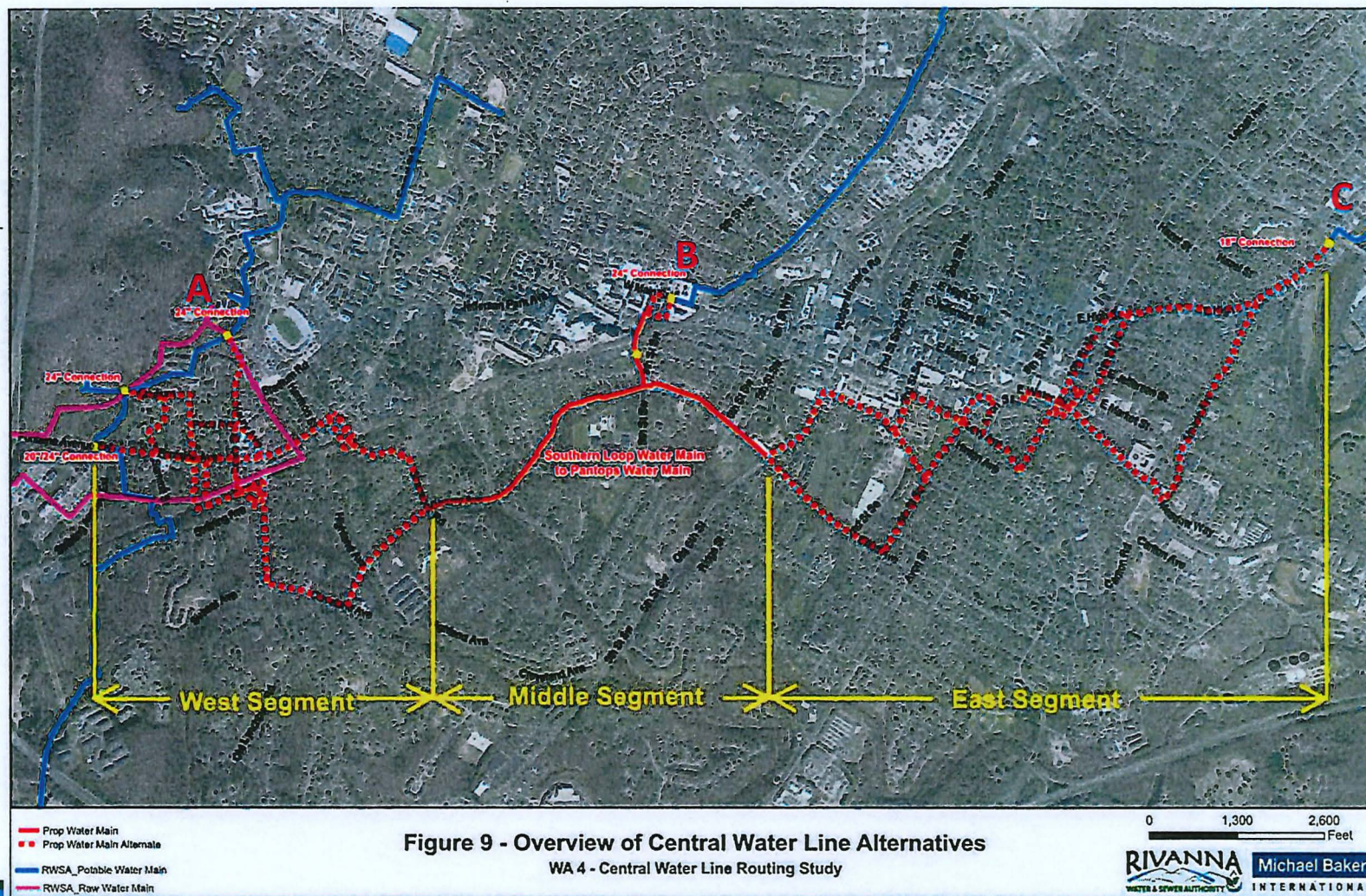
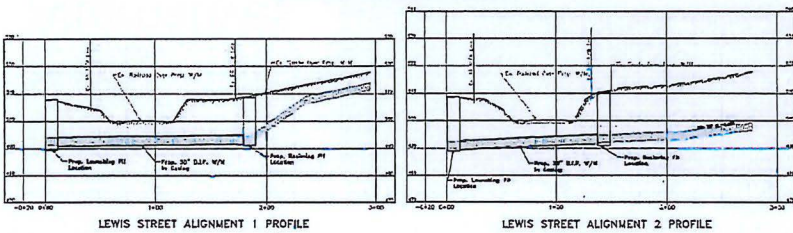


Figure 9 - Overview of Central Water Line Alternatives
WA 4 - Central Water Line Routing Study

Western Segment Evaluation



Figure 13 - Lewis Street Railroad Crossing Plan



West Alternative Alignment Evaluation

Alignment	Evaluation Factor								Total Score
	Impacts on Public During Construction (Traffic, Parking, Access)	Impacts on existing utilities (Congested underground utilities)	Impacts on private properties (Number of Parcels requiring easement)	Environmental Impacts/ Permitting Requirements	Future maintenance consideration (access, traffic, etc)	Trenchless Crossing - Required and Difficulty	Miscellaneous Challenges	Construction costs	
West 1a	1	2	0	1	1	1	1	1	8
West 1b	1	2	1	1	1	2	1	1	10
West 1c	0	1	1	1	0	1	1	2	7
West 2a	2	2	0	1	2	1	1	1	10
West 2b	1	2	1	1	1	2	1	1	10
West 2c	0	1	1	1	0	1	1	2	7
West 3a	2	1	0	1	2	1	1	1	9
West 3b	1	1	1	1	1	2	1	1	9
West 3c	0	1	1	1	0	1	1	2	7
West 4b	2	1	1	1	2	2	1	1	11
West 4c	1	1	1	1	1	1	1	2	9
West 5b	2	2	1	1	2	2	1	1	12
West 5c	1	1	1	1	1	1	1	2	9
West 6c	0	1	1	1	0	1	1	2	7

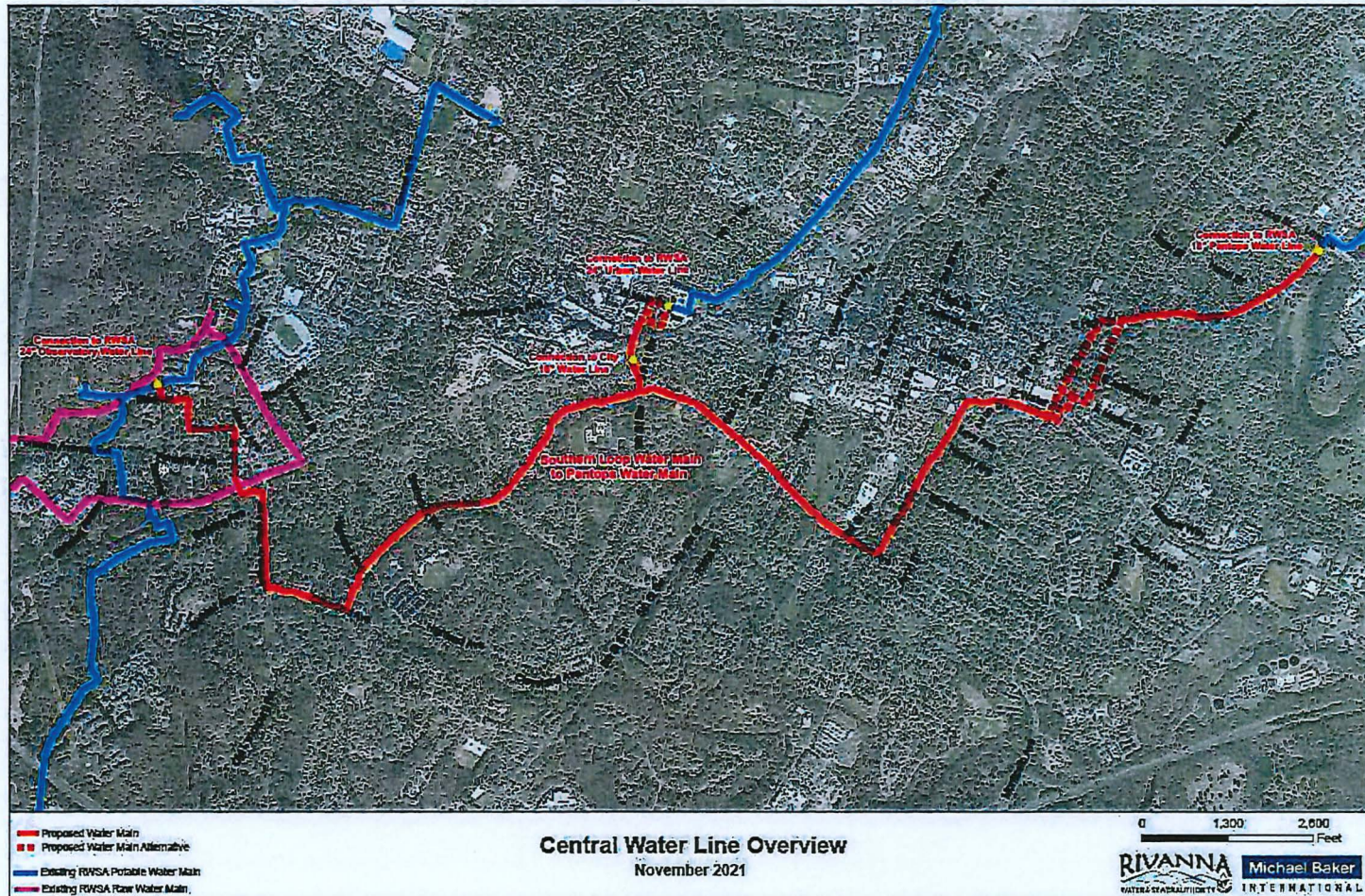
Alignment	Evaluation Factor					
	Fontaine Tie-In-->Lewis RR Crossing-->JPA-->Cleveland (1b)	Royal PS Tie-In-->Mimosa-->Fontaine-->Lewis RR Crossing-->JPA-->Cleveland (2b)	Royal PS Tie-In-->Stadium-->Piedmont/Price-->Lewis RR Crossing-->JPA-->Cleveland (3b)	Royal PS Tie-In-->Stadium-->Piedmont/Price-->Fontaine/JPA-->Shamrock RR Crossing (4c)	Alderman/OBS Tie-In-->Maury-->Lewis RR Crossing-->JPA-->Cleveland (5b)	Alderman/OBS Tie-In-->Maury-->Fontaine/JPA-->Shamrock RR Crossing (5c)
Length	7,650 LF	8,320 LF	8,200 LF	6,650 LF	7,480 LF	6,000 LF
Preliminary Cost Estimate	\$7.7M	\$8.3M	\$8.3M	\$6.6M	\$7.5M	\$6.0M
Areas of Major Traffic Impact	Fontaine, JPA (south)	Fontaine, JPA (south)	JPA (South)	Fontaine/JPA (north), Shamrock	Alderman, JPA (South)	Alderman, Fontaine/JPA (North), Shamrock
Parcels Impacted	3 (residential)	5 (3 residential, 2 UVA)	5 (3 residential, 2 UVA)	4 (2 residential, 2 UVA)	4 (3 residential, 1 UVA)	3 (1 residential, 1 commercial, 1 UVA)
Miscellaneous Impacts	Fire Station Along Fontaine	Footprint on UVA (Mimosa); Fire Station Along Fontaine	Footprint on UVA (pedestrian trail)	Footprint on UVA (pedestrian trail)	Footprint on UVA (Alderman Rd)	Footprint on UVA (Alderman Rd)
Pros	No UVA Impact; follows lesser traffic route of JPA-Cleveland	Lewis RR Crossing - straightforward; follows lesser traffic route of JPA-Cleveland	Lewis RR Crossing - straightforward; follows lesser traffic route of JPA-Cleveland	Shamrock Routes are shorter and less expensive	Best hydraulic benefit (tie-in closest to OBSWTP); Lewis RR Crossing - straightforward; follows lesser traffic route of JPA-Cleveland	Best hydraulic benefit (tie-in closest to OBSWTP); Shamrock Routes are shorter and less expensive
Cons	Fontaine Traffic/Parking Impacts; Least Hydraulic Benefit (furthest from OBSWTP); Fontaine routes are medium length/expense	Royal/Lewis routes are longer/more expensive; Residential yard impacts south of RR	Royal/Lewis routes are longer/more expensive; Residential yard impacts south of RR	Follows heavier traffic route of JPA-Shamrock; tight corridor and congested utilities along Shamrock	Footprint on UVA (Alderman Rd); Residential yard impacts south of RR	Footprint on UVA (Alderman Rd); follows heavier traffic route of JPA-Shamrock; tight corridor and congested utilities on Shamrock

Mutually Beneficial Projects Explored

- Main Street Streetscape Project – on hold
- E. High Street Water Main and Streetscape Project – coordination included
- Belmont Bridge Construction – ready for construction and our waterline could not be incorporated, however, our waterline will be built under the bridge and can be constructed independently with no interference
- Fontaine Streetscape Project – RWSA is coordinating the waterline crossing of Fontaine Ave at Lewis St.
- Emmet Street Corridor Streetscape Project – this corridor was not needed for the CWL, however, we are working with the City on replacing our aging cast iron waterline in Emmet St.

Final Selected Alignment

Streets from west to east: Stadium Road, Piedmont Avenue, Price Avenue, Lewis Street (to railroad), Jefferson Park Avenue, Cleveland Avenue, Cherry Avenue, Elliot Avenue, 6th Street SE, Avon Street (to railroad), E Water Street, 10th Street NE and/or 11th Street NE, and E High St to Long Street.



Project Schedule and Cost

- Design, permitting, bidding: 2021 - 2024
- Construction: 2024 – 2029
- Cost: \$25 – 31 M

ACSA Board Future Policy Issues Agendas 2021-2022

Regular 3rd Thursday Monthly Meetings	March '22	April '22	May '22	June '22	July '22	Aug. '22	Sept. '22	Oct. '22	Nov. '22	Pending Issues
	March 17th	April 21st	May 19th	June 16th	July 21st	August 18th	September 15th	October 20th	November 17th	Water Supply Plan Project Status Reports Water Treatment Plants RWSA CIP Central Water Line
	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	Recognitions	
	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	Monthly Financial and CIP Reports	
	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Annual Water Quality Reports (May)
	Presentation Proposed Capital Improvements Program; set Public Hearing	Proposed Fiscal Year 2022-23 Capital Improvements Program (CIP) Presentation	National Drinking Water Week	Public Hearing on Budget, Rates and CIP	Strategic Plan Update	Operational Presentation-ARC GIS; Satellite Imaging; Drone Use	Resolution-Imagine a Day Without Water	Operational Presentation	Operational Presentation	Board Organizational Meeting each January
	Investment Policy	Public Hearing on Proposed FY '23 Capital Improvements Program (CIP)	FY '23 Budget and Rates Workshop	Adoption of Budget, Rates, CIP and Rules and Regulations Amendments		Year-End Appropriations		Strategic Plan Process 2023-2025- Customer Survey		Water Audit and Energy Audit
	City Works - Online Customer Request (Demo)	Proposed FY '23 Budget and Rates Overview Presentation	Compensation Study	Amendment to the Personnel Management Plan (salary schedule and edits)						Strategic Plan 2020-2022 Updates January and July New Strategic Plan Process 2023-2025
	RWSA Capital Improvement Projects Consent	Resolution Scheduling Budget and Rates Public Hearing for June 16, 2022								Annual Water Conservation Report - January
	Rate Study Update and Recommendations	GFOA Distinguished Budget Award (Recognition)								National Drinking Water Week-May Imagine a Day Without Water - September
										Federal/State Water Quality Regulations
										Annual Investments Report December
										Operational Presentations
										ACSA Customer Communications
										Training and Biz Library
									Federal Infrastructure Grant Funds	
Executive Director Annual Performance Review									Executive Director Mid-Year Performance Review	Data Management Dashboards
										2/17/2022

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: CMMS Update Report	AGENDA DATE: February 17, 2022
STAFF CONTACT(S)/PREPARER: April Walker, Acting Manager of I.T. Justin Ray, GIS Coordinator	ACTION: Informational
	ATTACHMENTS: No

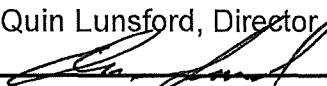
BACKGROUND: This report provides monthly updates on the status of the Computerized Maintenance Management System (CMMS) project.

Project Description: The Computerized Maintenance Management System (CMMS) has been a strategic goal since 2014. The need for this ACSA-wide software solution was identified due to a lack of centralized work order management and Geographic Information System (GIS) integration. The software solution will allow for the creation of work orders, a customer web portal, service requests, inventory management, asset inspections, and asset management.

2/17/22: The majority of the Cityworks project has gone live and is in use across the ACSA. The customer facing portal is being altered and tested in the goal to go live by March.

BOARD ACTION REQUESTED: None

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

AGENDA TITLE: Advanced Metering Infrastructure (AMI) Monthly Update	AGENDA DATE: February 17, 2022
STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance 	ACTION: Informational
	ATTACHMENTS: No

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

DISCUSSION: Authority staff continues to work closely with the selected vendor (Core & Main/Sensus) and the project management consultant (Esource). Staff will present to the Board a status update (Agenda Item # 11) at today's meeting.

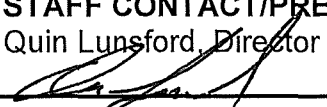
BUDGET IMPACT: Informational only.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ATTACHMENTS: None

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

AGENDA TITLE: Customer Assistance Grants Program Update	AGENDA DATE: February 17, 2022
STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance 	ACTION: Informational
	ATTACHMENTS: Yes

BACKGROUND: The ACSA was awarded \$195,358.96 in federal State and Local Fiscal Recovery Funds (SLFRF) through the American Recovery Plan Act (ARPA) for the COVID-19 ARPA SLFRF Municipal Utility Assistance program on October 29, 2021. The award allowed the ACSA to directly assist residential customers with arrearages greater than 60 days for the time period between March 2020 and August 2021.

DISCUSSION: Upon notification of award, Authority staff began the process of identifying qualified customers per federal/state guidelines. Beginning the week of January 24th, assistance was applied to eligible customer accounts. The ACSA has been able to assist 404 individual customers and expects the entire award to be applied within the next week.

Application of these funds have materially assisted many customers that have been impacted by the pandemic and provide an opportunity to bring their accounts closer to a current status. Each customer that received funds through this program has been mailed a letter outlining the program and providing the specific amount of the award that has been applied to their account. Additionally, all customers receiving assistance will see this reflected on their most current billing statement.

Beginning in March, the ACSA will begin an outreach program to customers that remain in arrears and attempt to establish contact to bring their account into current status. These efforts will emphasize available additional programs and an opportunity to establish a payment plan if necessary.

Programs like this require considerable teamwork and coordination to ensure all program requirements are met and that customers receive all benefits for which they are eligible. Among others, the ACSA Customer Service Team, led by Ms. Terri Knight, have diligently worked to ensure our eligible customers were identified and served well.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ATTACHMENTS: Sample ARPA Letter to Customers



January 24, 2022

Dear **<Customer Name>**,

Customer Payment Assistance:

Earlier this year, the Albemarle County Service Authority (ACSA) was awarded a grant through the State and Local Fiscal Recovery Funds (SLFRF) through the Federal American Recovery Plan Act (ARPA). These funds are to be used for the COVID-19 ARPA SLFRF Municipal Utility Assistance Program and allow the ACSA to directly assist residential customers with qualified unpaid bills.

You are receiving this letter because you qualify for customer assistance as your account is behind in payment. Through this program, the ACSA has applied **<Insert Amount of Relief>** toward your eligible unpaid bills in order to reduce your outstanding water and sewer balances. Please note, you are responsible for the remaining balance on your account.

To qualify for the customer assistance program, you don't need to do anything as we will automatically apply the authorized grant amount to your account.

Shortly after the COVID-19 Pandemic impacted our area in March 2020, the ACSA instituted a moratorium on discontinuation of water service for non-payment. While the moratorium remains in place, we expect to resume normal policies this spring, that is to say, disconnections will begin to resume for non-payments beginning in April.

If you are still in need of additional emergency financial assistance due to experiencing lost wages or earning ability because of reduced hours or loss of employment from the ongoing COVID-19 pandemic, Albemarle County is assisting those residents who qualify. To learn more about the County's program and request assistance, please call the fund hotline voicemail box at: 833-524-2904, Monday – Friday 9 am – 5 pm.

Additionally, the ACSA is able to assist in establishing a payment plan to spread out the repayment of past due arrearages. If you would like to establish a payment plan, please contact the ACSA directly at 434-977-4511 Option #2 or by email at custserv@serviceauthority.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Quin Lunsford".

Quin Lunsford
Director of Finance
Albemarle County Service Authority

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

AGENDA TITLE: Disconnection Policy Recommendation	AGENDA DATE: February 17, 2022
STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance	ACTION: Yes
	ATTACHMENTS: No

BACKGROUND: In March of 2020, the ACSA instituted a moratorium on water disconnections for non-payment. The moratorium successfully maintained water/sewer service for customers that were negatively impacted by the pandemic and unable to make payment on their account.

DISCUSSION: The moratorium on disconnections have resulted in considerable increases in customer arrearages even after over \$375,000 in federal/state grant funding was applied to eligible customer accounts.

We have included monthly updates on receivables in arrears which illustrate the increases in past due accounts over the course of the pandemic.

While re-institution of the ACSA's policy on disconnection for non-payment will be difficult, the need to resume disconnections for non-payment is needed to ensure the ACSA recoups services that have been provided. The application of over \$195,000 through the ARPA/SFLRF program this month provides necessary momentum to assist those that have been unable to pay and an opportunity for our team to assist customers that have been impacted negatively by the pandemic. If approved by the Board, we would begin communicating with customers that are in arrears and if necessary, develop personalized payment plans for customers to assist with arrearages.

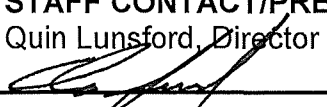
RECOMMENDATIONS: Approve the end of the moratorium for water disconnections related to non-payment.

BOARD ACTION REQUESTED: Approve as recommended.

ATTACHMENTS: None

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Enterprise Resource Planning (ERP) – Financial/Human Resources System Deployment STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance 	AGENDA DATE: February 17, 2022 ACTION: No ATTACHMENTS: Yes
--	---

BACKGROUND: The Authority designed and deployed an ERP (Microsoft Dynamics AX) in December 2015. This system was used for financial reporting, payroll, accounts payable and had limited human resource functionality. We were notified in 2019 that mainstream support for Dynamics would cease at the end of 2021 which necessitated the need for a comprehensive evaluation and formal procurement for its replacement. Through a formal evaluation and public procurement process, the Authority selected MUNIS (Tyler Technologies) as our ERP solution and successfully “went-live” January 1, 2022.

DISCUSSION: Upon notification that Dynamics AX would not be supported past 2021, Authority staff mobilized to assess our current system and document needs for the future. This process included consultation with the Government Finance Officers Association's (GFOA) Research and Consulting Center beginning January 2020. Services provided by the GFOA team assisted with current/future state business process analysis, business case recommendations, process design, request for proposal (RFP) development/selection, contract negotiations, and implementation transition.

Through this formal process, the Authority selected Munis as the most highly rated proposer and began the implementation project on March 29, 2021. Over the course of the next eight months, Authority staff, specifically Ms. Danielle Trent and Ms. Emily Roach from the HR/Administration team and Ms. Theresa Whiting, Ms. Jennifer Bryant, Ms. Tonya Foster, and Ms. Deanna Davenport from the accounting team, worked regularly (virtually) with the Tyler team to understand and design the new ERP system to meet the Authority's needs. While eight months was a very aggressive timeline to design, test, and deploy a new ERP system, the team remained committed throughout the process in the midst of challenges presented by the pandemic.

The team's dedication enabled the Authority to “go-live” on January 1, 2022, with all financial reporting, accounts payable, payroll and payroll related human resource modules. Additionally, this team is and continues to work with other Authority users to ensure they are able to transact/interact with the system for their departmental/individual needs.

While core critical business functions have been deployed, our team continues to work with Tyler to design/implement additional modules. The HR team is working on additional functionality related to Human Resource functions and the accounting team continues to refine business processes to reduce and/or eliminate redundant work while maintaining or enhancing internal control.

We are also working to deploy an integrated employee leave and time management system that automates current manual process and streamlines the workflow/approval

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

process. The ERP team and a small number of employees are currently testing this functionality and we anticipate deploying Authority-wide within the next few months.

The Authority team is excited to have a stable/intuitive system that affords flexibility and improvement in business processes, workflow, and other areas that were lacking in the legacy ERP.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None

ATTACHMENTS: ERP PowerPoint Presentation

Enterprise Resource Planning (ERP) Deployment

Financial/Human Resources System

February 17, 2022

Agenda



Project Timeline



ERP Core Team

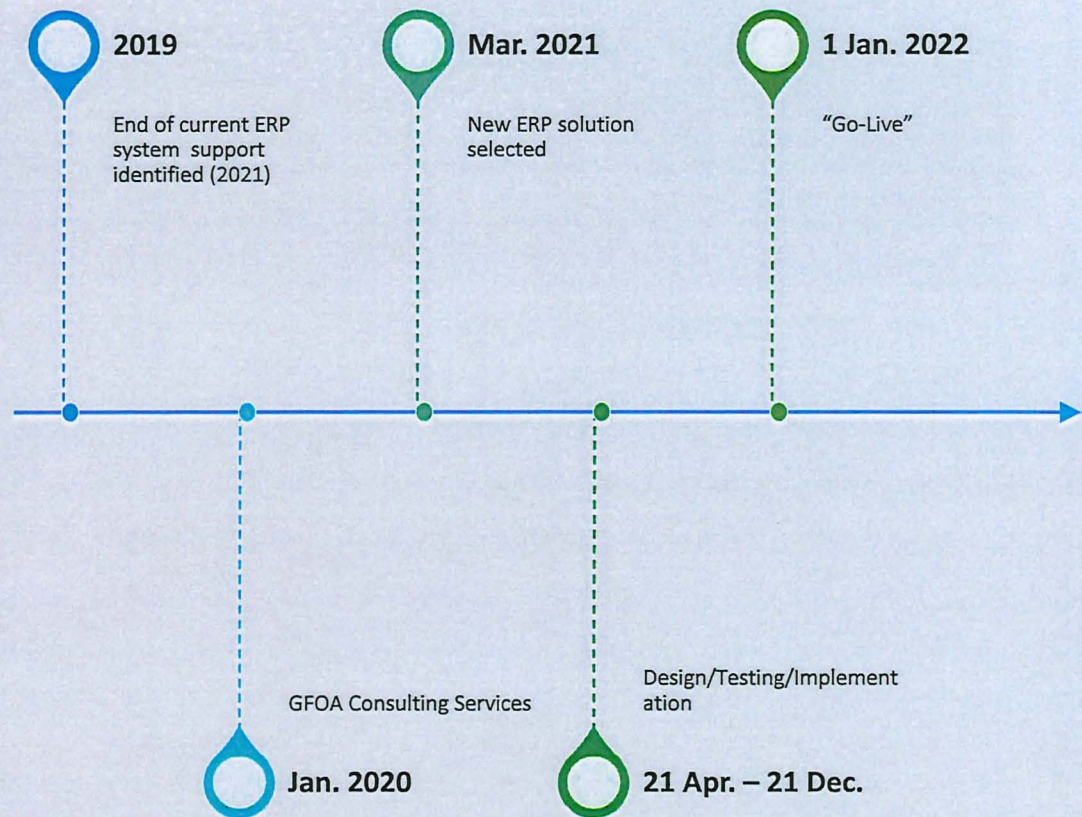


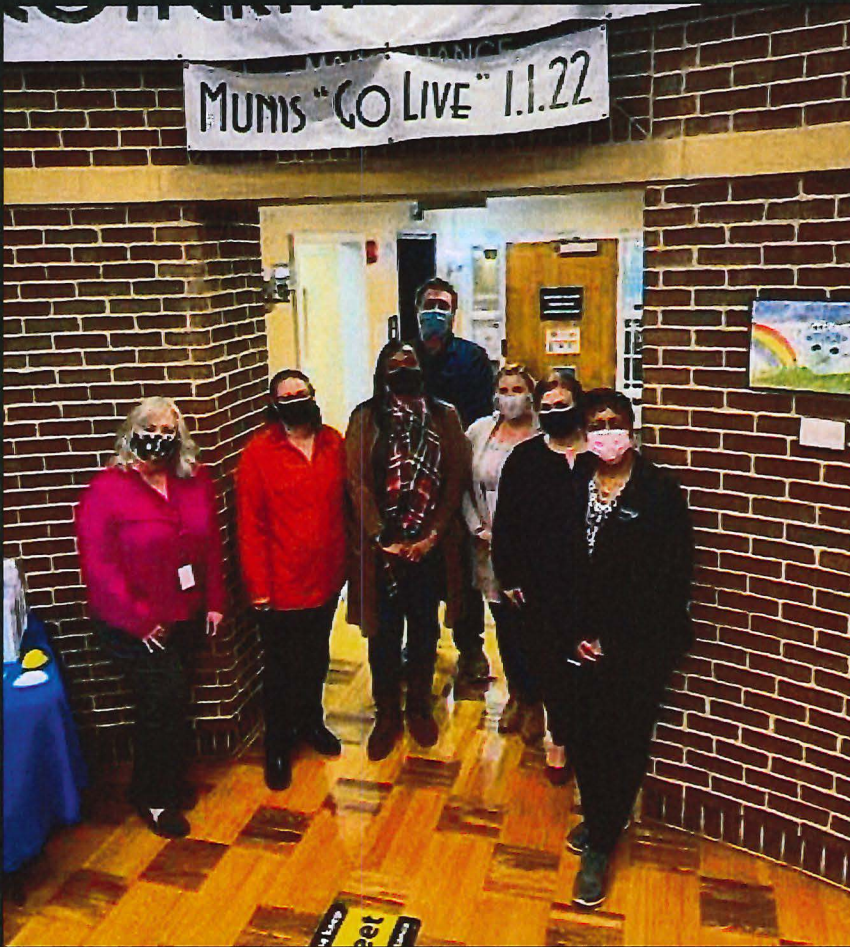
Modules Successfully
Deployed



Current/Future Modules
for Deployment

ERP Project Timeline





ERP Core Team

- Deanna Davenport, Accounting Supervisor
- Tonya Foster, Procurement/Fin. Specialist
- Danielle Trent, Human Resources Technician
- Quin Lunsford, Director of Finance
- Emily Roach, HR and Admin. Manager
- Jennifer Bryant, Payroll/Revenue Specialist
- Theresa Whiting, Accounting Clerk

Pictured from left to right

Modules Successfully Deployed

Payroll/Human Resources

Purchasing/Accounts Payable/AR

General Ledger

Financial Reporting

Budgeting

Future Modules for Deployment – Human Resources/Payroll and Administration

Personnel Action
Forms

Recruiting/Employee
Intake

Risk Management

Integrated
leave/time reporting

Open Enrollment

Future Modules for Deployment – Financial

Integrated
Capital Asset
Module

Project
Accounting

Contract
Management

Enhanced
Budgeting
Capabilities



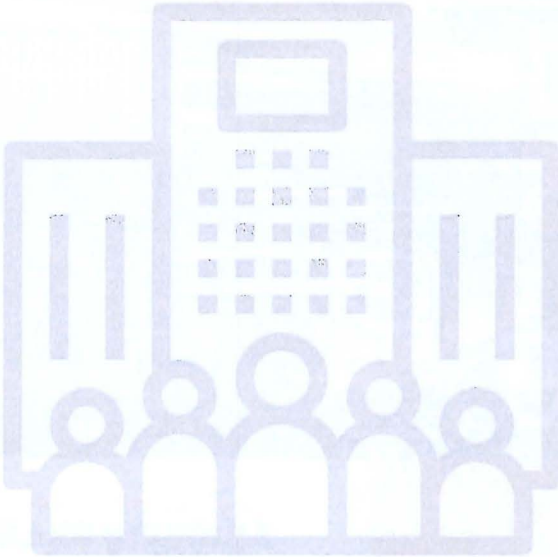
In Summary:

- The new ERP provides a stable, reliable platform
- Fully supported and used by similar entities throughout Virginia and the United States
- Provides a foundation for future needs of all users



Board of Directors' Meeting
February 2022

RECAP



In light of the ransomware attacks on the Colonial Pipeline and a couple of water treatment facilities across the U.S., in June 2021 the ACSA contracted with Synigent Technologies to conduct a thorough Security Assessment of the ACSA.

Synigent Technologies assessed the ACSA based on the Cybersecurity and Infrastructure Security Agency (CISA) standards which the ACSA adopted along with the American Water Works Association (AWWA) Guidelines and the Federal Bureau of Investigations (FBI) security advisories.

Asset Management
Business Management
Governance
Risk Assessment
Risk Management Strategy
Supply Chain Risk Management
Identity Management, Authentication
Awareness and Training
Data Security
Information Protection Processes
Maintenance
Protective Technology
Anomalies and Events
Security Continuous Monitoring
Response Planning
Communications
Analysis
Mitigation
Improvements
Recovery Planning
Improvements (RC.IM)
Communications (RC.CO)



The Assessment

The ACSA was assessed on 102 security controls based off 22 categories.

For each of the 102 security controls, we were graded on whether the recommendation was In Place, Partially In Place, or Not In Place.

This is an example of just one of the categories we were graded on and also demonstrates the subcategories that were also graded on.

Id	CISA Contr	Category	Title	Safeguard	Description
1	1	Asset Management	Asset Management (ID.AM): The data, personnel, devices, systems, and facilities that enable the organization to achieve business purposes are identified and managed consistent with their relative importance to organizational objectives and the organization's risk strategy.	ID.AM-1	Physical devices and systems within the organization are inventoried
2	1	Asset Management		ID.AM-2	Software platforms and applications within the organization are inventoried
3	1	Asset Management		ID.AM-3	Organizational communication and data flows are mapped
4	1	Asset Management		ID.AM-4	External information systems are catalogued
5	1	Asset Management		ID.AM-5	Resources (e.g., hardware, devices, data, time, personnel, and software) are prioritized based on their classification, criticality, and business value
6	1	Asset Management		ID.AM-6	Cybersecurity roles and responsibilities for the entire workforce and third-party stakeholders (e.g., suppliers, customers, partners) are established

In Place

June 2021 Assessment

32%

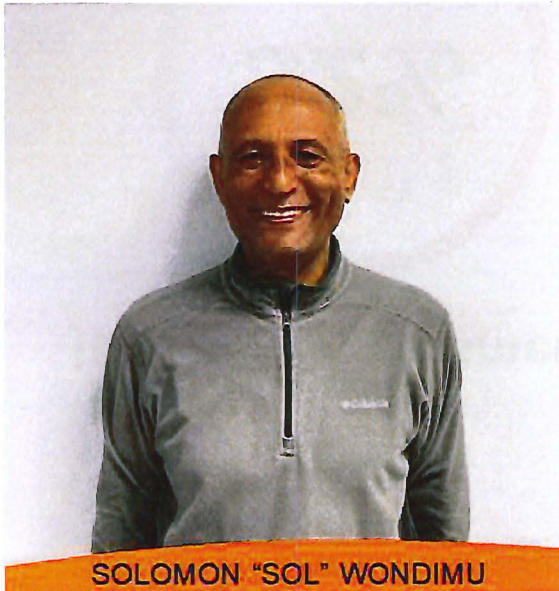
February 2022 Assessment

67%



Implemented recommendations

- Policy Developments
- SCADA System Upgrades
- Increased monitoring
- Firewall Changes
- Purchased a Learning Management System
- Conducted a 3rd Party Penetration Test
- Hired an Information Security Officer
- Lowered incident thresholds



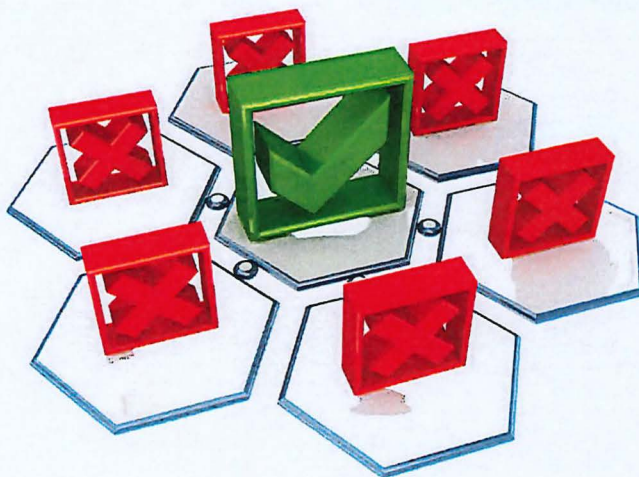
SOLOMON "SOL" WONDIMU

Partially In Place

June 2021 Assessment



February 2022 Assessment



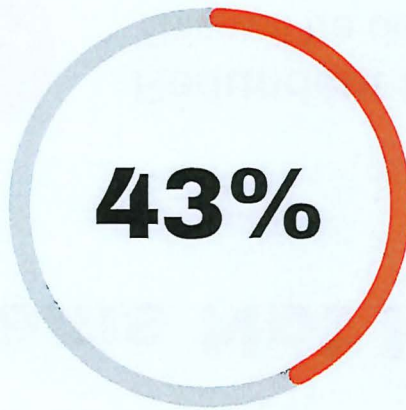


- Implement Multi Factor Authentication Organization-Wide **(In Progress)**
- Upgrade and Expand the ACSA Security System **(Funding in Proposed CIP Budget)**
- Purchase and Configure a Data Management Solution **(Funding in Proposed CIP Budget)**
- Test Disaster Recovery Plan **(In Progress)**
- Purchase and implement additional monitoring software **(Funding in Proposed IT Budget)**
- Upgrade Firewalls **(Funding in Proposed IT Budget)**

In Progress Recommendations

Not In Place

June 2021 Assessment



February 2022 Assessment



Items Not In Place



Redundant Server Room

This will be done in conjunction with the Avon Street Property Project.



Hire a Project Manager

Proposal is included in the upcoming FY2023 Budget



June 2021
Baseline Assessment

February 2022
Check-in Assessment

In Place

32%



67%

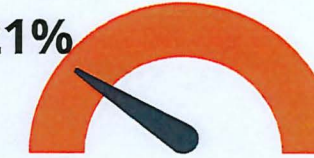


Partially In Place

25%



21%



Not In Place

43%



12%



Overall Completion

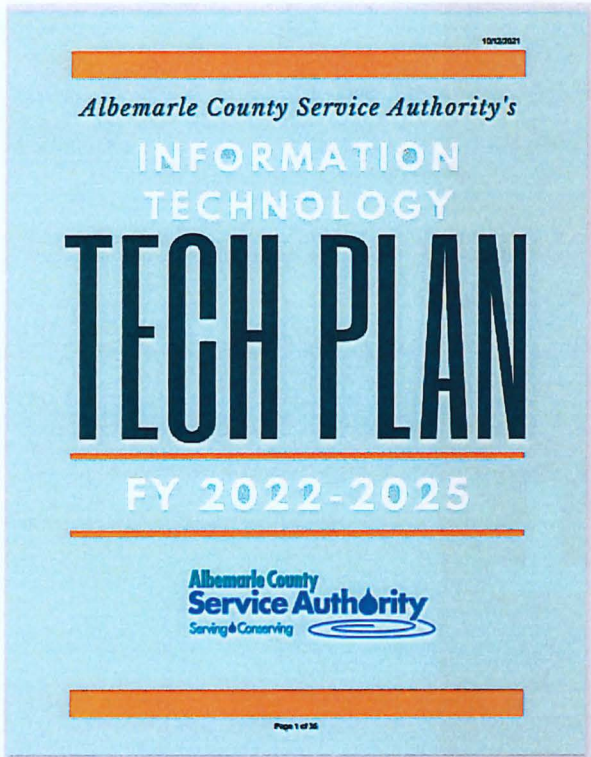
Security Assessment Findings **88%**



**Combined (Partially In Place and In Place)

Penetration Test Findings **100%**





TO STAY ON GOAL

We developed a multi-year Technology Plan with detailed timeline that includes the recommendations from the Security Assessment, among other projects.

Anticipated timelines, budget and responsible parties are detailed in the plan.

THANKS

ANY QUESTIONS FOR US?



EASEMENT CLEARING

CHARLIE THOMAS

FEBRUARY 17, 2022

Types of Equipment used in Easement Clearing

- Skid Steer with Brush Cutter
- Farm Tractor with Bush Hog
- Chainsaw
- Personal Protective Equipment





ASCA Assets in Isolated Areas

Easement clearing is
especially important in
these areas for
emergency access or
routine maintenance.

Some areas can be easily accessed and cleared by using bush hogging equipment, creating a nice lawn look.



This is another area that we were able to clear by utilizing the bush hogging equipment.

Before



After



Other areas need a more hands-on method of clearing. With large diameter trees or other safety concerns, arborists with specialized equipment are utilized.

Before

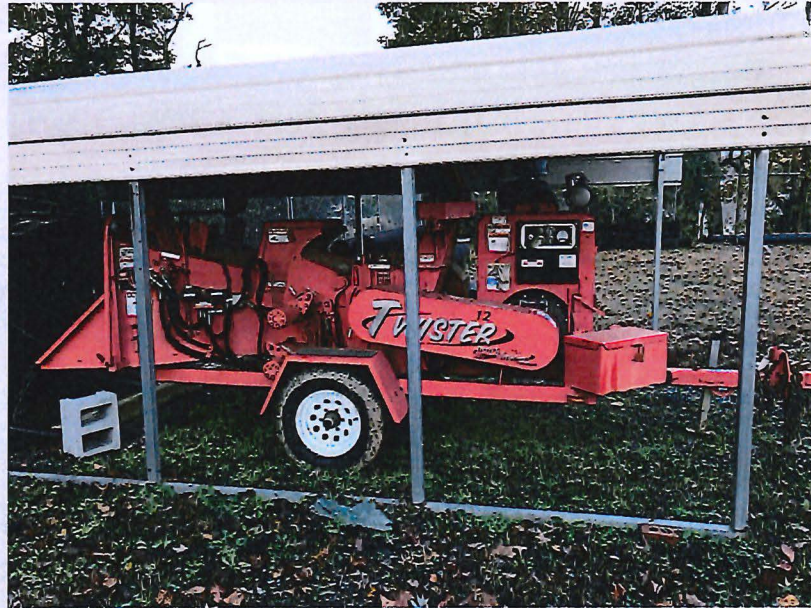


After





The use of chain saws, weed eaters, and bush axes are necessary for the clearing process.



When the easement needs to be cleared with non-equipment methods our chipper needs to be utilized. The chipper is rated to handle logs up to 12" in diameter.

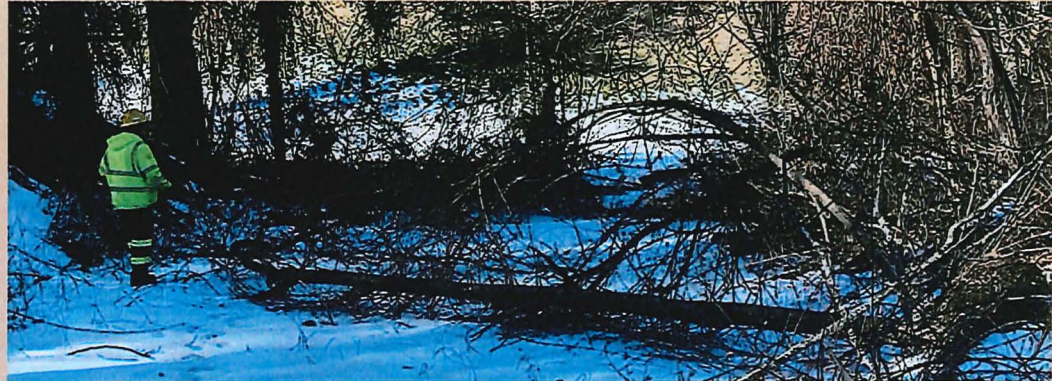
During easement clearing, all brush must be removed from the easement and run through our chipper. This ensures that all subdivision common areas and customer private property are restored to original condition.



Our easement clearing is usually performed in the fall and winter months, primarily for employee safety. We try to avoid the irritating poison ivy, the pesky sting of unwanted bees, and everyone's favorite - those cold-blooded slithering snakes.



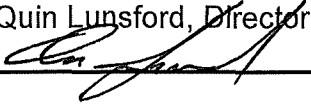
Winter has its
own hazards -
Freezing
Temperatures,
Snow and Ice





QUESTIONS???

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

AGENDA TITLE: Advanced Metering Infrastructure Project Status Report	AGENDA DATE: February 17, 2022
STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance 	ACTION: Informational
	ATTACHMENTS: Yes

BACKGROUND: The ACSA Board authorized staff at its October 2019 meeting to execute agreements related to the AMI project. Monthly status updates have been provided in the consent agenda. As we embark on phase II and approach the final phase of the project, a comprehensive presentation illustrating the progress made and scheduled for the remainder of the year has been prepared for today's meeting.

DISCUSSION: The ACSA's strategic plan in 2013 outlined the need and benefits of a well designed Advanced Metering Infrastructure (AMI) system. Nearly nine-years later, after a formal feasibility study, public procurement process, and years of work, this vision will soon be a reality.

The Authority installed two collectors (antennas) early in 2021 and deployed over 500 meters in and around the Pantops. These meters and two collector sites have been operational since April 2021. These meters have regularly communicated hourly readings since installation which provides the Authority information that has assisted operations but more importantly had positive impacts on our customers.

Our presentation today will provide an overview of the project, key milestones, and next steps but will also emphasize the benefits our customers in Phase I have experienced.

BUDGET IMPACT: Informational only.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ATTACHMENTS: AMI Project Status Report PowerPoint Presentation

ADVANCED METERING INFRASTRUCTURE (AMI) – PROJECT UPDATE

FEBRUARY 17, 2022

AGENDA



Project Summary



Project Milestones



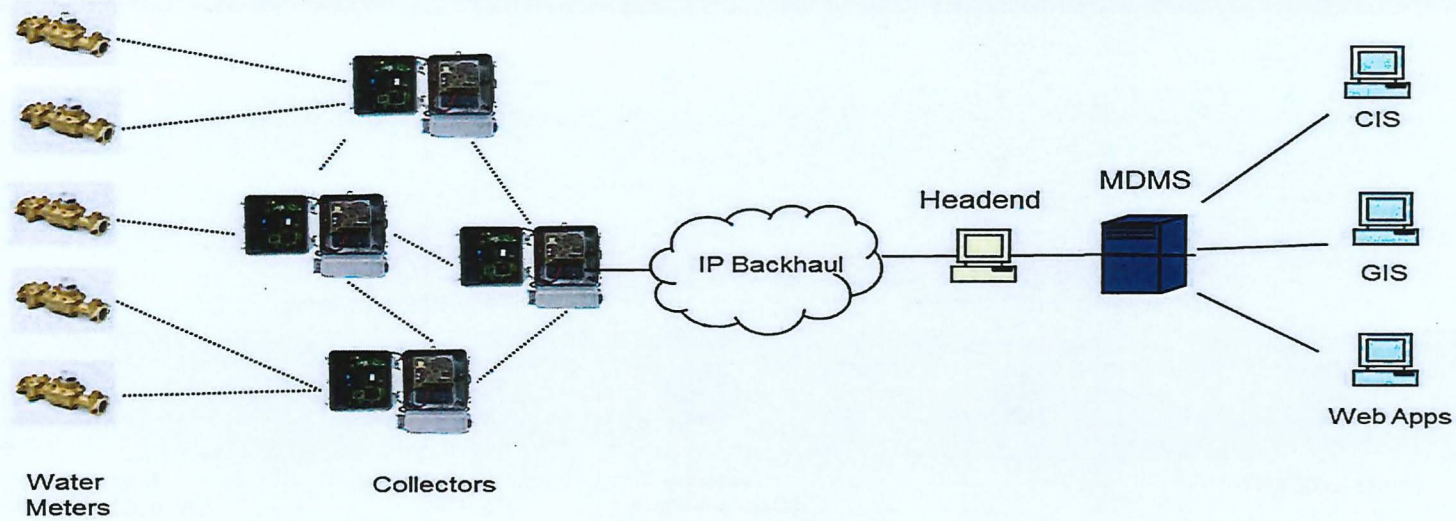
Phase I Customer Updates



Phase – II/III



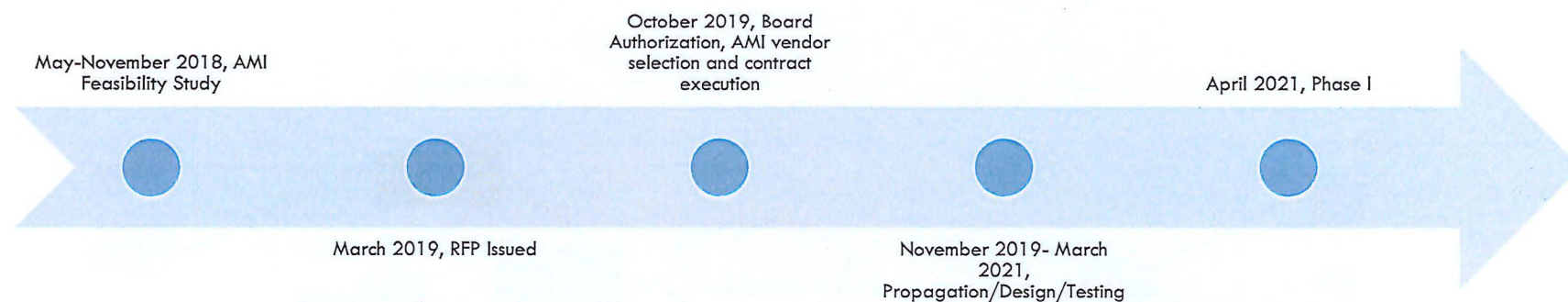
Next Steps



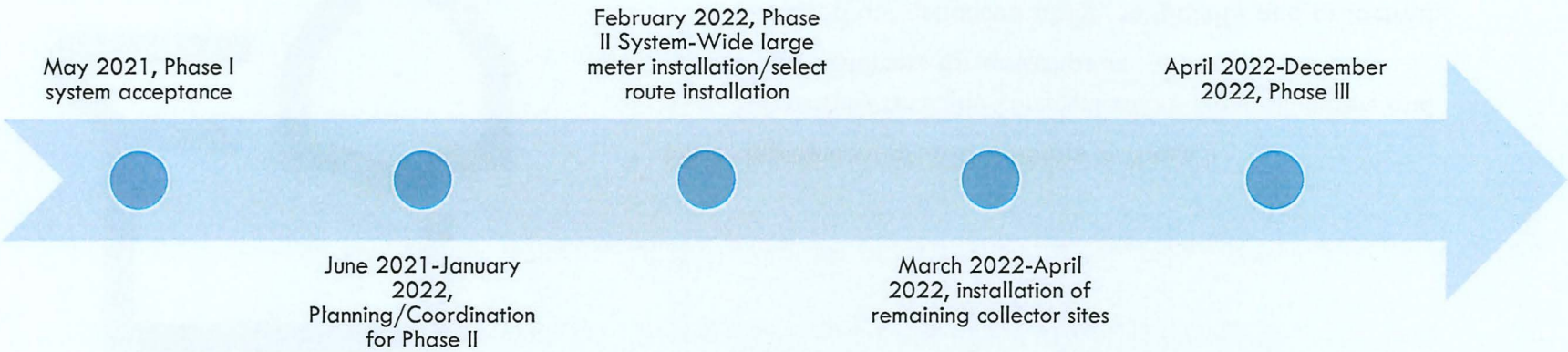
- AMI is an integrated system of meters, communications networks, and data management software that enables two-way communication between the utility and customers. It provides near real-time information about water usage.

WHAT IS ADVANCED METERING INFRASTRUCTURE (AMI)?

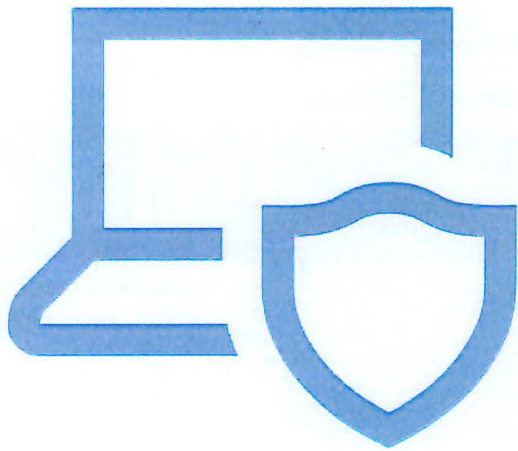
PROJECT MILESTONES



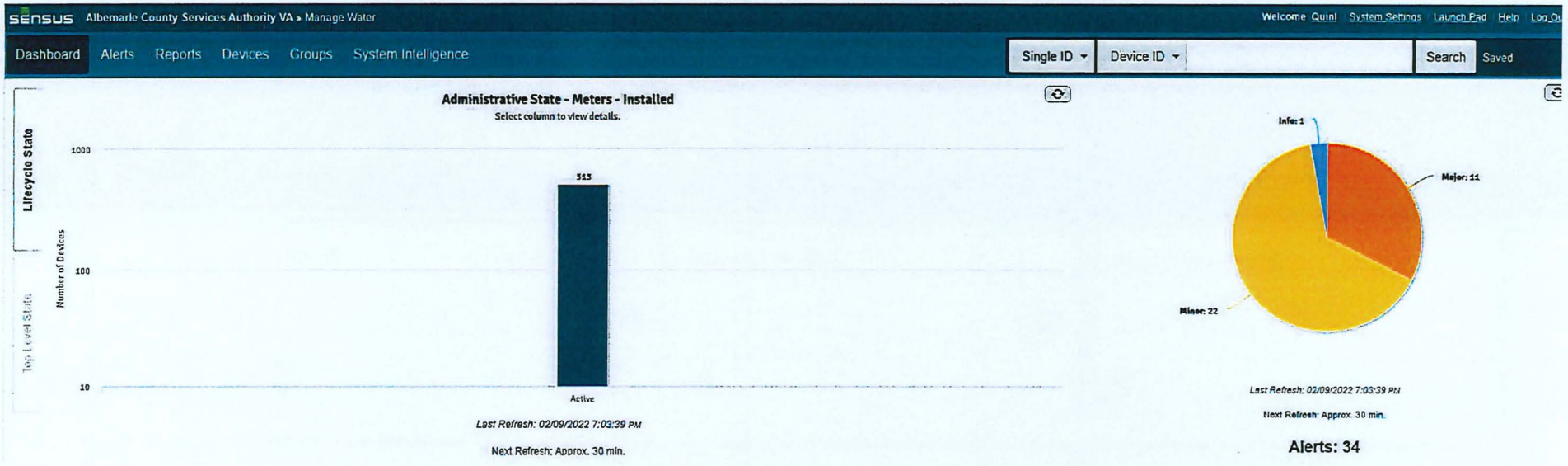
PROJECT MILESTONES



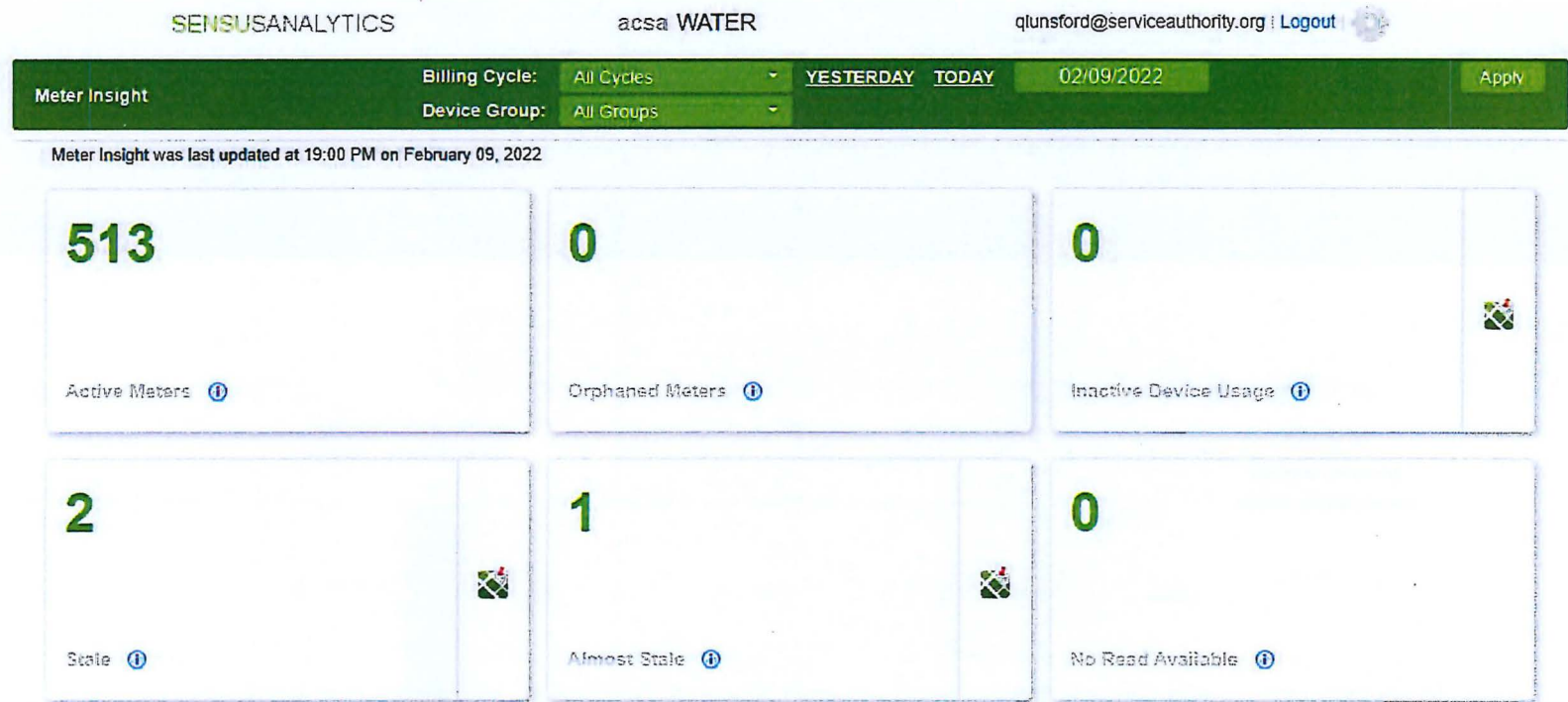
CUSTOMER UPDATES



- Since deployment of 500+ meters in Phase I:
 - Successfully received communications from all meters and billed customers for consumption
 - Exercised our enhanced ability to identify and proactively work with customers when abnormalities (most frequently leak/continuous flow) are identified.
 - Mr. Kenny Barrow, Meter Operations Supervisor, will speak to the level of service the AMI system affords the ACSA and our customers.

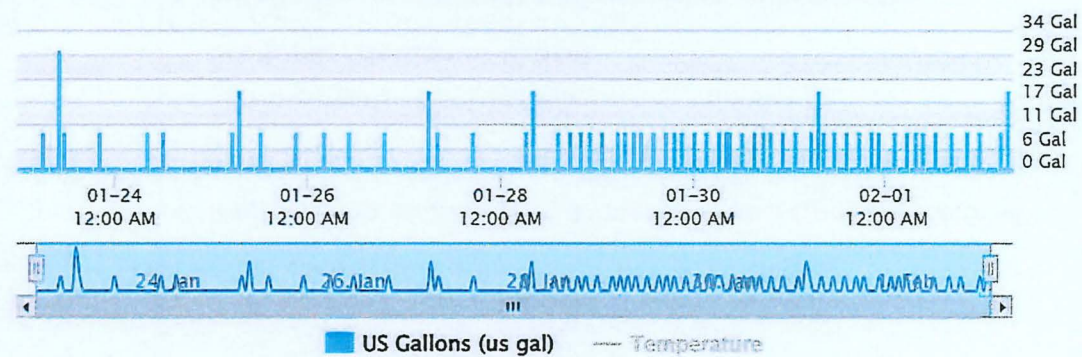


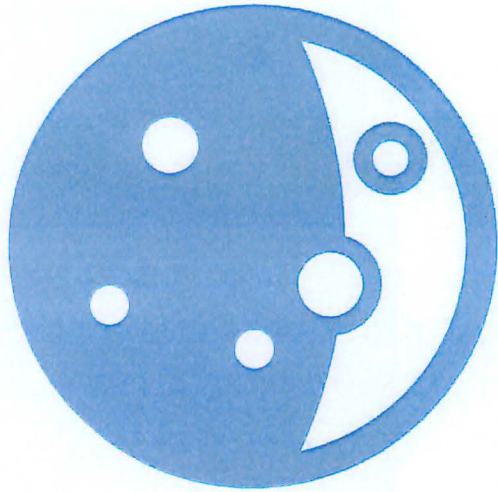
AMI INTERFACE- RNI



AMI INTERFACE- SENSUS
ANALYTICS (SA)

AMI INTERFACE- SENSUS ANALYTICS (SA) - CONSUMPTION REPORT





PHASE II

- Installation contractor begins Phase II which includes:
 - Replacement of 334 1.5"-4" meters/Retro-fit of 323 1.5"-4" meters
 - Replacement/Retrofit of 608 3/4"-1" meters in Scottsville/portion of Crozet
 - Installation/configuration of remaining collector sites

This is a detailed topographic map of the Fort Belvoir area in Colorado. The map shows the Rocky Mountain Trench and surrounding terrain, including the Fort Belvoir, Fort Collins, and Fort Lupton. Major roads like US 250 and US 15 are visible. The map is overlaid with a grid of latitude and longitude lines. Key locations labeled include Fort Belvoir, Fort Collins, Fort Lupton, and various military installations. The map also shows the Colorado River and the Fort Belvoir Airfield. The map is a high-resolution, detailed topographic map of the Fort Belvoir area in Colorado.

	Count	%
Total Endpoints Covered	19,782	99.93
Total Endpoints Analyzed	19,795	

- Two-way Coverage
- Site Location
- Endpoint Location



This propagation study is based on actual information provided by the utility pertaining to meter type, Smart point Location, potential antennae height on structure, structure height, and structure location. Any changes, deletions and/or additions that are not provided to the design engineers during the creation of this design may result in a study that does not correlate to actual field conditions.

NEXT STEPS - PHASE III

- Final configuration/NRQZ approval of antennas
- Filming of a short film to share with our customers in advance of final deployment
- Deployment of the final 19,500+ meters in the Authority's system
- Design and deployment of a customer facing portal allowing customers to access/monitor/establish alarms for their personal consumption

