



BOARD OF DIRECTORS' MEETING

July 21, 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 Chair
9:05 a.m.	2. Service Recognitions – Mike Lynn, Kenny Barrow, Jay Thomas, Mark Clinedinst
9:20 a.m.	3. Approve Minutes of June 8, 2022 & June 16, 2022
9:25 a.m.	4. Matters from the Public
9:35 a.m.	5. Response to Public Comment
9:40 a.m.	6. Consent Agenda
	a. Monthly Financial Reports
	b. Monthly Capital Improvement Program (CIP) Report
	c. Monthly Maintenance Update
	d. Rivanna Water and Sewer Authority (RWSA) Monthly Update
	e. ACSA Board Policy Future Issues Agenda 2022
	f. Strategic Plan Update
	g. ACSA Rules and Regulations Update – Resolution to Amend Appendix C
	h. Advanced Metering Infrastructure (AMI) Project Update
10:10 a.m.	7. City Works Demo – Service Requests, Work Orders, Inventory, Reporting
10:35 a.m.	8. AMI (Advanced Metering Infrastructure) Project – Update and Video
	9. Adjourn



ALBEMARLE COUNTY SERVICE AUTHORITY

STATEMENT OF CHAIR TO OPEN JULY 21, 2022 MEETING

This meeting today is being held pursuant to and in compliance with the Albemarle County Ordinance No. 20-A (16); an Ordinance to Ensure the Continuity of Government During the COVID-19 Disaster.

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

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

R E S O L U T I O N

WHEREAS Michael R. Lynn began employment with the Albemarle County Service Authority on June 9, 1977; and

WHEREAS “Mike” has served the Albemarle County Service Authority for a total of

45 YEARS; and

WHEREAS his efforts and service to the ACSA Maintenance Department, as well as his in-depth knowledge, have contributed to the reliability of the public water and sewer systems in Albemarle County, and greatly improved the ACSA's emergency preparedness; and

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

***NOW, THEREFORE, BE IT RESOLVED that the Board
of Directors of the
Albemarle County Service Authority
expresses its sincere gratitude to
Michael R. Lynn
for his service to the customers of the
Albemarle County Service Authority.***

I hereby certify the foregoing to be a true and exact copy of a resolution adopted by the Board of Directors of the Albemarle County Service Authority in a regularly scheduled meeting held July 21, 2022 by a vote of — to —.

Gary B. O'Connell, Secretary-Treasurer

RESOLUTION

WHEREAS Kenneth L. Barrow began employment with the Albemarle County Service Authority on July 6, 1982; and

WHEREAS “Kenny” has served the Albemarle County Service Authority for a total of

40 YEARS; and

WHEREAS his undeniable work ethic and dependable service to the Albemarle County Service Authority have contributed to the reliability of the public water and sewer systems in Albemarle County, and his critical role in various projects, including the implementation of the ACSA's Advanced Metering Infrastructure; and

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

***NOW, THEREFORE, BE IT RESOLVED that the Board
of Directors of the
Albemarle County Service Authority
expresses its sincere gratitude to
Kenneth L. Barrow
for his service to the customers of the
Albemarle County Service Authority.***

I hereby certify the foregoing to be a true and exact copy of a resolution adopted by the Board of Directors of the Albemarle County Service Authority in a regularly scheduled meeting held July 21, 2022 by a vote of ___ to ___.

Gary B. O'Connell, Secretary-Treasurer

R E S O L U T I O N

WHEREAS Julian "Jay" Thomas began his career on July 28, 1997, and has served the Albemarle County Service Authority for

25 YEARS; and

WHEREAS his efforts and service to the Albemarle County Service Authority, in the Maintenance and Engineering departments, have contributed to the reliability of the public water and sewer systems in Albemarle County, specifically through his careful attention to construction of new water and sewer infrastructure; and

WHEREAS the Albemarle County Service Authority and its customers have greatly benefited from his dedicated and reliable service; and

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

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Albemarle County Service Authority expresses its sincere gratitude to Julian Thomas for his service to the customers of the Albemarle County Service Authority.

I hereby certify the foregoing to be a true and exact copy of a resolution adopted by the Board of Directors of the Albemarle County Service Authority in a regularly scheduled meeting held July 21, 2022 by a vote of __ to __.

Gary B. O'Connell, Secretary-Treasurer

R E S O L U T I O N

WHEREAS Mark Clinedinst began his career on June 16, 1997, and has served the Albemarle County Service Authority for

25 YEARS; and

WHEREAS his efforts and service to the Albemarle County Service Authority, in the Maintenance and Engineering departments, have contributed to the reliability of the public water and sewer systems in Albemarle County, specifically through his careful attention to construction of new water and sewer infrastructure; and

WHEREAS the Albemarle County Service Authority and its customers have greatly benefited from his dedicated and reliable service; and

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

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Albemarle County Service Authority expresses its sincere gratitude to Mark Clinedinst for his service to the customers of the Albemarle County Service Authority.

I hereby certify the foregoing to be a true and exact copy of a resolution adopted by the Board of Directors of the Albemarle County Service Authority in a regularly scheduled meeting held July 21, 2022 by a vote of __ to __.

Gary B. O'Connell, Secretary-Treasurer

1 The Board of Directors of the Albemarle County Service Authority
2 (ACSA) met virtually in a special closed session on June 8, 2022, at 9:00
3 a.m. through Zoom. Mr. Roberts joined the virtual meeting at the
4 Administration and Operations Center at 168 Spotnap Road in
5 Charlottesville, Virginia.

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

9 **Members Absent:** None.

10 **Staff Present:** Jim Bowling, Daniel Fouch, Pete Gorham, Jeremy Lynn,
11 Alex Morrison, Gary O'Connell, Danielle Trent, April Walker.

12 **Public Present:** Michael Derdeyn, Flora Pettit.

13
14 1. Call to Order and Establish a Quorum – Statement of Board Chair

15 The Chair called the meeting to order, and a quorum was
16 established. He then read the Board Chair statement declaring an
17 electronic meeting (Attached as Page _____). He added that this
18 was a special, closed meeting session to discuss a legal matter.

19
20 2. Executive Session

21 Ms. Trent read a Resolution to enter Executive Session
22 pursuant to Virginia Code §2.2-3711 A (7) to discuss a legal matter
23 (Attached as Page_____). She stated that the specific legal matter was
24 concerning a dispute between the ACSA and Metra Industries, Inc. over a
25 construction contract.

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

30 The Board of Directors came back into regular session. Ms. Trent
31 read into record a Resolution stating that only matters so previously stated

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1 and exempted from open discussion in regular session were discussed in
2 Executive Session (Attached as Page _____).

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

7
8 3. Adjourn

9 ***There being no further business, Mr. Tolbert moved that the***
10 ***meeting be adjourned, seconded by Mr. Parcels. All members voted***
11 ***aye.***

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15 _____
16 Gary B. O'Connell, Secretary-Treasurer
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Albemarle County Service Authority Board of Directors

The Board of Directors of the Albemarle County Service Authority (ACSA) met virtually in a regular session on June 16, 2022, at 9:00 a.m. through Zoom. Mr. Roberts joined the virtual meeting at the Administration and Operations Center at 168 Spotnap Road in Charlottesville, Virginia.

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

Members Absent: None.

Staff Present: Jim Bowling, Daniel Fouch, Quin Lunsford, Michael Lynn, Alex Morrison, Gary O'Connell, Justin Weiler, Terri Knight, Emily Roach, Danielle Trent, April Walker, Elizabeth Wallace.

Staff Absent: Pete Gorham, Jeremy Lynn.

Public Present: Sean Tubbs, Charlottesville Community Engagement.

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

The Chair called the meeting to order, and a quorum was established. He then read the Board Chair statement declaring an electronic meeting (Attached as Page _____).

2. Approve Minutes of May 19, 2022

Mr. Parcels stated that he had one correction on page 7, line 24. He stated that the word "water" should be added after the word "reliable."

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

3. Matters from the Public

There were no matters from the public.

4. Response to Public Comment

There was no response to public comment.

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5. Consent Agenda

a. **Monthly Financial Reports** – Mr. Parcels stated that he noticed Southwood Mobile Homes still has a huge sewer bill, which is around \$30,000 a month for the excess usage. Alex Morrison, Senior Civil Engineer, replied that Southwood has a new private flow meter that has been installed and fully calibrated, which went live on May 6th. He stated that the ACSA received a Cycle 3 reading from that meter on June 6th for their current bill, which may not be reflected in this month's Board packet. He stated that there has been a reduction in the monthly sewage usage since the new meter was installed. He mentioned that ACSA staff has cloud access to the meter and have been monitoring the data minute-by-minute. He noted that there were not any peaks during the recent wet weather, thus they do not believe there is inflow in their system. He stated that the ACSA did learn that Habitat for Humanity ceased preventative maintenance of the private collection system for a while, but that has resumed. He mentioned that they are currently conducting CCTV within the sewer system to identify and correct any infiltration. He added that this should result in a further reduction in what is metered for the sewer discharge. He stated that there were also some trailers that were on shared septic systems that failed and have since been moved to the private collection system that discharges through the Southwood meter.

Dr. Palmer asked if those trailers are on the Southwood water system or on a well system. Mr. Morrison replied that all of the trailers in Southwood are served by public water. He stated that there was a Phase 2A and 2B portion of the redevelopment that involved trailers on private septic. He stated that when that septic system failed, those trailers were temporarily relocated, until the Phase 2 portion of the project is complete.

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1 Dr. Palmer asked when Habitat stopped their preventative
2 maintenance on the private sewer collection system. Mr. Morrison
3 replied that he does not have a specific date, but Habitat stated that it
4 had been "a couple of years." He stated that the maintenance has
5 commenced again, and Rooter-Man is doing CCTV of all the private
6 sewer collection system and working with Dewberry Engineering for
7 mapping purposes. Dr. Palmer asked if the ACSA knows how
8 Southwood bills its residents for water and sewer. Mr. Morrison replied
9 no.

10 Mr. Lunsford stated that the Southwood sewer meter is a private
11 meter. He stated that ACSA staff, mainly Alex Morrison, has been
12 communicating with Southwood for well over a year about the
13 questionable readings from their sewer meter. He stated that, not
14 unlike the ACSA, Southwood has had difficulty obtaining appropriate
15 equipment, as well as people to install and calibrate it. He mentioned
16 that overall, things are headed in the right direction and the ACSA
17 should begin to see more normal sewer meter readings in the near
18 future.

19 Mr. Parcels asked if Southwood is being billed with respect to the
20 numbers shown in the monthly financial report. Mr. Lunsford replied
21 yes. Mr. Parcels stated that the bill alone should be a huge incentive
22 to get the sewer fixed as soon as possible.

23 Mr. Parcels stated that his next question was about the arrearages.
24 He stated that they look better than they have been but seem to have
25 leveled off around \$200,000 in the last few months. He asked if there
26 are ways to get the arrearages down to the typical \$100,000. Mr.
27 Lunsford replied yes. He stated that the ACSA Customer Service team
28 is working incredibly hard to personally contact those customers with
29 arrearages. He mentioned that it has been incredibly successful to
30 date, but that it will take some time to recoup the last two years. He
31 noted that as of yesterday, there were 27 payment plans established

June 16, 2022

Page 3

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1 for those customers in arrears. He stated that some of those payment
2 plans will span almost two years, based on the customer's request and
3 ability to pay. He mentioned that improvement will be gradual over the
4 course of the next two months, but the staff is doing its best to
5 communicate, show compassion, and improve those arrearage
6 balances.

7 **b. Monthly CIP** – Mr. Parcels stated that there was a remark on page
8 62, that Commonwealth reported a 30–40-week delay on acquiring
9 ductile iron pipe. He stated that the ACSA has about 4-5 projects this
10 year and into the next, that will require a lot of pipe. He asked what this
11 delay is going to do to the project timelines. Mr. Morrison replied that
12 the ACSA staff has followed up with suppliers and confirmed that there
13 will be a fairly substantial delay. He stated that other projects are being
14 reviewed for opportunities to mitigate those factors and prevent further
15 delays. He stated that the overall delay in shipment is being caused by
16 a lack of raw materials used to process the ductile iron pipe. Mr.
17 O'Connell added that the same issue is happening with the
18 maintenance inventory.

19 Mr. Parcels stated that his final question was about the Northfields
20 project. He stated that there are geotechnical borings in the streets. He
21 asked if there were some lessons learned that can be applied to this
22 project, considering the issues with geotechnical borings around
23 Georgetown and Barracks Road. Mr. O'Connell replied that the
24 contract for Jefferson Village has been changed, just as an example.
25 Mr. Morrison added that Commonwealth will be the contractor on this
26 project, and the changes to the contract were made prior to the bidding
27 of the project, utilizing the lessons learned from the Hessian Hills
28 project.

29 Mr. Tolbert stated that he had a question about the Ragged
30 Mountain Phase 1 project on page 61. He asked if UVA had responded
31 yet to the ACSA's last compensation offer for the deed of easement.

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1 Mr. Morrison replied no. He stated that ACSA is still waiting for their
2 response to the offer, which was based on the appraisal conducted.

3 Mr. Tolbert stated that he also had a question about the Hessian
4 Hills project on page 63. He referenced the punch list of items that
5 require corrective action and asked what has been done and what still
6 needs to be done. Mr. O'Connell replied that the biggest item was
7 some valves that needed to be raised, which the ACSA crews began
8 on Monday. He mentioned that there were a couple of hydrants that
9 needed to be raised as well. Mr. Morrison added that a meeting was
10 held earlier this week with SL Williamson to look at the valves on
11 Georgetown and Barracks Road that will require some night work. He
12 stated that the concrete restoration began this week as well and once it
13 is complete, SL Williamson will move toward repaving those streets.

14 Mr. Tolbert noted that the project summary states that the punch list
15 items were to be corrected by Metra Industries. He asked if Metra
16 would still be correcting the items or someone else. Mr. O'Connell
17 replied that the contract with Metra has ended. He stated that the bulk
18 of it will be done by S.L. Williamson in a separate contract, and ACSA
19 in-house crews will perform some of the valve work as well.

20 **c. Rivanna Water and Sewer Authority (RWSA) Update** – Mr. Tolbert
21 stated that the Central Water Line project summary states that City
22 Council would discuss the project at their June meeting, as well as the
23 ACSA Board. He asked if the ACSA Board would be discussing the
24 project today. Mr. O'Connell replied that the summary should say
25 "RWSA Board," not "ACSA Board." He stated that the City Council will
26 take it up at their June 21 meeting, followed by the RWSA Board on
27 June 28th. He mentioned that he would provide the Board with a report
28 on the project, but it will not require any action from the ACSA Board.
29 He noted that the ACSA Board has already agreed to the cost
30 allocation for the project.

31 **d. ACSA Board Policy Future Issues Agenda 2022** –

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1 ***e. Advanced Metering Infrastructure (AMI) Project Update –***

2 ***f. Ratification of Agreement with Metra Industries –***

3 ***g. Water/Wastewater Professionals Appreciation Day – Resolution –***

4 ***Mr. Parcells moved to approve the Consent Agenda,***
5 ***seconded by Mr. Tolbert. All members voted aye.***

6
7 6. Public Hearing for Comments on Proposed FY 2023 Budget, Rates,
8 CIP and Amendments to the ACSA Rules and Regulations – Budget Rate
9 Schedule and Amendments

10 Mr. O'Connell stated that Quin Lunsford, Director of Finance, would
11 give a brief overview before holding the scheduled public hearing.

12 Mr. Lunsford stated that today's presentation is a last step in the
13 budget development process. He stated that he would give a quick
14 overview and follow up on some of the forecasts that were presented last
15 month related to the current fiscal year. He stated that he would also
16 review some of the water and sewer rate recommendations from the rate
17 study earlier this year. He mentioned that finally, he would highlight some
18 of the important items in the FY 2023 budget, summarize the proposed
19 rates for Board consideration, look at the value of water and customer bill
20 comparisons, and a brief look at the proposed CIP for FY 2023.

21 Mr. Lunsford stated that he would begin with the ACSA's Vision and
22 Mission Statement, which can be boiled down to clean, safe, reliable water
23 and wastewater collection and treatment. He stated that the ACSA team
24 works very hard every day to provide the highest level of service to over
25 82,000 customers in its jurisdictional area. He mentioned that the ACSA
26 was founded in 1964, and currently has over 22,000 unique water accounts
27 with continued growth in areas around the County.

28 Mr. Lunsford stated that projections last month are pretty similar to
29 what is expected by the end of June. He stated that the ACSA does expect
30 water revenues to exceed budgeted expectations by just under \$1 million,
31 and sewer revenues to exceed expectations by a little over \$1 million. He

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1 mentioned that water and sewer expenses from RWSA, as well as debt
2 service related to their projects, were nearly in line with budgeted
3 expectations.

4 Mr. Lunsford stated that following the formal rate study and analysis
5 completed by NewGen earlier this year, the ACSA is proposing an increase
6 of 4.6% in water and sewer charges for single-family customers. He
7 mentioned that this equates to about \$2.60 per month for a customer that
8 uses an average amount of water, or 3,300 gallons per month. He stated
9 that this follows a 5% increase in FY 2022 and no increase in FY 2021 due
10 to the pandemic. He mentioned that the rate study did recommend that the
11 ACSA maintain its current system development and capacity charges. He
12 noted that there is a recommendation to adjust the service charge for
13 meters that are 1 inch in size or larger. He stated that the increased charge
14 will more closely mirror the AWWA's recommendations and will help the
15 ACSA to better recoup costs related to maintaining and replacing the larger
16 meters. He stated that the ACSA is also proposing an adjustment to the
17 multi-family and non-residential rate to equal that of the single-family tier 2
18 rate. He mentioned that there were also a number of minor adjustments to
19 other charges that the ACSA assesses for various services, such as plan
20 review fees, that were proposed for the FY 2023 budget as well. He added
21 that also included in the proposed budget is the use of reserves to help
22 smooth rate increases over time.

23 Mr. Lunsford stated that over 75% of the ACSA's total revenues to
24 offset costs is related to water and sewer charges. He stated that those
25 water and sewer charges pay for operational expenses, and they also pay
26 for non-growth-related ACSA CIP projects. He noted that this is a critical
27 component of ACSA operations.

28 Mr. Lunsford stated that the Budgeted Expenses and Capital Costs
29 illustration on the next slide is one the Board has seen several times
30 already. He stated that it is impactful in showing how much of the ACSA's
31 operating, non-operating, and capital budget is made up of charges from

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1 RWSA for the purchase of water, wastewater treatment, and debt-service
2 related to ACSA allocated projects at RWSA.

3 Mr. Lunsford stated that the next slide is a short summary to
4 illustrate the changes in the service charges and the water and sewer
5 charges for different customer types. He stated that the service charge is
6 increasing .45 cents, or 5% as mentioned, and the combined increase for a
7 single-family customer including sewer is 4.6%. He noted that there is a
8 higher increase on the water side and a lower increase on the sewer side.
9 He mentioned that the multi-family/non-residential rate is reflected in this
10 illustration as well. He added that an average single-family customer can
11 expect about a \$2.60 increase per month, which equates to about \$31.00
12 over the course of the year.

13 Mr. Lunsford stated that the proposed increase in customer water
14 and sewer rates is largely attributed to the increases expected in charges
15 to the ACSA from RWSA. He stated that the charges for water and debt
16 service will be about \$1.3 million more than last year, and a little over \$1
17 million more for sewer treatment. He mentioned that the ACSA does expect
18 to also see increases in the total departmental operating budget, part of
19 which is related to the formal compensation study that was presented last
20 month to the board. He added that this increase is also due to a
21 considerable increase in the cost of supplies and materials.

22 Mr. Lunsford stated that the ACSA is proposing the use of reserves
23 to help offset some of the increased costs. He stated of the \$5.3 million in
24 reserves that the ACSA plans to use, \$1.5 will help to offset costs related to
25 non-growth-related ACSA CIP projects. He stated that growth-related CIP
26 projects are funded by ACSA system connection charges. He mentioned
27 that the ACSA has adopted the mantra of "growth pays for growth," and
28 there is a real effort to maintain that in this budget and how the CIP
29 program is funded. He noted that the strategic use of these reserves does
30 lessen rate increases as the community continues to recover from the
31 COVID-19 pandemic. He added that the ACSA will closely monitor the

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1 impact of using these reserves over the course of the next year, and the
2 possible need to replenish them in the future.

3 Mr. Lunsford moved to the next slide, which showed the ACSA's
4 current and proposed single-family customer bill for water and sewer, in
5 comparison to some similar sized utilities throughout the state of Virginia.
6 He stated that the ACSA compares favorably, and the quality of the water
7 is high and a good value to customers.

8 Mr. Lunsford stated that the graph on the next slide shows what
9 different customer types at various consumption levels can expect from
10 their monthly bill. He stated that the bill can vary considerably by
11 consumption amount, and some of the percentages change slightly
12 depending upon water use in comparison to sewer.

13 Mr. Lunsford stated that the next slide illustrates the great value of
14 ACSA water. He stated that one penny purchases 1.98 gallons of clean,
15 safe, reliable water. He added that this is an important fact to note.

16 Mr. Lunsford stated that, as a refresher, the ACSA is proposing
17 \$8.2 million in ACSA-specific capital improvements in FY 2023. He stated
18 that a few of the larger projects have already been presented in great detail
19 in previous meetings, such as the Crozet Phase 4 Water Main
20 Replacement project on the water side and the Madison Park Pump Station
21 Upgrade on the wastewater side.

22 Mr. Lunsford stated that this is the second budget workshop held
23 following last month's meeting. He stated that a public hearing is scheduled
24 for today, and the staff will be requesting the Board to adopt the FY 2023
25 budget and rates. He mentioned that, going forward, the staff will begin
26 focused work on the development of the new FY 2023-2025 Strategic Plan.
27 He added that the staff will also continue long-range financial review and
28 funding analysis to offset any drastic increases in cost fairly and equitably
29 across customer classes.

30 Mr. Parcels stated that he was wondering about the projection for
31 system connection charges. He stated that in FY 2021, the number was

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1 dropped very low and was exceeded by a lot. He stated that in FY 2022,
2 the number was \$7 million, which was almost spot on. He mentioned that
3 for FY 2023, the projection is very specific at \$5.926 million. He noted that
4 he understands how difficult it is to project with interest rate increases and
5 the overall economic situation but asked how reasonable that number is.
6 Mr. Lunsford replied that he feels the \$5.926 million is as solid as an
7 estimate that can be made. He stated that the finance team works closely
8 with the engineers, who have an idea of what is on the horizon and
9 expectations for connections in the upcoming fiscal year. He noted that
10 exceeding the expected budget in years prior has helped contribute to the
11 growth of ACSA reserves. He mentioned that, based on the formal rate
12 study, there were no changes recommended for those charges. He added
13 that the per ERC charge has not been materially changed in a number of
14 years, but it is a very difficult estimate to make each year.

15 Mr. Parcels stated that he would be interested to see, perhaps a
16 couple of times a year, what Albemarle County says about expected
17 growth. He stated that he would also like to know how the ACSA
18 incorporates that information into this type of planning. Mr. O'Connell
19 added that the County is going through a Comprehensive Plan update and
20 is discussing increased density, which would lead one to believe there will
21 be more development, particularly in the Urban area. He stated that the
22 ACSA is reviewing a lot of new development plans and has seen no
23 evidence of that slowing down. He stated that this relates directly to the
24 ACSA's projections on connection fees.

25 Mr. Tolbert stated that he wanted to go back to the slide on page
26 121, which shows the operating revenue and expense projections. He
27 stated that the water and sewer revenues exceed the expectations by
28 almost \$2 million, and asked if that went into the reserve fund, which would
29 then offset some of the reserves used to keep rate increases low. Mr.
30 Lunsford replied that this is exactly right. He stated that the surplus offsets
31 the projected use of rate stabilization reserve funds in the prior year. He

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1 mentioned that about \$5.2 million of reserves was projected in the FY 2022
2 budget. He stated that the use of these reserves was lessened by the
3 amount of revenue that exceeded the budget and expenses that fell below
4 the budgeted amount. Mr. Tolbert stated that he would like to, at some
5 point, see the actual dollar amount in the reserves.

6 The Chair stated that, at this time, the floor would be opened for
7 any public comments.

8 The Chair stated that, absent of any comment from the public, he
9 would now close the floor.

10
11 7. Adoption of Proposed FY 2023 Budget, Rates, CIP and
12 Amendments to the ACSA Rules and Regulations – Budget Rate Schedule
13 and Amendments

14 Mr. Roberts stated that there was a resolution on page 105 to adopt
15 the FY 2023 Operating and CIP Budget and Rates (Attached as Page
16 _____).

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

21
22 8. Amendments to Personnel Management Plan (PMP) – Pay
23 Schedule Changes

24 Mr. O'Connell stated that there was a formal presentation at the
25 May Board meeting of the recommendations that came out of the
26 Compensation and Classification Study. He stated that this board item was
27 to serve as a reminder of what the staff is asking the Board to adopt, and
28 what was approved financially in the budget.

29 Mrs. Roach stated that the classification and compensation
30 changes were just adopted by the Board, as part of the FY 2023 proposed
31 budget. She stated that this item today is a housekeeping measure to

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1 update the Personnel Management Plan. She stated that simply put, the
2 pay changes include a 10% increase to the mid-point of the prior pay scale
3 and an increased spread of 60%. She stated that there were also roughly
4 25 grade changes recommended as well.

5 Mr. Parcels stated that many individuals will end up shifting grades
6 with respect to the mid-point and asked if this was to ensure that they
7 receive their 10% pay increase. Mrs. Roach stated that the consultant
8 recommended that every single employee receive a 10% adjustment to
9 their salary. Mr. Parcels concurred and asked if employees were placed on
10 the pay scale in a way that allows for that 10% increase. Mrs. Roach
11 replied yes.

12 Dr. Palmer asked how this adjustment considers the current rate of
13 inflation. Mrs. Roach replied that inflation was incorporated into their
14 recommendation they made in January. Mr. O'Connell stated that the
15 inflation rate was around 7% when the consultant made their
16 recommendations, which looked back a year and forward a year.

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

21
22 9. Water Quality Update – CCRs

23 Mr. O'Connell stated that Tim Brown, Environmental Compliance
24 Specialist, would be giving an overview on water quality. He stated that Mr.
25 Brown watches all of the water quality issues and keeps up with all the
26 federal and state regulations affecting water. He mentioned that water
27 quality is a changing environment, and he feels it is important to continue
28 talking about providing clean, safe drinking water.

29 Mr. Brown stated that the Board has a copy of the Urban Annual
30 Drinking Water Quality Report (CCR) in their Board packet. He stated that
31 he is always proud of this report and many thanks go out to Mike McGill of

Albemarle County Service Authority Board of Directors

1 Water PIO for helping with the document. He mentioned that the goal is to
2 make the publication fresh, informative, educational, and accountable. He
3 stated that the ACSA is very proud of its water quality and wants to share
4 that information with customers. He stated that he would briefly touch on a
5 couple of items today.

6 Mr. Brown stated that page 153 of the Board packet, towards the
7 end of the Urban CCR, are the detailed water quality test results. He stated
8 that the ACSA's safe, clean, reliable, potable water is based primarily on a
9 single key analysis, that being the test for total coliform bacteria. He
10 mentioned that based on the estimated population served, the ACSA is
11 required to perform 80 tests monthly for coliform bacteria at designated
12 locations throughout the distribution system, or 960 tests per year. He
13 noted that the ACSA had a total of two positive coliform bacteria tests last
14 year, out of 960. He stated that this is an incredible number, especially
15 given that total coliform bacteria are everywhere in our environment. He
16 noted that neither of those positive tests had fecal coliform bacteria
17 present.

18 Mr. Brown stated that lead testing was conducted again last year,
19 at 30 high-risk homes in the ACSA system. He stated that of the 30 homes
20 tested, 29 were a non-detect for lead at less than 2 ppb (parts per billion).
21 He noted that one sample was at a little over 3 ppb, continuing a history of
22 excellent corrosion control treatment in the system. He stated that the test
23 results for Disinfection Byproducts (DBPs) show the value of the Granular
24 Activated Carbon (GAC) filtration introduced in 2018.

25 Mr. Brown stated that on page 149 is a summary of the revised
26 Lead and Copper Rule (LCR), which he and Mike McGill spent a little more
27 time summarizing this year. He stated that after years of discussion, the
28 revision was finalized and there are two key components to point out. He
29 mentioned that for the first time, there will be mandatory testing in schools
30 and childcare facilities. He noted, however, that the Albemarle County
31 school system has been very proactive with testing in schools, especially

Albemarle County Service Authority Board of Directors

1 after the Flint, MI crisis. He stated, secondly, that every water purveyor
2 across the country must identify and make public the composition of
3 service line material. He stated that the key concern is identifying lead
4 service lines, which are prominent in cities like Chicago and Detroit. He
5 mentioned that the ACSA has no knowledge of any lead service lines in its
6 system and does not have any lead in its distribution lines, nor does it
7 expect to discover any.

8 Mr. Brown stated that finally, a large focus of the annual water
9 quality reports is Per- and Polyfluoroalkyl Substances (PFAS). He stated
10 that PFAS are synthetic chemicals, with a growing list of nearly 10,000. He
11 stated that every chemical is distinct in that the element fluorine is a
12 component. He stated that the carbon-fluorine chemical bond is a very
13 strong one, which means they do not break down in the environment,
14 giving them the label "forever chemicals" by the common media. He stated
15 that PFAS date back to the late 1930s when companies like DuPont and
16 3M were looking for products that were heat, water, stain, and grease
17 resistant. He stated that these chemicals have expanded from Teflon
18 cooking pans to items like personal care products, clothing, food
19 packaging, cosmetics, and household products. He stated that these
20 chemicals have been linked to liver function, hormone imbalances,
21 immunity suppression, cancers, and reproductive effects.

22 Mr. Brown stated that there are no legal, binding mandates about
23 PFAS levels, but the EPA did release two health advisories. He noted that
24 the challenge is that the health advisory levels are lower than what lab
25 instrumentation is currently able to test. He stated that the RWSA and
26 ACSA have been proactive in testing for PFAS compounds, beginning in
27 2019. He stated that the ACSA does not have an issue with PFAS in its
28 system, and the GAC acts as an additional barrier to ensure as much.

29 Mr. Parcells stated that the water quality report shows on page 149,
30 that there was one treated water sample that was positive for PFAS. He
31 asked, even though it was a low level at less than five parts per trillion

Albemarle County Service Authority Board of Directors

1 (ppt), if there was any follow-up required to figure out why the PFAS
2 showed up. Mr. Brown replied that the PFAS that showed up in the raw
3 water did not show up in the treated water sample. He stated, interestingly
4 enough, that the testing in March of this year did not show the PFAS
5 compound that was detected in the raw water sample in 2021. He stated
6 that there will continue to be testing twice a year, but it is difficult to
7 determine how the PFAS originated when it shows up at such a low level.
8 He added that there is always the possibility of a false positive when the
9 test result is very close to a lab's detection limit.

10 Mr. Bowling stated that over 15 years ago, the ACSA came to the
11 rescue of Key West, when PFAS were found in their water system. He
12 stated that any place downstream from an underground gasoline storage
13 tank will be subject to PFAS. He stated that the ACSA ran an expensive
14 line to Key West and put them on the public water system. He stated that
15 nano plastics will soon pose a similar risk as PFAS. He added that the
16 financial burden will come when areas outside of the system look for the
17 ACSA to come to the rescue.

18 Dr. Palmer asked, with over 10,000 PFAS and the ACSA testing for
19 216, if there was any cross reactivity in the tests that are currently being
20 used. Mr. Brown replied that 216 was the total number of tests that were
21 conducted in the most recent round of testing. He stated that there were 18
22 PFAS compounds tested for, at 6 plants, for both raw water and finished
23 water. He stated that the testing is very expensive and requires very
24 intricate equipment.

25 Dr. Palmer stated that several years ago, she learned that some of
26 the older raw water lines are connected with lead solder, such as the Sugar
27 Hollow pipeline. She mentioned, however, that it does not show up in tests.
28 She asked if it is because the pipes are so tuberculated that there is no
29 contact with the lead at this point.

30 Mr. Brown stated that he would defer to Mr. O'Connell or Mr.
31 Morrison, but he believes that Dr. Palmer has answered her question in

Albemarle County Service Authority Board of Directors

1 part. He stated that the tuberculation may be, in this case, serving as a
2 protective coating against contact with that lead. Mr. O'Connell stated that
3 to his knowledge, there has never been any lead to show up in any of the
4 testing. He stated that if there were some, the GAC filtration system would
5 be an additional barrier.

6 Mr. Tolbert stated that, although it is hard to measure, he is
7 concerned about the taste of the water. He asked if the water taste is
8 considered to be good. Mr. Brown asked if Mr. Tolbert was asking about
9 the water in his home specifically. Mr. Tolbert replied yes. He stated that if
10 he pours a glass of water from the tap, it is not as tasty as he would like it
11 to be.

12 Mr. Brown replied that it is extremely difficult to completely
13 eliminate the "treated" taste of water, especially when one has a sensitivity
14 to it. He stated that some of the issue is the chlorine disinfectant in the
15 water, which is a balancing game. He stated that calls he receives from
16 customers at the end of a cul-de-sac usually involve a stale taste, which is
17 resolved by sending crews out to flush and move fresh water into the lines.

18 Mr. Tolbert asked if there is a tasting panel and if so, where does
19 that take place and who is involved in the tasting. Mr. Brown replied that for
20 years, the City of Charlottesville, RWSA, and the ACSA had a group that
21 would meet regularly to do taste and odor analyses of the water. He stated
22 that it was as proactive as possible, with the results being relayed to the
23 RWSA authorities. He mentioned that discussion a few months ago
24 revealed that there were so few taste complaints received by himself and
25 his colleague at the City, that they elected not to gather this year. He added
26 that COVID was a slight factor, but the complaints were so few they did not
27 feel it was necessary.

28 Mr. Brown stated that he wanted to thank the Board for their
29 support of the ACSA and its employees.

30
31 10. Upper Morey Creek Sewer Line Transfer from RWSA

Albemarle County Service Authority Board of Directors

1 Mr. O'Connell stated that this agenda item, simply put, is in regard
2 to the transfer of a sewer line from RWSA to the ACSA. He stated that it is
3 more of an administrative issue, but he would give some background and
4 then entertain any questions.

5 Mr. O'Connell stated that as the residential areas around the Morey
6 Creek Sewer lines have grown, especially future connections to Bellair and
7 Liberty Hills, the Upper Morey Creek Sewer Line has served more as a
8 collector line and would typically be part of the ACSA system. He
9 mentioned that RWSA has recently gone through a rehabilitation of the
10 line, and as the ACSA grows its system around Bellair and Liberty Hills, it is
11 a good time to transfer ownership of the line from RWSA to the ACSA.

12 Mr. O'Connell stated that there is a map in the Board packet that
13 shows the current Morey Creek Sewer line and the point at which the
14 ACSA will take ownership. He stated that the ACSA Board is being asked
15 to authorize the ACSA Executive Director to execute a deed with the
16 RWSA to make the transfer.

17 ***Mr. Tolbert moved to authorize the ACSA Executive Director to***
18 ***execute a deed with the RWSA to transfer ownership of the Morey***
19 ***Creek Interceptor upstream of MRI-MH-45 from RWSA to the ACSA;***
20 ***seconded by Mr. Parcells. All members voted aye.***

21

22 11. Items Not on the Agenda

23 Mr. O'Connell stated that he feels the virtual Board meetings have
24 been working well, and the ACSA has the authority, under current County
25 regulations, to continue them through September. He stated that he is
26 seeking concurrence from the Board to continue meeting virtually until
27 September. Mr. Roberts mentioned that he was under the impression that it
28 had been agreed upon, in a previous meeting, to continue meeting virtually
29 through September. He asked if any Board member disagreed with this. All
30 Board members concurred.

Albemarle County Service Authority Board of Directors12. Executive Session

Ms. Trent read a Resolution to enter Executive Session pursuant to Virginia Code §2.2-3711 A (1) to discuss a personnel matter. (Attached as Page_____).

Dr. Palmer moved to approve the Resolution as presented to the Board; seconded by Mr. Tolbert. The Chair asked for a roll-call vote: Mr. Armstrong, aye; Dr. Palmer, aye; Mr. Parcels, aye; Mr. Tolbert, aye; Mr. Roberts, aye.

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

Mr. Tolbert moved to approve the Resolution as presented to the Board, seconded by Mr. Armstrong. The Chair asked for a roll-call vote: Mr. Tolbert, aye; Mr. Armstrong, Mr. Parcels, aye; Dr. Palmer, aye; Mr. Roberts, aye.

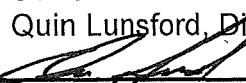
13. Adjourn

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

Gary B. O'Connell, Secretary-Treasurer

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Monthly Financial Reports STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance 	AGENDA DATE: July 21, 2022 ACTION: Informational ATTACHMENTS: Yes
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BACKGROUND: Water and sewer financial reports and check registers for the month of June are attached for your review.

DISCUSSION:

- Water consumption for the month of May increased 7.0% compared to April. Water consumption for the month of May 2022 compared to May 2021 decreased 0.9%.
- The ACSA continues to monitor sewer readings from the Southwood mobile home facility. Southwood is served by an ACSA water meter but has a private sewer flow meter. Over the course of the last year, this private sewer meter was registering flows in excess of recorded water consumption. Southwood purchased and installed a new sewer meter earlier this spring and calibrated in April. This newly installed/calibrated meter appears to be registering sewer flows accurately. The ACSA and Southwood will continue to monitor over the next few months to ensure readings are reasonable based on water consumption information and other environmental factors.
- RWSA's invoice of \$1,863,638 for the month of May was paid on June 10, 2022.
- Unearned water and sewer connection charges totaled \$2,178,514 at month end.
- System connection charges were above budgeted expectations with \$1,210,920 recognized in May. Total system connection charges for FY 2022 are less than those in FY 2021 by 14%.
- Water and Wastewater revenues for FY 2022 are above budgeted expectations by 7.1%.

BUDGET IMPACT: Informational only.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

ATTACHMENTS:

1. Statement of Net Position
2. Year-to-Date Budget to Actual Comparison/Commentary
3. Investment Summary
4. Capacity/System Development Reserves
5. Connection Charges/ERC Analysis
6. Monthly Water 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
June 30, 2022

ASSETS

Cash and cash equivalents	\$ 9,202,612
Accounts receivable	4,546,555
Investments	42,797,754
Capital assets: (net of accumulated depreciation)	176,210,504
Inventory	578,205
Prepays	240,025
Cash and cash equivalents, restricted	<u>592,056</u>
Total assets	<u>234,167,711</u>

DEFERRED OUTFLOWS OF RESOURCES

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

LIABILITIES

Accounts payable	2,065,396
Accrued liabilities	463,294
Compensated absences	693,271
Net pension liability	3,659,743
Other post-employment benefits	1,448,953
Unearned connection fees	2,178,514
Long-term debt	<u>5,142,353</u>
Total liabilities	<u>15,651,524</u>

DEFERRED INFLOWS OF RESOURCES

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

	<u><u>219,788,823</u></u>
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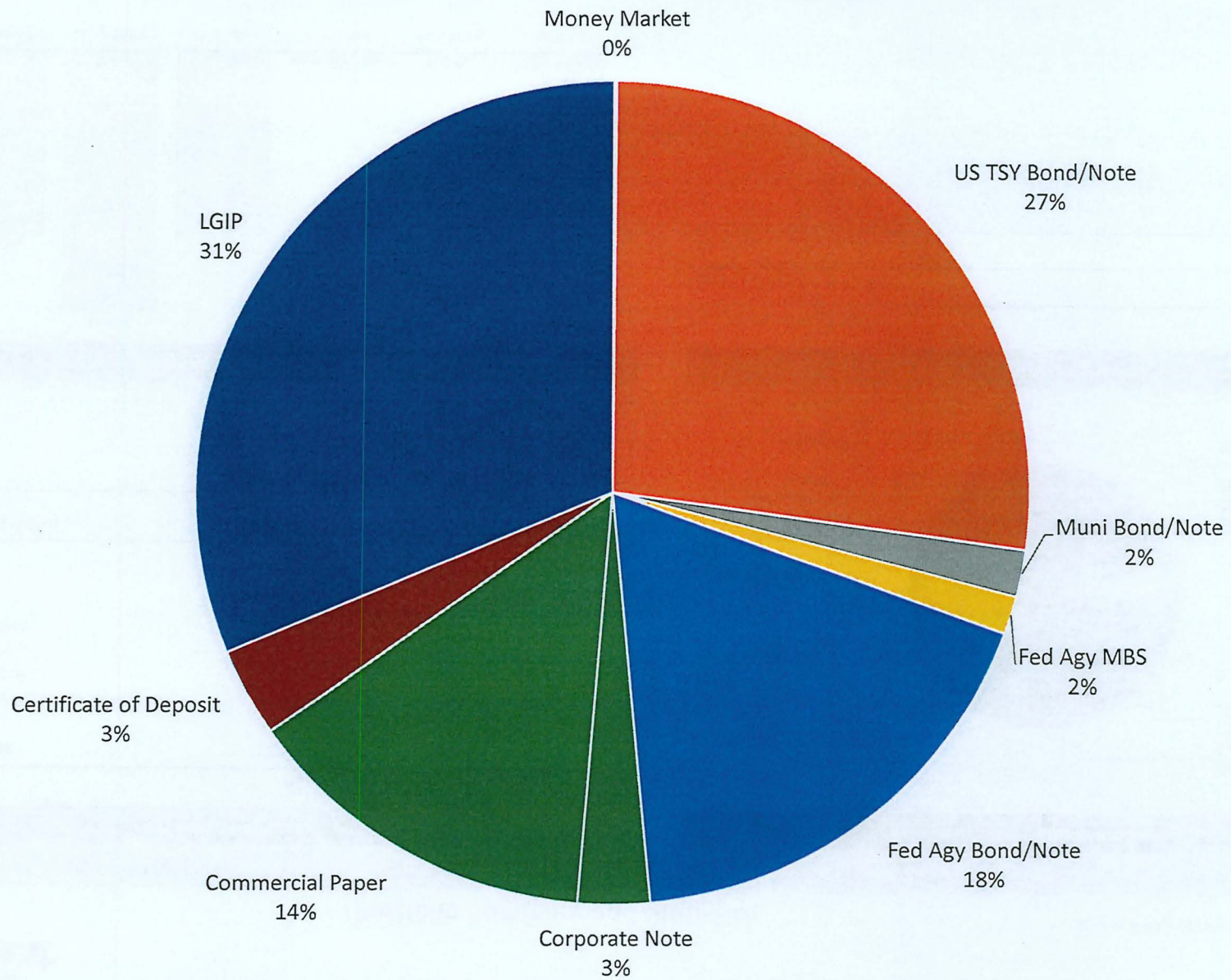
ALBEMARLE COUNTY SERVICE AUTHORITY
For the Twelve Months Ending June 30, 2022

	Budget FY 2022	Budget Year-to-Date 2022	June Actual Year-to-Date	Actual vs. Budget	Variance Percentage
Revenues					
Water Sales	16,543,400.	16,543,400.	17,464,539.	921,139.	5.57%
Sewer Service	14,034,800.	14,034,800.	15,272,387.	1,237,587.	8.82%
Total operating revenues	30,578,200.	30,578,200.	32,736,926.	2,158,726.	7.06% A
Operating Expenses					
Purchase of bulk water	(12,450,600.)	(12,450,600.)	(12,403,735.)	46,865.	(0.38%) B
Purchase of sewer treatment	(9,685,800.)	(9,685,800.)	(9,520,032.)	165,768.	(1.71%) B
Administration	(1,253,400.)	(1,253,400.)	(1,037,074.)	216,326.	(17.26%) C
Finance	(2,243,574.)	(2,243,574.)	(2,075,916.)	167,658.	(7.47%) C
Information Technology	(1,162,387.)	(1,162,387.)	(1,114,888.)	47,499.	(4.09%) C
Engineering	(2,107,300.)	(2,107,300.)	(1,932,527.)	174,773.	(8.29%) C
Maintenance	(4,018,540.)	(4,018,540.)	(3,248,532.)	770,008.	(19.16%) C
Total operating expenses	(32,921,601.)	(32,921,601.)	(31,332,704.)	1,588,897.	(4.83%)
Operating gain(loss)	(2,343,401.)	(2,343,401.)	1,404,222.	3,747,623.	(159.92%)
Nonoperating Revenues					
System connection charges	7,000,000.	7,000,000.	8,800,642.	1,800,642.	25.72% D
Investment/Interest Income	200,000.	200,000.	(631,857.)	(831,857.)	(415.93%) E
Rental income	16,000.	16,000.	18,357.	2,357.	14.73%
Miscellaneous revenues	455,000.	455,000.	647,906.	192,906.	42.40% F
Federal subsidy, Build America Bonds	87,000.	87,000.	0.	(87,000.)	(100.00%) G
Total nonoperating revenues (expenses)	7,758,000.	7,758,000.	8,835,048.	1,077,048.	13.88%
Nonoperating Expenses					
Miscellaneous expenses	(304,179.)	(304,179.)	(383,675.)	(79,496.)	26.13% H
Bond interest charges	(274,436.)	(274,436.)	(424,423.)	(149,987.)	54.65% I
Depreciation	0.	0.	(4,108,788.)	(4,108,788.)	0.00% J
Total nonoperating revenues (expenses)	(578,615.)	(578,615.)	(4,916,886.)	(4,338,271.)	749.77%
Capital contributions	0.	0.	2,505,732.	2,505,732.	0.00%
Change in Net Position	4,835,984.	4,835,984.	7,828,116.	2,992,132.	61.87%

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

- A. Water and sewer revenues exceed budgeted amounts by 7.06%. Consumption through June (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 0.96%. 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 June 30, 2022

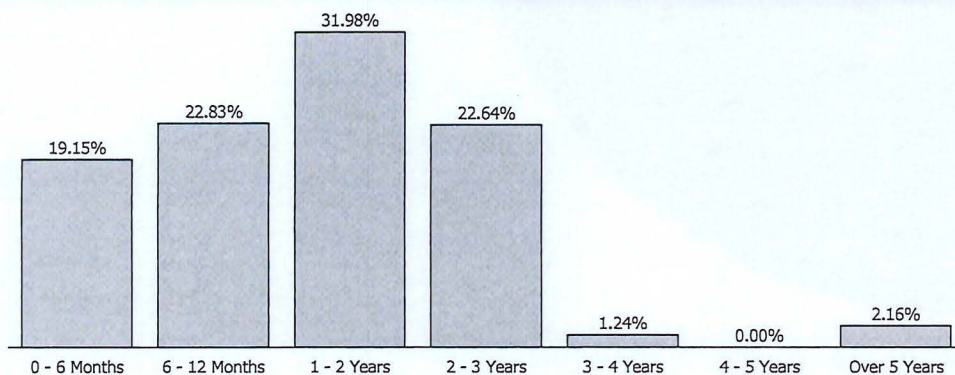
ACSA OPERATING FUNDS - 03100100

Account Summary

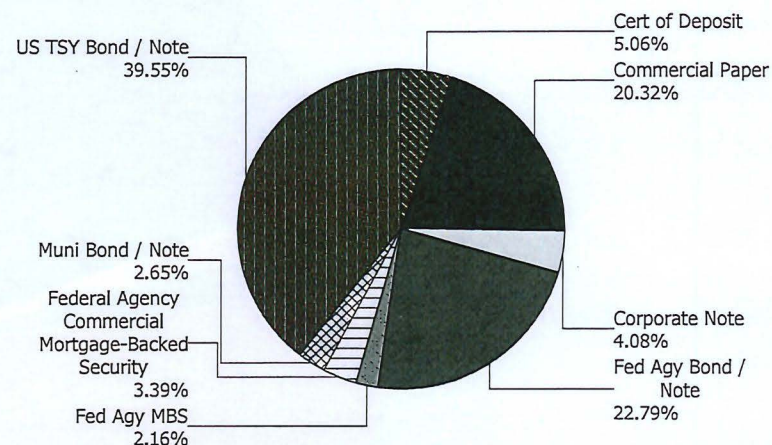
Description	Par Value	Market Value	Percent
U.S. Treasury Bond / Note	12,105,000.00	11,610,056.96	39.55
Municipal Bond / Note	800,000.00	778,485.00	2.65
Federal Agency Mortgage-Backed Security	647,560.55	632,687.33	2.16
Federal Agency Commercial Mortgage-Backed Security	1,003,173.71	995,387.37	3.39
Federal Agency Bond / Note	6,860,000.00	6,690,190.81	22.79
Corporate Note	1,225,000.00	1,198,561.35	4.08
Commercial Paper	6,000,000.00	5,963,792.40	20.32
Certificate of Deposit	1,500,000.00	1,486,385.87	5.06
Managed Account Sub-Total	30,140,734.26	29,355,547.09	100.00%
Accrued Interest		36,064.90	
Total Portfolio	30,140,734.26	29,391,611.99	

Unsettled Trades 0.00 0.00

Maturity Distribution



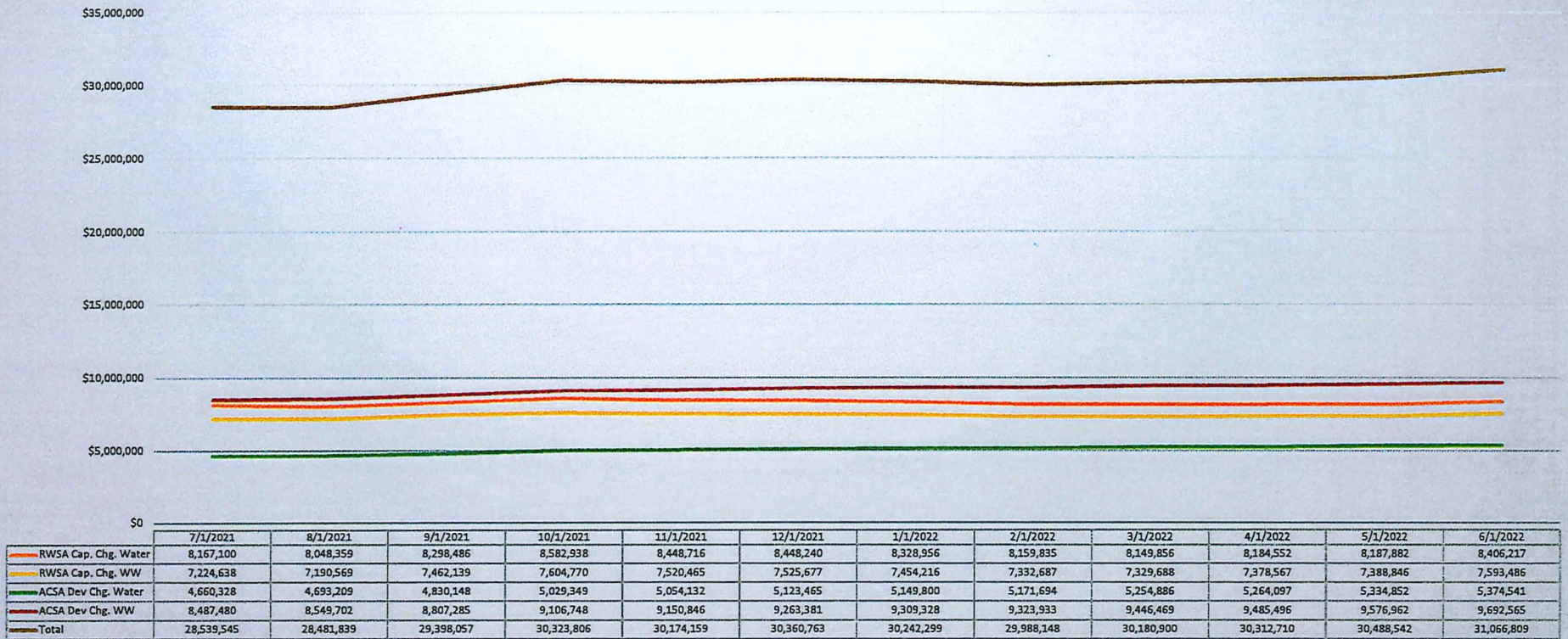
Sector Allocation



Characteristics

Yield to Maturity at Cost	1.03%
Yield to Maturity at Market	2.89%
Weighted Average Days to Maturity	565

Capacity/System Development Reserves



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
May 2022

Area	May 2022 Monthly Connection Fees	May 2021 Monthly Connection Fees	\$ Change	% Change
Crozet	\$ 121,230	\$ 296,340	\$ (175,110)	-59%
Urban	1,089,690	395,560	694,130	175%
Scottsville	-	-	-	-
Total Connection fees	\$ 1,210,920	\$ 691,900	\$ 519,020	75%
Through May				
Area	YTD FY 2022 Connection Fees	YTD FY 2021 Connection Fees	\$ Change	% Change
Crozet	\$ 1,449,870	\$ 2,825,715	\$ (1,375,845)	-49%
Urban	6,688,442	6,643,928	44,514	1%
Scottsville	-	-	-	-
Total Connection fees	\$ 8,138,312	\$ 9,469,643	\$ (1,331,331)	-14%

Area	May 2022 ERC's	May 2021 ERC's	Change	% Change
Crozet	9	22	(13)	-59%
Urban	81	29	52	179%
Scottsville	-	-	-	-
Total ERC's	90	51	39	76%
Through May				
Area	YTD FY 2022 ERC's	YTD FY 2021 ERC's	Change	% Change
Crozet	108	210	(102)	-49%
Urban	497	493	4	1%
Scottsville	-	-	-	-
Total ERC's - YTD	605	703	(98)	-14%

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
May 2022**

Area	May 2022 ERC's	May 2021 ERC's	May 2020 ERC's
Crozet	9	22	33
Urban	81	29	29
Scottsville	-	-	-
Total ERC's	90	51	62

Through May			
Area	YTD 2022 ERC's	YTD 2021 ERC's	YTD 2020 ERC's
Crozet	108	210	228
Urban	497	493	521
Scottsville	-	-	1
Total ERC's - YTD	605	703	750

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 development 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	142,192,560	141,920,135	0.19%	4.04	2.37
February	127,434,073	119,808,532	6.36%	1.81	4.51
March	131,636,356	128,124,393	2.74%	3.50	2.13
April	135,122,656	131,020,458	3.13%	3.23	3.24
May	144,519,955	145,813,573	-0.89%	6.04	0.81
June		161,128,651	-100.00%		2.80
	1,643,320,142	1,719,433,244		37.51	49.04
<hr/>					
YTD	1,643,320,142	1,558,304,593	5.46%	37.51	46.24

Note: Consumption through May 2022 is 5.46% 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>.

Albemarle County Service Authority

Serving • Conserving

Water and Sewer Report

(Volumes in Gallons)

May 2022

Billed by Area:	Water	Sewer
Crozet	17,267,167	15,828,091
Scottsville	1,384,320	795,273
Urban	125,830,080	110,599,089
Red Hill	38,388	0
Total	144,519,955	127,222,453

Billing by Sewer Plant:	
AWT	126,427,180
less Glenmore	(4,035,594)
Urban Total	122,391,586
Scottsville	795,273
Total	123,186,859

Number of Installed Meters:

Urban	38
Crozet	6
Scottsville	0
Total	44

Unmetered Consumption:

	Gallons
ACSA Fire Flow Consump.	Urban 19,078
Total	19,078

Metered Consumption (billed by invoice):

Urban	1,171,600
Crozet	0
Scottsville	0
Total	1,171,600

Unmetered Leak Consumption:

N/A	Total
	-

Billed Consumption for Selected Customers

	Water	Sewer
*Virginia Land Holding	315,712	315,712
Southwood Mobile Homes	1,687,000	3,606,328
Turtle Creek Apts.	1,271,021	1,265,621
Barracks West Apartments	1,852,000	1,852,000
Monroe Health and Rehab	727,532	727,532
Sunrise Senior "Colonnades"	857,131	793,531
ACRJ	1,120,190	1,029,190
Westminster Canterbury	1,337,210	1,303,210
SEMF Charleston	1,400,593	1,400,593
Martha Jefferson Hospital	1,577,978	995,978
Crozet Mobile Home Village	229,200	229,200
Fashion Square Mall	176,314	176,314
County of Albemarle	1,513,378	1,334,941
University of Virginia	2,114,156	2,071,179
Wegmans	323,094	323,094

* indicates Industrial Discharge Permit Holders

	Water	Sewer
Boar's Head Inn	400,582	368,882
Farmington, Inc.	664,831	422,896
Westgate Apts.	1,067,849	1,066,649
Abbingdon Crossing	1,572,592	1,572,592
Four Seasons Apts	1,385,203	1,385,203
Ch'ville/Alb Airport	187,370	188,969
State Farm	58,450	44,450
Hyatt @ Stonefield	375,572	375,572
Doubletree	750,089	750,089
Arden Place Apts.	471,402	471,402
Hilton Garden Inn	243,624	243,624
Ridgewood Homes	0	n/a
The Lodge @ Old Tr	215,532	215,532
Gov't-Defense Comp	824,864	739,574
Harris Teeter Stores	148,573	148,573

May 2022

WATER

Class Type	Number of Connections by Area			Total
	Urban	Crozet	Scottsville	
Single-Family Residential	15,575	3,676	196	19,447
Multi-Family Residential	545	43	3	591
Commercial (Offices)	203	12	5	220
Commercial (Other)	911	76	52	1,039
Industrial	36	9	4	49
Institutional	171	32	12	215
Total Water Accounts	17,441	3,848	272	21,561
Plus Multiple Units	12,648	748	89	13,485
Total Water Units	30,089	4,596	361	35,046

SEWER**Class Type**

	Number of Connections by Area			Total
	Urban	Crozet	Scottsville	
Single-Family Residential	13,268	3,398	158	16,824
Multi-Family Residential	514	41	4	559
Commercial (Offices)	187	12	5	204
Commercial (Other)	706	52	44	802
Industrial	15	5	1	21
Institutional	133	25	10	168
Total Sewer Accounts	14,823	3,533	222	18,578
Plus Multiple Units	12,231	745	56	13,032
Total Sewer Units	27,054	4,278	278	31,610

POPULATION SERVED

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

	Urban	Crozet	Scottsville	Total
Total Water Customers	70,558	11,060	713	82,330
Total Sewer Customers	63,748	10,358	535	74,640

**Albemarle County Service Authority
Major Customer Analysis
May 2022 and April 2022**

	May 2022		April 2022		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Westminster Canterbury	1,337,210	1,303,210	1,095,540	1,095,540	22.06%	18.96%
Old Salem Apts.	1,852,000	1,852,000	1,539,200	1,539,200	20.32%	20.32%
County of Albemarle	1,513,378	1,334,941	1,329,682	1,138,594	13.82%	17.24%
Martha Jefferson Hospital	1,577,978	995,978	1,421,203	1,084,203	11.03%	-8.14%
University of Virginia	2,114,156	2,071,179	1,945,645	1,722,854	8.66%	20.22%
ACRJ	1,120,190	1,029,190	1,089,550	1,035,550	2.81%	-0.61%
Turtle Creek Apts.	1,271,021	1,265,621	1,311,950	1,307,350	-3.12%	-3.19%
Southwood Mobile Homes	1,687,000	3,606,328	1,804,000	5,159,061	-6.49%	-30.10%
Westgate Apts.	1,067,849	1,066,649	1,142,935	1,141,635	-6.57%	-6.57%
SEMF Charleston	1,400,593	1,400,593	1,565,706	1,565,706	-10.55%	-10.55%
Four Seasons Apts.	1,385,203	1,385,203	1,649,827	1,649,827	-16.04%	-16.04%
Abbingdon Crossing	1,572,592	1,572,592	1,966,133	1,966,133	-20.02%	-20.02%

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
May 2022 and May 2021

	May 2022		May 2021		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
Old Salem Apts.	1,852,000	1,852,000	1,528,800	1,528,800	21.14%	21.14%
County of Albemarle	1,513,378	1,334,941	1,348,051	922,052	12.26%	44.78%
Martha Jefferson Hospital	1,577,978	995,978	1,425,816	922,816	10.67%	7.93%
Southwood Mobile Homes	1,687,000	3,606,328	1,687,000	2,296,768	0.00%	57.02%
University of Virginia	2,114,156	2,071,179	2,117,843	2,112,200	-0.17%	-1.94%
Westminster Canterbury	1,337,210	1,303,210	1,443,150	1,517,565	-7.34%	-14.12%
Westgate Apts.	1,067,849	1,066,649	1,201,000	1,201,000	-11.09%	-11.19%
Four Seasons Apts.	1,385,203	1,385,203	1,585,000	1,585,000	-12.61%	-12.61%
Turtle Creek Apts.	1,271,021	1,265,621	1,460,900	1,459,000	-13.00%	-13.25%
Abbingdon Crossing	1,572,592	1,572,592	1,816,600	1,816,600	-13.43%	-13.43%
ACRJ	1,120,190	1,029,190	1,639,920	1,563,920	-31.69%	-34.19%
SEMF Charleston	1,400,593	1,400,593	2,328,900	2,328,900	-39.86%	-39.86%

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 -- May

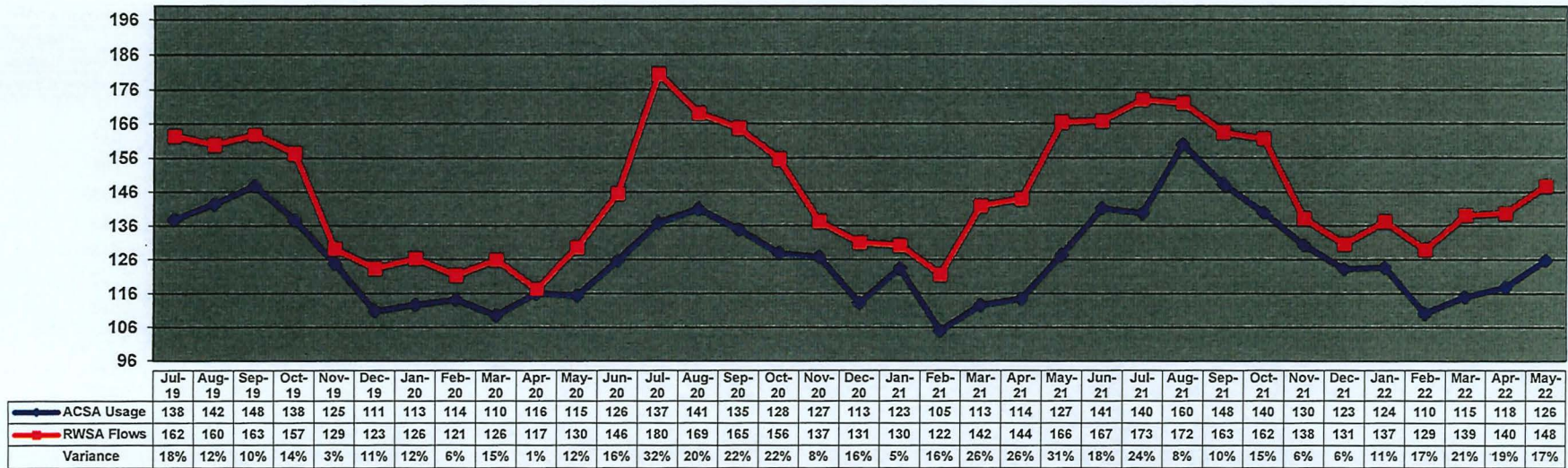
	YTD FY 2022		YTD FY 2021		Increase(Decrease)	Increase(Decrease)
	Water*	Sewer*	Water*	Sewer*	Water Consumption	Sewer Usage
County of Albemarle	15,083,101	12,239,915	10,462,351	7,826,452	44.17%	56.39%
University of Virginia	24,869,212	23,907,731	21,546,943	20,995,700	15.42%	13.87%
Martha Jefferson Hospital	19,381,280	11,608,180	17,553,416	11,163,616	10.41%	3.98%
Westminster Canterbury	16,086,600	14,480,600	14,783,150	14,349,565	8.82%	0.91%
Westgate Apts.	13,388,784	13,376,384	13,170,000	13,155,800	1.66%	1.68%
Four Seasons Apts.	17,103,030	17,103,030	17,243,000	17,243,000	-0.81%	-0.81%
Old Salem Apts.	16,839,900	16,839,900	17,284,800	17,284,800	-2.57%	-2.57%
Abbingdon Crossing	19,341,325	19,341,325	20,081,500	20,081,500	-3.69%	-3.69%
Southwood Mobile Homes	20,176,000	45,274,231	21,369,000	21,391,947	-5.58%	111.64%
SEMF Charleston	21,130,249	21,130,249	22,906,550	22,906,550	-7.75%	-7.75%
ACRJ	15,039,450	13,831,450	17,276,920	16,351,920	-12.95%	-15.41%
Turtle Creek Apts.	14,267,671	14,241,971	18,118,800	18,107,000	-21.25%	-21.35%

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.

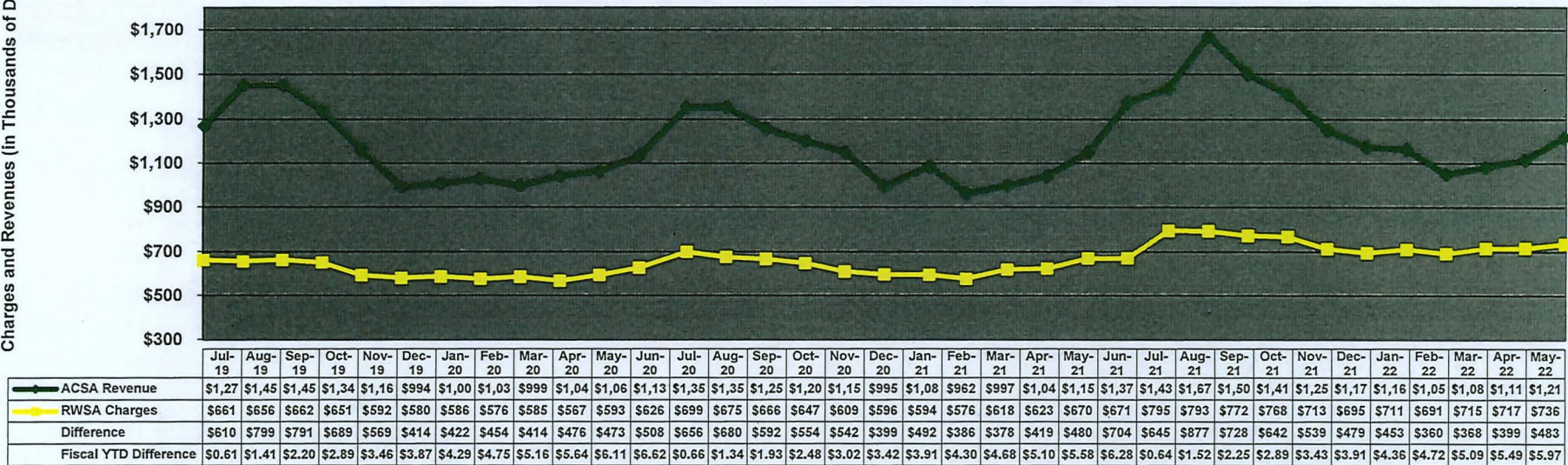
FY 2020, 2021, and 2022 Urban Water Comparison RWSA Flows & ACSA Customer Usage

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)

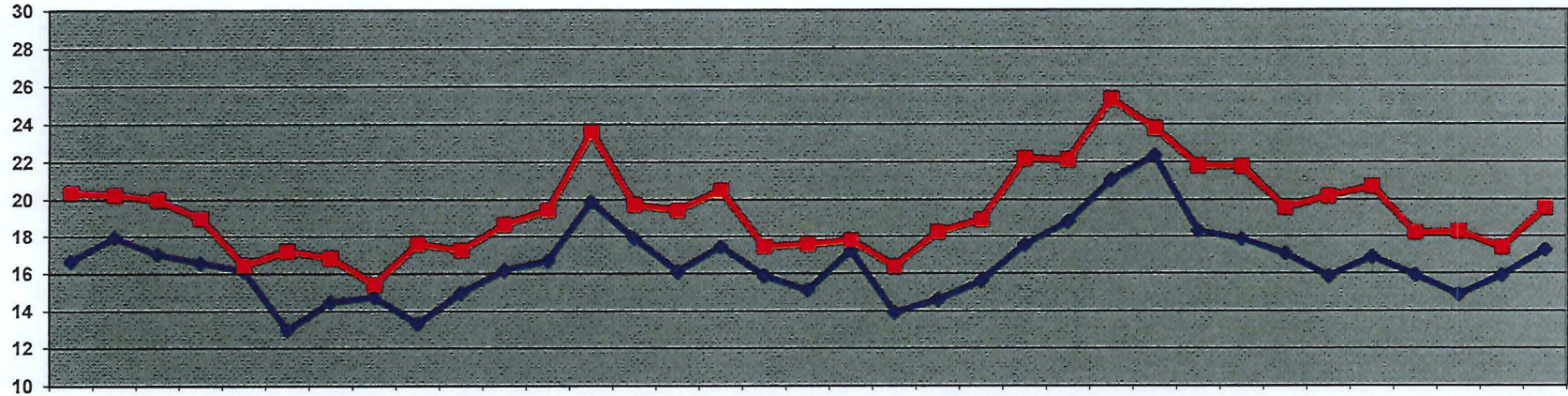


Note: Fiscal YTD Difference (ONLY) in Millions of Dollars

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

52

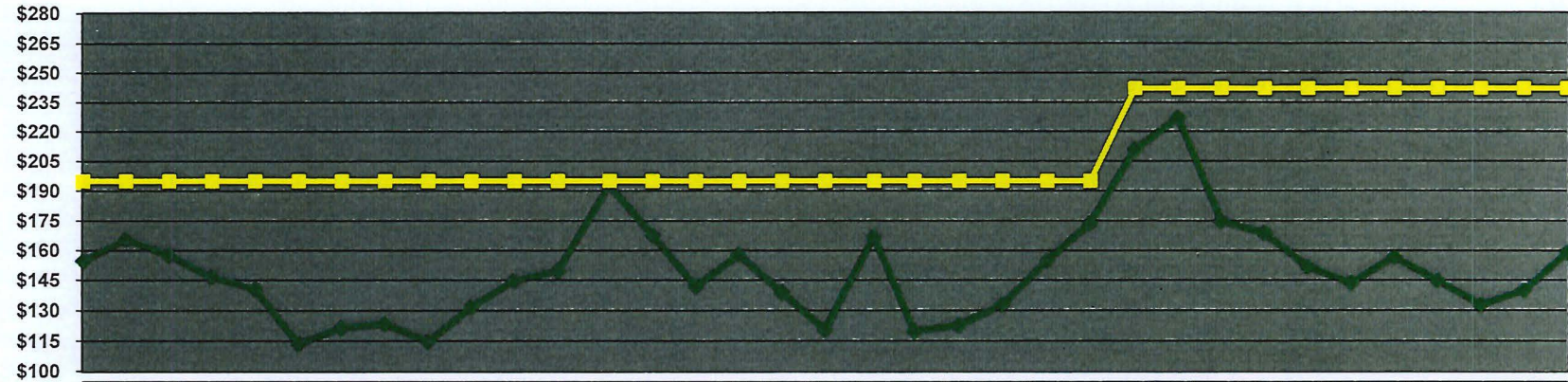
Flows & Usage (in Millions of Gallons)



	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	Jan-22	Feb-22	Mar-22	Apr-22	May-22	
 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	21	22	18	18	17	16	17	16	15	16	17
 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	21	18	18	17	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%	23%	14%	23%	9%	13%	

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

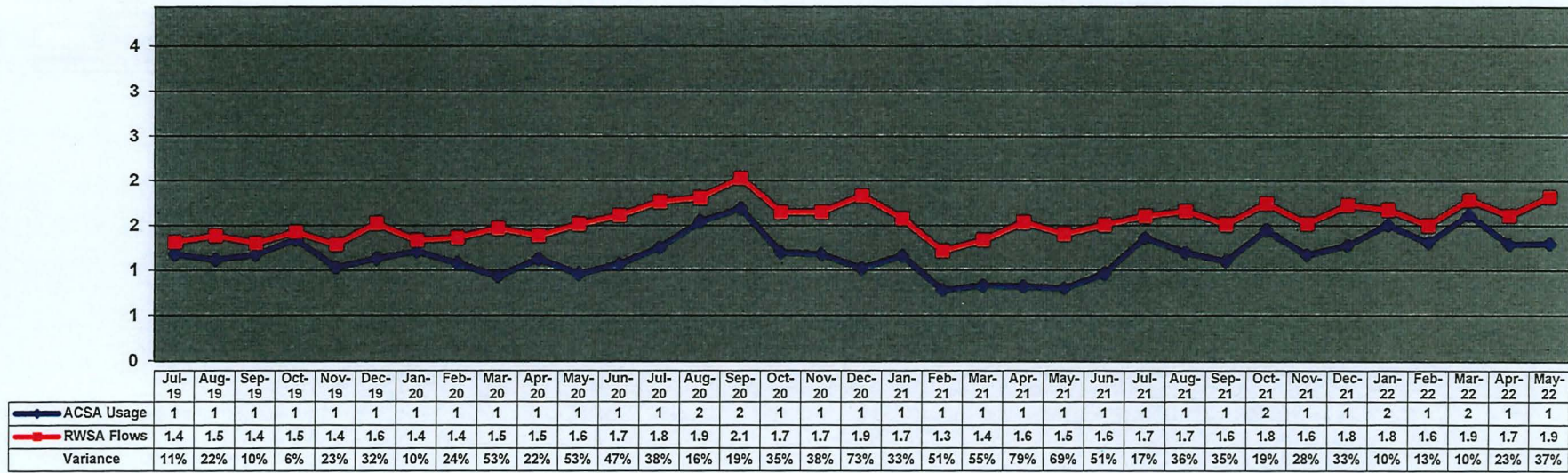
Charges and Revenues (in Thousands of Dollars)



	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	Jan-22	Feb-22	Mar-22	Apr-22	May-22
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	\$157	\$145	\$133	\$140	\$159
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	\$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)	(\$85)	(\$97)	(\$109)	(\$102)	(\$83)
Fiscal YTD Difference	-\$0.0	-\$0.0	-\$0.1	-\$0.1	-\$0.2	-\$0.2	-\$0.3	-\$0.4	-\$0.5	-\$0.5	-\$0.6	-\$0.6	\$0.00	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	-\$0.0	(\$0.0)	(\$0.1)	(\$0.1)	(\$0.2)	(\$0.3)	(\$0.4)	(\$0.5)	(\$0.6)	(\$0.7)	(\$0.8)

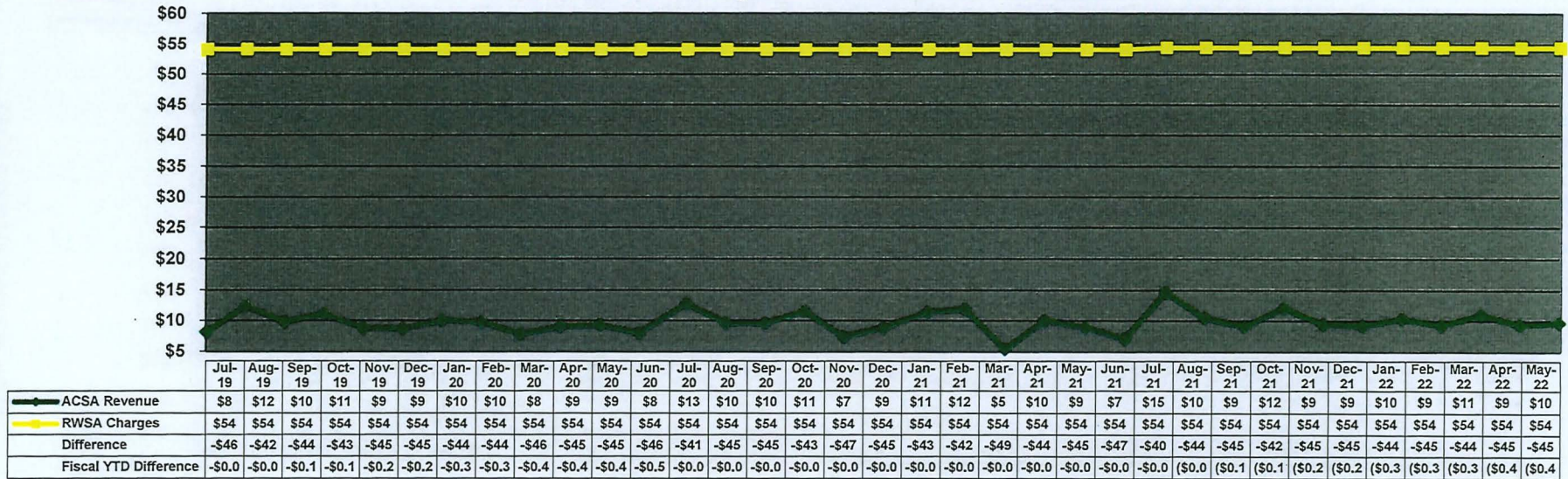
FY 2020, 2021, and 2022 Scottsville Water Comparison RWSA Flows & ACSA Customer Usage

Flows & Usage (in Millions of Gallons)



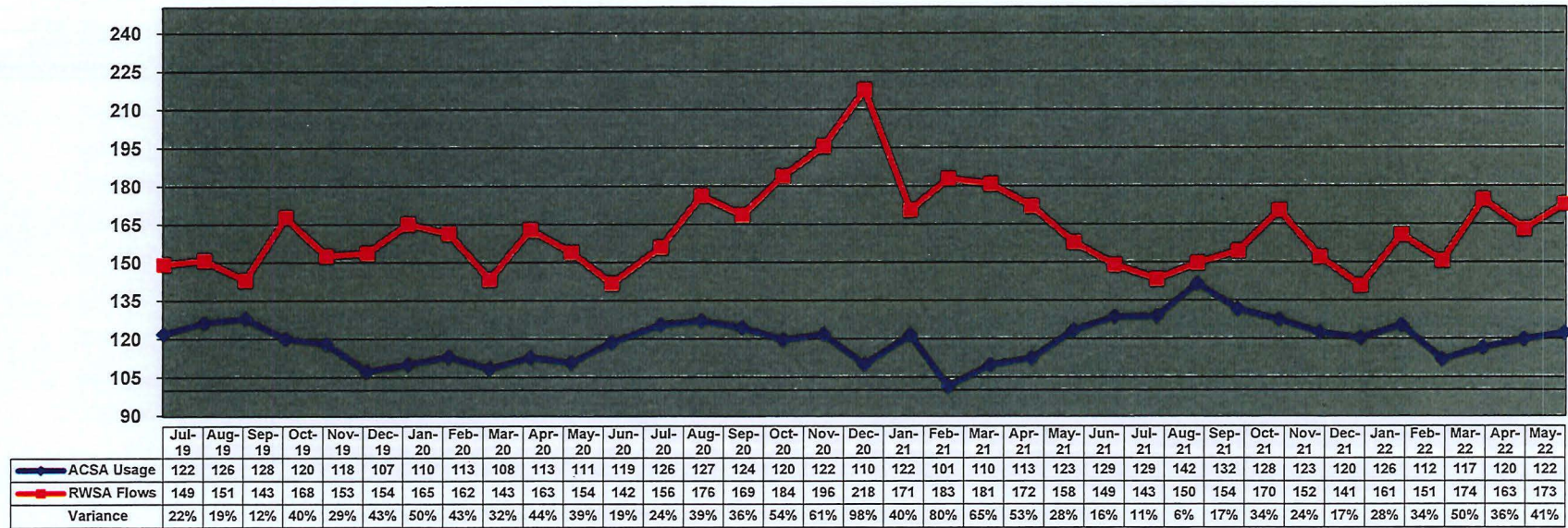
FY 2020, 2021, and 2022 Scottsville Water Comparison RWSA Billed Water Charges & ACSA Billed Water Revenues

Charges and Revenues (in Thousands of Dollars)



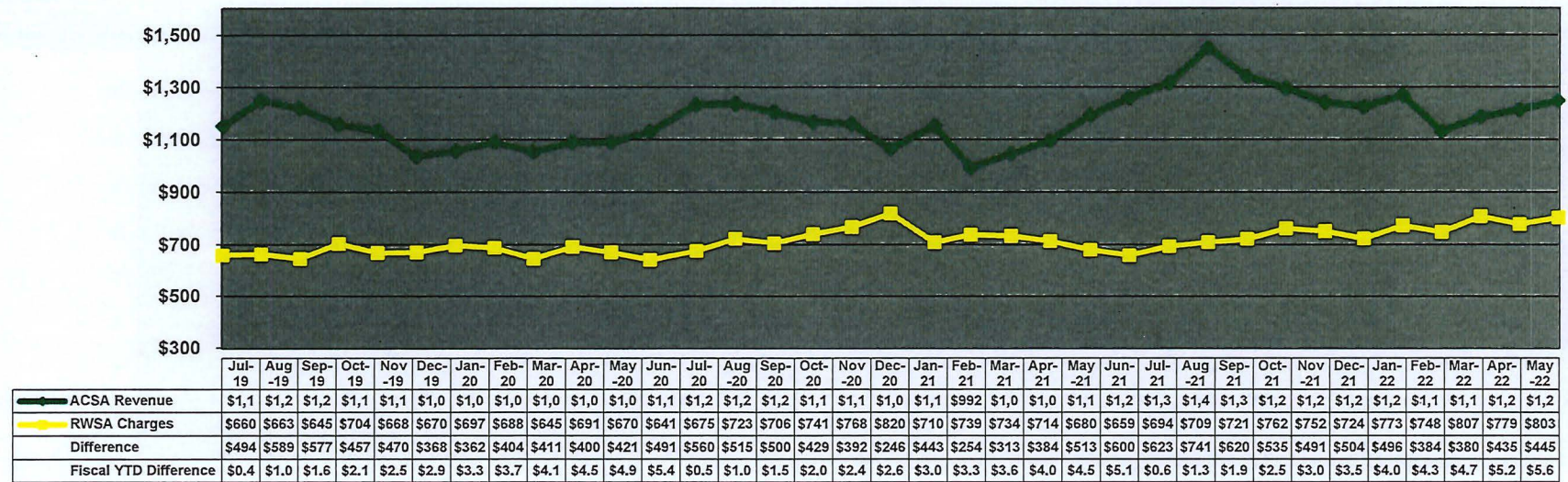
**FY 2020, 2021, and 2022 Urban (including Glenmore) & Crozet Sewer Comparison
ACSA Customer Usage & RWSA Flows**

Usage & Flows (in Millions of Gallons)



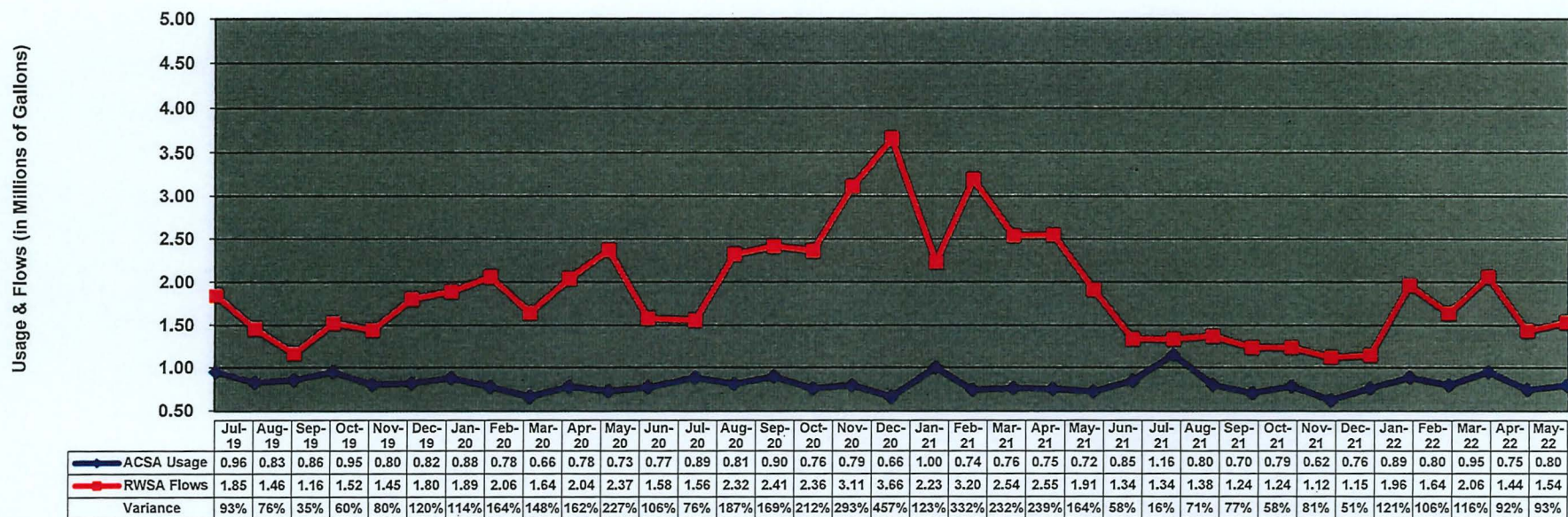
**FY 2020, 2021, and 2022 Urban (including Glenmore) & Crozet Sewer Comparison
ACSA Billed Sewer Usage & RWSA Billed Sewer Charges**

Charges & Revenues (in Thousands of Dollars)

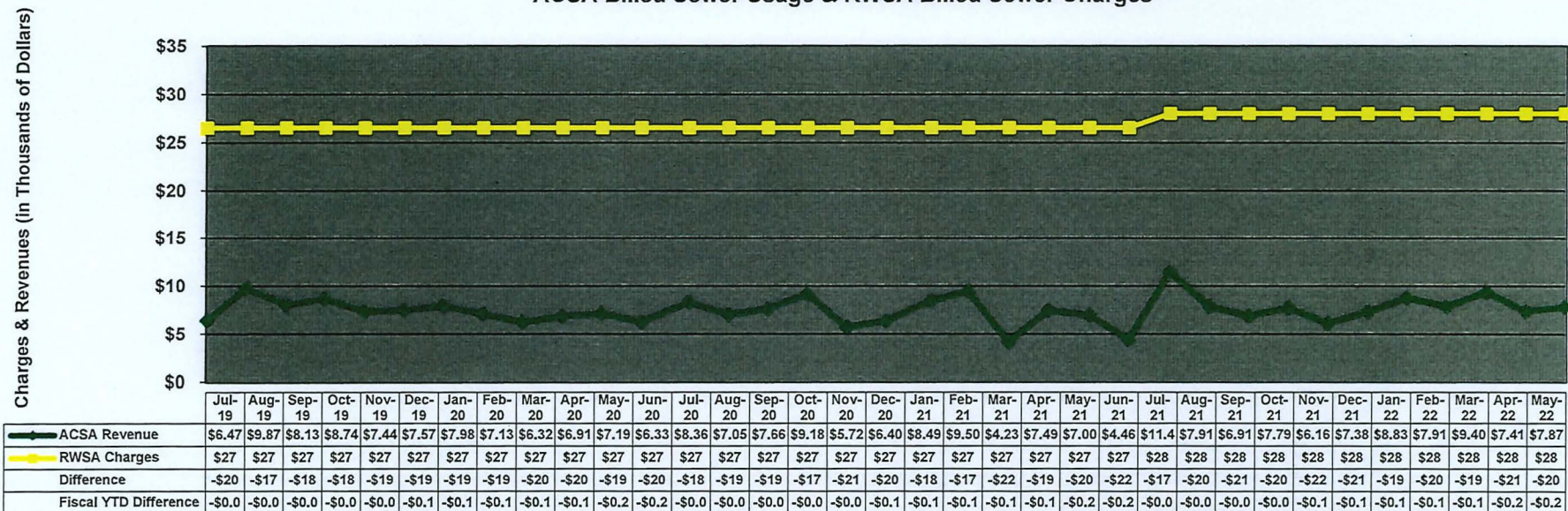


Note: Fiscal YTD Difference (ONLY) in Millions of Dollars

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

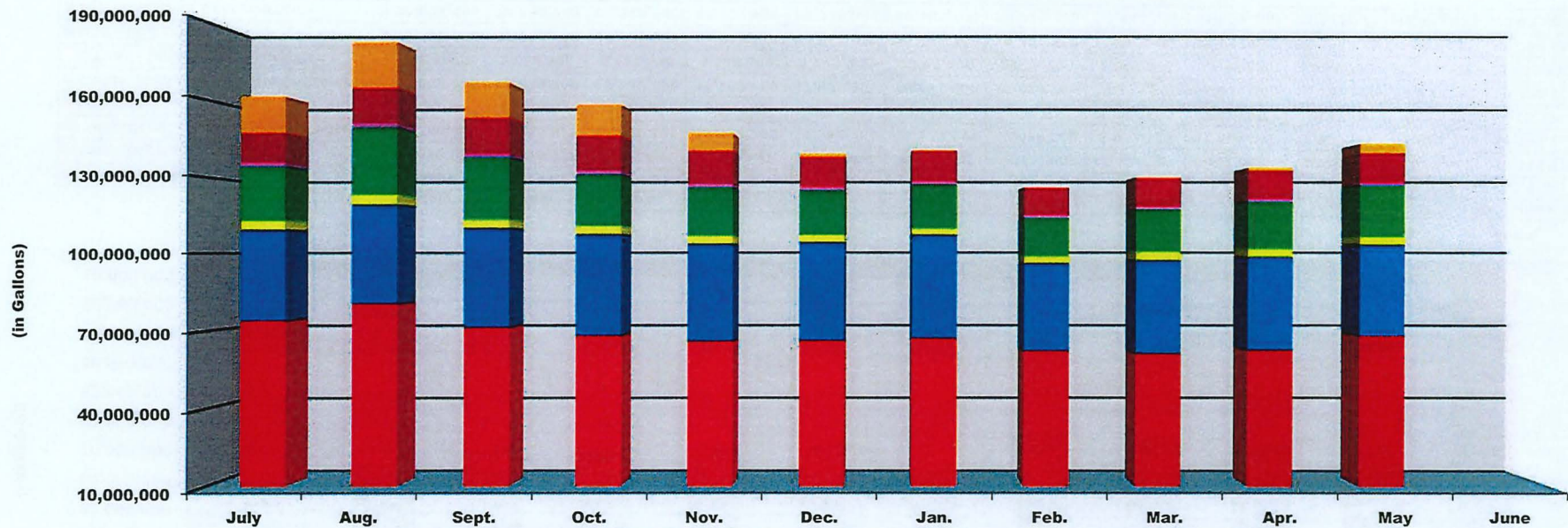
	FY 2022											
	July	August	September	October	November	December	January	February	March	April	May	June
Level 1 (0 - 3,000 gallons)	45,715,768	46,650,649	45,763,766	45,032,204	45,171,862	45,419,967	45,519,835	43,528,147	44,213,375	44,847,991	45,928,802	
Level 2 (3,001 - 6,000 gallons)	18,273,794	20,170,499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

System-Wide Irrigation Water Usage

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

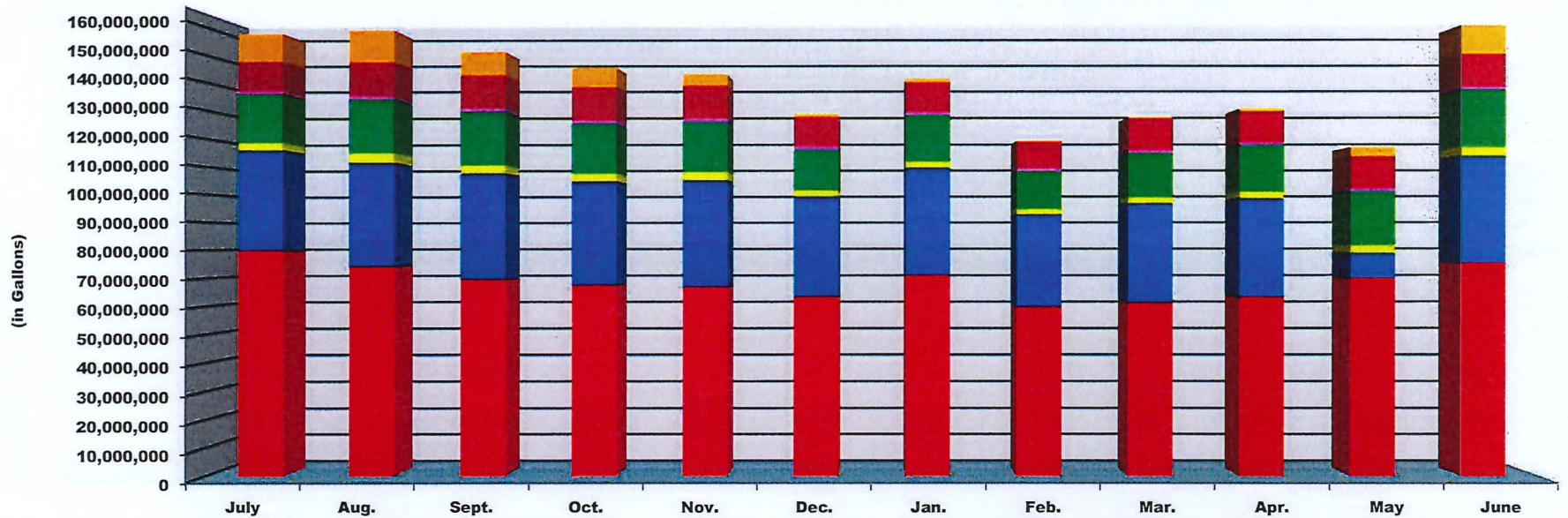
FY 2022	July	August	September	October	November	December	January	February	March	April	May	June
Level 1 (0 - 3,000 gallons)	227,735	245,814	228,478	203,450	155,121	17,400	3,524	3,931	8,114	24,844	76,177	
Level 2 (3,001 - 6,000 gallons)	962,522	1,040,603	904,153	849,482	602,101	69,638	14,390	13,183	17,563	39,381	277,100	
Level 3 (6,001 - 9,000 gallons)	1,134,487	1,351,889	1,085,629	1,060,900	690,400	56,305	11,043	10,729	12,057	34,193	283,548	
Level 4 (over 9,000 gallons)	11,756,763	15,108,350	11,413,176	9,936,698	5,645,695	1,263,435	441,698	329,481	459,753	960,114	3,032,903	
Total	14,081,507	17,746,655	13,631,436	12,050,529	7,093,317	1,406,778	470,655	357,324	497,487	1,058,531	3,669,728	-

Monthly Water Consumption Fiscal Year 2022



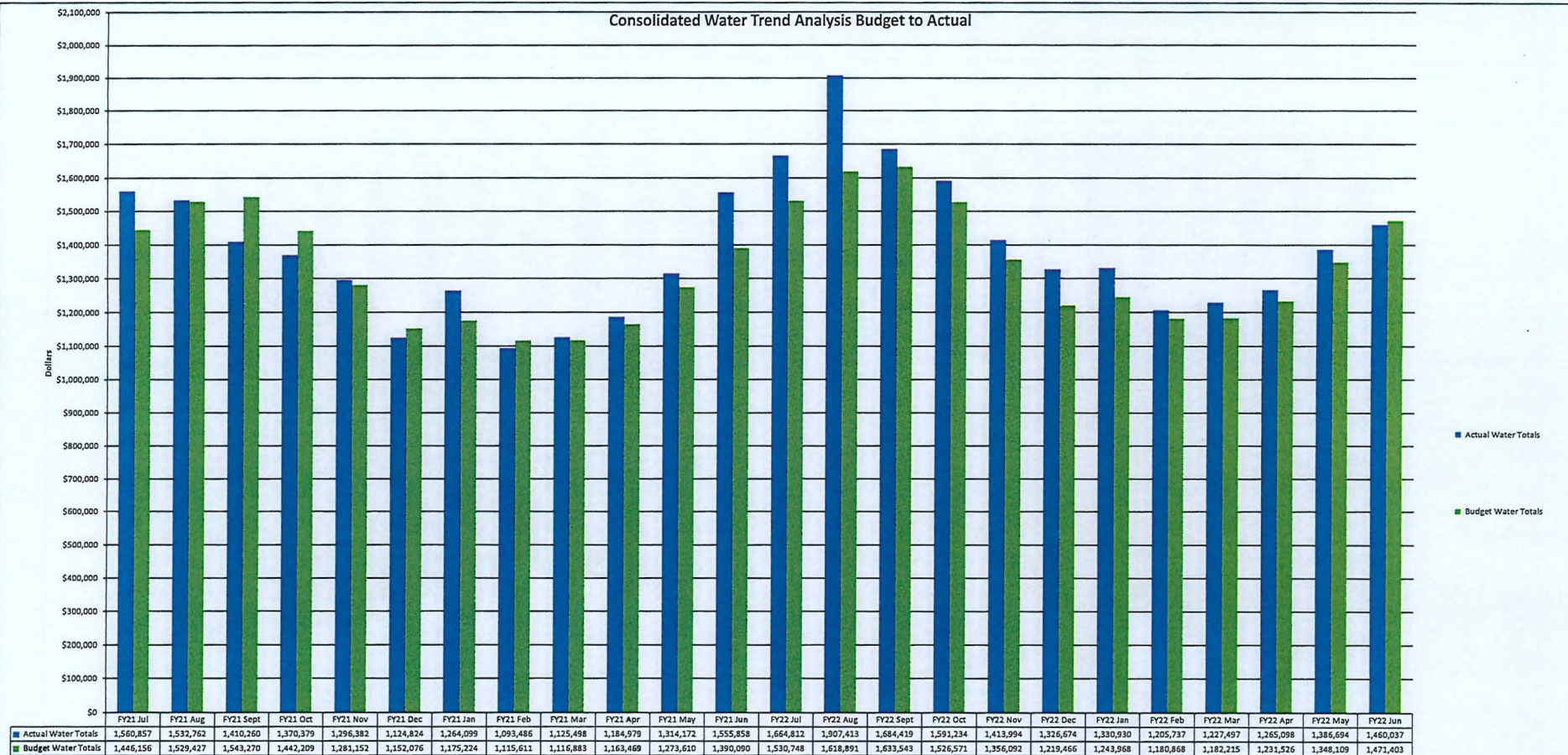
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	8.73%	9.74%	8.19%	7.63%	4.82%	1.01%	0.34%	0.28%	0.38%	0.79%	2.57%	0.00%
Total Irrigation	14,081,507	17,746,655	13,631,436	12,050,529	7,093,317	1,406,778	470,655	357,324	497,487	1,058,531	3,669,728	
Institutional - Domestic Consumption	11,582,738	13,489,815	13,865,774	13,494,096	12,724,964	11,630,981	11,883,862	10,962,679	11,319,135	11,212,974	11,454,262	
Industrial	1,262,587	1,519,053	1,193,165	1,128,786	1,121,916	1,050,113	810,668	718,305	787,267	845,945	751,304	
Comm. (Other) - Domestic Consumption	21,372,075	26,208,337	24,479,570	20,510,511	19,291,182	17,778,992	17,574,070	15,092,224	16,832,508	18,691,391	20,575,249	
Offices - Domestic Consumption	3,879,956	4,069,097	3,591,164	3,441,196	3,335,735	3,025,301	2,634,609	2,778,047	3,334,693	3,305,569	3,261,990	
MFR - Domestic Consumption	35,402,612	38,868,005	38,709,217	39,341,545	37,682,580	38,067,253	40,137,903	34,042,165	36,211,107	36,066,312	35,359,564	
SFR - Domestic Consumption	73,692,893	80,350,479	71,047,224	67,925,415	65,790,587	65,994,951	66,908,674	61,974,946	60,946,308	62,355,766	67,822,510	

Monthly Water Consumption Fiscal Year 2021

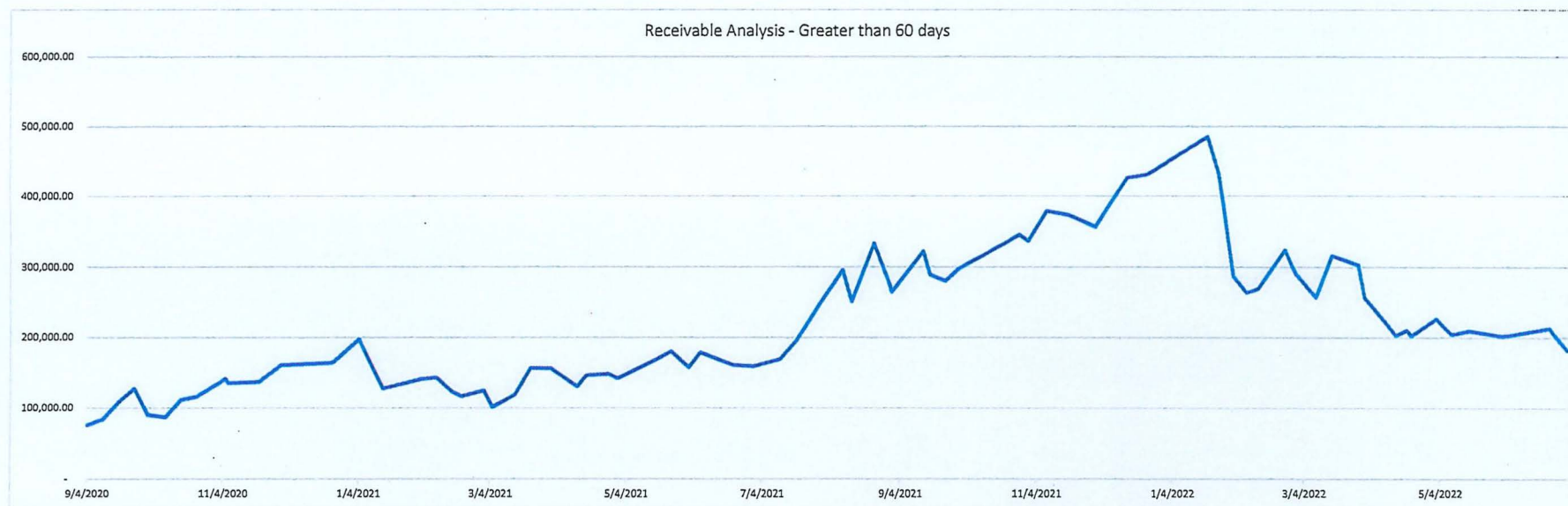


	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
% Irrigation to total	6.43%	7.32%	5.75%	5.06%	2.94%	0.85%	0.99%	0.38%	0.35%	0.69%	2.81%	6.44%
Total Irrigation	10,119,091	11,616,375	8,666,494	7,348,137	4,183,034	1,083,884	1,388,900	448,272	442,048	894,200	3,277,869	10,315,679
Institutional - 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

Consolidated Water Trend Analysis Budget to Actual







Albemarle County Service Authority

June 2022 Checks

CHECK NUMBER	CHECK DATE	VENDOR NAME	AMOUNT	DESCRIPTION OF ITEMS OVER \$5,000
63025	06/15/2022	Core & Main LP	221,813.45	AMI Project and Inventory (Meters)
63153	06/30/2022	Linco Inc	93,755.70	Oak Forest Pump Station Abandonment Retainage
63055	06/15/2022	Michael Baker International Inc	58,709.78	Bellair - Liberty Hills Sewer 4/4 - 5/1/22
63216	06/30/2022	Whitman, Requardt & Associates	46,202.20	Scottsville Phase 4 WM Replacement 4/10-6/4/22 and various
63054	06/15/2022	Metra Industries	42,429.85	Hessian Hills WMRP Construction May 2022
63151	06/30/2022	LB Water Service Inc	39,203.77	Ductile Iron Pipe (Emergency Procurement)
63213	06/30/2022	VRSA	30,899.00	Insurance/Worker's Compensation, 7/1/22-6/30/23
63074	06/15/2022	Provantage, LLC	16,975.00	Engineer Computer Replacements
63187	06/30/2022	St John, Bowling, Lawrence & Quagliana LLP	16,205.00	Legal Services May 22
63166	06/30/2022	Paymentus	16,120.64	Transaction Fees for May 22
63031	06/15/2022	ESRI	16,102.50	ESRI ArcGIS Pro Training 2 Day Class 5/16-17/22
63128	06/30/2022	Dewberry Engineers Inc	14,878.00	Avon Property PH1 & PH2 thru 4/29/22 & Risk Assess. Improve PH1 thru 4/29/22
63012	06/15/2022	Bank of America	13,628.96	Office Supplies, Memberships, Tools, Travel, Software Renewals
63173	06/30/2022	Quarles Petroleum Inc	12,278.33	Monthly Fuel
63131	06/30/2022	E Source Companies, LLC	10,000.00	AMI Prof Services May 22
63041	06/15/2022	Innovyze	8,280.00	Modeling Software Renewal 8/15/22 - 8/14/23
63052	06/15/2022	The McCammon Group LTD	6,286.50	Mediation services 6/9/22
63181	06/30/2022	RSG Landscaping & Lawn Care Inc	6,265.42	Landscaping - June 2022
63094	06/15/2022	Verizon Wireless	6,107.05	Monthly Cellular Service
63080	06/15/2022	RSG Landscaping & Lawn Care Inc	5,296.46	Landscaping - May 2022
63075	06/15/2022	Quarles Petroleum Inc	5,153.07	Monthly Fuel
63133	06/30/2022	Evoqua Water Technologies LLC	4,706.06	
63057	06/15/2022	Motorola Solutions, Inc.	4,625.70	
63022	06/15/2022	Virginia Department of Emergency Management	4,440.00	
63137	06/30/2022	Flora Pettit PC	4,270.00	
63155	06/30/2022	Lowes Companies Inc	4,085.87	
63095	06/15/2022	Virginia Municipal Drinking Water Assoc., Inc.	4,075.53	
63162	06/30/2022	Michael Baker International Inc	3,802.15	
63132	06/30/2022	Eds Floor Care Services LLC	3,703.33	
63029	06/15/2022	Dominion Energy Virginia	3,586.25	
63099	06/15/2022	WaterPIO	3,500.00	
63192	06/30/2022	The El Group, Inc.	3,400.00	
63204	06/30/2022	UniFirst Corporation	3,359.02	
63130	06/30/2022	Dominion Energy Virginia	3,071.43	
63167	06/30/2022	PFM Asset Management LLC	2,982.15	
63047	06/15/2022	Lowes Companies Inc	2,965.50	
63071	06/15/2022	PFM Asset Management LLC	2,885.30	
63205	06/30/2022	University of Virginia Office of Property &	2,814.50	
63032	06/15/2022	Evoqua Water Technologies LLC	2,805.60	
63011	06/15/2022	Atlantic Machinery Inc	2,766.25	
63180	06/30/2022	Stemmle Plumbing	2,500.00	

63068	06/15/2022	Onset Computers	2,444.73
63191	06/30/2022	Tencarva Machinery Company Inc	2,434.74
63199	06/30/2022	Traffic Safety Supplies, LLC	2,421.30
63123	06/30/2022	Consolidated Pipe & Supply Co Inc	2,400.00
63037	06/15/2022	Hamilton Hill LLC	2,085.00
63059	06/15/2022	Ramboll Americas Engineering Solutions Inc	2,072.50
63170	06/30/2022	Ferguson Enterprises LLC #3326	2,018.95
63225	06/30/2022	Minnesota Life Insurance Company	2,017.49
63141	06/30/2022	Hach Company Inc	1,972.50
63222	06/30/2022	Guardian	1,869.79
63096	06/15/2022	Virginia Utility Protection Service	1,851.15
63100	06/15/2022	Whitman, Requardt & Associates	1,805.19
63135	06/30/2022	Ferguson Enterprises LLC #1300	1,696.83
63174	06/30/2022	Rappahannock Electric Cooperative	1,643.93
63164	06/30/2022	ODP Business Solutions, LLC	1,622.90
63007	06/15/2022	Advantage Office Systems	1,617.00
63091	06/15/2022	UniFirst Corporation	1,526.16
63122	06/30/2022	Comcast Business	1,421.43
63021	06/15/2022	Comcast Business	1,418.78
63079	06/15/2022	Rivanna Water & Sewer Authority	1,412.00
63027	06/15/2022	Cues	1,388.35
63124	06/30/2022	Core & Main LP	1,307.65
63206	06/30/2022	University Tire & Auto Center Inc	1,206.43
63040	06/15/2022	Hydraflo, Inc.	1,185.08
63060	06/15/2022	ODP Business Solutions, LLC	1,153.12
63053	06/15/2022	McCarthy Tire Service	1,099.38
63070	06/15/2022	Performance Signs LLC	971.12
63175	06/30/2022	Red Wing Business Advantage Account	921.56
63184	06/30/2022	Safeware Inc	874.45
63200	06/30/2022	Treasurer, City of Charlottesville	846.77
63177	06/30/2022	Richmond Times-Dispatch	835.60
63160	06/30/2022	Marriot Corporation	825.92
63147	06/30/2022	Georgia Joyal	800.00
63023	06/15/2022	Concrete Pipe & Precast, LLC	765.00
63138	06/30/2022	FlowNetwork, Inc	750.00
63104	06/30/2022	Advance Auto Parts	699.20
63046	06/15/2022	LB Technology Inc	687.50
63217	06/30/2022	ACAC	676.00
63197	06/30/2022	Thrope's Tree Service and Landscaping	675.00
63224	06/30/2022	Herbert Beskin Trustee	669.00
63159	06/30/2022	Mailing Services of Virginia	653.90
63202	06/30/2022	Tyler Technologies Inc	652.00
63189	06/30/2022	Super Shoe Stores Inc	650.44
63006	06/15/2022	Advance Auto Parts	650.43

63049	06/15/2022	Mailing Services of Virginia	580.70
63209	06/30/2022	VACORP	563.33
63127	06/30/2022	The Daily Progress	543.60
63084	06/15/2022	Specialty Fasteners of Charlottesville	539.89
63208	06/30/2022	UVA-WorkMed	534.00
63196	06/30/2022	Timmons Group, Inc.	525.00
63145	06/30/2022	James River Communications Inc	516.13
63026	06/15/2022	Crown Communication LLC	515.00
63087	06/15/2022	The Supply Room Companies Inc	476.94
63073	06/15/2022	Ferguson Enterprises LLC #3326	460.00
63083	06/15/2022	Florence K Simons	454.33
63168	06/30/2022	Pitney Bowes Global Financial Services LLC	441.60
63121	06/30/2022	Comcast	441.47
63058	06/15/2022	Kenneth Nelson	436.95
63102	06/15/2022	Treasurer of Virginia	430.90
63229	06/30/2022	Treasurer of Virginia	430.90
63056	06/15/2022	Moore's Electrical & Mechanical Construction Inc	426.25
63014	06/15/2022	Blackburn Manufacturing Company	395.68
63207	06/30/2022	USABlueBook	392.82
63082	06/15/2022	S.I.S. Paint Inc	384.30
63028	06/15/2022	Nancy Debiase	350.00
63114	06/30/2022	Charlottesville Settlement Company	350.00
63142	06/30/2022	Hathaway	346.57
63101	06/15/2022	Cincinnati Insurance Company	312.73
63221	06/30/2022	Cincinnati Insurance Company	312.73
63179	06/30/2022	Hollis Rinehart	303.50
63165	06/30/2022	Ellen MacAvoy	300.00
63134	06/30/2022	FedEx	292.92
63089	06/15/2022	U S Bank	291.67
63010	06/15/2022	API Service Center	282.50
63088	06/15/2022	Traffic Safety Supplies, LLC	280.00
63157	06/30/2022	Michael R Lynn	279.00
63178	06/30/2022	Ricoh USA Inc	275.00
63107	06/30/2022	Atlantic Machinery Inc	271.09
63030	06/15/2022	Ennas Technology Systems Integration Inc	270.00
63203	06/30/2022	Umansky Chrysler Dodge Jeep Ram of Charlottesville	256.91
63097	06/15/2022	VoiceLink Communications	251.22
63024	06/15/2022	Ann Cooper	247.97
63158	06/30/2022	Jennifer MacLaren	247.91
63227	06/30/2022	Snap Fitness	239.76
63112	06/30/2022	Cardinal Home Center	237.59
63146	06/30/2022	MyFleetCenter.com	232.58
63182	06/30/2022	S L Williamson Co Inc	225.70
63106	06/30/2022	Appalachian Power	225.50

63226	06/30/2022	Piedmont Family YMCA	225.00
63090	06/15/2022	Megan Ulan	224.57
63214	06/30/2022	W A Wells Excavating LLC	210.00
63150	06/30/2022	Petra & Charles Lange	207.77
63109	06/30/2022	Marc Breidenbaugh	202.25
63076	06/15/2022	Republic Services	198.93
63212	06/30/2022	VoiceLink Communications	195.37
63020	06/15/2022	Comcast	189.85
63051	06/15/2022	Mayer Electric Supply Company Inc	187.87
63198	06/30/2022	Diana Torres-Aguilera	186.43
63176	06/30/2022	Robert & Rachel Rhodes	185.01
63152	06/30/2022	Susan C Lebeis	176.75
63098	06/15/2022	W A Wells Excavating LLC	175.00
63033	06/15/2022	Flexible Benefit Administrators, Inc	160.25
63039	06/15/2022	Laurie Howard	157.20
63103	06/15/2022	Virginia Department	150.00
63230	06/30/2022	Virginia Department	150.00
63171	06/30/2022	Priority Elevator	149.00
63201	06/30/2022	Sharon Twitty	141.77
63148	06/30/2022	Kimberly Keese	139.50
63193	06/30/2022	The Jefferson Legacy Foundation	138.37
63092	06/15/2022	USABlueBook	132.26
63045	06/15/2022	Gwendolyn Kelly	132.02
63015	06/15/2022	Travis Blount-Elliott	131.46
63223	06/30/2022	The Gym	130.00
63136	06/30/2022	Fisher Auto Parts Inc	124.48
63144	06/30/2022	Denise Hoy	124.12
63169	06/30/2022	Shorrol Pitt	118.72
63009	06/15/2022	American Pest	118.00
63105	06/30/2022	American Pest	118.00
63036	06/15/2022	Grainger	116.21
63163	06/30/2022	Vuong Nguyen	113.40
63078	06/15/2022	Rivanna Solid Waste Authority	110.00
63061	06/15/2022	Anne Farrell	100.00
63062	06/15/2022	Carol Woodburn	100.00
63064	06/15/2022	Elizabeth & William Manson	100.00
63065	06/15/2022	Ellen Daniels	100.00
63066	06/15/2022	Hubert Shaffer	100.00
63067	06/15/2022	Irma Garrison	100.00
63210	06/30/2022	Virginia Department	100.00
63149	06/30/2022	Rucha Khole	99.47
63077	06/15/2022	Rachel Ritter	96.14
63156	06/30/2022	Luck Stone Corporation	95.91
63194	06/30/2022	Shania Thorpe	94.67

63113	06/30/2022	Central Battery Specialist	90.22
63190	06/30/2022	The Supply Room Companies Inc	86.07
63111	06/30/2022	Forrest Burtnette	83.91
63120	06/30/2022	Thomas Claxton	82.30
63215	06/30/2022	Olivia Wages	81.38
63093	06/15/2022	VEPGA	76.00
63129	06/30/2022	Document Destruction of Virginia, LLC	69.95
63161	06/30/2022	Judith Meyer	68.41
63110	06/30/2022	Andrea Bryant	67.85
63188	06/30/2022	Andrew Struchen	64.85
63085	06/15/2022	Christian Steinmetz	62.99
63119	06/30/2022	Jennifer Clark	60.70
63081	06/15/2022	Jeremy Rutledge	59.38
63118	06/30/2022	City of Charlottesville	59.07
63183	06/30/2022	Angela Sachar	57.79
63186	06/30/2022	Katelyn Sessums	56.75
63008	06/15/2022	Aireco Supply Inc	56.26
63072	06/15/2022	Piedmont Power	49.43
63019	06/15/2022	City of Charlottesville	48.74
63044	06/15/2022	Jim Price Chevrolet	48.71
63013	06/15/2022	Better Living Inc	43.30
63050	06/15/2022	James Matus	41.57
63043	06/15/2022	MyFleetCenter.com	40.49
63218	06/30/2022	Anytime Fitness-Pantops	40.00
63219	06/30/2022	Anytime Fitness-Ruckersville	40.00
63220	06/30/2022	Anytime Fitness - Zion VA	40.00
63228	06/30/2022	Snap Fitness Hollymead	39.96
63126	06/30/2022	County of Albemarle	39.73
63125	06/30/2022	Trey Corrin	39.64
63069	06/15/2022	Sam & Corey Pederson	34.54
63086	06/15/2022	Chang Yu Sun	33.92
63154	06/30/2022	Joan Longley	33.89
63017	06/15/2022	Central Virginia Electric Cooperative	32.87
63063	06/15/2022	Cathy McGrane	30.00
63185	06/30/2022	Kimberly Schneider	27.00
63034	06/15/2022	Florence Feldman	24.39
63016	06/15/2022	Cardinal Home Center	24.00
63140	06/30/2022	Chen Gui	23.78
63172	06/30/2022	N Woodrow Pusey	22.18
63108	06/30/2022	Cooperative Financial Solutions	21.52
63035	06/15/2022	Fisher Auto Parts Inc	20.92
63005	06/15/2022	ABC Extinguishers, LLC	20.10
63048	06/15/2022	Luck Stone Corporation	17.25
63211	06/30/2022	VML/VACo AEP Steering Committee	16.00

63117	06/30/2022	City Electric Supply	10.26
63143	06/30/2022	William E Hopkinson	9.91
63042	06/15/2022	Paulette J'Sen	9.14
63115	06/30/2022	CHB Investments Inc	9.00
63018	06/15/2022	Adam Citko	8.95
63195	06/30/2022	Thryv, Inc.	6.59
63116	06/30/2022	Childress Paints	6.24
63038	06/15/2022	Eldred H Hendricks	6.17
63139	06/30/2022	David W. Garnett	3.00
			<hr/>
			840,257.05

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: FY 2023 Capital Improvement Program (CIP) STAFF CONTACT(S)/PREPARER: Jeremy M. Lynn, P.E., Senior Civil Engineer	AGENDA DATE: July 21, 2022 CONSENT AGENDA: ACTION: ■ INFORMATION: ■ ATTACHMENTS: YES
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BACKGROUND: Monthly CIP Memo including a status report on active CIP Projects, changes to the CIP Schedule, the revised CIP Schedule, and a list of Active Private Development Projects.

DISCUSSION:

- Questions about the status of active CIP Projects.
- Schedule changes for three projects.

BUDGET IMPACT: None.

RECOMMENDATIONS: None.

BOARD ACTION REQUESTED: Approval of the Consent Agenda.

ATTACHMENTS:

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

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

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

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

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

7/12/2022: One bid was received on July 1, 2022, from Harrisonburg Construction Co., Inc. (HCC) totaling \$311,000, which was \$194,000 more than budgeted in the CIP Rate Model. ACSA staff will reach out to HCC to see if we can negotiate some cost reductions by identifying any value engineering adjustments with assistance from Dewberry.

b) Energy Audit (Account Code 1625):

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

Appropriated Funds: \$296,000

Project Description - This project will consist of a comprehensive energy audit of the Operations Center and all pump stations. It will evaluate current energy consumption and the factors that drive it, as well as, an analysis of utility rate structures to identify potential cost savings. Surveys will be conducted of all systems, including operation and maintenance procedures to determine where energy conservation can be improved.

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

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

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	65%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2024
Total Budget:	\$4,315,000
Appropriated Funds:	\$634,312

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

7/12/2022: The title search has been completed to update all encumbrances on the property. Dewberry is continuing to work with the County's consultant for the Avon Street Extended Sidewalk Project to create a stormwater connection for the future improvements to our Avon Street entrance.

d) HVAC System Upgrade (Account Code 1619):

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Construction
Percent Complete:	95%

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

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

6/7/2022: The draft Commissioning Report has been received and it is currently under review. As-built control documents have been provided to WRA from eTEC.

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

Consultant:	ACSA/Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2023
Total Budget:	\$348,000
Appropriated Funds:	\$360,295

Project Description - In late 2018 ACSA staff became aware of four-story residential structures being constructed without proper backflow prevention devices. Section 8 of the ACSA Rules and Regulations details the ACSA Backflow Prevention Program. This program is in accordance with 12VAC5-590-570 through 12VAC5-590-630 of the Virginia Waterworks Regulations. The Containment Policy in 12VAC5-590-610 outlines the requirement for a backflow prevention (BFP) assemblies on the domestic water service line to high rise structures, defined as four (4) or more stories.

7/12/2022: No bids were received on June 24, 2022. ACSA staff is reviewing alternative options in an effort to increase bidder interest. Approximately 42 customers have executed the access and ownership agreement for the installation of the BFP assemblies.

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

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
Project Status:	Design
Percent Complete:	90%

Contractor:	Undetermined
Construction Start:	2024
Completion:	2026
Total Budget:	\$5,004,900
Appropriated Funds:	\$499,410

Project Description - This project continues our systematic program to replace undersized and deteriorating asbestos-cement and cast iron water mains throughout our water systems. The design will begin in FY 2019 and carry over into FY 2020. Construction is not anticipated to begin until FY 2025.

6/7/2022: The 90% design documents have been received and are currently under review. The start of the geotechnical borings has been delayed while F&R is trying to work out the pavement repair requirements for any holes that are made in the pavement, as they apply for the VDOT permit.

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

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2025
Total Budget:	\$6,183,500
Appropriated Funds:	\$520,911

Project Description - Our Strategic Plan calls for the eventual replacement of all asbestos-cement and PVC (pre-1990) water mains in our system, as they are older and made of a weaker material than the current industry norm. This project continues our systematic program to replace the aging and undersized asbestos-cement and PVC water mains in the Crozet Water System. This is the fourth of five phases that have been defined to carry out these improvements.

6/7/2022: To date 14 of 19 easements required for construction have been acquired.

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

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	90%

Contractor:	Undetermined
Construction Start:	2022
Completion:	2023
Total Budget:	\$951,400
Appropriated Funds:	\$124,975

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

7/12/2022: The UVAF has accepted the ACSA's compensation offer based on the Appraisal Report. Both parties are in the process of executing the Deed of Easement.

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

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Construction
Percent Complete:	0%
Contractor:	Commonwealth Excavating, Inc. (CEI)
Construction Start:	2022
Completion:	2023
Total Budget:	\$2,451,000
Appropriated Funds:	\$1,614,340

Project Description - This project addresses the goal in our Strategic Plan for the eventual replacement of all asbestos-cement water mains in our system. The existing water mains are approximately 49 years old and have reached the end of their useful life. As a former well system that was connected to public water, many of the mains are also undersized.

7/12/2022: ACSA staff have reviewed and provided comments on the first round of submittals from CEI. CEI has advised that a different ductile iron pipe (DIP) supplier has been identified and anticipates construction could start before the end of August.

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

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2027

Total Budget:	\$8,130,000
Appropriated Funds:	\$583,497

Project Description - This project addresses the goal in our Strategic Plan for the eventual replacement of all asbestos-cement water mains in our system. The existing water mains are approximately 54 years old and have reached the end of their useful life. As a former well system that was connected to public water, most of the mains are also undersized.

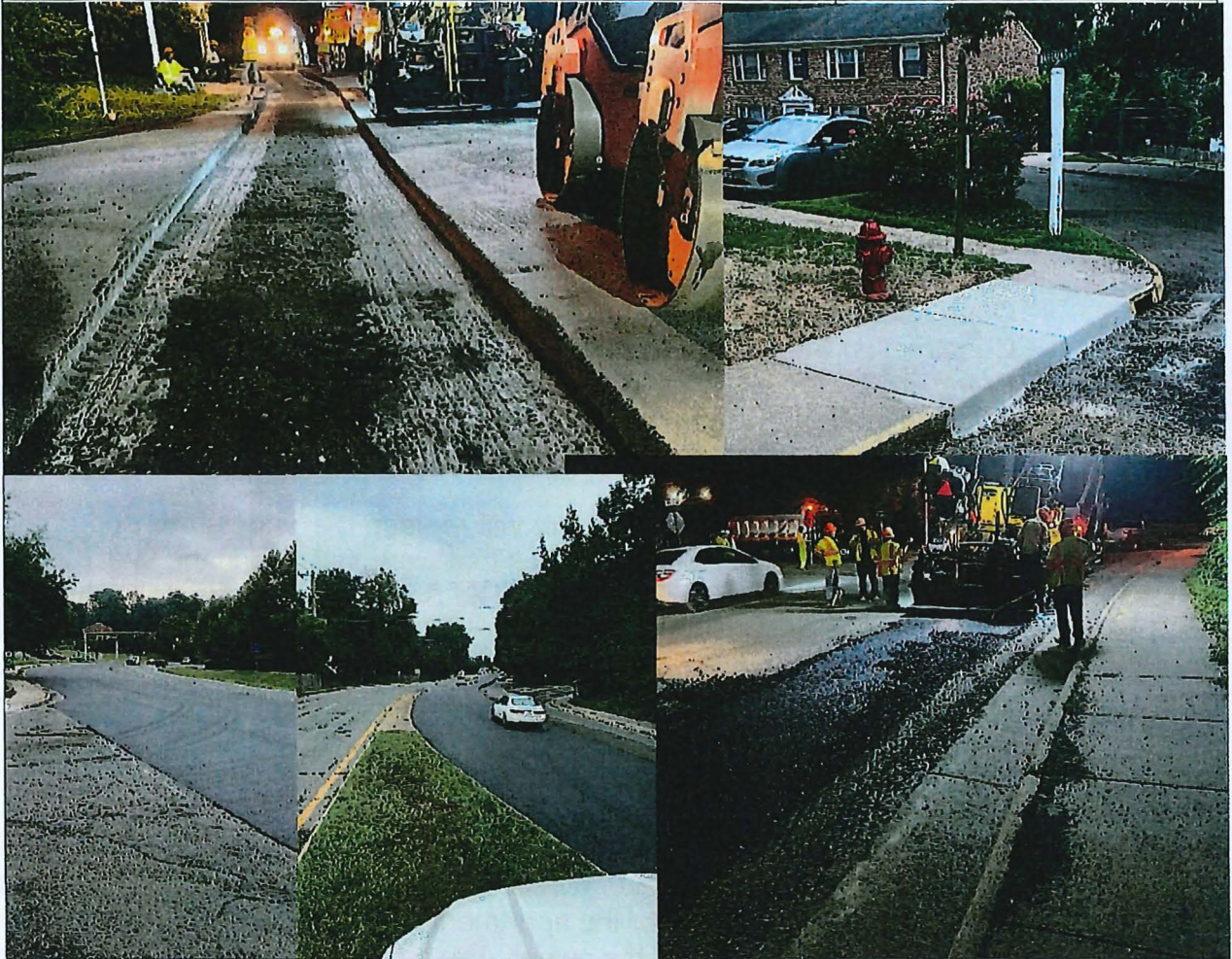
6/7/2022: ACSA staff is currently working with VDOT to establish the pavement repair requirements for the test holes and geotechnical borings that occur in streets in preparation of the LUP application. Some locations will be shifted out of paved areas to avoid having to mill and overlay a square yard of asphalt for each 4-inch diameter hole.

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

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Construction
Percent Complete:	95%
Contractor:	Metra Industries, Inc. (Metra)
Construction Start:	April 2021
Completion:	July 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.

7/12/2022: All concrete and sidewalk work has been completed. S.L. Williamson is currently underway with the milling and pavement restoration efforts. Project coordination with VDOT has provided the opportunity to repave both westbound travel lanes along Barracks Road.



I) Briarwood Water Main Replacement (Account Code 1766):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2026
Total Budget:	\$2,430,000
Appropriated Funds:	\$255,338

Project Description - Our Strategic Plan calls for the eventual replacement of PVC (pre-1990) water mains in our system, as they are older and made of weaker material than the current industry norm. This project will replace the PVC water mains that have been in service since the early 1980's. The design phase has been initiated and will carry over into FY 2023. Construction is expected to take place in FY 2025 and FY 2026.

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

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

Consultant:	Dewberry Engineers, Inc. (Dewberry)
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2026
Total Budget:	\$3,385,000
Appropriated Funds:	\$209,335

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

6/7/2022: Additional field surveying was required to pick up data that was missed initially. A revised set of 50% design documents has been received and is currently under review. ACSA staff has made contact with the head of Facilities Management for the apartment complex who will be included in the plan review process by the owner. We have also made contact with the owner who was initially unresponsive and with whom we will share project information at the 50% comment stage.

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

Consultant:	Whitman, Requardt & Associates, Inc.
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2023
Completion:	2023
Total Budget:	\$792,800
Appropriated Funds:	\$99,820

Project Description - This project will replace the ductile iron water main that was installed in the early 1970's and has been found to be in deteriorating condition based on recent excavations. With the redevelopment of the Woolen Mills Factory and Albemarle County's

increased attention on economic revitalization of this corridor, replacement of this water main is crucial in transforming this area.

3/8/2022: Comments on the 50% design documents have been received from the City and RWSA concerning the connections to their utilities at the west end of Broadway Street, and these have been forwarded to WRA.

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

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	0%
Contractor:	Undetermined
Construction Start:	2027
Completion:	2028
Total Budget:	\$5,947,300
Appropriated Funds:	\$290,887

Project Description - Our Strategic Plan calls for the eventual replacement of PVC (pre-1990) water mains in our system, as they are older and made of weaker material than the current industry norm. This project will replace the PVC water mains that have been in service since the 1980's and will eliminate pipe saddles at the water service connections that have been failing due to corrosion.

6/7/2022: Field surveying and boundary research are currently underway.

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

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:	July 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.

7/12/2022: Prism is scheduled to return to our area the week of July 11, 2022 and they've been directed to prioritize completion of the five remaining manholes in the Pantops Drainage Basin before moving on to some of our other rehabilitation projects.

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

Consultant:	O'Brien & Gere Engineers, Inc. (OBG)
Project Status:	Construction
Percent Complete:	24%
Contractor:	Prism Contractors & Engineers, Inc. (Prism) & Linco, Inc. (Linco)
Construction Start:	October 2021
Completion:	October 2022
Total Budget:	\$454,700
Appropriated Funds:	\$472,786

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

6/7/2022: Prism has been directed to resume work on rehabilitation of manholes in the Hollymead Drainage Basin after completing the outstanding Pantops Rehabilitation and FY 2021 Miscellaneous Sewer Rehabilitation work.

r) Airport Trunk Sewer Upgrade (Account Code 1828):

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

Appropriated Funds: \$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.

6/7/2022: ACSA staff has acquired the two easements from the County bringing the number of easements obtained to 7 of 24. ACSA staff continues to negotiate with the owners of 1705 Jumpers Run to arrive at a fair compensation for the impact to their property and narrow the list of suggested trees and shrubs for the restoration of landscaping on their parcel.

s) Biscuit Run Sewer Replacement (Account Code 1830):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Design
Percent Complete:	100%
Contractor:	Linco, Inc. (Linco)
Construction Start:	2022
Completion:	2022
Total Budget:	\$479,600
Appropriated Funds:	\$84,916

Project Description - During a routine inspection the ACSA's Maintenance Department discovered an existing gravity main and manhole along an intermittent stream that drains into Biscuit Run had been exposed due to runoff. This project will replace the sewer segment that crosses the stream with ductile iron pipe and will reinforce the stream bank where the sewer manhole is exposed.

6/7/2022: Most of the approvals from departments covered by the JPA have been received. ACSA staff is still awaiting the approval of DEQ for the stream disturbance necessary to the project.

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

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	75%

Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2020
Completion:	September 2022
Total Budget:	\$200,000
Appropriated Funds:	\$200,000

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

5/10/2022: The CCTV and cleaning work ahead of the relining proposed under Work Order No. 7 in the Hessian Hills area have been completed. One sewer segment relining in this work order will be replaced with some segmental lining.

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

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	Underway
Contractor:	Linco, Inc. (Linco)
Construction Start:	December 2021
Completion:	October 2022
Total Budget:	\$200,000
Appropriated Funds:	\$200,000

Project Description - This project continues our annual “find and fix” program of sanitary sewer rehabilitation to reduce I&I in our system. The ACSA made the decision to split our miscellaneous rehabilitation Contract Documents into separate contracts: one for repair and replacement work, and the other for trenchless pipe rehabilitation plus internal manhole rehabilitation. This contract will be utilized to make point repairs and undertake pipe replacement, which requires excavation work, to correct problems in our system found with systematic CCTV inspection by ACSA crews. It will also be used to complete rehabilitation recommendations generated from the SSES’s of larger drainage basins.

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

v) FY 2022 Miscellaneous Sewer Rehabilitation (Account Code 1906):

Consultant:	OBG, A Ramboll Company (Ramboll)
Project Status:	Construction
Percent Complete:	Underway
Contractor:	Prism Contractors & Engineers, Inc. (Prism)
Construction Start:	October 2021
Completion:	October 2022
Total Budget:	\$200,000
Appropriated Funds:	\$200,000

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

6/7/2022: All of the manholes under Work Order No. 1 have been rehabilitated, leaving only the repair of a protruding lateral remaining to finish this work order.

w) Oak Forest Pump Station Abandonment (Account Code 1807):

Consultant:	O'Brien & Gere Engineers, Inc. (OBG)
Project Status:	Construction
Percent Complete:	100%
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.

7/12/2022: Linco has completed the punch list and submitted all of the required closeout documents. Final payment has been requested, therefore this project is complete.

x) Bellair – Liberty Hills Sewer (Account Code 1829):

Consultant:	Michael Baker International, Inc. (Baker)
Project Status:	Design
Percent Complete:	10%
Contractor:	Undetermined
Construction Start:	2025
Completion:	2026
Total Budget:	\$3,493,715
Appropriated Funds:	\$380,295

Project Description - Over the past several years, there has been an uptick in residents of the Bellair Subdivision seeking to connect to public sanitary sewer service since most residents are currently served by private septic fields. In an effort to gauge community interest for such a project, ACSA staff mailed out a survey to the residents seeking feedback on their interest. Based on initial feedback received, a majority of the property owners are interested in connecting to public sewer if it was made available.

5/10/2022: ACSA staff have reviewed a map of parcels where a low pressure pump system may be required to avoid excessive depths for the new sewer mains. After a preliminary review and discussion ACSA staff have asked Baker to set the maximum depth of sewer at 15 feet and they will use this criteria to determine how many private grinder pumps can be eliminated.

y) Madison Park Pump Station Upgrade (Account Code 1735):

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

Project Description - This wastewater pump station was constructed 33 years ago by private development and the original equipment is wearing down. In addition the building is undersized creating difficulty in performing routine maintenance and making it impossible to install the control panels necessary to include this pump station in our new SCADA System. A study to evaluate the best option for upgrading this pump station will be performed, followed by design and construction.

7/12/2022: The Standard Form of Agreement has been executed and bonds have been approved. ACI has begun preparing submittals for our review.

z) Sewer Pump Station Comminutors (Account Code 1827):

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

7/12/2022: Tax Exemption status has been received for this project. ECUC has advised that lead time on the grinders is currently 6-8 weeks from ordering.

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

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	95%
Contractor:	ACSA Maintenance Department
Construction Start:	2022
Completion:	2023
Total Budget:	\$80,900

Appropriated Funds: \$7,125

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

4/12/2022: ACSA staff will be contacting the Lewis Hill HOA in the month of April 2022 to restart discussions about pipe alignment and easement acquisition.

bb) Huntington Village Water Connection (Account Code 1770):

Consultant:	ACSA Engineering Department
Project Status:	Design
Percent Complete:	50%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2022
Total Budget:	\$60,700
Appropriated Funds:	\$3,533

Project Description - The existing water main that serves as the only feed into Huntington Village off Old Ivy Road is at risk of failure due to an existing rock retaining wall that was constructed overtop of the water main. This project provides a second water connection into Huntington Village which is comprised of approximately 135 residential customers. It is anticipated all the work will be coordinated in-house by Maintenance Department personnel.

5/10/2022: ACSA staff have completed an internal review of the 50% design documents. During the week of May 9, 2022, our staff engineer will reach out to a couple of companies that specialize in Maintenance of Traffic (MOT) design to request proposals.

cc) Briarwood Pump Station Generator (Account Code 1767):

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	60%
Contractor:	ACSA Maintenance Department
Construction Start:	October 2021
Completion:	August 2022

Total Budget: \$54,100
 Appropriated Funds: \$54,100

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

7/12/2022: The automatic transfer switch has been installed and energized. Delivery of the new standby generator is expected the week of July 25, 2022.



dd) Exclusion Meters Replacement (Account Code 1759):

Consultant:	ACSA Engineering Department
Project Status:	Construction
Percent Complete:	26%
Contractor:	ACSA Maintenance Department
Construction Start:	September 2019
Completion:	2024
Total Budget:	\$742,500
Appropriated Funds:	\$247,500

Project Description - In the mid 1990's with the development of Glenmore, many new customers installed irrigation systems for their properties and wanted to have their sewer bills reduced by the amount of water that was diverted to irrigate their properties. Private meters were installed behind their ACSA meter to record this volume and it was "excluded" from the calculation of their sewer charges and these became known as exclusion meters. On January 1, 2006 the ACSA Rules and Regulations were modified to no longer allow exclusion meters and required that all future irrigation meters would be tapped separately off our water mains, to be owned and controlled by the ACSA. At that time the existing exclusion meters were grandfathered and allowed to stay in place unless the irrigation system was voluntarily abandoned. This project is a multi-year replacement program by our in-house CIP Crew to install dedicated, ACSA owned irrigation meters that will eliminate all remaining exclusion meters in our system.

7/12/2022: ACSA Maintenance performed an abandonment of one exclusion meter at the request of the customer. There are currently 369 exclusion meters remaining in our system.

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

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

Project Description - This project will address the ACSA's Strategic Plan to complete condition assessments on all sanitary sewer force mains at pump stations within the ACSA wastewater system. This project will utilize SmartBall and transient pressure monitoring technology to determine any problem areas that require correction or further detailed investigation.

5/10/2022: ACSA staff have decided to avoid potential capacity issues along the new gravity sewer route through the Woodbrook Subdivision and keep the force main at full length. ACSA staff is preparing a Scope of Services for Ramboll for the design of the partial replacement of the Woodbrook Pump Station Force Main.

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

Consultant:	Whitman, Requardt & Associates, Inc. (WRA)
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Project Status:	Design
Percent Complete:	100%
Contractor:	Undetermined
Construction Start:	2022
Completion:	2023
Total Budget:	\$943,115
Appropriated Funds:	\$324,472

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

7/12/2022: ACSA staff has begun the competitive negotiation stage.

JML/dmg
060806CIPMonthly071222

Albemarle County Service Authority (ACSA)

CIP Schedule Revisions
July 2022

1. The construction phase of the Hessian Hills Water Main Replacement Project has been extended to July 2022.
2. The construction phase of the Pantops Drainage Basin Rehabilitation Project has been extended to July 2022.
3. The construction phase of the FY 2021 Miscellaneous Sewer Rehabilitation Project has been extended to September 2022.

060806CIPRevisions071222

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

In house construction
Engineering
Construction

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

- a. 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.
- b. 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.
- c. Avon Street Extended Sidewalk Project (Scottsville): Replacement of approximately 600 LF of water main to facilitate the installation of a sidewalk and associated storm water infrastructure. This project is located along Avon Street Extended, between Stoney Creek Drive and Arden Drive.
- d. Berkmar Drive Apartments (Rio): Water and sewer main extensions to serve 10 apartment buildings, totaling 261 units. The project is located along Berkmar Drive, south of the Forest Springs Mobile Home Park.
- e. Boys and Girls Club – Drivers Ed Site (Jack Jouett): Water main extension to serve a new Boys and Girls Club. The project is located southeast of Jack Jouett Middle School.
- f. Brookhill Blocks 9-11 (Rivanna): Water and sewer main extension to serve 85 single family homes in the Brookhill subdivision, located east of Stella Lane between Ashwood Boulevard and Archer Avenue.
- g. **Brookhill Blocks 16 & 17 (Rivanna)**: **Water and sewer main extensions to serve 135 single family homes in the Brookhill subdivision, located north of Polo Grounds Road and East of the Montgomery Ridge Subdivision.**
- h. 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.
- i. 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.

- j. Galaxie Farm Subdivision (Scottsville): Water and sewer main extension to serve 65 residential units. This project is located along Scottsville Road, south of Mountain View Elementary.
- k. Georgetown Hydraulic (Jack Jouett): Water main extension to serve a commercial office building at the intersection of Georgetown Road and Hydraulic Road.
- l. Glenbrook at Foothills Phase 3 (White Hall): Water and sewer main extensions to serve 120 residential units between the Parkside Village and Glenbrook at Foothills subdivisions along Park Ridge Drive.
- m. **Old Trail Village Block 7C (White Hall)**: **Water and sewer main extensions to serve 30 residential units. This project is located along Old Trail Drive near Golf View Drive.**
- n. **Pleasant Green – Phase 2 (white Hall)**: **Water and sewer main extensions to serve 134 residential units. This project is located to the southeast of the Orchard Acres subdivision.**
- o. 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.
- p. 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.
- q. PVCC - Advanced Technical Training Center (Scottsville): Water main extension to serve new building on PVCC campus off College Drive.
- r. Regents School of Charlottesville (Samuel Miller): Water and sewer main extension to serve a private school, grades K-12. The site is located east of Trinity Presbyterian Church, along Reservoir Road.
- s. Rivanna Station – Nicholson Building Addition (Rivanna): Water main extension to serve an expansion of the Nicholson Building and a parking garage at NGIC, located east Route 29 and south of Boulders Road.
- t. 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.
- u. Southwood Phase 1 – Blocks 9-11 (Scottsville): Water and sewer main extensions to serve 70 single family units and 16 condominium units. This project is located west of Horizon Road and south of Hickory Street.

- v. 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.
- w. Stonefield Block D1 (Jack Jouett): Water main extension to serve a 220 unit apartment building at the intersection of Inglewood Drive and Bond Street.
- x. White Gables Major Amendment (Samuel Miller): Water main extension to serve three multi-family condominium buildings, with 30 units each. This site is located to the east of the existing White Gables neighborhood along Old Ivy Road.

JML/jl

0506 Active Private Development Projects 071222

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

AGENDA TITLE: How Cityworks keeps the ACSA Fleet on the Road	AGENDA DATE: July 21, 2022
STAFF CONTACT(S)/PREPARER: Mike Lynn, Director of Operations	ACTION: Informational
	ATTACHMENTS: Yes

BACKGROUND: The challenge of maintaining a fleet currently at 61 vehicles, 15 trailers and 9 pieces of large equipment is daunting. The implementation of Cityworks in 2020 has made this process manageable currently and for the inevitable growth in the fleet in the coming years.

DISCUSSION: The basis of fleet maintenance management is the Monthly Vehicle Inspection that is completed for each vehicle. The Maintenance Department's approach is for each crew to be assigned specific vehicles and for the respective crew leaders to be responsible for those vehicles and the monthly inspections. Usually, the inspections are delegated to crew members to carry out. The vehicle inspections are then submitted to the Maintenance Administrative Assistant to be processed. Any vehicle that does not pass inspection, must be serviced either by the ACSA or by a service center if the issue cannot be remedied internally to pass inspection.

Prior to the implementation of Cityworks in October 2020, the ACSA used the Monthly Maintenance Report from SharePoint (Attachment 1) which was a 31 Point inspection which the current Cityworks vehicle inspection is based on. There are several advantages the Cityworks Monthly Vehicle Inspection (Attachment 2) has over the old SharePoint version:

1. The Maintenance Administrative Assistant assigns and manages the inspections through Cityworks. Under the old SharePoint system, the inspections were sent by email which was a cumbersome process to track and manage.
2. The Cityworks inspections allow the next month's inspection to generate when the current month's inspections are completed. This streamlines the process and ensures a vehicle inspection will not be overlooked during the next month.
3. With Cityworks there is a Work History (Attachment 3) for each vehicle that is automatically generated. This was a feature that Sharepoint did not have, and it allows each vehicle's maintenance records to be centralized on one page.

In addition to the Monthly Vehicle Inspections, the Work History for every vehicle includes Work Orders. Work Orders for vehicles include Fleet Planned


Maintenance, Fleet Repair and Fleet Accessory Install. Fleet Planned Maintenance includes 8 categories of routine maintenance with the most common being oil & oil filter changes along with State Inspections. Fleet Repair (Attachment 4) has 16 categories of repair ranging from Alternators to Recall Notices. Fleet Accessory Install covers any aftermarket accessories such as a hitch. These Work Orders allow valuable details to be included such as the mileage of the vehicle and date when the work was completed, costs, the vendor or supplier of parts and the ability to attach copies of invoices and photos for each Work Order.

Cityworks allows an overview of each vehicle's history that was not readily available in the past. Using it, informed decisions can be made about maintaining the ACSA fleet going forward.

BOARD ACTION REQUESTED: None

ATTACHMENTS:

Attachment 1 Previously Used SharePoint Monthly Vehicle Report (Hardcopy)



Monthly Vehicle Report

Department:	Maintenance ▼	Vehicle:	24 ▼
Inspector:	David Ward ▼	Date:	9/30/2020
Current Odometer Reading: 15089			
Are items below in good operating condition? All vehicles:			
	Yes	No	
Safety belts working?	<input checked="" type="radio"/>	<input type="radio"/>	Windshield wiper blades & fluid?
Horn?	<input checked="" type="radio"/>	<input type="radio"/>	Floor & Parking Brake?
Turn/direction signals?	<input checked="" type="radio"/>	<input type="radio"/>	Tires with adequate tread & pressure?
Oil/Coolant/Brake fluid levels?	<input checked="" type="radio"/>	<input type="radio"/>	Brake/Tail/Head/Emergency lights?
Steering?	<input checked="" type="radio"/>	<input type="radio"/>	License plate light?
Backup alarm/backup camera?	<input checked="" type="radio"/>	<input type="radio"/>	First Aid Kit?
Intact windshield, with no cracks?	<input checked="" type="radio"/>	<input type="radio"/>	All seating in vehicle secure to frame?
Flares?	<input checked="" type="radio"/>	<input type="radio"/>	Fire Extinguisher?
Insurance Cards?	<input checked="" type="radio"/>	<input type="radio"/>	Dashboard indicator lights lit up? <i>If no, please specify which.</i>
Vehicle interior/exterior damage-free? <i>If no, please specify location.</i>	<input checked="" type="radio"/>	<input type="radio"/>	Unusual noises or vibrations?
Oil changed within manufacturer's warranty or within last 7,000 miles?	<input checked="" type="radio"/>	<input type="radio"/>	Rear-view mirror and side mirrors?
Blank "What to do in case of an accident" cards?	<input checked="" type="radio"/>	<input type="radio"/>	Inspection current?
Exterior and interior presentable and clean?	<input checked="" type="radio"/>	<input type="radio"/>	Cargo (tools and equipment) carried inside the vehicle properly secured?
MSDS list in vehicle? If applicable.	<input checked="" type="radio"/>	<input type="radio"/>	Anti-bacterial wipes/hand cleaner?
Pintle hook? If applicable.	<input checked="" type="radio"/>	<input type="radio"/>	Gauges working properly? <i>If applicable.</i>
Defrost in heating system?	<input checked="" type="radio"/>	<input type="radio"/>	

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

Attachment 2 Cityworks Monthly Vehicle Inspection Detail

Inspection		Details		Attachments	
Comments Type: Monthly Vehicle Inspection Inspection ID: 26501 Location: 160 Spoutap Rd Priority: 3-Medium Status: Closed Insp. Date: 05/22/2022 10:45 AM Inspected By: Lynn Mike					
Asset Information Highlight History Asset Costs Update Inspection XY when adding/removing asset? <input checked="" type="checkbox"/> Editable Fields All Fields FLEET Year: 2020 ((title: wpkassetid2_text)) Editable Fields All Fields ACSA HEADQUARTERS					
Observations Inspection Information Department: Maintenance Inspector: Michael Lynn Unit Number: 10					
Current Odometer Reading: 14958 Are Items Below in Good Operating Condition? All Vehicles			Pintle Hook? Defrost in Heating System? Yes Windshield Wiper Blades & Fluid? Yes Floor & Parking Brake? Yes Tires With Adequate Tread & Pressure? Yes Brake/Tail Head/Emergency Lights? Yes License Plate Light? Yes First Aid Kit? Yes Blood Born Pathogen Kit? Yes All Seating in Vehicle Secure to Frame? Yes Fire Extinguisher? Yes Any Dashboard Indicator Lights Lit Up? No Please Specify Why:		
Safety Belts Working? Yes Horn? Yes Turn Direction Signals? Yes Oil/Coolant/Brake Fluid Levels? Yes Steering? Yes Backup Alarm/Backup Camera? Yes Intact Windshield, With No Cracks? Yes Flares? Yes Insurance Cards? Yes Blank "What to do in case of an accident" Cards? Yes Vehicle Interior/Exterior Damage-Free? Yes Specify Damage Location: Is the Damage New? No Oil Changed Within Manufacturer's Warranty or Within Last 7,000 Miles? Yes Exterior and Interior Presentable and Clean? Yes SDS List in Vehicle? Yes			Dashboard Lights Functional? Yes Unusual Noises or Vibrations? No Rear-View Mirror and Side Mirrors? Yes Inspection Current? Yes Cargo (tools & equipment) Carried Inside the Vehicle Properly Secured? Yes Anti-bacterial Wipes/Hand Cleaner? Yes Gauges Working Properly? Yes Small and Large Dump Trucks Only Hydraulic Hoses and Pump? Side Boards on Dump Bed? Air Leaks? Tarps? Trailers Only Battery? Brakes? Checks? Fluids? Tires/Wheels? Local Binders? Chains? Lights? Electrical Connector Plugs? Resolution: Pass Observation: Repairs:		

Attachment 3 Cityworks Work History

Asset Viewer

Attributes Work History Relationships

Work Orders - 3 found


Total Cost: 76.56 Total Hours: 0.5

Id	Description	Status	Start	Finish	Expense
4572	Fleet Planned Maintenance	CLOSED	01/25/2022 8:05 AM	01/25/2022 10:35 PM	MAINT
5347	Fleet Planned Maintenance	CLOSED	01/28/2022 8:00 AM	01/28/2022 9:25 AM	MAINT
2837	Fleet Planned Maintenance	CLOSED	09/10/2021 10:00 AM	09/10/2021 11:00 AM	MAINT


Inspections - 17 found

ID	Description	Status	Inspected
28443	Monthly Vehicle Inspection	OPEN	
27206	Monthly Vehicle Inspection	CLOSED	06/30/2022 1:00 PM
26911	Monthly Vehicle Inspection	CLOSED	03/1/2022 3:58 PM
24346	Monthly Vehicle Inspection	CLOSED	04/22/2022 3:50 PM
22044	Monthly Vehicle Inspection	CLOSED	03/30/2022 2:08 PM
20941	Monthly Vehicle Inspection	CLOSED	02/28/2022 3:02 PM
19989	Monthly Vehicle Inspection	CLOSED	02/1/2022 10:25 AM
19115	Monthly Vehicle Inspection	CLOSED	12/23/2021 9:39 AM
17116	Monthly Vehicle Inspection	CLOSED	12/2/2021 7:13 AM
16342	Monthly Vehicle Inspection	CLOSED	11/1/2021 3:26 PM
15640	Monthly Vehicle Inspection	CLOSED	09/29/2021 3:32 PM
13380	Monthly Vehicle Inspection	CLOSED	08/31/2021 8:45 AM
12200	Monthly Vehicle Inspection	CLOSED	07/30/2021 3:38 PM
10640	Monthly Vehicle Inspection	CLOSED	06/30/2021 2:10 PM
9321	Monthly Vehicle Inspection	CLOSED	06/1/2021 3:04 PM
7709	Monthly Vehicle Inspection	CLOSED	05/3/2021 6:51 AM
6897	Monthly Vehicle Inspection	CLOSED	03/26/2021 3:28 PM

Attachment 4 Cityworks Work Order

Work Order									
Description	Unit Repair								
WO #	4027								
Entity Type	Fixed Asset								
Priority	Medium								
Status	Closed								
Initiated By	Gatbright Tim	Unit ID	04/S/2022 2 40 PM						
Created By	Gatbright Tim	Date Closed	04/05/2022 2 40 PM						
Requested By	Gatbright Tim								
Supervisor	Gatbright Tim								
Submitted To	Gatbright Tim	Submit Date	04/05/2022 2 41 PM						
Projected Start	04/05/2022 2 40 PM		Projected Finish	04/05/2022 2 40 PM					
Infrastructure Unit 10 - Repa - O - Leak									
Location Information									
Facility ID	Level ID								
Address									
N Location	11 496 745 16937292		S Location	3 699 249 87363347					
Location Details									
Assets									
Total Entries	2								
<input type="checkbox"/> Asset	Asset ID	Asset Util	Location	Warranty	Date	Work C			
<input checked="" type="checkbox"/> FLEET	62	FLT60							
<input checked="" type="checkbox"/> ACSA HEADQUARTERS	404	ACSA-HQ							
Pink road estimate assembly still under warranty									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Start GrantNet Inspection									
Update Work Order N/A when adding removing assets									
Related Work Activities									
Work Orders									
Create Child Work Order									
Human Resources									
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	01/10/2022 12 09 PM		Actual Finish	01/11/2022 12 00 PM					
Completed By	Lynn Mee								
Contractor	Malay Ford								
Resolution	Permanent Fix	Work Order							
Alternatives	No								
Batteries	No								
Brakes	No								
Diesel Maintenance	No								
Hydraulic Hoses	No								
Hydraulic Pumps	No								
Compressor Repairs	Yes								
Tires (Vehicle < 5 tons)	No								
Large Vehicle Tires	No								
Lights	No								
Windows - Glass	No								
Major Engine Repairs	No								
Suspension Repair	No								
Transmission Repair	No								
Steering Repair	No								
Recall Work	No								
Odometer			11 795						
Work Cycle									
Comments									
Comments									
Sort									
Attachments									
 mfo110322-10.pdf 04/05/2022 2 41 PM 04/05/2022 2 41 PM									

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: July 21, 2022</p> <p>CONSENT AGENDA: Informational</p> <p>ATTACHMENTS: Yes</p>
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BACKGROUND: This report continues the monthly updates on the Rivanna Water & Sewer Authority (RWSA) projects and Board meetings. Below are some updates on RWSA major projects and issues, including updates from the June 28th RWSA Board Meeting and other communications.

RWSA Board Meeting and other Updates and Approvals at the June 28th Board Meeting:

- **Central Water Line:** This project is one of a series of community water supply projects to address long-term water supply and water transmission to ACSA customers. The concept is straightforward; there is a middle gap in the RWSA water transmission system that needs to be connected to close this gap. The map in slide four illustrates this gap. The Central Water Line would connect the Ragged Mountain Reservoir/Observatory Water Treatment Plant side of the system with the central and eastern portions of the Urban Water System. This will remove an "obstruction" in a small line leaving the newly expanded Observatory Water Treatment Plant, with a larger line replacement that will roughly parallel the middle of the City. This is beneficial to the City, with a number of direct connections, and to the ACSA to better serve the eastern part of our system. It will also provide emergency redundancy if the South Fork Reservoir or South Rivanna Water Treatment Plant were to ever have an outage.

This is projected to be a \$41 million project, to be constructed in phases over the 2024-28 time period. A thorough evaluation of the route options was undertaken narrowing to five main options, and then refined to one recommended option – a southern route from the Observatory Water Treatment Plant along the Stadium – Cherry Avenue – E. Jefferson – E. High corridors to a connection on East High Street (see page 13 in the attached PowerPoint for a map depicting this route). The City Council on June 22nd reviewed these options, since on city streets. A series of neighborhood meetings had been held that raised some of the route options, and some resident concerns over the project, hence also of City Council interest. At the June 28th RWSA Board meeting the Central Water Line Route 5 – Southern – Cherry Avenue route was approved.

- **RWSA CIP – Projects in FY' 23 Rates:** The following are projects that are wholly or partially funded in the FY' 23 CIP, that the ACSA rate increase will contribute towards:

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

- South Rivanna and Observatory Water Treatment Plant Renovations, and Capacity Expansion at Observatory (\$43 million total project costs);
- Airport Road Water Pump Station (\$10 million);
- Moores Creek Wastewater Treatment Plant Electrical Replacements (\$5 million);
- Moores Creek Location – RWSA Administration Building Renovation (\$18 million);
- Crozet – Beaver Creek Dam, Spillway Piping, Intake, New Pump Station (\$31 million);
- Ragged Mountain Reservoir to Observatory Water Treatment Plant Piping and Pump Station Replacements (\$25 million);
- Central Water Line (\$41 million).

Total in the FY' 23-27 timeframe is \$163 million; on the June 28th agenda was approval of \$121.6 million to fund new debt on CIP projects.

- **Wholesale Metering Report:** Update on the metering system installed at the City-County border as part of the Water Supply Plan. The current water use average is City at 49.5% and ACSA at 50.5%. The ACSA has a lot of available future capacity (nearly double at 7 MGD available; City at 2.2 MGD capacity) under the terms of the Agreement.
- **Water Supply Status:** At over 99% full in all reservoirs as we head into the hotter part of the summer. The drought problem times from the past are late August – early September when the hottest days and highest water uses occur, and the UVa students are back in town.

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:	62%
Completion Date:	May 2023
Base Construction Contract:	\$37,467,169.49
Approved Capital Budget:	\$43,000,000

Current Status:

Work continues on the South Rivanna Water Treatment Plant, the Administration Building, replacement of the drive on the second clarifier and improvements at the Raw Water Pump Station. Two new filters have been completed. Work at the Observatory Water Treatment Plant includes the new Chemical Storage Building, sedimentation basin improvements and foundation work for the GAC expansion.

AGENDA ITEM EXECUTIVE SUMMARY

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:	94%
Expected Completion Date:	June 2022
Base Contract	\$4,594,712.99
Total Capital Project Budget:	\$5,400,000

Current Status:

Final construction of the tank continues with only completion of the tank dome, additional leak testing, and painting remaining. Final SCADA and control work is in progress.

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.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

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

Contractor:	Anderson Construction
Bidding:	
Construction Start:	December 2021
Percent Complete:	7%
Completion Date:	December 2023
Base Contract:	\$8,520,312.50
Budget:	\$10,000,000

Current Status:

Work has begun at the Kohl's site with about 300 feet of pipe installation thus far. Rock has been encountered, closing excavation. Clearing and grubbing of the pump station site is complete and grading is anticipated to begin this month.

History:

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

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

Design Engineer:	Michael Baker International (Baker)
Project Start:	August 2018
Project Status:	Design (15%) 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. Topographic survey work to the east of the proposed pump station site continues, while stake out on UVA Foundation property has been completed to further easement negotiations. Easement negotiations with one private owner, UVA, and the UVA Foundation continue. Staff met with the UVA Foundation on June 8th to examine the proposed alignment through Foxhaven Farm, as well as discuss potential laydown areas on the property.

AGENDA ITEM EXECUTIVE SUMMARY

History:

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

The RMR to Observatory WTP raw water pump station is planned to replace the existing Stadium Road and Royal Pump Stations, which have exceeded their design lives or will require significant upgrades with the Observatory WTP expansion. The pump station will pump up to 10 million gallons per day (mgd) of raw water to the Observatory WTP. Integration of the new pump station with the planned South Rivanna Reservoir (SRR) to RMR Pipeline is being planned in the interest of improved operational and cost efficiencies and emergency redundancy. An integrated pump 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 (UVAF) for this phase of the project. Design documents have been submitted to local regulatory authorities for review. Finalization of permits, design, and bidding are currently on hold awaiting the final UVAF easement.

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.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

- **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:	80% NRCS Planning Process
Construction Start:	2024
Completion:	2027
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 June. Remaining NRCS requirements, including review and approval of the planning study, are scheduled for completion by December 2022. An application for design and construction funding from NRCS will be submitted in 2022.

History:

RWSA operates the Beaver Creek dam and reservoir as the sole raw water supply for the Crozet area. In 2011, an analysis of the Dam Breach inundation areas and changes to Virginia Department of Conservation and Recreation (DCR) *Impounding Structures Regulations* prompted a change in hazard classification of the dam from significant to high hazard. This change in hazard classification requires that the capacity of the spillway be increased, and the dam be replaced. This CIP project includes investigation, preliminary design, public outreach, permitting, easement acquisition, final design, and construction of the anticipated modifications. Work for this project includes a new relocated raw water pump station and intake. A federal grant totaling \$341,000 was secured from the National Rural Conservation Service (NRCS) to cover the costs of an Environmental Assessment for the dam modifications. Staff will continue to pursue federal funding for later phases of the project to cover a portion (70%) of final design and construction costs.

- **South Fork Rivanna River Crossing**

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2020
Project Status:	40% 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. Proceeding with the 50% design documents.

AGENDA ITEM EXECUTIVE SUMMARY

History:

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

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

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

Current Status:

Progress continues in 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.

- **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

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

Current Status

Phase 2 of the study continues with detailed reservoir water quality modeling performed by DiNatale Water Consultants. Modeling efforts using the Excel-based desktop model have been completed, and while these efforts were helpful in determining high-level transfer scenarios, the more detailed reservoir model will be utilized to help better present the future conditions at Ragged Mountain Reservoir based upon the known characteristics of the proposed transfer system. RWSA staff continues to evaluate potential pretreatment and water quality improvement solutions, and toured Western Virginia Authority's Hypolimnetic Oxygenation Systems at their reservoirs on June 15th.

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

Design Engineer:	SEH
Project Start:	August 2020
Project Status:	100% (Phase 1) 65% (Phase 2)
Completion:	July 2022
Budget:	\$22,969 (Phase 1) \$98,629 (Phase 2)

Current Status:

Phase 2 of the study continues and includes detailed reservoir water quality modeling performed by DiNatale Water Consultants. Development of a more detailed reservoir model is underway.

History:

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

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

- **Central Water Line Project – Routing Study**

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	5% Design

AGENDA ITEM EXECUTIVE SUMMARY

Construction Start:	2024
Completion:	2028
Budget:	\$31,000,000

Current Status:

Based on comments from community meetings, Baker is performing additional modeling and routing evaluations. Results from this supplemental work was presented to City Council, and to the RWSA Board at the June 28th Board meeting. Project route alignment – Cherry Avenue – option 5 chosen.

History:

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

- **Security Enhancements**

Construction Contractor:	Security 101
Construction Start:	March 2020
Percent Complete:	99% (WA 2 & 3)
	80% (WA 4)
	0% (WA 5)
Based Construction Contract +	
Change Orders to Date = Current Value:	\$718,428.00 (WA1) + \$91,130.32 (WA2)
	+\$128,166.69 (WA3) + \$189,698.95
	(WA4) = \$1,127,423.96 (total)
Completion:	December (WA 2 & 3)
	February 2022 (WA 4)
Budget:	\$2,810,000

Current Status:

Access control system installation has been completed on all exterior doors at MCAWRRF, as well as all WTP motorized gates. The Card Access System is in use at the Administration, Engineering, and Maintenance Buildings at MCAWRRF, as well as at various process buildings across the site and at the WTP gates. The only task that remains is some door and lock hardware improvements under WA #2, which will enhance the functionality of the card access system. Finally, WA #4 includes security conduit at the South Rivanna and Observatory WTPs that was not included in the Improvements Project. This work began on November 2, 2021, with the majority of the work at South Rivanna WTP now complete, except for the Filter Building, which is currently ongoing heavy construction work as part of the Improvements Project. Security 101's subcontractor has largely completed Observatory. In WA 5 the remainder of the facilities will have card access installations.

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

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

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CENTRAL WATER LINE PROJECT

INVESTING in the Urban Drinking Water System

PRESENTATION TO CHARLOTTESVILLE CITY COUNCIL

June 21, 2022

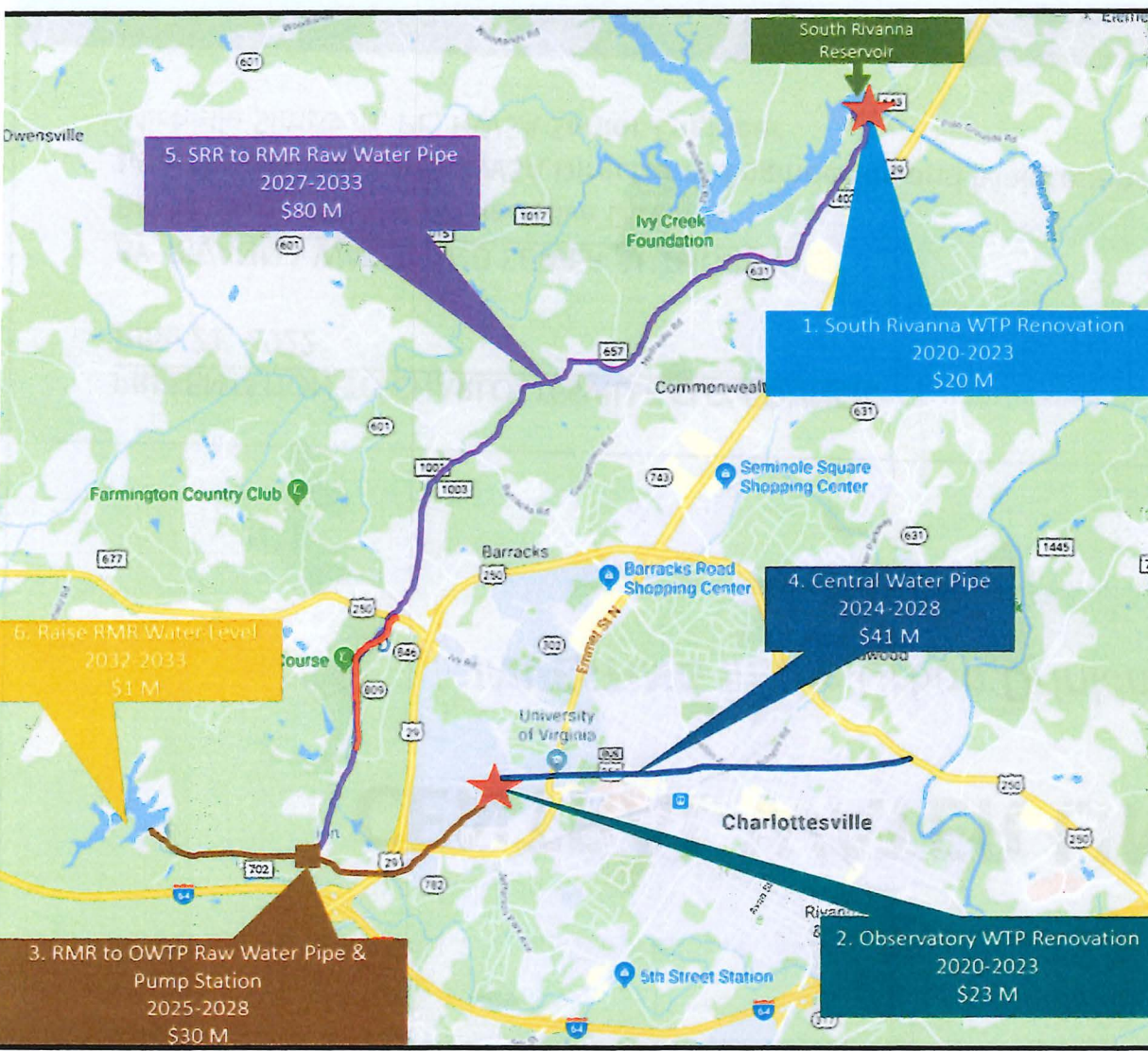
BY: RIVANNA WATER AND SEWER AUTHORITY

Bill Mawyer, PE, RWSA Executive Director

Jennifer Whitaker, PE, RWSA Director of Engineering and Maintenance

Michelle Simpson, PE, RWSA Senior Engineer





Community Water Supply Projects

(June 1, 2022)

1. SR WTP Renovation 2020-2023	\$20 M
2. OB WTP Renovation 2020-2023	\$23 M
3. RMR to OB WTP Raw Water Pipe & Pump Station 2025-2028	\$30 M
4. Central Water Line 2024-2028	\$41 M
5. SRR to RMR Raw Water Pipe 2027-2033	\$80 M
6. Raise RMR Water Level 2032-2033	\$1 M
\$195 M	

Overview of the Central Water Line Project

- Scope of Work

- Construction of 5 miles of 24"-30" water transmission main
- Installed under existing City streets in a segmented process
- Construction schedule: 2024 – 2028
- Cost allocation: 48% City, 52% ACSA

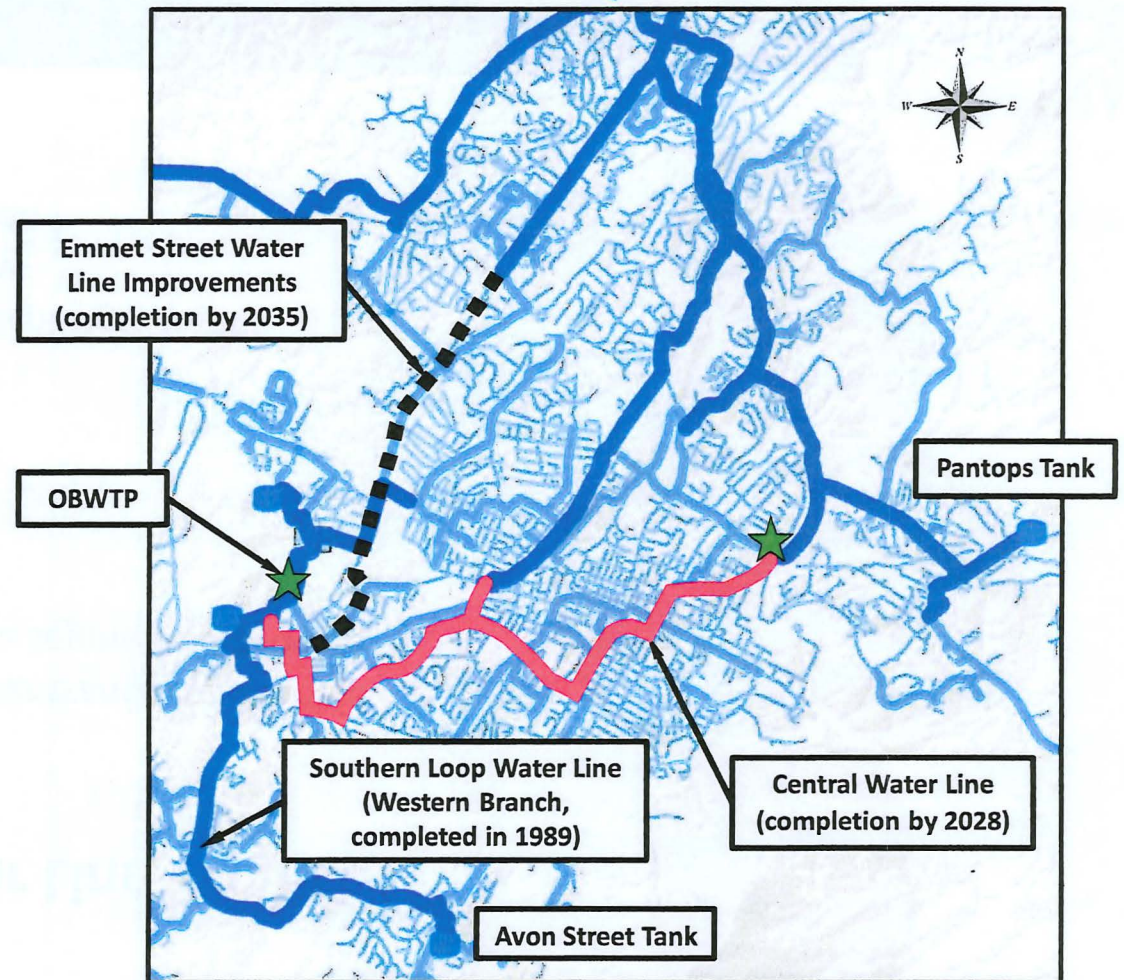
- Project History

- 1987 Southern Loop Agreement
- 2020 Observatory Water Treatment Plant Agreement
- 2021 Central Water Line Routing Study
- 2022 Urban Finished Water Master Plan



Results of Urban Finished Water Master Plan

- Modeling shows that closing gaps in the water transmission system will help:
 - Provide consistent supply and pressure to customer faucets
 - Reduce service disruptions during water line breaks and tank maintenance
 - Support fire fighting demands
 - Improve system flexibility, efficiency, and redundancy
 - Utilize capacity of OBWTP Upgrade



Public Outreach

• Communications

- Presented to City Council and the RWSA Board of Directors in January 2022
- Project Website (<https://www.rivanna.org/central-water-line-project/>)
- Project Flyer mailed to 480 property owners along Southern/Cherry Avenue alignment
- Presentations to 6 Neighborhood Associations
 - Fry's Spring, Fifeville, Little High, Martha Jefferson, Belmont-Carlton & Woolen Mills

• Considered comments from neighborhood meetings

• Evaluated 5 primary and 5 alternate routes

Primary → Emmet/Rt. 250 Bypass, Northern (Preston), Middle (W. Main), Southern (Cherry) and Southern (Harris/5th)

Alternate → Emmet/Rt. 250 Bypass (City Park), Northern (McIntire/Rt. 250 Bypass), Southern (Shamrock), Southern (E. Water/Meade) and Southern (E. Market/Meade)

CENTRAL WATER LINE PROJECT

THE PROJECT

- Construction of 5 miles of water transmission main
- Includes 24-inch and 30-inch diameter pipes
- Pipes will mostly be located under paved City streets
- Construction expected to begin in 2024, and to be completed by 2029

WHY IS IT NEEDED

The Central Water Line will strengthen the Urban Area community drinking water system and ensure water can move easily and efficiently be delivered to City of Charlottesville (City) and Albemarle County Service Authority (ACSA) customers for years to come.

BENEFITS TO ALL CITY AND ACSA CUSTOMERS

- Ensures a plentiful amount of drinking water
- Provides consistent flow and pressure to your faucets
- Adds to maintain water supply during times of drought
- Supports significant fire fighting efforts
- Provides a "back-up plan" during system disruptions
- Cleans existing pipes in the water transmission system

COMMUNITY PARTNERS

RIVANNA Water and Sewer Authority (RWSA) was created in 1972 by the City and County to provide an adequate supply of drinking water and to treat wastewater for our community. RWSA treats and delivers drinking water to the ACSA and the City as its only two customers, through its water transmission system. In turn, the ACSA and the City provide water service through their respective water distribution systems to YOU and YOUR community as their retail customers.

WHAT DO THESE TERMS MEAN ...

Water Transmission System is a network of larger pipes used to convey treated water between water treatment plants and storage tanks. These pipes carry large amounts of water, much like interstates and highways carry large amounts of traffic.

Water Distribution System is a network of medium and smaller pipes used to provide water service directly to individual residential and commercial customers, as well as fire protection systems and hydrants. These pipes carry smaller amounts of water, much like local roads and neighborhood streets carry smaller amounts of traffic to your home, workplace, or grocery store.

Our community outreach and education program will be proactive to keep you AND your community informed about the Central Water Line Project throughout its design and construction stages.

ANTICIPATED PROJECT SCHEDULE

Complete Design	Fall 2023
Start Construction	Spring 2024
Complete Construction	Spring 2029

The preliminary project cost estimate for the Central Water Line Project is \$31 Million. The City Utilities Department will support 48% of the project cost, and ACSA will support 52%.

STAYING INFORMED - For project updates, visit our Project Web Page: <https://www.rivanna.org/central-water-line-project/>
QUESTIONS OR COMMENTS? Contact Michele Simpson, PE at (434) 977-2970, T at 202 | mjsimpson@rivanna.org

INVESTING in the Urban Drinking Water System

HOW THE WATER LINE ROUTE WAS CHOSEN

RWSA, in coordination with the City Utilities and Traffic Departments, and the ACSA, evaluated a series of street alignments and their associated impacts based on criteria such as:

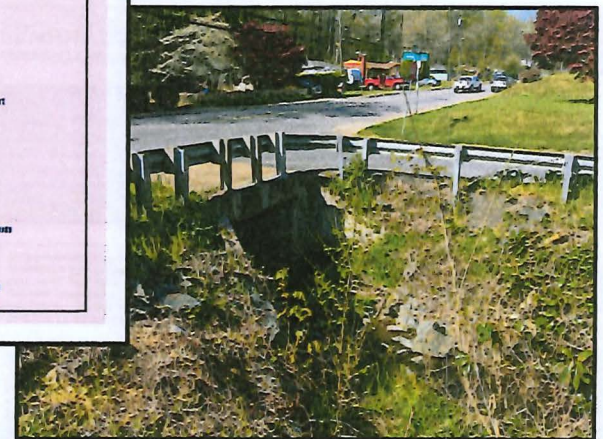
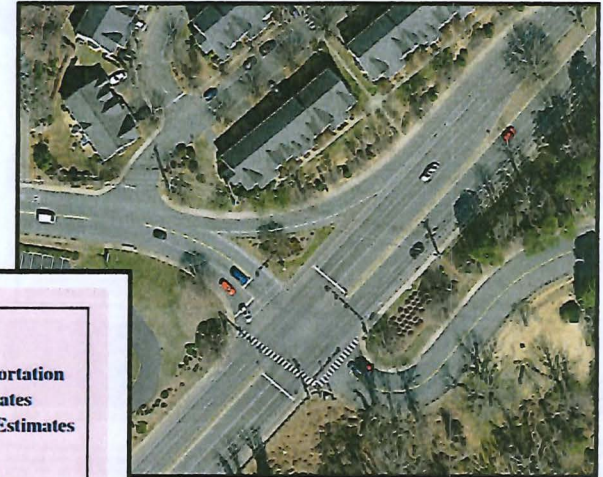
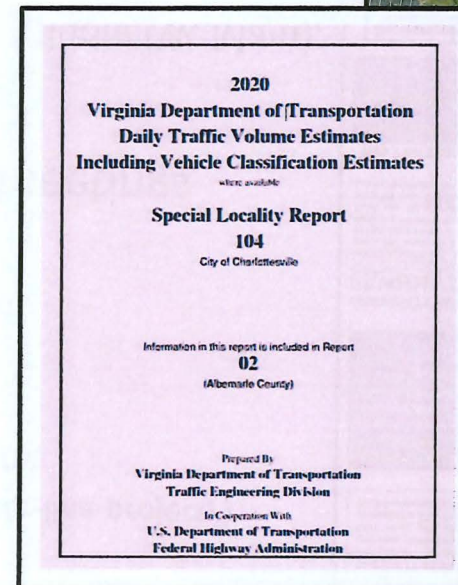
- constructability and accessibility
- construction cost
- traffic and parking
- neighborhood & public spaces
- sidewalks, trails and bikeways
- railroad crossing locations
- underground & overhead utilities
- easements and permitting

The final route for the Central Water Line was selected to provide the least amount of overall impacts to the surrounding community, in addition to the most amount of benefits for both the short-term and long-term drinking water needs. A Project Map is shown on the back. The Routing Study is located on our project website.

RWSA will continue to coordinate with City Departments during design to ensure impacts to streets, parking, sidewalks, trails, bikeways, trees, parks, and schools are minimized during construction.

How Was the Evaluation Performed?

- Field Investigations/Visual Observations
- VDOT Traffic Volume Estimates
- GIS Data
- Aerial Photography
- Hydraulic Modeling



What Were the Evaluation Criteria?

- Water Distribution Benefits
 - Tank Levels and Fire Flow
- Average Day Traffic Impacts
- Impacts to Neighborhoods/Businesses/UVA/Medical
- Average Right-of-Way Widths
- Overall Construction Cost
- Overall Pipe Length
- Major Crossings of Physical Features
 - Signalized Intersections, Bridges, Railroads and Water Bodies
- Opportunity to Coordinate with Other Work
- Tree Clearing Requirements
- Degree of Utility Congestion
- Overall Construction Duration



Jefferson Park Avenue at Immanuel Lutheran Church (looking north)



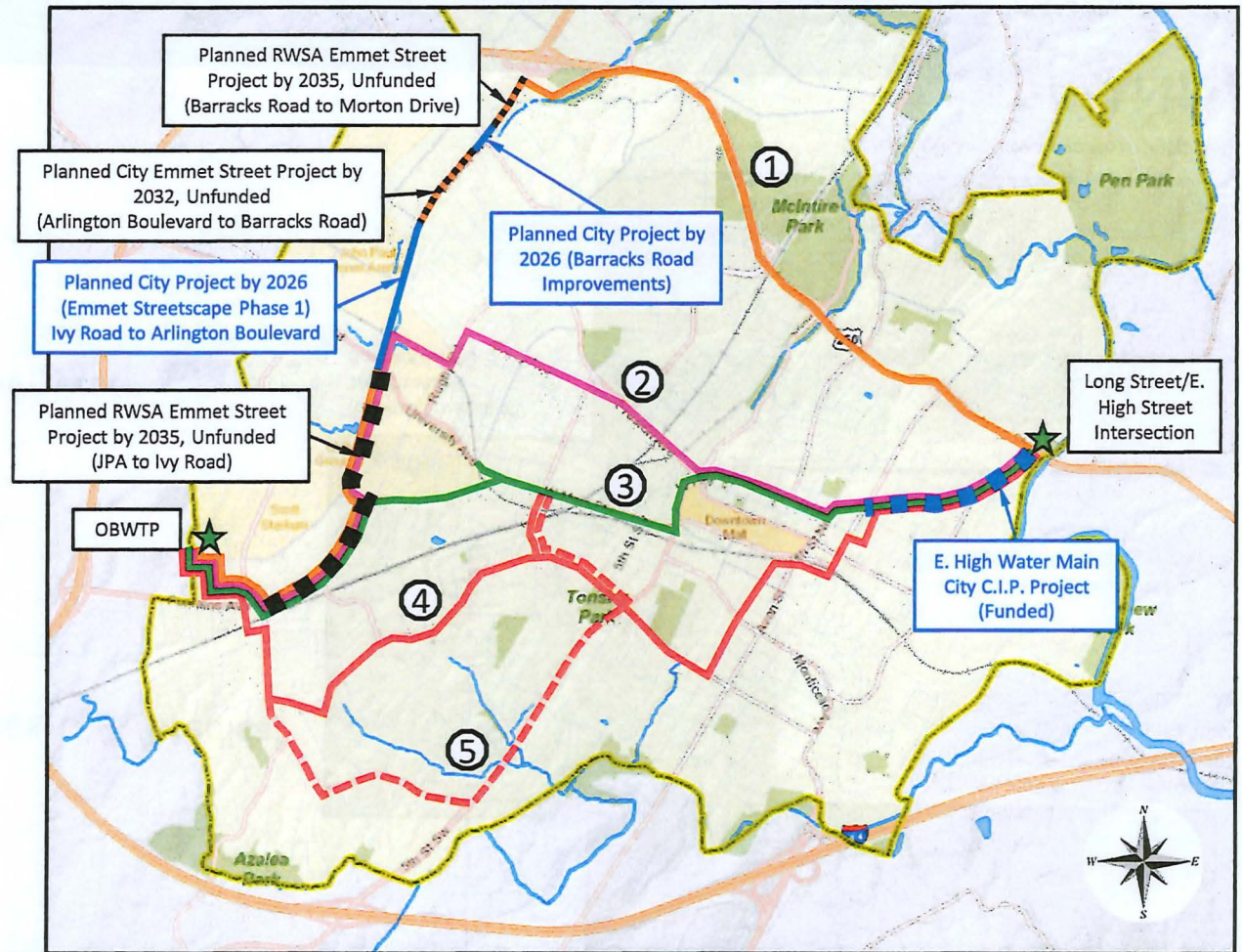
Railroad Crossing at 10th Street NE (looking north)



US 250 Bypass at Locust Avenue (looking east)

Alignments Evaluated

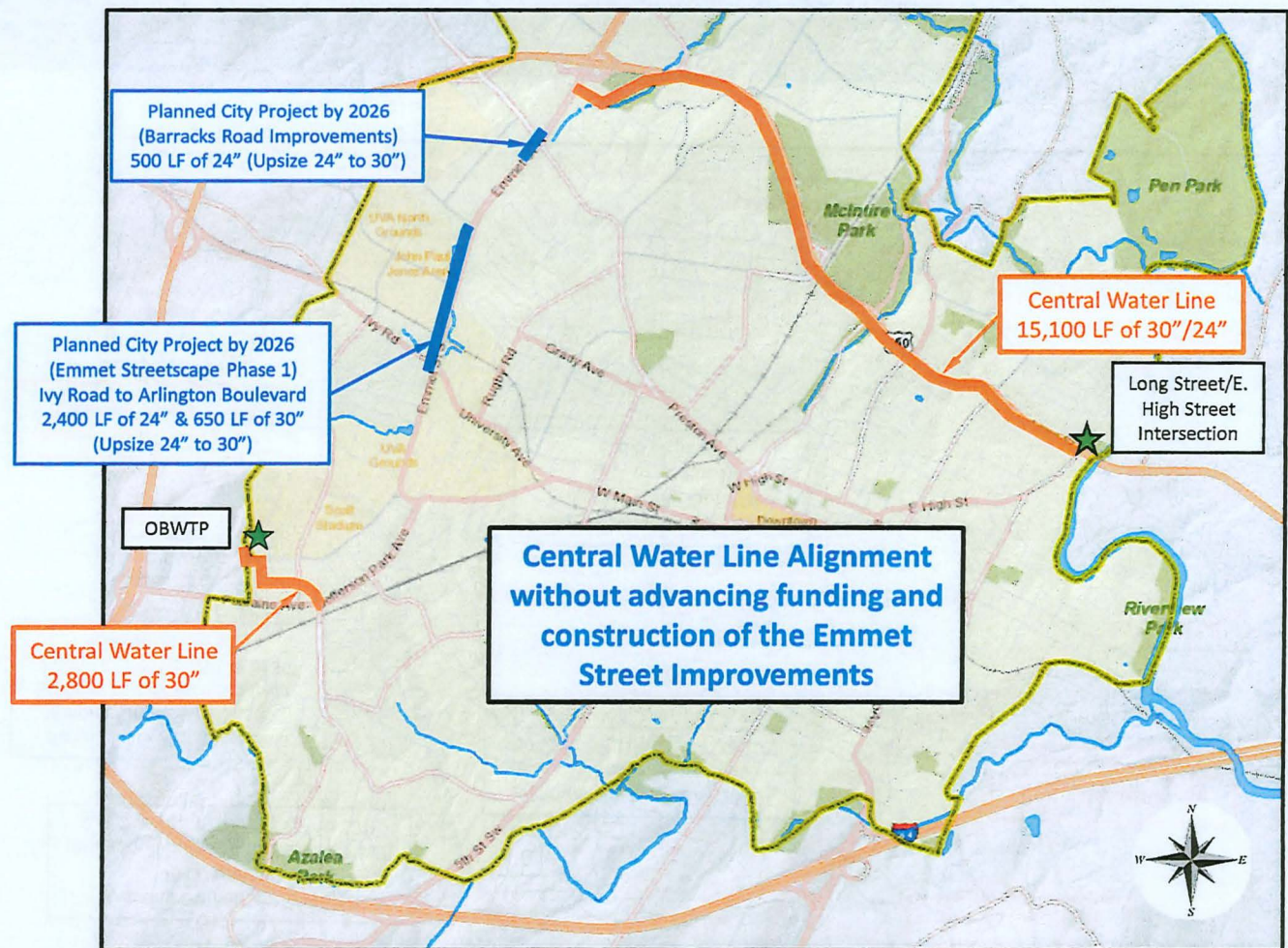
1. Emmet/Rt. 250 Bypass ———
2. Northern (Preston) ———
3. Middle (W. Main) ———
4. Southern (Cherry) ———
5. Southern (Harris/5th) - - - -



Alignment #1

- **Emmet/Rt. 250 Bypass**

- Stadium, Piedmont, Price, Maury, JPA, Emmet, Morton, Rivanna Trail (City Garden) & Route 250 Bypass

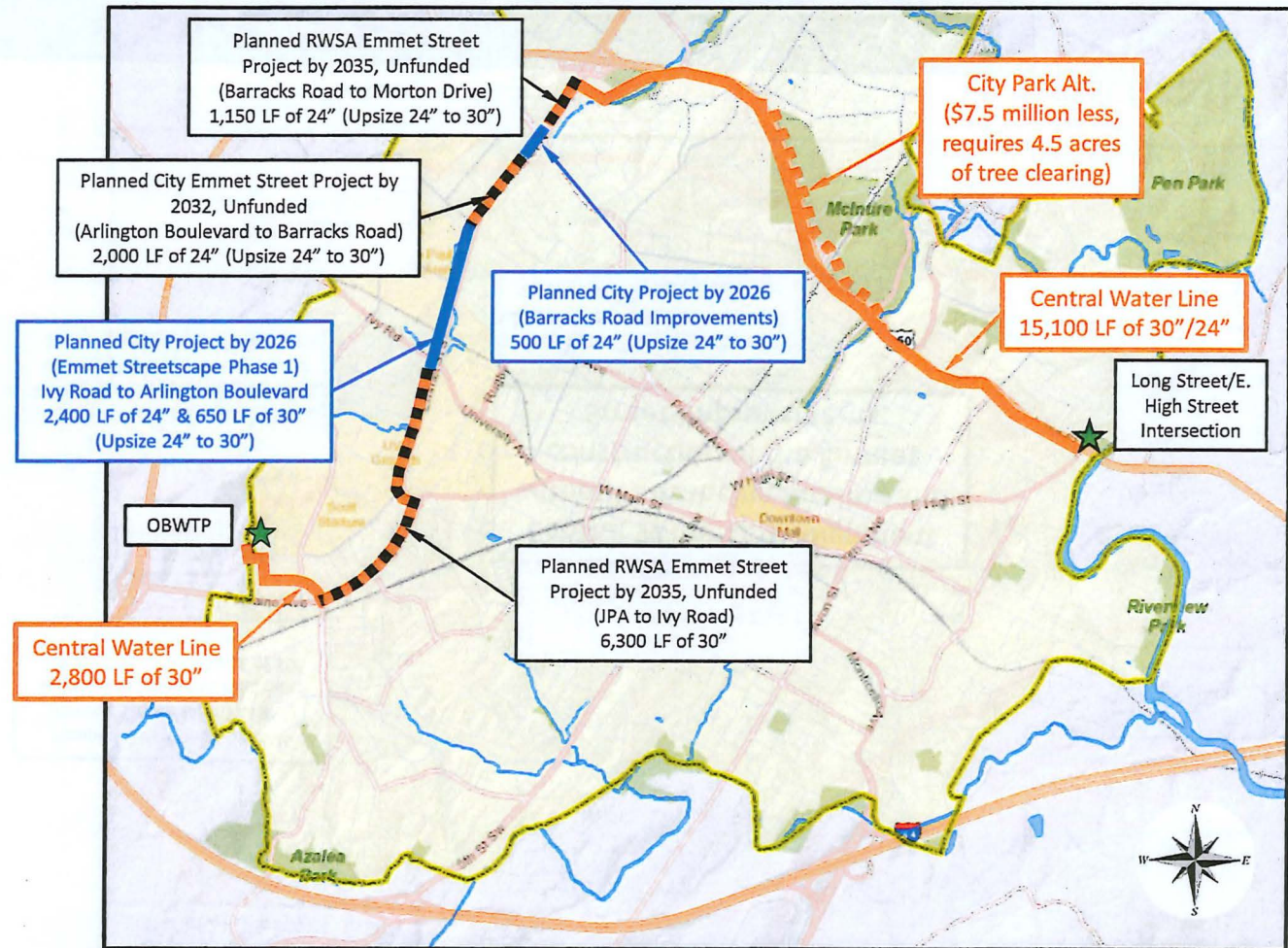


Alignment #1

• Emmet/Rt. 250 Bypass

- Stadium, Piedmont, Price, Maury, JPA, Emmet, Morton, Rivanna Trail (City Garden) & Route 250 Bypass
- Night work required on Rt. 250 Bypass
- Unfunded work on Emmet Street is required for the CWL Project
- Cost ≈ \$60 Million

• Emmet/Rt. 250 Bypass Alternate (thru McIntire Park)



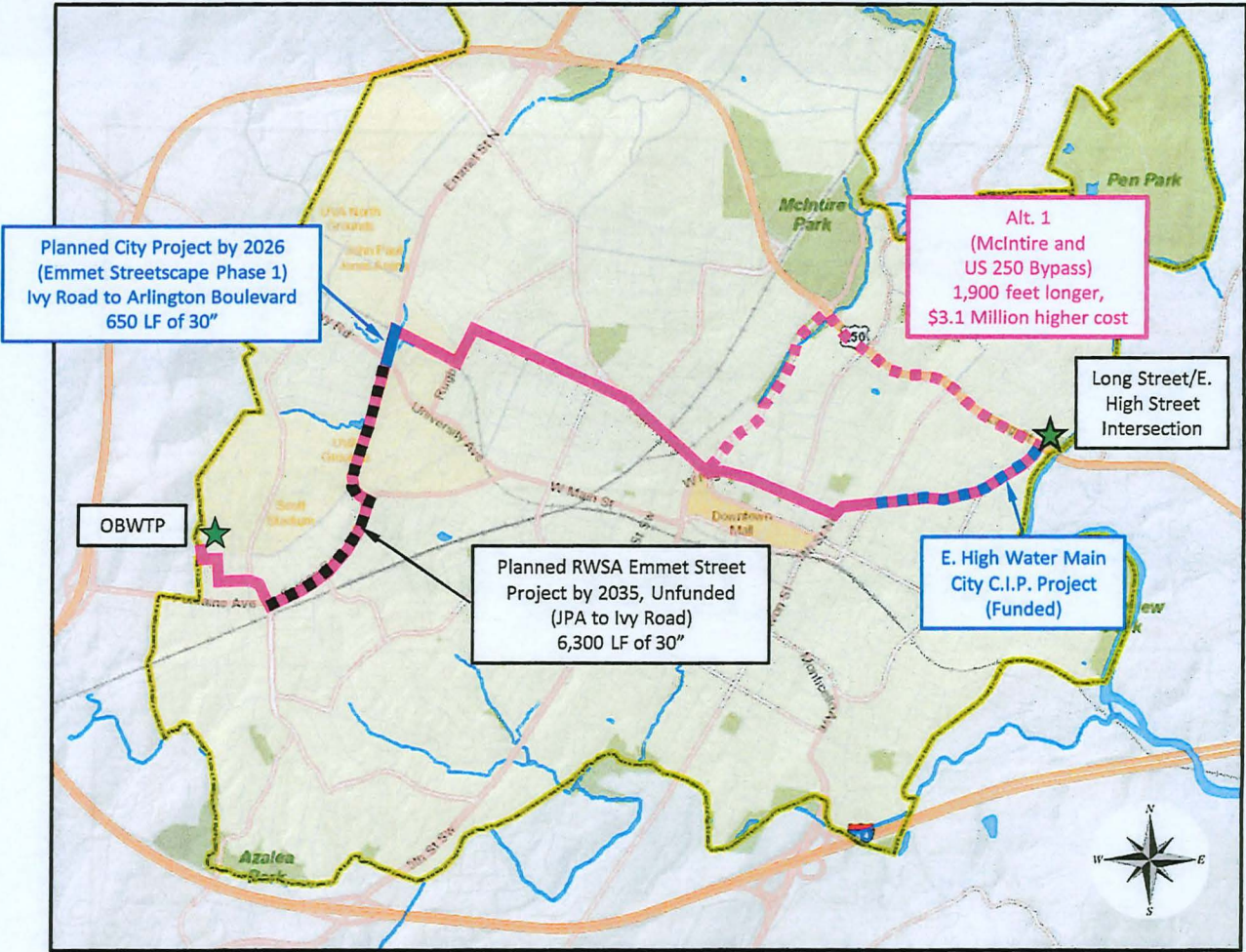
Alignment #2

• Northern (Preston)

- Stadium, Piedmont, Price, Maury, JPA, Emmet, Lambeth Field, Rugby, Grady, Preston, W. High & E. High
- Cost ≈ \$39 Million

• Northern (McIntire/Rt. 250 Bypass) Alternate

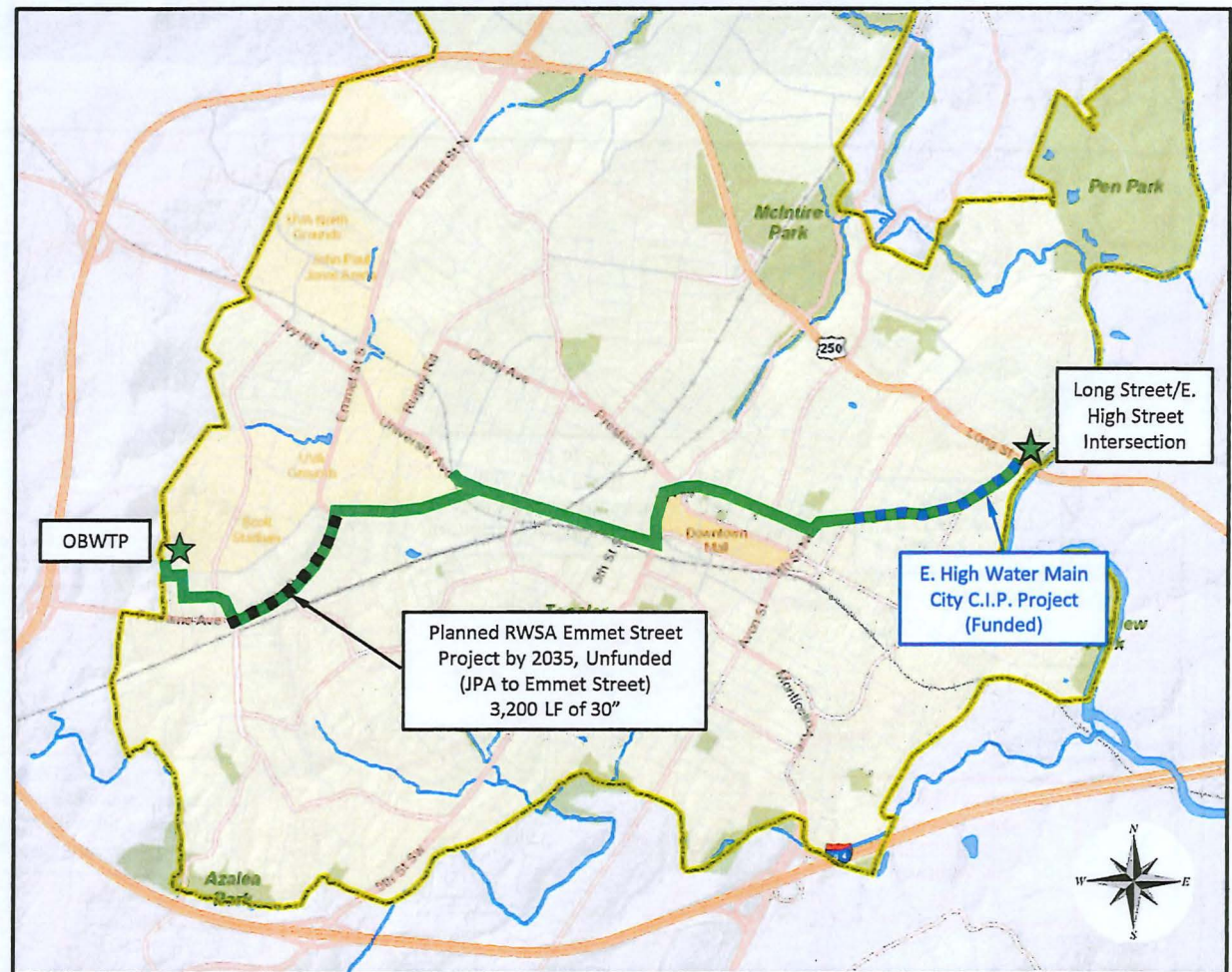
- Uses McIntire & Route 250 Bypass instead of W. High & E. High
- Night work required on Rt. 250 Bypass



Alignment #3

• Middle (W. Main)

- Stadium, Piedmont, Price, Maury, JPA, W. Main, Ridge McIntire, Preston, W. High & E. High
- UVA/University Hospital/medical center route
- Cost ≈ \$39 Million



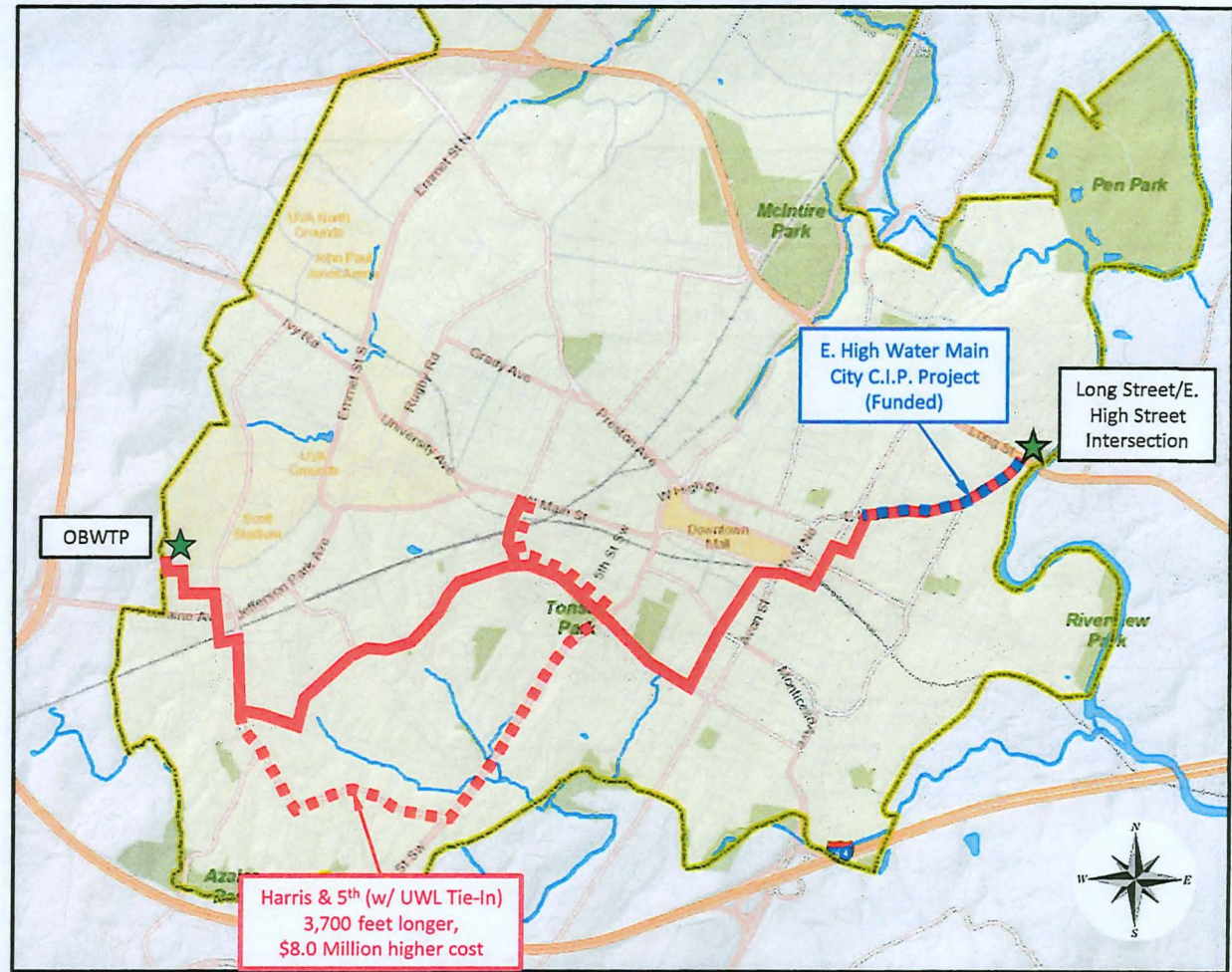
Alignments #4 & #5

• #4 - Southern (Cherry)

- Stadium, Piedmont, Price, Lewis, JPA, Cleveland, Cherry, Elliott, 6th SE, Avon, 10th NE, E. Jefferson, 11th NE, E. High & Roosevelt Brown Connector
- Cost ≈ \$41 Million

• #5 - Southern (Harris/5th)

- Stadium, Piedmont, Price, Lewis, JPA, Harris, 5th SW, Elliott, 6th SE, Avon, 10th NE, E. Jefferson, 11th NE, E. High & Roosevelt Brown Connector
- Cost ≈ \$49 Million



• Southern (Shamrock) Alternate

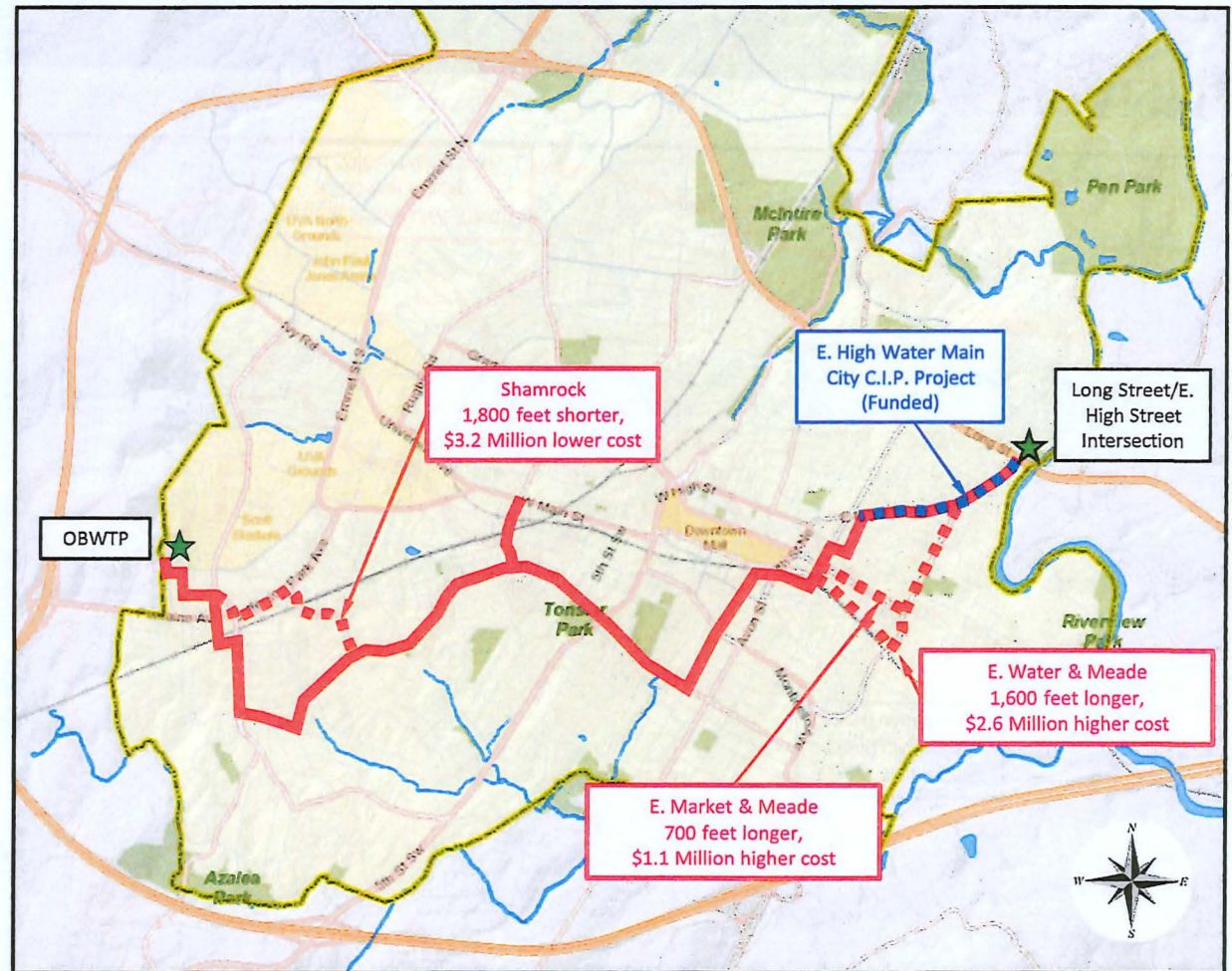
- Stadium, Piedmont, Price, Maury, JPA, Shamrock, Cherry, Elliott, 6th SE, Avon, 10th NE, E. Jefferson, 11th NE, E. High & Roosevelt Brown Connector

• Southern (E. Market/Meade) Alternate

- Stadium, Piedmont, Price, Lewis, Cross Railroad, JPA, Cleveland, Cherry, Elliott, 6th SE, Avon, E. Water, Meade, E. High & Roosevelt Brown Connector

• Southern (E. Water/Meade) Alternate

- Stadium, Piedmont, Price, Lewis, Cross Railroad, JPA, Cleveland, Cherry, Elliott, 6th SE, Avon, 10th NE, E. Market, Meade, E. High & Roosevelt Brown Connector



OVERALL RESULTS FOR CORRIDORS EVALUATED THROUGH ADDITIONAL MODELING EFFORTS

ALIGNMENT DESIGNATION	Emmet/Rt. 250 Bypass	Northern (Preston)	Middle (W. Main)	Southern (Cherry)	Southern (Harris/5 th)	Remarks
Streets Included in Alignment	Stadium, Piedmont, Price, Maury, JPA, Emmet, Morton, Rivanna Trail (City Garden) & Route 250 Bypass	Stadium, Piedmont, Price, Maury, JPA, Emmet, Lambeth Field, Rugby, Grady, Preston, W. High & E. High	Stadium, Piedmont, Price, Maury, JPA, W. Main, Ridge McIntire, Preston, W. High & E. High	Stadium, Piedmont, Price, Lewis, JPA, Cleveland, Cherry, Elliott, 6th SE, Avon, 10th NE, E. Jefferson, 11th NE, E. High & Roosevelt Brown Connector	Stadium, Piedmont, Price, Lewis, JPA, Harris, 5th SW, Elliott, 6th SE, Avon, 10th NE, E. Jefferson, 11th NE, E. High & Roosevelt Brown Connector	
Overall Length of Pipe (feet)	17,900 CWL 13,000 EWL 30,900 Total ⁽¹⁾	17,700 CWL 7,600 EWL 25,300 Total ⁽¹⁾	21,400	26,500	30,200	Includes total length of all projects along route
Average Daily Traffic Counts	85% > 10,000 Max. 39,000	86% > 10,000 Max. 29,000	87% > 10,000 Max. 29,000	32% > 10,000 Max. 17,000	45% > 10,000 Max. 18,000	10,000 vehicles per day is minimum threshold for arterial street.
Estimated Overall Construction Duration (Years)	8 ⁽²⁾	4	6 ⁽²⁾	4	4.5	⁽²⁾ Assumes installation with one work crew, otherwise multiple crews will be required to complete the project within 4 years.
Estimated Project Cost for Central Waterline (CWL)	\$ 45 Million	\$ 28 Million	\$ 39 Million	\$ 41 Million	\$ 49 Million	Includes: design, bidding, permitting, easements, construction, upsizing costs, CM, and contingencies
Estimated Project Cost for Advancing Emmet Street Waterline (EWL)	\$ 15 Million	\$ 11 Million	\$ 0 Million	\$ 0 Million	\$ 0 Million	Excludes funded EWL CIP coincident with the CWL (Ivy Road to Arlington Boulevard and Barracks Road)
Estimated Overall Project Cost	\$ 60 Million ⁽³⁾	\$ 39 Million	\$ 39 Million	\$ 41 Million	\$ 49 Million	⁽³⁾ Includes premium for night work
Water System Benefits	Lower	Lower	Higher	Higher	Higher	Adequate tank operability, fire flow, consistent pressures, operational reliability and redundancy
Ease of Future Operations and Maintenance Efforts	Low	Medium	Low	High	Medium	Traffic/neighborhood/business/hospital impacts, operations and maintenance with adjacent utilities



- All alignments have challenges
- Not all alignments equally meet RWSA operational & hydraulic goals
- Southern (Cherry) Alignment #4 provides greatest overall benefits:
 - Higher water system advantages (redundancy, reliability and flexibility)
 - Customer benefits (improved supply and fire fighting, more consistent pressure)
 - Lowest impacts to traffic
 - Lower estimated overall project cost
 - Ease of future operations and maintenance efforts
 - Greatest hydraulic advantage when paired with future Emmet Street Water Line Improvements



- Proceed with Southern (Cherry) Alignment #4

WE **WELCOME** YOUR



AND **THANK YOU** FOR
YOUR TIME



**RESOLUTION OF THE RIVANNA WATER AND SEWER AUTHORITY
REGARDING THE
CENTRAL WATER LINE PROJECT**

June 28, 2022

WHEREAS, pursuant to an agreement between the City of Charlottesville (the “City”), the Albemarle County Service Authority (the “ACSA”), and the Rivanna Water and Sewer Authority (the “Authority,” and, collectively with the City and ACSA, the “Parties”) dated January 28, 2020 and identified as the “Observatory Water Treatment Plant, Raw Water Pumping and Piping Upgrade Cost and Capacity Allocation Agreement (the “2020 Agreement”), the Parties recognized that to receive the benefits of the infrastructure improvements planned for the Observatory Water Treatment Plant and the raw water lines supplying the plant, which infrastructure improvements will strengthen the Urban Area community drinking water system and enable the Authority to more easily and efficiently provide continuously reliable water service; that a future finished water distribution line in a different location than previously planned is necessary; and

WHEREAS, in the 2020 Agreement the Parties agreed that the necessary future finished water distribution line should be located more centrally through the City of Charlottesville, that the Authority would identify the exact location of such line upon completion of an Urban Finished Water Master Plan, and that the City and ACSA would cooperate fully to ensure the additional finished water distribution line is constructed expeditiously; and

WHEREAS, the planned future finished water distribution line is now referred to as the proposed “Central Water Line,” and

WHEREAS, the Central Water Line will provide benefits to all water customers of the City and the ACSA in the following ways:

- Provide consistent drinking water supply and pressure to residential and business customers in both the City and County
- Reduce service disruptions during water line breaks and storage tank maintenance
- Support firefighting demands
- Improve system flexibility, efficiency, and redundancy
- Assist with maintaining water supply during times of drought by utilizing the increased capacity of the upgraded Observatory Water Treatment Plant; and

WHEREAS, the Urban Finished Water Master Plan prepared by the Authority's engineering consultant Michael Baker International, Inc. identified multiple options for the alignment of the Central Water Line, and a detailed Central Water Line Routing Study also prepared by Michael Baker International, Inc. (the "Routing Study") summarized the alternative routes and further evaluated the Southern (Cherry Avenue) Corridor, all in consultation with the City's Utility and Traffic Departments and with ACSA, including each of their engineering staff;

WHEREAS, review of the Urban Finished Water Master Plan, the Routing Study, and additional investigations, a series of street alignments and their associated impacts were evaluated based on numerous factors, including the technical benefits to the drinking water distribution system, construction challenges and costs, projected impacts to the public and neighborhoods, projected impacts to traffic and adjacent areas, opportunities to coordinate with other necessary City utility projects, and future operation and maintenance requirements, among other factors; and

WHEREAS, following consideration of the assessments, public engagement with neighborhood associations along the potential routes, presentations to City Council, and further consultation with the City's Traffic Engineer, the City's Department of Utilities and ACSA, including the engineering staff from both, and Michael Baker International Inc., the Authority staff recommended the Southern (Cherry Avenue) alignment as generally planned to follow along the following route: Stadium Road, Piedmont Avenue, Price Avenue, Lewis Street, Jefferson Park Avenue, Cleveland Avenue, Cherry Avenue, Elliott Avenue, 6th Street SE, Avon Street, 10th Street NE, E. Jefferson Street, 11th Street NE, E. High Street, and Roosevelt Brown Boulevard (the "Southern (Cherry Avenue) Alignment"); and

WHEREAS, the Southern (Cherry Avenue) Alignment was selected based on its ability to provide the least amount of overall impacts to the surrounding community while also providing the greatest short-term and long-term benefits to the community's drinking water distribution system; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Rivanna Water and Sewer Authority that it hereby endorses the recommendation of the Authority staff and approves the Southern (Cherry Avenue) Alignment for the Central Water Line.

Approved by the Board of Directors
June 28, 2022

Secretary



MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY
BOARD OF DIRECTORS

FROM: JENNIFER WHITAKER, DIRECTOR OF ENGINEERING & MAINTENANCE

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: WHOLESALE METERING REPORT FOR MAY 2022

DATE: JUNE 28, 2022

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

	<i>Month</i>	<i>Daily Average</i>	
City Usage (gal)	142,385,396	4,593,077	49.5%
ACSA Usage (gal)	145,418,698	4,690,926	50.5%
Total (gal)	287,804,094	9,284,003	

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

Note: Staff detected a read issue with Meter Site 15 – Ivy Road at Colonnade Drive in March and has determined that the meter’s register will require replacement. Staff will report a flow estimate for this site using available data until the issue is resolved, likely this summer.

Figure 1: City of Charlottesville Monthly Water Usage and Allocation

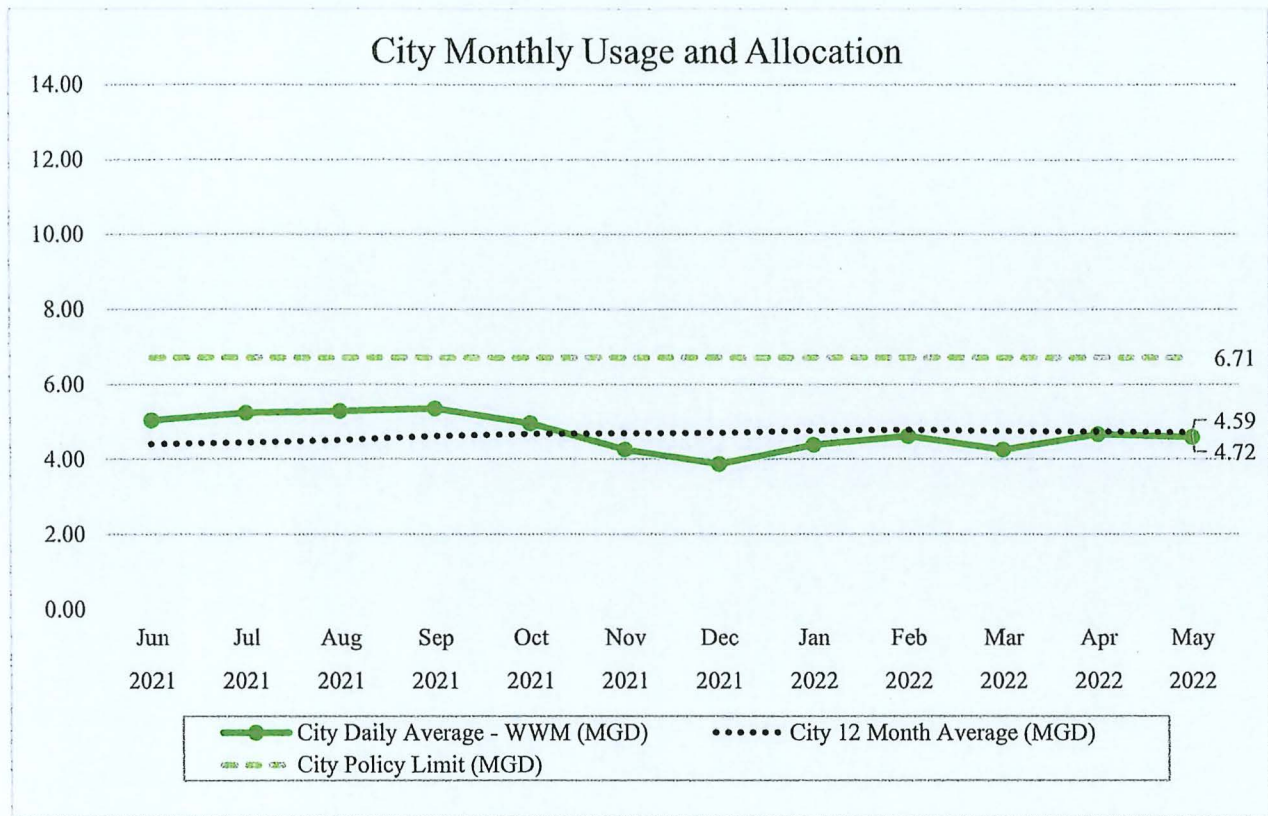
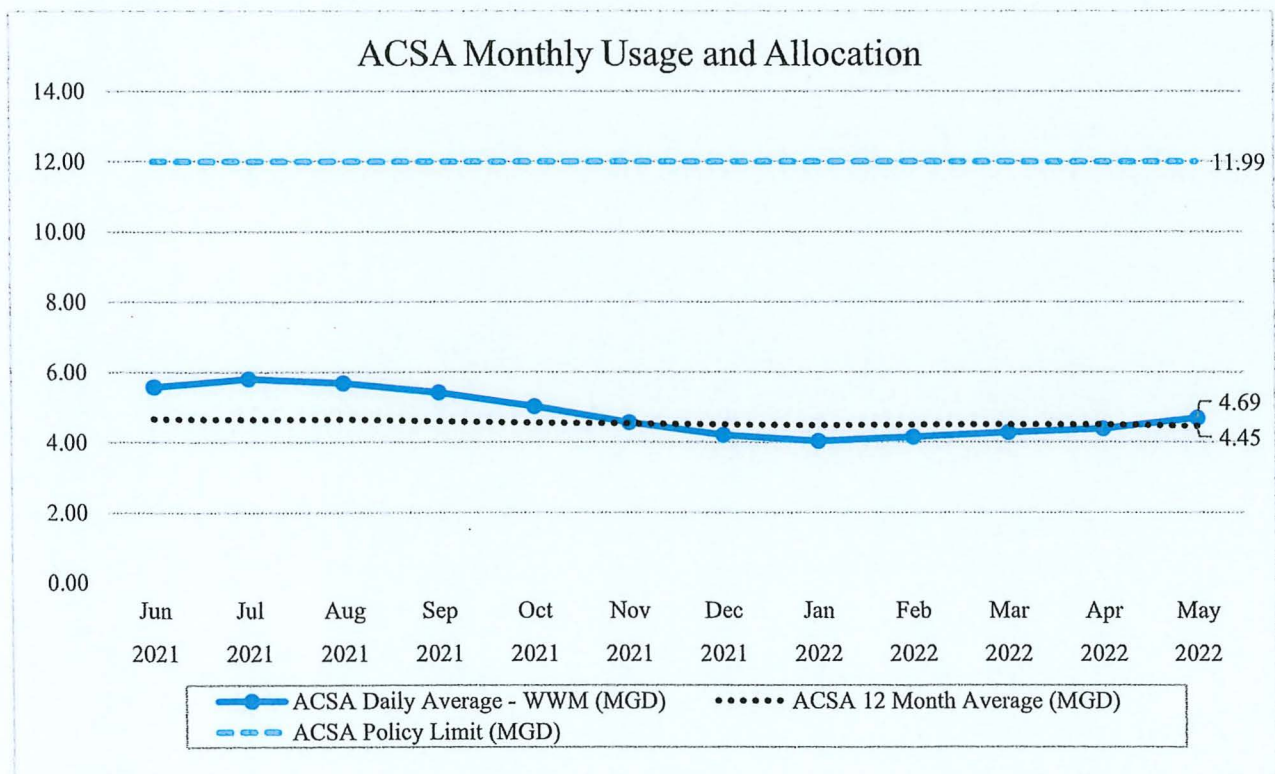


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation





ACSA Board Future Policy Issues Agendas 2022-2023

Regular 3rd Thursday Monthly Meetings	Aug. '22	Sept. '22	Oct. '22	Nov. '22	Dec. '22	Jan. '23	Feb. '23	March '23	April '23	Pending Issues
	August 18th	September 15th	October 20th	November 17th	December 15th	January 19th	February 16th	March 16th	April 20th	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 Authorization	Capital Project Authorizations	Capital Project Authorizations	Capital Project Authorizations	Annual Water Quality Reports (May)
	Operational Presentation-ARC GIS; Satellite Imaging	Resolution-Imagine a Day Without Water	Operational Presentation - Training and BizLibrary	Operational Presentation - Exclusion Meter Program - Maintenance	Operational Presentation - 4 Story Backflow	Operational Presentation	Operational Presentation	Operational Presentation	Operational Presentation	Board Organizational Meeting each January
										Annual Report - January
	Year-End Appropriations; reserves	Report on status of customer accounts in arrears	Energy Audit Report	Annual Financial Report	Budget Guidelines and Schedule for FY '24 Budget	Board Organizational Meeting	PAFR (Popular Annual Financial Report) Presentation	Proposed CIP Presentation	Proposed Capital Improvements Program (CIP) FY '24 Presentation	Water Audit and Energy Audit
	Service Recognition for Pete Gorham	Water Audit Report	AMI Update	Strategic Plan Process 2023-2025	Annual Investment Report	ACSA Annual Report 2021	Security Assessment Updates; IT Report	AMI Update	Public Hearing on Proposed FY '24 Capital Improvements Program (CIP)	Strategic Plan 2020-2022 Updates January and July New Strategic Plan Process 2023-2025
	Investment Policy - Socially Responsible Investing	Supplier Issues	Operational Presentations - ARV's and Auto Flushers		Best Practices Review Panel	Strategic Plan Updated 2020-2022 Final Report	New Strategic Plan Draft 2023-2025		Proposed FY '24 Budget and Rates Overview Presentation	Annual Water Conservation Report - January
	Customer Survey		Construction and Engineering Contracts - Processes		Recognition for Jim Bowling	Water Supply Plan and Treatment Projects Updates			Resolution Scheduling Budget and Rates Public Hearing for June 15, 2023	National Drinking Water Week-April Imagine a Day Without Water - September
					New Attorney Appointment	Annual Water Conservation Report (Consent Agenda)			National Drinking Water Week Resolution	AMI Updates - Customer Portal Video
										Federal/State Water Quality Regulations
										Emergency Preparedness - Regional Exercise
										Annual Investments Report December
										Operational Presentations
										ACSA Customer Communications
										Avon Satellite Operations Center
			Closed Session							Federal Infrastructure Grant Funds
										Data Management and Management Dashboards
			Tentative - Strategic Plan Process	Executive Director Mid Year Performance Review				Executive Director Annual Review		

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

AGENDA TITLE: 2020-2022 ACSA Strategic Plan - Update STAFF CONTACT(S)/PREPARER: Gary O'Connell, Executive Director and Leadership Team	AGENDA DATE: July 21, 2022 ACTION: Informational ATTACHMENTS: Yes
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BACKGROUND: The ACSA Board in July 2019 approved a new Strategic Plan for a three-year period through the end of 2022. We are nearing completion with the major items in the plan. A couple of the items are major projects for the ACSA: AMI, CMMS, and the ERP new financial system.

Most strategic plan processes stop to take a look at upcoming strategic issues and identify any strategic future oriented "gaps" that need to be addressed. The two main "gap" strategic areas addressed over the three-year period were the AMI project (advanced metering infrastructure) - customer water use data and leak notifications, and the CMMS/Cityworks project (computerized maintenance management system) - customer service requests, work orders, inventory and asset management. Both have been major, multi-year efforts to successfully implement.

Strategic Plan areas are updated (see attached Tasks List) by using the green/yellow/red format to show status of items for which an update to the implementation plan is attached:

1. AMI – (advanced metering infrastructure) a detailed implementation plan has been developed; first phase testing of software and communications underway; second phase in the spring of 2021 with 490 AMI meters installed and operational; next 900 meters installed early 2022; final 19,500 late 2022-23. All antenna equipment has been installed. Global supply issues have delayed meter delivery.
2. CMMS/CityWorks – (computerized maintenance management system) A go live on the work order and inventory systems was completed in October 2020; Customer portal for service requests was implemented online in March 2022. Project complete; fully in use; reporting being utilized.

Other areas to either complete or implement:

3. Succession Plan – Plan has been implemented with continuing mentoring initiatives with staff; part of annual evaluations for additional discussion.
4. Best Practices Review – Schedule virtual best practices utility visits; several visits held to review the AMI systems; COVID delayed actual field visits; HR Review; IT Assessment and Review; Safety Review and Inspection. Plan fall 2022 Best Practices Review Panel in anticipation of the 2023-25 Strategic Plan.

ALBEMARLE COUNTY SERVICE AUTHORITY

AGENDA ITEM EXECUTIVE SUMMARY

CONSENT AGENDA

5. Emergency Response Plan – Completion of the Emergency Plan, presentation made to the Board; training and checklists; EPA certification completed; tabletop emergency exercises.
6. Implemented New Financial System – Successful go live on Munis system January 1, 2022.
7. Implement IT Risk Assessment – In depth Cybersecurity Assessment fall 2021; implementation underway, with most successfully completed.
8. Operations Center Expansion Plan – Planning approvals underway to lead to construction; parking lot completed; interior renovations completed; Avon site plan under design with County Planning approvals; CIP project.
9. Managing/Utilizing Data – Explore strategic implementation plan to best manage for upcoming available data: GIS, Financial/ERP, SCADA, CMMS, AMI, Modeling, etc. Data Dashboards proposal FY '23 Budget, integration of data for management reporting.
10. Annual Water Audit – Initial Crozet and Scottsville Water Audits completed.
11. Energy Audit; CIP project; project underway for implementation.
12. Business Continuity Plan – Expanding on the emergency plan with a formal plan for business operations in times of crisis; during COVID we actually implemented “Business Continuity”, responsive and timely future project. Item to formally complete.
13. Annual “Market Rate” Recommendations for the annual budget to stay competitive within the local job market, and to reflect on the cost of living in the Albemarle area; market rate adjustment approved for FY '23 Budget.
14. Review Pay Plan Study with recommendations of the ACSA Pay Plan for competitiveness and internal equity; adopted, delayed by COVID in 2021; completed early 2022 for adoption in FY '23 Budget.

The final update will occur in January 2023. In late 2022-23, we will need to update and look forward to a 2023-2025 ACSA Strategic Plan.







Exploring Strategic Plan Updates for 2023 – likely new items may include: explore our Vision Statement again – now it is “serve and conserve”; the Customer Experience (CX) – looking organizationally in some depth at how we can better serve our customers; new billing system to replace a 30+ year old billing software (RFP currently being developed on this); Data warehouse (dashboards) – data integration for management reporting, expand on current work; Urban Water System audit; Unidirectional flushing; Succession; Avon Satellite facility; completion of AMI; Best Practices Reviews; Document Management (software system); Technology Plan update; and maybe others.

BOARD ACTION REQUESTED: Informational.

ATTACHMENTS:

- ACSA Strategic Planning List of Goals, Strategies and Implementation Tasks 2020-22; updated July 20, 2022
- IT Technology Plan

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

Strategy	Implementation Task	Completion Status	Metric	Task Leader & Staff	Project Completion Status
1. AMI – Advanced Metering	a. Present a final recommendation for ACSA Board approval to execute a contract for AMI deployment	Board approved contract; final contract being signed, and project scheduling being finalized.	Executed contract.	Quin Lunsford	
	b. Develop and execute an “Alpha” Proof of Concept (POC) phase; first phase.	First phase of project. Equipment on order; software and communications testing complete early fall. Two collectors (antennas) and 13 endpoints (meters) installed and tested, POC to be finalized in January 2021.	Successful installation and training of a limited number of collectors, repeaters, and endpoints in a controlled environment; the AMI headend software; and the integration of meter data from the AMI headend to the meter data management system (MDMS). The intent of this phase is to prove out basic network connectivity and system functionality.	Quin Lunsford	
	c. Develop and execute a “Beta” POC phase; second phase.	490 meters; successfully deployed April 2021. Successfully deployed all meters sized 1.5” – 4” and completed the areas of Scottsville and most of Crozet. Total number of meters installed through both “Beta” phases is 1,700 meters.	Successful installation and testing of all collectors/repeaters and backhaul infrastructure, field deployment of Beta endpoints, and the balance of system interfaces representing basic functionality, including integration with the ACSA’s billing system.	Quin Lunsford	
	d. Develop and execute Full Deployment; third phase.	Next phase of approximately 500 meters/communication devices to be deployed in spring 2022; final phase for the remaining 19,500 installation in mid-2022; global chip shortage delays in meter delivery	Successful installation of remaining meters and endpoints.	Quin Lunsford	
	e. Develop and deploy a comprehensive customer communication program outlining enhanced functionality the AMI system provides.	Developed and shared a “Public Service Announcement” video illustrating the project and features available to customers.	Communication with our customers via mailer, electronic, and by other means as appropriate outlining: the Customer Portal, leak identification, and enhanced payment options.	Quin Lunsford	
	f. Design a training program for field and office staff to support hardware and software associated with the project.	Staff has been trained in analyzing information obtained from currently deployed meters and a comprehensive review of business processes is ongoing.	All staff is able to execute job responsibilities at a high level.	Quin Lunsford	

**ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022**

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
2. CityWorks/CMMS	a. CityWorks Initial Install	Completed installation.	CityWorks software installed on servers.	April Walker and Justin Ray	✓
	b. Develop System Design	Completed system design and configuration plan on June 11, 2019.	Completion of System Design & Configuration Plan.	April Walker and Justin Ray	✓
	c. System Implementation	Workflow development, Asset Management and system implementation complete except for the billing software integration. We will integrate with the new billing software solution once that is chosen.	Work orders, service request, integrations, and reports developed and configured.	April Walker and Justin Ray	✓
	d. Staff Training	Staff has been trained on everything and refresher trainings are available through SOPs and video recordings.	Staff trained on how to use CityWorks.	April Walker and Justin Ray	✓
	e. System Acceptance & Go-Live	The majority of the Cityworks project has gone live and is in use across the ACSA. Integration with the billing system will occur once a new system is chosen.	System configuration accepted and staff begins to use the system daily.	April Walker and Justin Ray	✓
	f. Customer Online Service Requests	The customer facing portal is live.		April Walker and Justin Ray	✓
	g. Review and improve annually	Management Reports have been completed and additional reports are created as requested. Dashboards will be developed in 2023.	List of improvements to implement.	April Walker and Justin Ray	✓

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project







In Progress




Completed or Continuing Strategies







ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
3. Succession Plans	a. Review current Succession Plan and make edits as needed.	Annual, ongoing activity.	Receive feedback from staff on current plan.	Emily Niziolek	
	b. Identify potential retirement schedule and impact on ACSA.		Review list of retirement schedule.	Emily Niziolek	
	c. Develop and retain target position talent pool.		Develop and train talent pool.	Emily Niziolek	
	d. Review Succession Plan annually.	There were succession plans completed with reviews.	Ensure the ACSA is utilizing the Succession Plan.	Emily Niziolek	

**ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022**

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
4. Best Practices Review	a. Visits to other utilities	<p>AMI visits to two utilities; Best Practices visits summer 2021, to identify teams to visit; delayed by COVID. AMI visits postponed until we advance further with the project.</p> <p>Berkeley Group HR Review; HR Review completed.</p> <p>IT Review and Assessment summer 2021; Data Management virtual tours with Santa Rosa, California and Opelika, Alabama.</p> <p>Virginia Occupational Safety and Health (VOSH) mock inspection conducted May 26, 2021. Mock Inspection and take away items completed.</p>		Lead Team	

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

Strategy	Implementation Task	Completion Status	Metric	Task Leader	Project Completion Status
5. Emergency Response Plan	a. Review Emergency Response Plan (ERP) and make edits as needed.	This a continual process.	Review and make edits	Michael Lynn	
	b. Tabletop exercises (internal).	A tabletop exercise was conducted internally on November 1, 2021, with a second tabletop exercise to occur at the end of August 2022.	Plan at least two exercises per year.	Michael Lynn	
	c. Tabletop exercises with City, RWSA and Emergency Manager.	The regional tabletop exercise is currently on hold due to a vacancy in staffing at the VDEM and the Blue Ridge Health District. The VDEM will need to hire a replacement before scheduling a regional event.	Plan at least one exercise per year.	Michael Lynn and Engineering	
	d. Checklists training.	Have conducted three checklist training exercises since October.	Try to do one checklist per month starting fall 2021.	Michael Lynn	
	e. Develop a tank and facilities weekly inspection form.	A Tank and Facilities inspection form is being used.	Stations weekly and tanks monthly security checklists.	Billy Defibaugh	
	f. AWIA Certification.	Vulnerability Assessment (VA) Certification by December 31, 2020; Emergency Response Plan (ERP) Certification by June 30, 2021.	Completed VA 12/1/20; ERP 5/1/21.	Gary O'Connell	

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project



In Progress



Completed or Continuing Strategies

**ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022**

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
6. Implement New Financial System	a. Procure consulting services related to an ERP system replacement.	Scope of services developed; contract to procure services completed.	Executed contract with GFOA consultants.	Quin Lunsford	✓
		Next steps in the ERP process scheduled to be developed by late summer.	Develop a map of all business processes and begin discussions related to improvement opportunities.	Quin Lunsford	✓
		Business Process Review completed.	Conduct an analysis to benchmark existing processes against recognized public sector best practices and develop process recommendations for improvement.	Quin Lunsford	✓
	b. ERP consulting engagement to analyze business process, provide business case recommendations, develop RFP for ERP solution, support in selecting the most highly rated ERP, and contract negotiations.	Future Business Process review with system needs development.	Identify potential changes to the business processes identified above based on best practices ERP functionality and how these features are best utilized in other public sector organizations.	Quin Lunsford	✓
		Scope of RFP (Request for Proposals) developed and RFP advertised. Highest rated proposals evaluated by ACSA committee and interviewed.	Prepare an overall procurement strategy to define the scope of the software RFP and a specific plan for moving forward into the procurement process.	Quin Lunsford	✓
		Selection of highest rated proposer completed in early 2021 for final selection and contracting.	System selection and contract negotiations with selected vendor, resulting in an executed contract for full ERP.	Quin Lunsford	✓
	c. Install and begin implementation.	FY 2021, ongoing. Completed 12/31/21.	Operable system installed, with multiple testing environments to ensure agreed upon functionality.	Quin Lunsford	✓
	d. Complete system implementation and integration with other ACSA information systems (billing, CMMS, etc.).	Completed. System went "live" 1/1/2022.	Reliable operation of newly implemented system with verifiable information output.	Quin Lunsford	✓

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project



In Progress



Completed or Continuing Strategies

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

Strategy	Implementation Task	Completion Status	Metric	Task Leader	Project Completion Status
7. Implement IT Risk Assessment Action Plan	a. Network Redundancy	Report to Board December 19, 2019; action plan being implemented; completed.	All major network components have redundancy and a formalized replacement plan.	April Walker	✓
	b. Physical Access Security Improvements	Completed.	Physical access policies created, and additional physical security measures implemented.	April Walker	✓
	c. Secure Data Access	Completed.	Formal vendor access policies and procedures created.	April Walker	✓
	d. Phone System Redundancy	Completed.	Failover phone system implemented and tested.	April Walker	✓
	e. IT Security Assessment Update/Review	Revisit all aspects of ACSA Cybersecurity including third-party vendors and RWSA. Completed a Cybersecurity Assessment and Penetration Test in 2021.	Recommendations and implementation.	April Walker	✓

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project






In Progress



Completed or Continuing Strategies

**ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022**

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
8. Operations Center Expansion Plan	a. Develop a Master Plan for Operations Center Expansion with Term Contract Consultant.	Completed.	Final Master Plan Report is complete.	Pete Gorham and Alex Morrison	
	b. Design and construct Phase 1 of the Operations Center Expansion Plan.	Completed.	Construction of Operations Center Expansion Phase 1 is complete.	Pete Gorham and Alex Morrison	
	c. Design and construct the Avon Street Maintenance Yard.	Initial site plan has been submitted to Albemarle County with conditions. Final site plan is expected to be submitted by the end of 2022. Estimated construction completion FY 2024.	Construction of Avon Street Maintenance Yard Phase 1 is complete.	Pete Gorham and Alex Morrison	

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project



In Progress



Completed or Continuing Strategies

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

Strategy	Implementation Task	Completion Status	Metric	Task Leader	Project Completion Status
9. Managing and Utilizing Data	a. Identify critical data and information.	Future project; post AMI/CMMS/Financial System completion; IT consultant will assist in developing a data management strategy and security compliance.	Detailed list of critical data and information.	Quin Lunsford and April Walker	✓
	b. Develop comprehensive understanding of how data and information is collected.	A Data Warehouse Project is planned in FY 2023 to assist with what data is collected and how it is used.	Detailed recovery strategies for all critical business processes documented.	Quin Lunsford and April Walker	●
	c. Develop Business Continuity Plan (BCP)	Part of the Emergency Response Plan.	Business Continuity Plan (BCP) created.	Quin Lunsford and April Walker	●
	d. Test and train.		Training/testing exercises developed and performed.	Quin Lunsford and April Walker	●
	e. Develop recovery strategies for recovering critical business processes.	IT is working on a documented Disaster Recovery Plan and SOPs with testing of the Disaster Recovery Plan planned. The ERP and AMI are cloud solutions to limit any downtime and IT has developed offline GIS mapping to assist in an emergency situation where network or cellular data may not be available. The Avon Street Property is being designed to serve as a redundant server room so that data is duplicated to both locations.	Identify and implement.	Quin Lunsford and April Walker	●

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project









In Progress



Completed or Continuing Strategies

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

Strategy	Implementation Task	Completion Status	Metric	Task Leader	Project Completion Status
10. Water Audit - Annual	a. Conduct Water Audit of Crozet Water System when 12 full months of data is available for the finished water meter at the RWSA Crozet Water Pump Station.	Completed.	Initial Water Audit of Crozet Water System is completed.	Jeremy Lynn	
	b. Conduct Water Audit of Urban Water System when 12 full months of data is available for the RWSA Wholesale Water Meters.	Potential for a coordinated effort given our interconnections. Wholesale metering should help to assign non-revenue water to each entity. Coordination with RWSA and the City is required.	Initial Water Audit of Urban Water System is completed.	Jeremy Lynn	
	c. Conduct Water Audit of Scottsville Water System when 12 full months of data is available.	Completed.	Initial Water Audit of Scottsville Water System is completed.	Jeremy Lynn	
	d. Establish Water Audit working group with representation from multiple departments to identify sources of non-revenue water (NRW) and quantify real losses and apparent losses.	Water Audit Working Group is meeting every other month. Members are discussing methods for improving the accuracy of tracking NRW and identifying other sources of Apparent Losses that could be tagged as "authorized" so we can account for them in the Water Balance Sheets.	Working group is formed with representatives from Engineering , Maintenance, Finance and IT. A Water Balance Sheet is completed for each Water Audit. Develop cost-effective NRW reduction strategies.	Pete Gorham	
	e. Obtain validation per AWWA standards for Water Audits of each water system.	This task may no longer apply, as I do not believe AWWA validates utility water audits anymore.	Water Audits are validated for Crozet, Scottsville, and Urban Water Systems.	Pete Gorham	
	f. Conduct annual Water Audit for each water system.	Completed.	Annual Water Audit schedule is maintained for each water system.	Jeremy Lynn	

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project








In Progress



Completed or Continuing Strategies

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

Strategy	Implementation Task	Completion Status	Metric	Task Leader	Project Completion Status
11. Energy Audit	a. Issue a RFP to one of our Term Contract Consultants to conduct facility-wide Energy Audit.	Completed.	Proposal is approved and funding is appropriated.	Alex Morrison and Pete Gorham	
	b. Energy Audit is conducted for the Operations Center and all pump stations to evaluate current energy consumption and identify how systems or procedures might be altered to improve energy conservation.	Draft Final Report has been received and is currently under review by ACSA staff.	Final Report with recommendations is received and approved.	Alex Morrison and Pete Gorham	
	c. Develop scope of work and preliminary cost estimate for each CIP project identified by final Energy Audit Report.	Preliminary discussions held with Ramboll about some energy conservation measures. Awaiting final approved report to identify future CIP projects.	All projects recommended are added to the CIP.	Alex Morrison and Pete Gorham	
	d. Issue RFP for the design of each CIP project recommended.		Project design is completed for each CIP project and is ready to bid.	Alex Morrison and Pete Gorham	
	e. Construct and institute all energy conservation measures for Operations Center and pump stations.		Construction and implementation of all energy conservation measures is complete.	Alex Morrison and Pete Gorham	

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project



In Progress



Completed or Continuing Strategies

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
12. Business Continuity Plan	a. Identify critical business processes.	COVID Response Plan quickly implemented in early stages of pandemic.	Detailed list of critical business processes created.	Quin Lunsford and April Walker	✓
	b. Develop recovery strategies for recovering critical business processes.	IT is developing a documented and tested Disaster Recovery Plan with SOPs and testing of the Disaster Recovery Plan is planned. The ERP and AMI are cloud solutions to limit any downtime and IT has developed offline GIS mapping to assist in an emergency situation where network or cellular data may not be available. The Avon Street Property is being designed to serve as a redundant server room so that data is duplicated to both locations.	Detailed recovery strategies created for all critical business processes documented.	Quin Lunsford and April Walker	●
	c. Develop Business Continuity Plan (BCP)		Business Continuity Plan created.	Quin Lunsford and April Walker	●
	d. Test and Train		Training/testing exercises developed and performed.	Quin Lunsford and April Walker	●

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
13. Annual Market Rate Recommendations	a. Develop formal policy on annual market rate adjustment.	Completed.	Conduct an analysis to identify best practice factors on market adjustments.	Emily Niziolek	✓
	b. Present policy to Board for approval.	Completed.	Final policy shared with Board.	Emily Niziolek	✓
	c. Review and have Board approve annually.	Completed.	Board approval every June with Budget.	Emily Niziolek	✓

Project Completion Status:



Not Started



Behind Schedule or an Upcoming Project



In Progress



Completed or Continuing Strategies

ACSA Strategic Planning
List of Goals, Strategies, and Implementation Tasks
2020-2022

<i>Strategy</i>	<i>Implementation Task</i>	<i>Completion Status</i>	<i>Metric</i>	<i>Task Leader</i>	<i>Project Completion Status</i>
14. Review Pay Plan and Personnel Management Plan – Study with recommendations	a. Review all ACSA job descriptions and update as needed.	Completed.	Review and update.	Emily Niziolek	✓
	b. Procure consulting services related to Compensation and Classification Plan.	Completed.	Executed contract with consultant .	Emily Niziolek	✓
	c. Consultant to review current Compensation Plan and provide recommendations.	Completed.	Final report with recommendations.	Emily Niziolek	✓
	d. Implement consultant recommendations.	Completed.	Review changes with Employees and Board.	Emily Niziolek	✓
	e. Update Personnel Management Plan	Completed.	Board approved June 17, 2021.	Emily Niziolek	✓
	f. Employee Handbook	Develop draft for review by October 1, 2022.	Finalize to employees.	Emily Niziolek	●

Albemarle County Service Authority's

**INFORMATION
TECHNOLOGY
TECH PLAN**

FY 2022-2025



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TECH PLAN OVERVIEW

MISSION & GOAL

The ACSA I.T. Department is committed to providing technology which can be utilized in a cost effective manner that will save both capital and human resources.

Mission

Our mission is to provide stable, secure infrastructure, equipment and software for the completion of operational tasks. We strive to procure, deploy and maintain assets for optimal performance.

Goal

Our primary goal is to advance technology within the organization to utilize the most efficient methods in processing and management of intellectual property.

INTRODUCTION

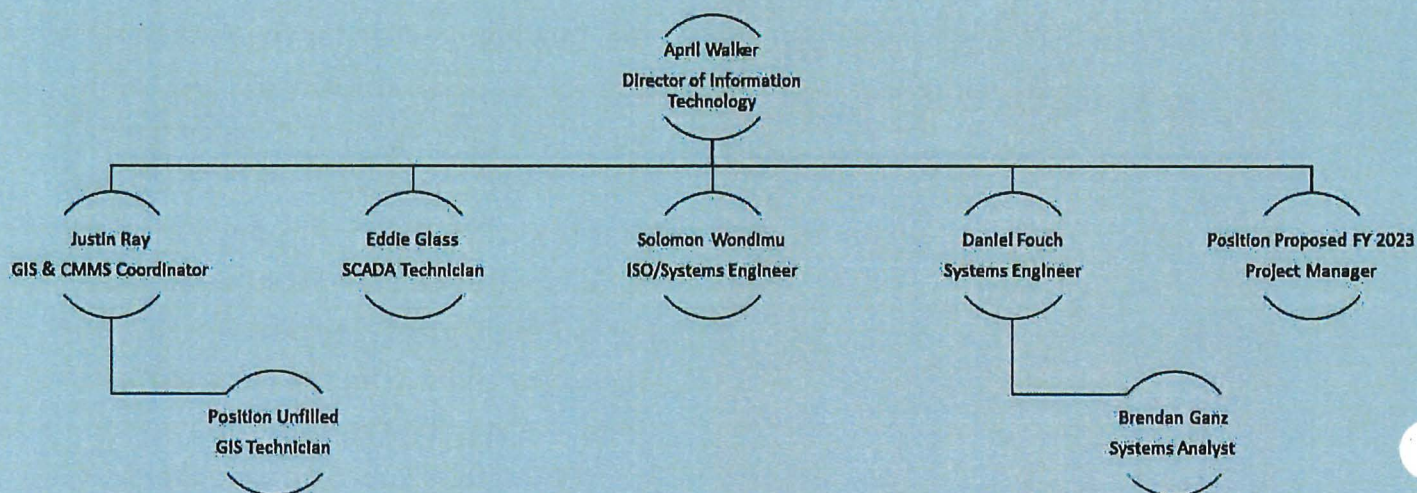
The Technology Plan for the Albemarle County Service Authority (ACSA) has been developed by the I.T. Department and is based on a 3-year period for Fiscal Year (FY) 2022-2025. Although we plan to update this document annually, it is our belief that this is to be a working document and should allow for changes as new technology and alternatives to existing methods becomes available.

This plan will also be altered and updated from other initiatives within the ACSA such as the Strategic Plan and as specific departmental goals are established.

This 3 year plan focuses on three critical areas; Security, Maintenance and Efficiency. We believe these three areas are the foundation of a successful I.T. Department.



THE I.T. TEAM



Staffing Changes

With the included projects, I.T. has requested 2 additional positions; (1) ISO/Systems Engineer who will focus on the security aspects and was hired in January 2022, and (1) Project Manager to help facilitate and organize future large-scale projects requiring I.T. involvement within our organization and is proposed to be hired in FY2023.

To accommodate the new staff members, the Training Room was split into two I.T. offices in FY 2022.

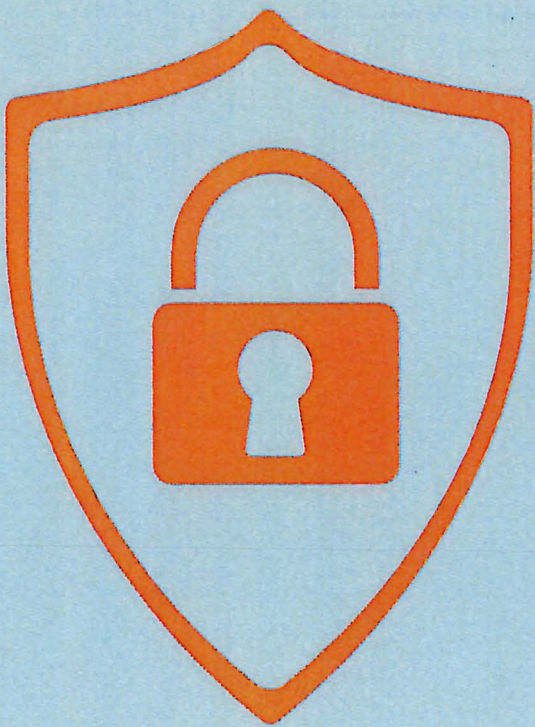
PROJECT CATEGORIES

SECURITY

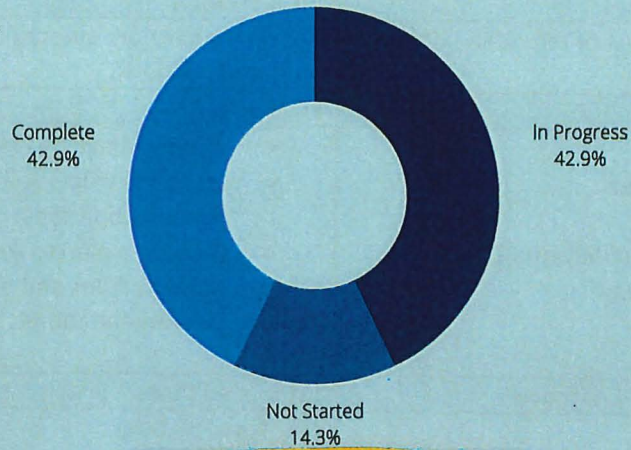
MAINTENANCE

EFFICIENCY

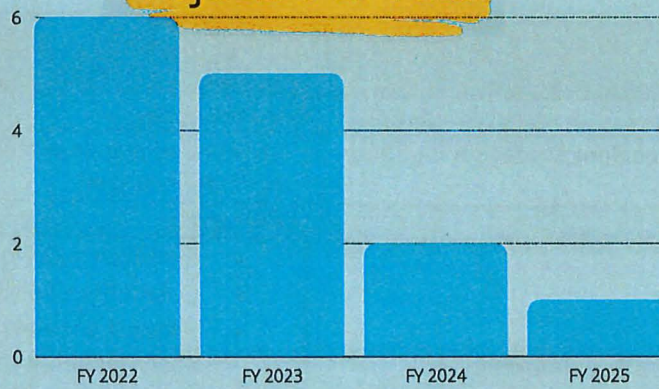
SECURITY



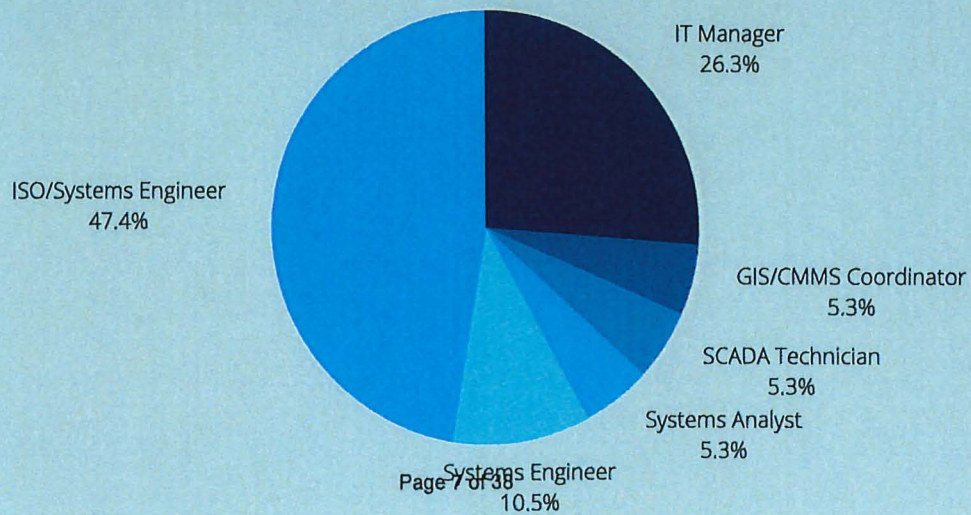
Current Status



Projects Per Year



Projects Per I.T. Staff Member



S1: Conduct a Penetration Test of the ACSA Networks**Status: Complete**

Project Description:	Project Goals:
Conduct a Penetration Test of the ACSA internal and external network.	Obtain a report of vulnerabilities found and recommendations.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Pen Tester • Internal: <ul style="list-style-type: none"> ○ Director of Information Technology 	<ul style="list-style-type: none"> • Work with a Pen Tester • Learn the vulnerabilities and recommendations • Develop a plan to remedy the vulnerabilities and implement recommendations
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Months Timeframe: Completed in October 2021	Pen Test: \$6,000 External Resource Remediations: Unknown

S2: Develop a Security Incident Management Policy & Plan**Status: Complete**

Project Description:	Project Goals:
Develop a Security Incident Management Policy & Plan	A policy and plan in place that is communicated to all affected staff.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ N/A • Internal: <ul style="list-style-type: none"> ○ Director of Information Technology ○ ISO Systems Engineer 	<ul style="list-style-type: none"> • Research Plan/Policies • Create Plan/Policies • Request a review and feedback from staff and implement feedback. • Communicate Plan/Policies
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Month Timeframe: Completed in February 2022	None

S3: Implement Multi-Factor Authentication	
Status: Complete	
Project Description:	Project Goals:
Implement Multi-Factor Authentication for the ACSA systems	Multi-Factor Authentication will be in place throughout the ACSA
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Vendor/Contractor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Research and Plan • Hire a vendor (if necessary) • Configure • Educate and Communicate the upcoming change to staff • Implement • Re-Educate Staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2-4 Months Timeframe: Completed in March 2022	Unknown

S4: Participate in a Security Assessment of the ACSA	
Status: Complete	
Project Description:	Project Goals:
Participate in an overall security assessment of the entire organization	Determine the ACSA's overall security posture.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Right Fit Consulting • Internal: <ul style="list-style-type: none"> ○ Director of Information Technology 	<ul style="list-style-type: none"> • Participate in the Security Assessment • Plan for remediations • Educate and Communicate the upcoming change to staff • Implement remediations • Re-Educate Staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2-4 Months Timeframe: Completed October 2021	\$30,000

S5: Logging Server	
Status: In Progress	
Project Description:	Project Goals:
Implement a logging server to collect logs from various systems	A successful logging server is configured and set up to be utilized by the SEIM
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ N/A • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Purchase Server • Setup Server • Configure logs • Monitor logs • Connect server to the SEIM
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2-4 Months Timeframe: To be completed in FY 2023	\$4,000

S6: SEIM Service Implementation	
Status: In Progress	
Project Description:	Project Goals:
Implement a Security Event & Incident Monitoring System	Acquire and implement a Security Event & Incident Monitoring System
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Contractor/Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Acquire a SEIM • Implement the SEIM • Monitor the SEIM
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 6 Months Timeframe: To be completed in FY 2023	\$75,000 Initially \$50,000 Annually

S7: Vulnerability Management Software**Status: In Progress**

Project Description:	Project Goals:
Purchase and implement vulnerability management software and set up and configure monitoring	An Implemented Vulnerability Management Software in place and systems being monitored.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Purchase software • Configure and implement software and equipment • Configure and implement monitoring
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 4 Months Timeframe: To be completed in FY 2023	\$10,000

S8: Hardware Integrity Monitoring Software**Status: In Progress**

Project Description:	Project Goals:
Purchase and implement hardware integrity monitoring software and set up and configure monitoring	An implemented hardware integrity monitoring system and systems being monitored.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Purchase equipment and software • Configure and implement software and equipment • Configure and implement monitoring
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2-4 Months Timeframe: To be completed in FY 2023	\$10,000

S9: Implement Software File Integrity Monitoring System

Status: In Progress

Project Description:	Project Goals:
Purchase and implement software file integrity monitoring system and equipment and set up and configure monitoring	An Implemented FIM and systems being monitored.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Purchase equipment • Configure and implement software and equipment • Configure and implement monitoring
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2-4 Months Timeframe: To be completed in FY 2023	\$10,000

S10: Expand Security System

Status: In Progress

Project Description:	Project Goals:
Expand our security system to include access controls and cameras at water storage tanks and PRVs	An expanded security system including tanks and PRVs and being monitored.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Security Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer ○ Director of Information Technology ○ Sr. Civil Engineer 	<ul style="list-style-type: none"> • Purchase equipment and software • Install, configure, integrate, and implement equipment and controls • Configure and implement monitoring
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Year Timeframe: To be completed in FY 2023	Unknown

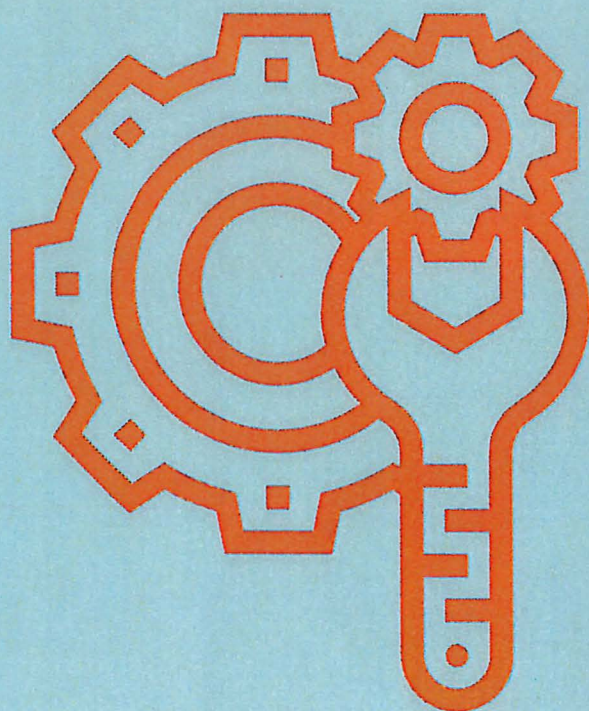
S11: Learning Management System (LMS)	
Status: Complete	
Project Description:	Project Goals:
Purchase and implement a Learning Management System for cybersecurity and regulatory training for all employees	An Implemented LMS being utilized and monitored.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ Human Resources & Administration Manager ○ Leadership Team ○ I.T. Team 	<ul style="list-style-type: none"> • Purchase software • Configure and implement software and equipment • Have IT, HR and Department Heads assign training to staff with records of trainings completed.
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Months Timeframe: Completed in December 2021	\$15,000 Annually

S12: Firewall Replacement	
Status: Not Started	
Project Description:	Project Goals:
Purchase and configure a new firewall	A new firewall in place and routing all traffic properly
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Purchase equipment • Configure and implement • Monitor and Maintain
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: July – October 2023	\$30,000

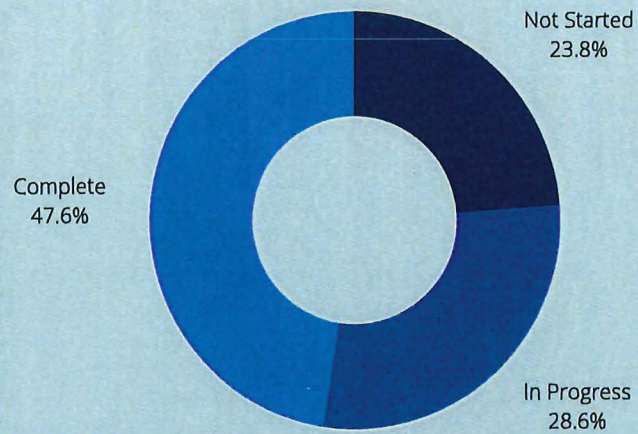
S13: Replacement Security System	
Status: Not Started	
Project Description:	Project Goals:
Replace Security System with one integrated system for Avon, Spotnap and all Tanks and PRV locations	Replace Security System with one integrated system for Avon, Spotnap and all Tanks and PRV locations
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Security System Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer ○ Sr. Civil Engineer ○ Director of Information Technology 	<ul style="list-style-type: none"> • Request Proposals • Hire Vendor • Purchase equipment • Configure and implement • Monitor and Maintain
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 6 Months Timeframe: July 2024-December 2024	\$100,000

S14: Update Security Badge Photo IDs	
Status: Completed	
Project Description:	Project Goals:
Update all photo IDs	Updated photos taken and new Photo IDs printed and distributed
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Engineer ○ Systems Analyst 	<ul style="list-style-type: none"> • Take new photos of all staff • Print new Photo ID cards • Distribute new Photo ID cards
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Months Timeframe: Completed May 2022	\$300

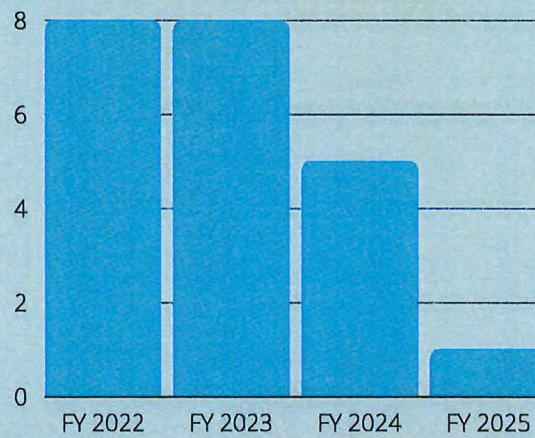
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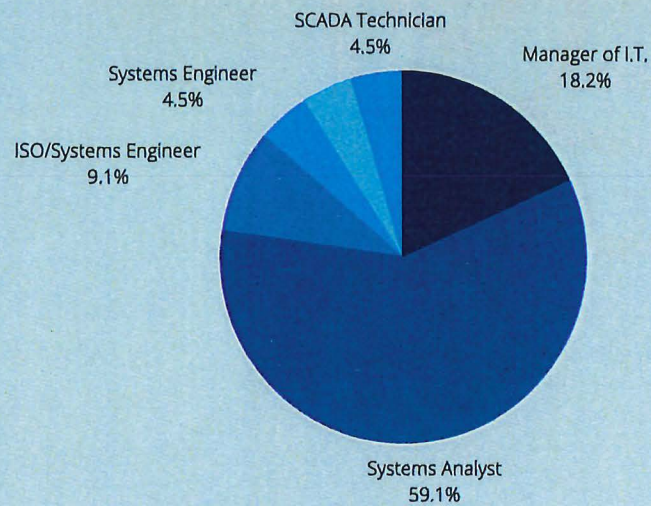
Current Status



Projects Per Year



Projects Per I.T. Staff Member



M1: Replace Titan File Server	
Status: Complete	
Project Description:	Project Goals:
Replace the Titan File Server	A new file server in place with all permissions, files and the Ricoh carried over.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ N/A • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Purchase equipment • Configure the server and permissions
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Week Timeframe: Completed April 2022	\$4,000

M2: Upgrade FuelMaster	
Status: Complete	
Project Description:	Project Goals:
Upgrade the Fuel Master PC and system	An upgraded system and software
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Work with FuelMaster to obtain system specifications and upgrade path • Schedule the work to occur on a weekend or afterhours • Upgrade the system
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Days Timeframe: Completed October 2021	\$None

M3: Upgrade Security System	
Status: Delayed due to supply shortages and inflation costs	
Project Description:	Project Goals:
Upgrade the Security System	An upgraded system and software
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ Director of Information Technology ○ Systems Analyst 	<ul style="list-style-type: none"> • Work with Security System Vendor to obtain system specifications and upgrade path • Schedule the work to occur on a weekend or afterhours • Upgrade the system
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2-4 Days Timeframe: To be completed in FY 2023	\$None

M4: Upgrade SCADA System	
Status: In Progress	
Project Description:	Project Goals:
Replace the SCADA Servers and upgrade the SCADA software	An upgraded system and software
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer ○ Manager of Information Technology ○ SCADA Technician 	<ul style="list-style-type: none"> • Work with SCADA System Vendor to obtain system specifications and upgrade path • Configure the SCADA servers parallel to the current system • Test the system • Switchover to the new SCADA servers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2-3 Months Timeframe: To be complete by November 2022	\$25,000

M5: Replace Finance Server	
Status: Complete	
Project Description:	Project Goals:
Replace Mercury Server	A new server in place with all permissions and files carried over.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Billing Software Vendor • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Purchase server, drives and OS • Configure server and move over files and permissions • Switch over to the new server
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1-2 Weeks Timeframe: Completed in May 2022	\$6,000

M6: iPad Upgrades	
Status: Complete	
Project Description:	Project Goals:
Replace 10 of the older iPads that are currently in use	Replacement of 10 of the older iPads (Meter Reading and Construction Inspectors) that are currently deployed and in use
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Verizon • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase iPads • Add to ACSA Managed Devices and Meraki Systems Manager and configure for deployment • Deploy
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Weeks Timeframe: Completed in February 2022	\$20,000

M7: Replace Customer Service Computers	
Status: Complete	
Project Description:	Project Goals:
Replace Customer Service Desktops with Laptops	New laptops configured and in place of the current desktop computers and all remote computers collected for redeployment
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase new laptops • Configure new laptops and deploy • Retrieve the borrowed Remote computers and prepare for redeployment
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Weeks Timeframe: Completed in October 2021	\$10,000

M8: Phone System Upgrade	
Status: Not started	
Project Description:	Project Goals:
Upgrade the current Phone System	Upgrade the current phone system
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Phone System Vendor • Internal: <ul style="list-style-type: none"> ○ Systems Engineer 	<ul style="list-style-type: none"> • Purchase system upgrades and hardware • Configure new system and hardware • Schedule the switchover afterhours or on a weekend • Switchover hardware
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: June -September 2023	\$Unknown

M9: Tokay Replacement**Status: Complete**

Project Description:	Project Goals:
Replace Tokay Software	Replace the Tokay software with Swift Comply
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ Director of Information Technology ○ Environmental Compliance Team 	<ul style="list-style-type: none"> • Review software and meet with Environmental Team for choice of software • Coordinate with software vendor • Work with software vendor on import/exports and installations
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: Completed in March 2022	\$12,000

M10: Onboarding/Offboarding Technology Policy**Status: Not started**

Project Description:	Project Goals:
Create a policy to be used and to address onboarding/offboarding at the ACSA	A policy in place given to staff members on their first day when handed technology and access badges that include the rules for use of technology that is signed by each employee and includes what must be done when the employee leaves the organization
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Director of Information Technology ○ ISO/Systems Engineer 	<ul style="list-style-type: none"> • Develop policy • Educate staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Month Timeframe: November – December 2022	\$None

M11: Retention and Disposal Policy**Status: Not started**

Project Description:	Project Goals:
Create a policy on document retention and disposal	A policy in place following the Library of Virginia for records retention and disposal
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Manager of Information Technology 	<ul style="list-style-type: none"> • Develop policy • Educate staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Month Timeframe: November - December 2022	\$None

M12: Replace HR Technician Computer**Status: Complete**

Project Description:	Project Goals:
Replacement of HR Technician Computer	Replacement of HR Technician Computer
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Configure new system and hardware • Deploy computer
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 week Timeframe: Completed in October 2021	\$2,000

M13: Purchase and Replace IT Computers and Finance Computers**Status: Complete**

Project Description:	Project Goals:
Replace IT Computers & Finance Computers	Replacement Computers Deployed
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase computers • Configure computers • Deploy computers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: Completed in June 2022	\$12,000

M14: Replacement of Engineering Computers	
Status: In Progress	
Project Description:	Project Goals:
Replace 10 Engineering Computers	Replacement Computers Deployed
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase computers • Configure computers • Deploy computers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: July – September 2022	\$20,000

M15: Replace Administration Computers	
Status: Not started	
Project Description:	Project Goals:
Replace 5 Administration Computers	Replacement Computers Deployed
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase computers • Configure computers • Deploy computers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Month Timeframe: July 2023	\$10,000

M16: Replace Administration & I.T. Phones	
Status: Complete	
Project Description:	Project Goals:
Replace 7 Phones	Replacement Phones Deployed
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase phones • Configure phones • Deploy phones
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 month Timeframe: Completed in May 2022	\$300

M17: Replace large printers in Administration, Finance & Engineering**Status: Delayed due to supply shortages and inflation costs**

Project Description:	Project Goals:
Replace 3 Large Printers	Replacement Printers in Use
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase printers • Configure printers • Update staff drivers • Deploy printers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Week Each Timeframe: Admin July 2023 Finance July 2023 Engineering Not deemed necessary	\$18,000

M18: Replace Field Computers and/or iPads**Status: In Progress**

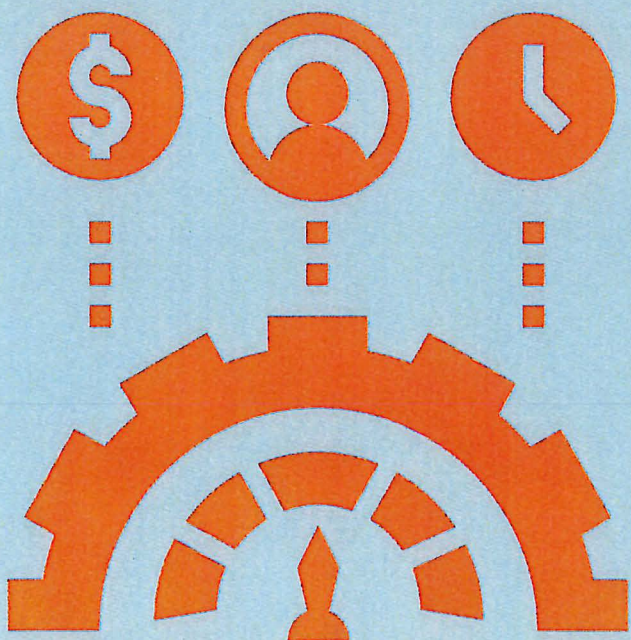
Project Description:	Project Goals:
Replace Maintenance and Engineering Field Devices	Replacement Devices in Use
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Analyst 	<ul style="list-style-type: none"> • Purchase devices • Configure devices • Deploy devices
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Days Each Timeframe: January 2024	\$35,000

M19: Replace Cityworks & GIS Servers**Status: Not started**

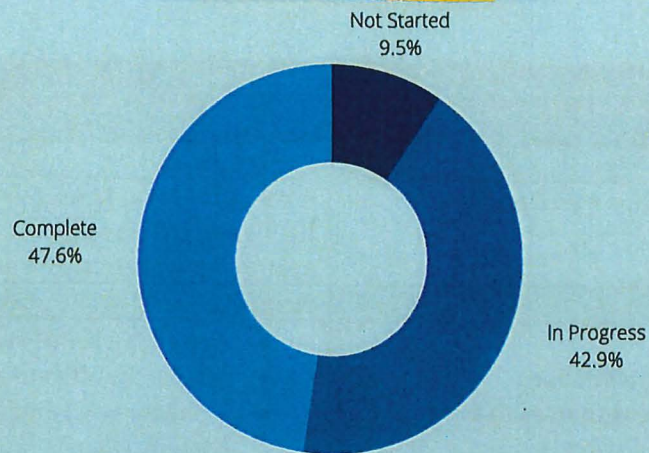
Project Description:	Project Goals:
Replace Cityworks and GIS Servers	Replacement Servers in use
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Engineer ○ GIS & CMMS Coordinator 	<ul style="list-style-type: none"> • Purchase servers and OS • Configure servers • Deploy servers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Months Timeframe: July 2024	\$25,000

M20: Replace Maintenance Computers	
Status: In Progress	
Project Description:	Project Goals:
Replace Maintenance Supervisors and Crew Leader Computers	Replacement Computers in Use
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Systems Engineer ○ Systems Analyst 	<ul style="list-style-type: none"> • Reformat Computers • Configure Computers • Deploy Computers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Months Timeframe: August 2022	\$None

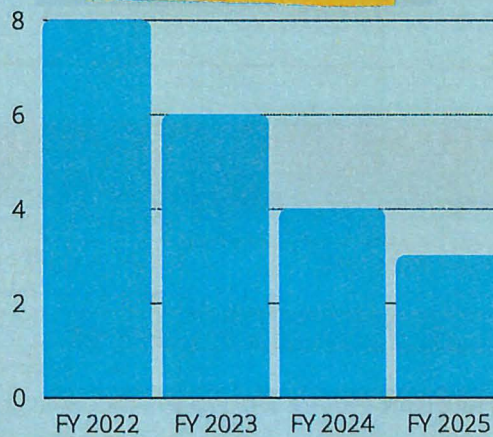
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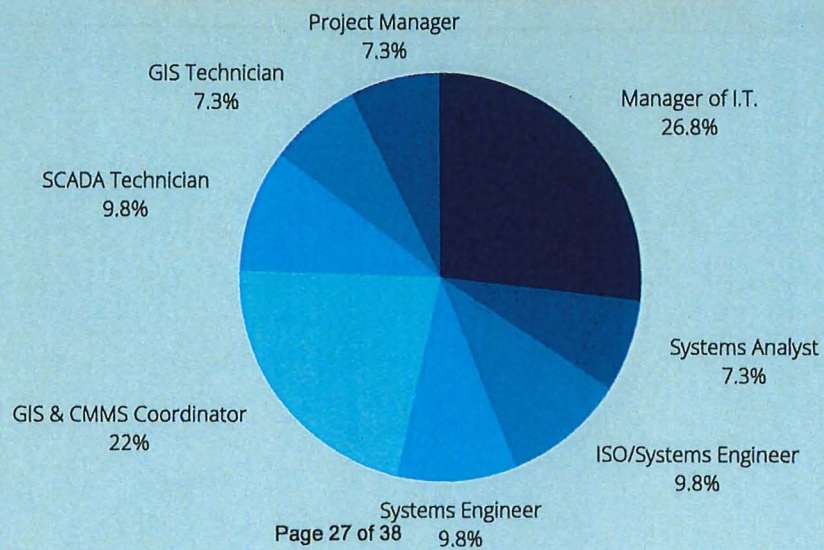
Current Status



Projects Per Year



Projects Per I.T. Staff Member



E1: New Document Management System**Status: Not Started**

Project Description:	Project Goals:
Replace Paper Tiger with a new Document Management System	A new Document Management System in place that is searchable and will allow for the destruction of paper records.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor ○ Outside resources to scan • Internal: <ul style="list-style-type: none"> ○ Administration Department ○ Systems Engineer 	<ul style="list-style-type: none"> • Conduct a needs analysis • Research software and request proposals • Configure and implement the new system • Hire outside resources to scan all paper files
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Years Timeframe: 2024-2025	\$Unknown

E2: SCADA Phase 3**Status: In Progress**

Project Description:	Project Goals:
Install SCADA Equipment on additional infrastructure	SCADA Equipment will be functional and monitored remotely
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Firm • Internal: <ul style="list-style-type: none"> ○ Sr. Civil Engineer ○ SCADA Technician 	<ul style="list-style-type: none"> • Review plans, prepare for installs • Install and configure equipment • Monitor the equipment to ensure proper functionality • Continued monitoring
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Years Timeframe: 2022-2023	\$Unknown

E3: New Billing System**Status: In Progress**

Project Description:	Project Goals:
Replace BillMaster billing system	A new billing system with all integrations in place
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor ○ Integrators • Internal: <ul style="list-style-type: none"> ○ Finance Department ○ Director of Information Technology ○ GIS & CMMS Coordinator 	<ul style="list-style-type: none"> • Conduct a needs analysis • Research software and request proposals • Configure and implement the new system • Configure and implement integrations
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3-4 Years Timeframe: 2022-2024	\$Unknown

E4: New ERP**Status: Complete**

Project Description:	Project Goals:
Replace Dynamics AX with a new ERP system	A new ERP system functional and in place
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ Director of Information Technology ○ Finance Department 	<ul style="list-style-type: none"> • Research software and request proposals • Configure and implement the new system integration with current IT Infrastructure • Train on the new System • Continuous maintenance and administration of the new system
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Year Timeframe: Completed in January 2022	\$Unknown

E5: Cityworks Implementation	
Status: Complete	
Project Description:	Project Goals:
Implementation of Cityworks CMMS system	Cityworks being utilized in all departments of the ACSA to streamline data and provide needed reporting and analyzation tools to better the ACSA
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ Finance Department ○ Maintenance Department ○ Engineering Department ○ Administration Department ○ Lead Team ○ GIS & CMMS Coordinator ○ GIS Technician 	<ul style="list-style-type: none"> • Conduct a needs analysis • Research software and request proposals • Configure and implement the new system • Integrate the system with billing and other systems • Train Staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Year Timeframe: Completed in March 2022	\$Unknown

E6: Ashcroft Pump Station SCADA Upgrades	
Status: Complete	
Project Description:	Project Goals:
Upgrade the SCADA system at the Ashcroft Pump Stations	A reliable SCADA system in place being utilized and monitored.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Firm • Internal: <ul style="list-style-type: none"> ○ SCADA Technician ○ Sr. Civil Engineer 	<ul style="list-style-type: none"> • Conduct an analysis • Configure and implement the new system • Test and Monitor the System
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 6 Months Timeframe: Completed in December 2021	\$Unknown

E7: ArcGIS Pro	
Status: Complete	
Project Description:	Project Goals:
Replace ArcMap with ArcGIS Pro	ArcGIS Pro in place and in use across the organization
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Software Vendor • Internal: <ul style="list-style-type: none"> ○ GIS & CMMS Coordinator ○ GIS Technician 	<ul style="list-style-type: none"> • Conduct a needs analysis • Configure and implement the new system • Train Staff • Install on Staff computers
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Year Timeframe: Completed in June 2022	\$8,000

E8: Data Classification & Dashboarding Project	
Status: In Progress	
Project Description:	Project Goals:
All ACSA data classified and mapped with dashboards created	All ACSA data classified and mapped, and staff needs established to create a Data Warehouse and Dashboard Needs
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ All Departments ○ Director of Information Technology 	<ul style="list-style-type: none"> • Conduct a needs analysis • Research software and request proposals • Determine all data • Classify all data and map it out • Meet with staff regarding their needs • Create dashboards of data
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Year Timeframe: 2023-2025	Phase 1 Data Classification \$15,000 Phase 2 Data Warehouse \$250,000 Phase 3 Dashboards \$250,000

E9: Business Continuity Plan	
Status: Not Started	
Project Description:	Project Goals:
Develop a Business Continuity Plan (BCP) for the ACSA	Create, implement, and test a BCP for the ACSA
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Manager of Information Technology ○ Director of Finance ○ Lead Team 	<ul style="list-style-type: none"> • Conduct an analysis • Plan out • Document steps • Develop Plan • Train staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Year Timeframe: 2023	\$None

E10: Single Sign-on	
Status: Complete	
Project Description:	Project Goals:
Implement Single Sign-on throughout the ACSA	Implement Single Sign-on for the ACSA
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ ISO/Systems Engineer ○ Director of Information Technology 	<ul style="list-style-type: none"> • Switch the ACSA to Azure AD • Configure AD Sync • Implement Single Sign-on for Staff • Train Staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 6-12 Months Timeframe: Completed in April 2022	\$Unknown

E11: VA Base Mapping Program Update**Status: Complete**

Project Description:	Project Goals:
Update VA Base Mapping Program	Updated imagery in the GIS being utilized
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ GIS & CMMS Coordinator 	<ul style="list-style-type: none"> • Meet with engineering services and community partners • Contract organization to obtain imagery • Implement imagery
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 2 Months Timeframe: Complete in October 2021	\$10,000

E12: Cityworks Respond**Status: In Progress**

Project Description:	Project Goals:
Implement Cityworks Respond	Cityworks Respond being utilized
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ GIS & CMMS Coordinator 	<ul style="list-style-type: none"> • Conduct a needs analysis • Build dashboards • Train staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 6 Months Timeframe: Complete by December 2022	\$None

E13: Updated Network Map**Status: Complete**

Project Description:	Project Goals:
Update the Network Map	Updated Network Map
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Manager of Information Technology 	<ul style="list-style-type: none"> • Develop an accurate representation of a Network Map of the ACSA system
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Week Timeframe: Completed September 2021	\$None

E14: Field Maps	
Status: Complete	
Project Description:	Project Goals:
Implement Field Maps	Staff migrated from Collector and Explorer to Field Maps
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ GIS & CMMS Coordinator 	<ul style="list-style-type: none"> • Configure Field Maps • Retire Collector and Explorer • Train Staff
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: Completed in December 2021	\$None

E15: Upgrade & Test Disaster Recovery Kit	
Status: In Progress	
Project Description:	Project Goals:
Update/Upgrade and Test Disaster Recovery	An updated Disaster Recovery Kit that has been tested and is maintained
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ IT Department 	<ul style="list-style-type: none"> • Update the kit • Test the kit for effectiveness • Note problems and correct • Test again until there are no discrepancies • Document
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: December 2022	\$None

E16: Update & Review Departmental SOPs	
Status: In Progress	
Project Description:	Project Goals:
Review/ Update all Departmental SOPs and create any that are not there	All SOPs updated and tested for accuracy
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ IT Department 	<ul style="list-style-type: none"> • Review and edit all SOPs • Create SOPs that are missing • Test SOPs
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: December 2022	\$None

E17: Cityworks Insights	
Status: In Progress	
Project Description:	Project Goals:
Implement Cityworks Insights	Cityworks Insights being utilized
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ GIS & CMMS Coordinator 	<ul style="list-style-type: none"> • Configure and implement Cityworks Insights • Meet with staff regarding their needs • Create dashboards of data
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 1 Year Timeframe: 2023	\$10,000

E18: Technology Plan	
Status: Complete	
Project Description:	Project Goals:
Updated Technology Plan	An updated Technology Plan is in place, staff is aware of it and it is being updated continuously
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ None • Internal: <ul style="list-style-type: none"> ○ Manager of Information Technology 	<ul style="list-style-type: none"> • Conduct meetings with Supervisors and Lead Team regarding needs and upcoming projects • Plan out projects, staffing and needs • Document • Relay to staff • Continue to meet with Supervisors and update the Technology Plan
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Months Timeframe: Completed in November 2021	\$None

E19: Avon Street Property	
Status: In Progress	
Project Description:	Project Goals:
Build of the Avon Street Property	A redundant Server Room with parallel data
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ Manager of Information Technology ○ Sr. Civil Engineer 	<ul style="list-style-type: none"> • Conduct an analysis • Work with Engineering firm on our needs • Planning • Implementation
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 3 Years Timeframe: Complete by December 2023	\$Unknown

E20: Have Fiber Installed for Avon Street Property	
Status: In Progress	
Project Description:	Project Goals:
Have Fiber Internet installed for Property	High-speed Internet
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Engineering Services • Internal: <ul style="list-style-type: none"> ○ Manager of Information Technology ○ Sr. Civil Engineer 	<ul style="list-style-type: none"> • Meet with Internet Provider • Schedule fiber install in conjunction with other utilities (i.e., electric, gas) • Planning • Implementation
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 6-12 Months Timeframe: Complete by December 2023	\$Unknown

E21: Training Room Modifications	
Status: Complete	
Project Description:	Project Goals:
Split the Training Room into two offices to accommodate I.T. staff	An office in the I.T. Wing of the ACSA for each I.T. staff member.
Resources Needed:	Strategies:
<ul style="list-style-type: none"> • External: <ul style="list-style-type: none"> ○ Contractor • Internal: <ul style="list-style-type: none"> ○ Manager of Information Technology ○ Facilities Supervisor 	<ul style="list-style-type: none"> • Split the Training Room by installing a wall down the center • Move receptacles • Drywall, Paint • Install door • Setup office
Anticipated Duration & Timeframe:	Estimated Costs:
Duration: 6 months Timeframe: Completed January 2022	\$Unknown

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Recommended Changes to Rules and Regulations STAFF CONTACT(S)/PREPARER: Peter C. Gorham, P.E., Director of Engineering	AGENDA DATE: July 21, 2022 ACTION: <input checked="" type="checkbox"/> INFORMATION: <input type="checkbox"/> ATTACHMENTS: (YES)
---	---

BACKGROUND: On October 18, 2012, the ACSA Board of Directors adopted the final revised fees associated with the North Fork Regional Pump Station (NFRPS) Special Rate District. This adoption included the addition of Appendix C to the ACSA Rules and Regulations that contained a list of each parcel within the NFRPS Special Rate District and a map showing the boundaries of the North and South Zones of this Special Rate District. A list of lots by tax map parcel (TMP) number was provided for both the South and North Zones.

In 2021 parcel 32A-1-B-20, located in the South Zone of the NFRPS Special Rate District, was developed as the Proffit Road Townhomes North. During the design of the project the developer's consultant determined that approximately half of the parcel could be served by a gravity sewer flowing to the south, across Proffit Road. This effectively removed this portion of the original parcel from the NFRPS drainage basin. The remaining undeveloped portion of the original parcel has been established as a separate lot and is designated as TMP 32A-2-1-D. It is anticipated that this parcel, when developed, will drain into the NFRPS system and should remain within the South Zone of the Special Rate District. ACSA staff has revised the list of South Zone parcels to reflect the changes in the parcels included in the South Zone and has revised the map to show the adjustment to the boundary of the South Zone.

DISCUSSION:

- The List of Parcels in the South Zone has been edited to remove the original larger parcel TMP 32A-1-B-20 and add parcel TMP 32A-2-1-D.
- The area removed from the South Zone is on the north side of Proffit Road just east of the intersection with Worth Crossing.

BUDGET IMPACT: None.

RECOMMENDATIONS: Approve the recommended changes to Appendix C of the ACSA Rules and Regulations.

BOARD ACTION REQUESTED: Adopt a resolution to amend Appendix C of the ACSA Rules and Regulations.

ATTACHMENTS:

- Resolution adopting changes to Appendix C of the ACSA Rules and Regulations with recommended changes.

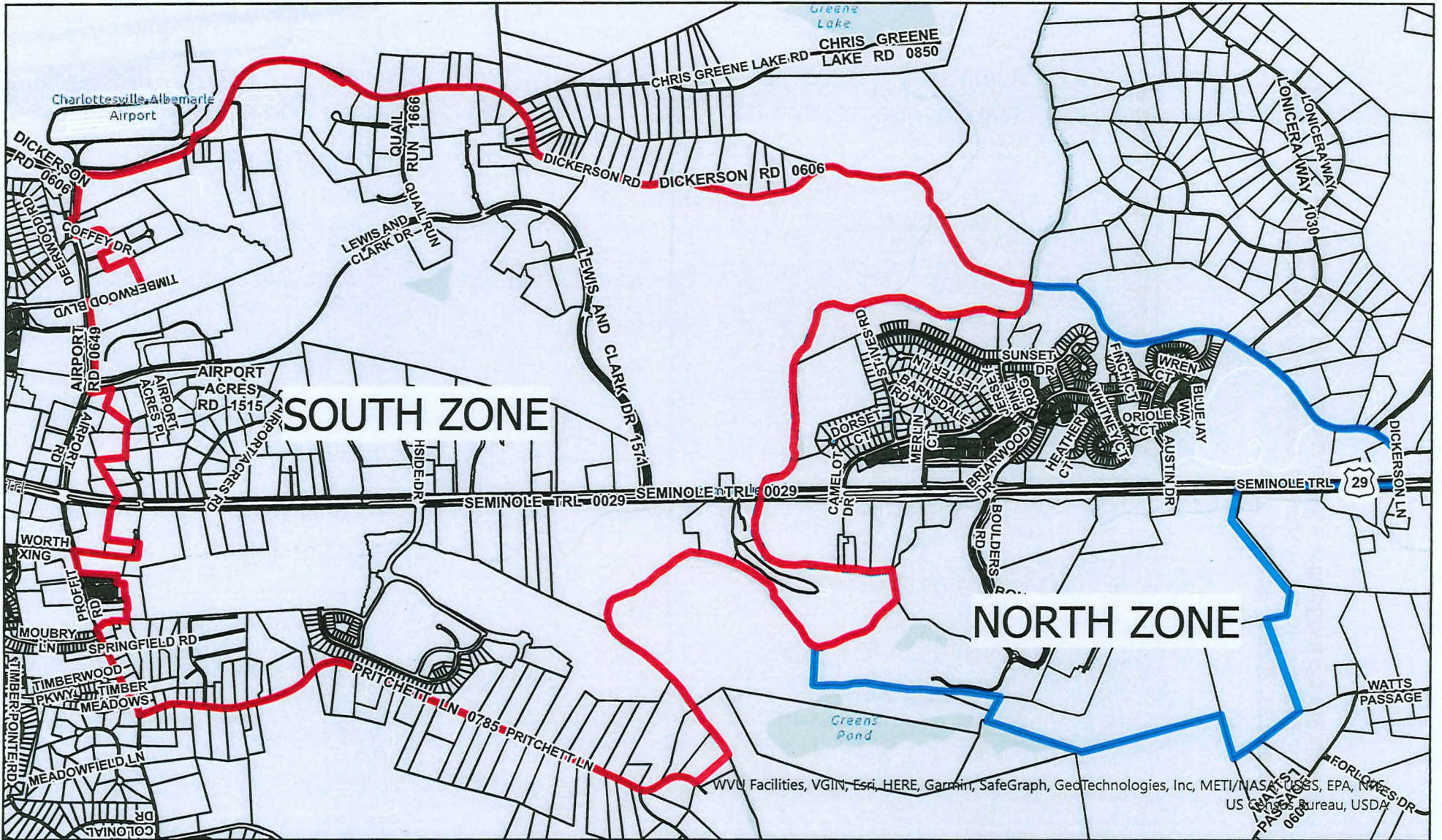
BE IT RESOLVED by the Board of Directors of the Albemarle County Service Authority that the Rules and Regulations are to be amended and re-enacted, effective July 21, 2022 as follows:

North Fork Regional Pump Station Special Rate District

List of Parcels in South Zone

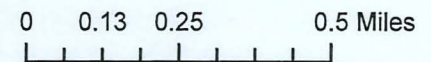
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032000000019E0	032000000017B4	032000000022C1	032A0010A00600	032A0010B01800
032000000021E0	032000000017B5	032000000022C3	032A0010A006A0	032A0010B018A0
032000000022E0	032000000017C0	032000000022C4	032A0010A00700	032A0010B01900
032000000023E0	032000000018A0	032000000022C5	032A0010A007A0	032A0010B02000
032000000029E0	032000000018B0	032000000022C6	032A0010A00800	032A0010B02100
032000000017E1	032000000019A0	032000000022F0	032A0010A01000	032A00200001B0
03200000001006	032000000019A1	032000000022G0	032A0010A010A0	032A00200001C0
032000000017E2	032000000019A2	032000000022I0	032A0010A01100	032A0020000200
03200000001700	032000000019B0	032000000022J0	032A0010A011A0	032A0020000400
03200000001800	032000000019B2	032000000022K0	032A0010A01200	032A00201000D0
03200000002000	032000000019B4	032000000022K1	032A0010A012A0	032A0030B00100
03200000002100	032000000019B7	032000000022L0	032A0010A01300	032A0030B00200
03200000002200	032000000019B8	032000000022L1	032A0010A013A0	032A0030B002A0
03200000002300	032000000019B9	032000000022M0	032A0010A01400	032A0030B00400
03200000006700	032000000019C0	032000000022N0	032A0010A01500	032A0030B00500
03200000007000	032000000019C1	032000000022P0	032A0010A01600	032A0030B00600
03200000007100	032000000019C2	032000000023A0	032A0010A016A0	032A0030B00700
03200000007200	032000000019C3	032000000023B0	032A0010A01700	032A0030B00800
03200000007300	032000000019D0	032000000023C0	032A0010A01800	032A0030B00900
03200000007400	032000000019F0	032000000023D0	032A0010A018A0	032A0030B01000
033000000001700	032000000019F1	032000000023F0	032A0010A01900	032A0030B01100
032000000017E3	032000000019G0	032000000023G0	032A0010B00100	032A0030B01600
032000000017E4	032000000019H0	032000000023H0	032A0010B001A0	032A0030B01700
032000000017E5	032000000019H1	032000000023HI	032A0010B00200	032A0030B01800
032000000004C0	032000000019J0	032000000023J0	032A0010B00500	032A0030B01900
032000000004D0	032000000019J1	032000000029A0	032A0010B00600	032A0030B02000
032000000004F0	032000000020A0	032000000029B0	032A0010B00700	032A0030B02100
032000000004H0	032000000020A1	032000000029B1	032A0010B00800	032A0030B02200
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032000000009C0	032000000021A0	032000000029P0	032A0010B01100	032A0030C00300
032000000009D0	032000000021B0	032A0010A00100	032A0010B01200	032A0030C00400
032000000009D1	032000000021C0	032A0010A001A0	032A0010B01300	0330000000017A0
032000000009G0	032000000021D0	032A0010A00200	032A0010B01400	0330000000017A1
032000000017B0	032000000022B0	032A0010A00300	032A0010B01500	0330000000017A2
032000000017B2	032000000022B1	032A0010A00400	032A0010B01600	0330000000017B0

South Zone Parcels



Legend

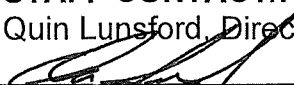
- North Rate Zone Border
- South Rate Zone Border



I certify that the foregoing is a true and exact copy of a resolution adopted by the Board of Directors of the Albemarle County Service Authority in a regular session on July 21, 2022 by a vote of ___ to ___.

Gary B. O'Connell, Secretary-Treasurer

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Advanced Metering Infrastructure (AMI) Monthly Update	AGENDA DATE: July 21, 2022
STAFF CONTACT/PREPARER: Quin Lunsford, Director of Finance 	ACTION: Informational
	ATTACHMENTS: No

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

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

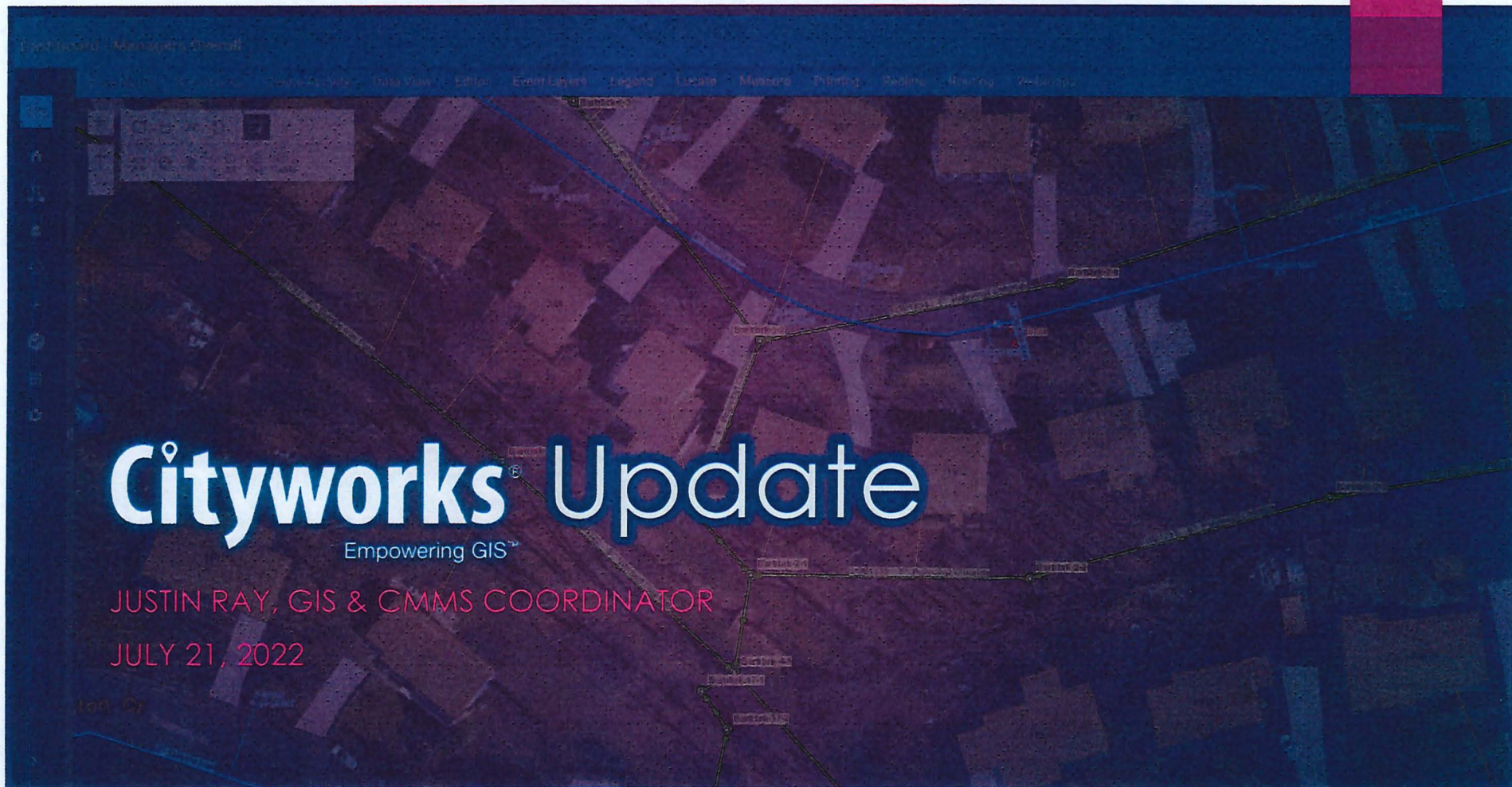
- We continue to monitor meters that have been deployed and are notifying customers daily of irregular consumption/leaks.
- Supply chain disruptions continue to impact meter manufacturers and significant improvement in delivery of outstanding meters is not expected until at least October of 2022. Upon improvement of meter/component availability, the ACSA is poised and prepared for final deployment of the remaining 20,000 meters.
- This month's Board agenda includes a viewing of a professionally produced AMI informational video and is available on the ACSA website. This video provides pertinent information related to the project, benefits, and what customers can expect during full deployment.

BUDGET IMPACT: Informational only.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ATTACHMENTS: N/A



Background



Cityworks is a Computerized Maintenance Management System (CMMS)



In Production Use for 1 Year, 9 Months, 10 Days (October 12, 2020)



Customer Request Portal Live on March 28, 2022

By the Numbers

- ▶ 420 Materials Tracked in Inventory
- ▶ 190 Work Order Templates
- ▶ 29 Service Request Templates
- ▶ 19 Inspection Templates
- ▶ 44 Report Types

Issue

St

Dashboard

Issue

Receive

Transfer

Audit

Requisition

Build Assemblies

Search

Configure

My Apps

Settings

Material

Storeroom Domain

ACSA

Storeroom

ACSA

< STOREROOM MATERIAL WORK ORDER MATERIAL MATERIAL QUERY

Image	Material Uid	Description	Part Number	Location	Location 2	Stock on Hand
<input type="checkbox"/> No Image	Adaptor Meter 1x1-1/2 In	Adaptor Meter 1x1-1/2 In-G52-100280	G52-100280	MSC17		2
<input type="checkbox"/> No Image	Adaptor Meter 1x2 In	Adaptor Meter 1x2 In-G52-100281	G52-100281	MSC023		4
<input type="checkbox"/> No Image	Adaptor Meter 5/8x1 In	Adaptor Meter 5/8x1 In-G51-100270	G51-100270	MSC18		10
<input type="checkbox"/> No Image	Band Sewer 10 In	Band Sewer 10 In-B30-100310	B30-100310			4
<input type="checkbox"/> No Image	Band Sewer 12 In	Band Sewer 12 In-B30-100320	B30-100320			4

All numbers are accurate as of 7/8/22 and averages include non-business days

Service Requests

- ▶ 737 Completed Requests
- ▶ Averaging 1.2 Completed Requests per Day
- ▶ Most Common Request Types:
 - ▶ Water Leak
 - ▶ Water Pressure Complaint
 - ▶ Water Quality Complaint
 - ▶ No Water
 - ▶ Sewer Stoppage/Backup

Cityworks Ray, Justin

Inbox New Search Saved Searches Manager Administration

Request Email Print Save New Close Delete

Service Request

Description: Account Close/Transfer Request

Request Id: 730
 Priority: 3-Medium
 Status: Open
 Cancel SR? ☐

Initiated By: Citysourced, Citysourced
 Closed By: Wallace, Elizabeth
 Submit To: Wallace, Elizabeth
 Dispatch To:
 Prj. Comp. Date:
 Init. Date: 05/12/2022 8:33 AM
 Date Closed: 5/13/2022 8:17:36 AM
 Submit Date: 05/12/2022 8:33 AM
 Dispatch Date:
 Details: Description: need to stop/transfer service to the people moving into my house
 CitySourced Id: 2678278
 Approximate Address: 908 Rover Dr. Charlottesville, VA 22902

Investigation Information

Investigation: ☒ **Inv. Date:** 05/13/2022 8:17 AM
Resolution: No Issue

Comments

Comments: Add Comment Sort ▲

Citysourced, Citysourced 05/12/2022 8:47 AM
 Public: Don't want it transferred until May 20th or after

Attachments

+ Add attachment...
 Drag and drop files here to attach them.

Incident Information

Facility Id	Level Id
Address: 908 Rover Dr	
Apt #:	
City: Charlottesville	State: VA
Zip Code: 22902	

Location Details: 908 Rover Dr. Charlottesville, VA 22902

Related Work Activities

Inspections
 Add:
 Create

Work Orders

Customer Request Portal



- ▶ Live as of 3/28/22
- ▶ Request Type Options: 13
- ▶ Submitted Requests: 23
- ▶ Most Common: Account Close/Transfer Request (19)

View Create

Account

Service Requests

Submit a request

- 1 Select a Report Type: ***
Sewer - Manhole Cover Missing, Damaged, or Noisy >
- 2 Where is the request? ***

- 3 Tell us more details *** >
- 4 Add photos, videos, or audio**

- 5 Privacy**
☐ Keep this request private

Inspections

Inspection

Rs

Inspection Details

Inspection Id

24915

Type

Hydrant Inspection

Status

Closed

Priority

Initiated By

Dennis, Jimmy

Initiated Date

Apr 13, 2022, 9:17 AM

Submit To

Roach, William

Submit To Date

Apr 25, 2022, 2:47

Inspected By

Dennis, Jimmy

Inspection Date

Apr 13, 2022, 9:18

Cancel

Closed By

Roach, William

Closed Date

Jun 27, 2022, 2:57 PM

Project

Resolution

Pass

Projected Start Date

Apr 13, 2022, 9:17

Hydrant Inspection Observations

Static Pressure (PSI)

Numeric Answer

128

Hydrant in Service?

Answer

Yes

Cap Point Condition

Answer

Poor

Barrel Point Condition

Answer

Poor

Hydrant Height

Answer

Good

Local Permitt

Answer

No

If Leak Present, Local Locations

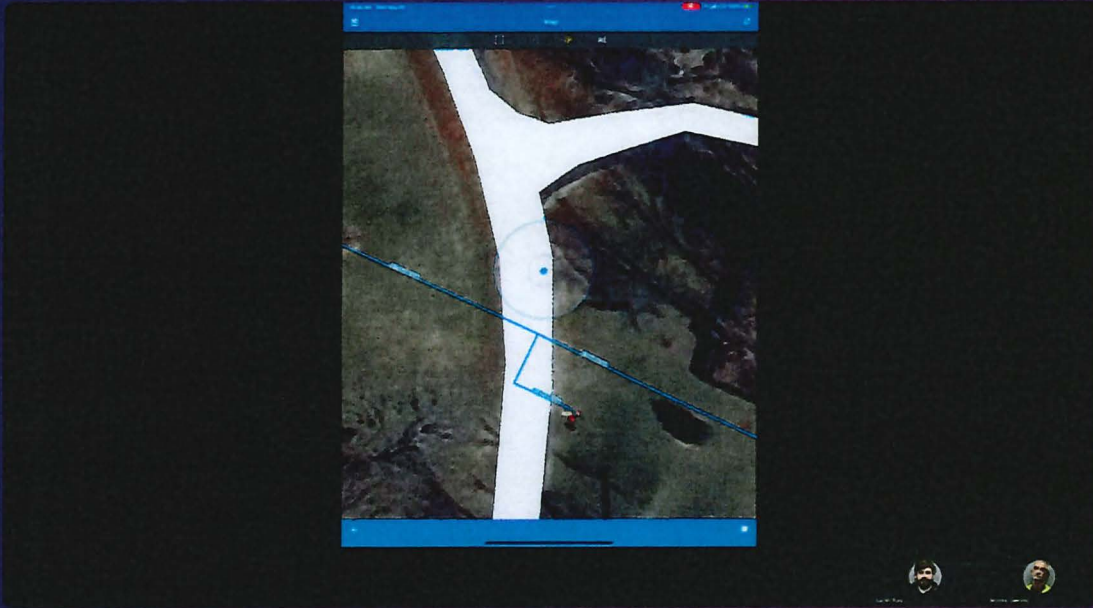
Answer

Direct Hydrant Issues?

Answer

Yes

- ▶ 28,071 Completed Inspections
- ▶ Averaging Over 44 Per Day
- ▶ Most Frequent Inspection Types:
 - ▶ Water Valve Inspection
 - ▶ Hydrant Inspection
 - ▶ Manhole Inspection
 - ▶ CCTV Inspection
 - ▶ Pump Station Inspections
 - ▶ Monthly Vehicle Inspections



Inspection Demonstration

- ▶ 5,462 Completed Work Orders
- ▶ Averaging 8.6 Per Day
- ▶ Most Common Types:
 - ▶ CCTV Sewer Gravity Main / Manhole
 - ▶ Raise/Lower Meter Box or Setter
 - ▶ Upgrade Setter
 - ▶ Update GIS
 - ▶ Repair Fire Hydrant
 - ▶ Repair Sewer Manhole

- ▶ 5,462 Completed Work Orders
- ▶ Averaging 8.6 Per Day
- ▶ Most Common Types:
 - ▶ CCTV Sewer Gravity Main / Manhole
 - ▶ Raise/Lower Meter Box or Setter
 - ▶ Upgrade Setter
 - ▶ Update GIS
 - ▶ Repair Fire Hydrant
 - ▶ Repair Sewer Manhole

196

Work Order Metrics

- ▶ Average Labor Cost: \$95.99
- ▶ Average Equipment Cost: \$78.59
- ▶ Average Material Cost: \$45.71
- ▶ Average Duration: 2.6 Hours

Cityworks Search... Ray, Justin

Inbox New Search Saved Searches Manager Administration

Work Order Email Print Save Close Delete

Work Order

Description: Exercise Sewer Valve
 WO Id: 3991 Show in GraniteNet
 Entity Type: SEWER SYSTEM VALVE Change Show in GraniteNet Web
 Priority: 3-Medium
 Status: Closed Cancel WO?
 Initiated By: Walker, Jake Init. Date: 02/8/2022 8:22 AM
 Closed By: Bega, Roland Date Closed: 2/28/2022 9:31:11 AM
 Requested By:
 Supervisor: Bega, Roland
 Submit To: Caylor, Jonathon Submit Date: 02/24/2022 11:50 AM
 Projected Start: 04/1/2022 3:48 PM Projected Finish: 04/1/2022 3:48 PM
 Instructions:

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.				

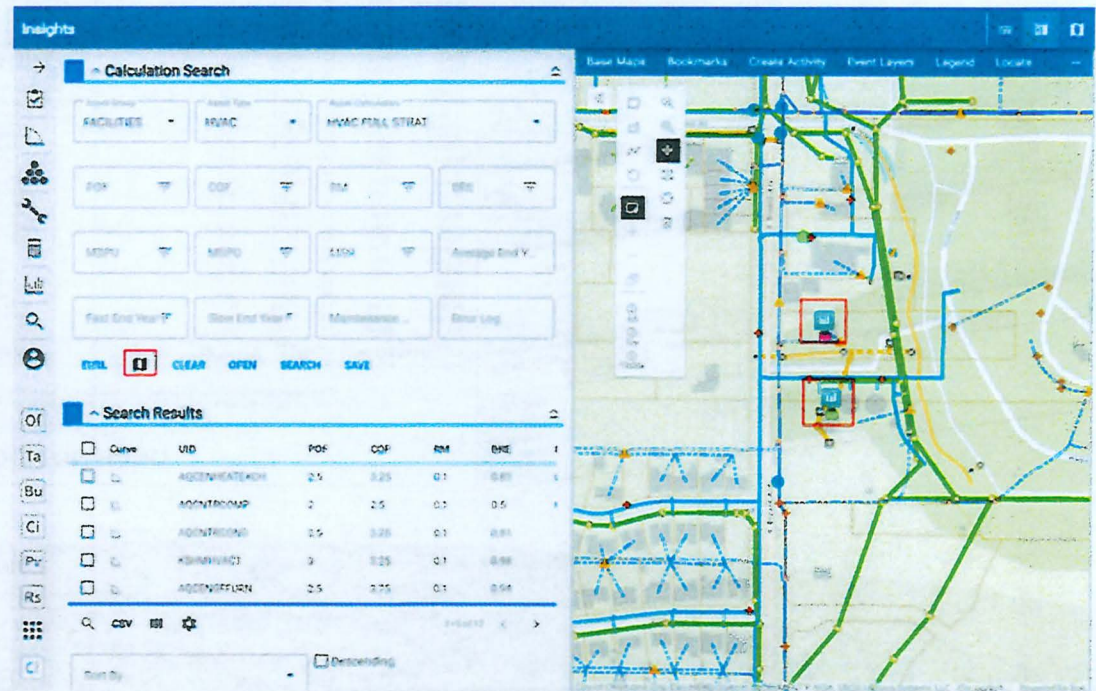
Job Information

Actual Start: 02/25/2022 9:00 AM Actual Finish: 02/25/2022 10:00 AM
 Completed By: Caylor, Jonathon
 Contractor:
 Resolution: Preventative Maintenan Work Billable: No

Work Cycle

Next

- ▶ Respond Training & Go-Live
- ▶ Operational Insights CIP Project
- ▶ Utility Network Feasibility CIP Project
- ▶ Continuous Improvement



Reports

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
VALLEY REGIONAL OFFICE
OVERFLOW/SPILL/UNAUTHORIZED DISCHARGE REPORT
THIS FORM IS ONLY TO BE USED FOR NON-EMERGENCY 24-HOUR NOTIFICATION
EMAIL FORM TO: YEO.SSO.TD@dm.virginia.gov

Date Time Reported: 29 06 2022 10:33:21
Reported By: Walker, Jake
Affiliation: Albemarle County Service Authority
Telephone No.: (434) 977-4511

FACILITY INFORMATION
Facility Name: Albemarle County Service Authority
Permit No. (if applicable): N/A
Physical Address: 165 Spoutap Rd., Charlottesville, VA 22911

OVERFLOW/SPILL/UNAUTHORIZED DISCHARGE INFORMATION
Location (physical address) of discharge: Strubling Avenue Ext (S45 E45)
N Coordinate: 11476169.65 Y Coordinate: 3896444.37
WGS84 Zone: 18Q UTM Zone: 18Q
Description of discharged material: Unreated sewage
Cause of discharge: Gravel
Date and time discovered: 4/21/2022 10:30:00 AM
Volume of discharge (gallons): 200
Duration of discharge (hours): 2 hrs
Did the discharge reach state waters? No
If yes, name of the state water that the discharge reached: No
What, if any, impact to state waters was observed? No
Did the discharge occur due to a rain event? No
Was a fish kill observed? No
Corrective Action Taken: High-Pressure Equipment
Lined Area? Yes
Comments: WO #4975



STOCK ON HAND

REPORT DATE: 6/28/2022

Description: This report provides details on all inventory on hand, if DIFF ON HAND a red that means the stock on hand is below the min quantity for that field. This report will provide information on one or many storerooms selected

STORE	MATERIAL/ID	DESCRIPTION	SUPPLIER	DIFF ON HAND	UNIT	UNIT COST	UNIT	RELOCATION	LINE TOTAL
ACSA	Adaptor Meter 1x1-1/2 in	Adaptor Meter 1x1-1/2 in-053-100280		0	2	\$ 57.25	EA	MSC17	\$114.50
ACSA	Adaptor Meter 1/2 in	Adaptor Meter 1/2 in-053-100281		0	4	\$ 78.68	EA	MSC025	\$314.72
ACSA	Adaptor Meter 1/2 in	Adaptor Meter 1/2 in-053-100278		0	10	\$ 18.41	EA	MSC18	\$184.10
ACSA	Band Sewer 10 in	Band Sewer 10 in-030-100316		0	4	\$ 73.00	EA		\$292.00
ACSA	Band Sewer 12 in	Band Sewer 12 in-030-100320		0	4	\$ 87.55	EA		\$350.20
ACSA	Band Sewer 4 in	Band Sewer 4 in-030-100280		0	4	\$ 50.80	EA	C004	\$203.20
ACSA	Band Sewer 6 in	Band Sewer 6 in-030-100300		-2	2	\$ 53.54	EA	C009	\$107.08
ACSA	Band Sewer 8 in	Band Sewer 8 in-030-100300		0	4	\$ 70.51	EA	C014	\$282.04
ACSA	Band DI MJ 11-1/4 4 in	Band DI MJ 11-1/4 4 in-A80-120320		1	3	\$ 24.78	EA	E003	\$74.34
ACSA	Band DI MJ 11-1/4 8 in	Band DI MJ 11-1/4 8 in-A80-120360		1	3	\$ 45.21	EA	E003	\$135.63
ACSA	Band DI MJ 11-1/4 8 in	Band DI MJ 11-1/4 8 in-A80-120370		2	4	\$ 58.70	EA	E003	\$234.80
ACSA	Band DI MJ 22-1/2 4 in	Band DI MJ 22-1/2 4 in-A80-120300		3	5	\$ 28.86	EA	E003	\$144.30
ACSA	Band DI MJ 22-1/2 8 in	Band DI MJ 22-1/2 8 in-A80-120310		2	4	\$ 43.61	EA	E003	\$174.44
ACSA	Band DI MJ 22-1/2 8 in	Band DI MJ 22-1/2 8 in-A80-120320		1	3	\$ 80.04	EA	E003	\$240.12
ACSA	Band DI MJ 48 4 in	Band DI MJ 48 4 in-A80-120270		1	3	\$ 32.24	EA		\$96.72
ACSA	Band DI MJ 48 6 in	Band DI MJ 48 6 in-A80-120280		2	4	\$ 44.29	EA	E003	\$177.16
ACSA	Band DI MJ 48 8 in	Band DI MJ 48 8 in-A80-120290		1	3	\$ 55.61	EA	E004	\$166.83
ACSA	Band DI MJ 80 4 in	Band DI MJ 80 4 in-A80-120240		-1	1	\$ 37.91	EA	E004	\$37.91
ACSA	Band DI MJ 80 6 in	Band DI MJ 80 6 in-A80-120250		1	3	\$ 38.18	EA		\$114.54
ACSA	Band DI MJ 80 8 in	Band DI MJ 80 8 in-A80-120260		4	4	\$ 78.38	EA		\$313.52
ACSA	Box Meter Brooks 2200 Round 15 in	Box Meter Brooks 2200 Round 15 in-A80-130400		155	355	\$ 35.65	EA		\$5525.75
ACSA	Box Meter Old Castle PL-30 Rectangle 18 in	Box Meter Old Castle PL-30 Rectangle 18 in-J40-130408		8	28	\$ 185.81	EA		\$5202.68
ACSA	Breaker Double Pole 15 Amp	Breaker Double Pole 15 Amp-E10-100229		0	1	\$ 12.85	EA	C133A	\$12.85
ACSA	Breaker Double Pole 20 Amp	Breaker Double Pole 20 Amp-E10-100230		0	1	\$ 12.85	EA	C133B	\$12.85
ACSA	Breaker Single Pole 15 Amp Cuh	Breaker Single Pole 15 Amp Cuh-E10-100250		0	1	\$ 8.50	EA	C136A	\$8.50
ACSA	Breaker Single Pole 20 Amp Cuh	Breaker Single Pole 20 Amp Cuh-E10-100240		0	1	\$ 8.50	EA	C135C	\$8.50
ACSA	Breaker Single Pole 20 Amp Cuh	Breaker Single Pole 20 Amp Cuh-E10-100260		0	1	\$ 8.50	EA	C136B	\$8.50
ACSA	Breaker Single Pole 20 Amp	Breaker Single Pole 20 Amp-E10-100240		0	1	\$ 12.85	EA	C135C	\$12.85
ACSA	Brushing Brass 1-1/2 in PFT	Brushing Brass 1-1/2 in PFT-A10-100770		0	6	\$ 6.32	EA	A078	\$37.92
ACSA	Brushing Brass 1-1/4 in PFT	Brushing Brass 1-1/4 in PFT-A10-100680		0	5	\$ 4.11	EA	A07	\$20.55
ACSA	Cap Pumpier Hecza Mue A-17	Cap Pumpier Hecza Mue A-17-C16-100550		1	4	\$ 54.77	EA	C071	\$219.08
ACSA	Cap Side Hecza Mue A-21	Cap Side Hecza Mue A-21-C16-100540		13	18	\$ 12.81	EA	C070	\$230.58
ACSA	Cap Side MJ 8 in	Cap Side MJ 8 in-A80-120915		1	3	\$ 25.53	EA		\$76.59
ACSA	Cap Side MJ 8 in	Cap Side MJ 8 in-A80-120625		1	3	\$ 37.91	EA		\$113.73
ACSA	Clamp Bell Joint 4 in	Clamp Bell Joint 4 in-A30-110820		-1	1	\$ 67.53	EA	B034	\$67.53



Cost Summary

Reason (i.e., Damage Repair): Irrigation tap

Service Address: 55 CANTERBURY RD, CHARLOTTESVILLE, VA, 22903

Mailing Address (if different):


Hours	Equipment	Materials	Total Labor Cost	Total Equipment Cost	Total Material Cost
5.00			\$146.35		
5.00			\$98.20		
5.00			\$128.76		
2.00			\$471.51		
	Equipment Line				
	Volvo C-3500				
	Nissan Frontier				
	F-250				
	Hours				
5.00			\$146.35		
1.00			\$98.20		
1.00			\$128.76		
	Equipment				
5.00			\$146.35		
1.00			\$98.20		
1.00			\$128.76		
	Materials				
1.00			\$146.35		
1.00			\$98.20		
1.00			\$128.76		
0.50			\$471.51		
	Hours				
5.00			\$146.35		
1.00			\$98.20		
1.00			\$128.76		
0.50			\$471.51		
	Equipment				
5.00			\$146.35		
1.00			\$98.20		
1.00			\$128.76		
0.50			\$471.51		
	Materials				
1.00			\$146.35		
1.00			\$98.20		
1.00			\$128.76		
0.50			\$471.51		

Sub-Total: \$ 941.46
VDOT Highway Permit: \$ 0.00
Lost Water Cost: \$ 0.00
Total Direct Costs: \$ 941.46
Plus 25% Indirect Costs (Labor and Materials Only): \$ 197.11
Total: \$ 1,138.57



Questions?

AGENDA ITEM EXECUTIVE SUMMARY

AGENDA TITLE: Advanced Metering Infrastructure (AMI) Project – Update and Video	AGENDA DATE: July 21, 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 and major components of the project have been completed, notably the bulk of the communication infrastructure and software integrations.

The information below summarizes key accomplishments and milestones.

DISCUSSION: The Advanced Metering Infrastructure (AMI) project has long been a strategic priority for the Authority. Evaluation of the technology began over ten years ago with a formal feasibility study conducted in 2018-2019. Based on this study, the Authority competitively procured an AMI solution. This process identified the Sensus system as best meeting the needs of the Authority and our customers.

Planning, design, and analysis began in the fall of 2019 and by the end of June 2022, 1,723 meters have been installed/retrofitted with AMI equipment and eleven base stations have been completed throughout the service area.

All meters sized 1.5" – 4" are AMI compatible and are actively communicating. All services in Scottsville and a substantial portion of Crozet have been upgraded through the first two phases of the project. The Authority is receiving consumption information and alarms around the clock which allows Authority staff to evaluate and contact customers that may have an issue.

Over the course of the last seven months, our team has identified 118 instances of continuous or high flow alerts and assisted customers with resolution. Conservatively, we estimate between 500,000 gallons – one million gallons of treated water have been conserved through early identification of leaks.

Feedback from those customers we have been able to assist has been positive and our team is empowered to proactively assist in ways that were not possible with our old systems in place.

While we have encountered supply chain issues related to meter/meter component availability, we are optimistic that later this year/early next year we will be able to resume our final "full-deployment" phase.

Throughout the separate phases of the project, our team has worked hard to keep our customers informed of the process, the benefits associated with installation, and address specific concerns as they arise. We have accomplished this through targeted letters and post-cards prior to work being performed. Additionally, we have compiled an informational video related to the Authority, AMI, and what customers can expect. This

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

video is available on our website (https://videos.files.wordpress.com/VLJWBWcy/acsa_psa_final.mp4). As the final phase of the project begins, we see an opportunity to leverage this video to ensure our customers understand the process and new benefits afforded.

BUDGET IMPACT: Informational only.

RECOMMENDATIONS: None

BOARD ACTION REQUESTED: None; informational item only.

ATTACHMENTS: N/A