

Albemarle County Service Authority Board of Directors

1 The Board of Directors of the Albemarle County Service Authority (ACSA)
2 met in a regular session on September 18, 2025, at 9:00 a.m. at the
3 Administration and Operations Center at 168 Spotnap Road in
4 Charlottesville, Virginia.

5 **Members Present:** Mr. Richard Armstrong; Ms. Lizbeth Palmer; Mr. John
6 Parcels (virtual); Mr. Clarence Roberts; Ms. Kimberly Swanson.

7 **Members Absent:** Charles Tolbert.

8 **Staff Present:** Mike Derdeyn, Deborah Herr, Quin Lunsford, Jeremy Lynn,
9 Alex Morrison, Emily Roach, Keane Rucker.

10 **Staff Absent:** Danielle Trent; April Walker.

11 **Public Present:** Jennifer Whitaker, RWSA; Bill Mawyer, RWSA; Dave
12 Tungate, RWSA; Matt Wimmer, Hazen and Sawyer.

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

15 The Chair then called the meeting to order. He read the opening
16 Board Chair statement (Attached as Page _____), and a quorum was
17 established. He stated that pursuant to State law and the ACSA's policy, Mr.
18 John Parcels is participating in the meeting remotely from Ashland, Oregon
19 where he is visiting family.

20 ***Ms. Palmer moved to approve John Parcell's remote***
21 ***participation in the September 18, 2025, Board of Directors meeting;***
22 ***seconded by Ms. Swanson. All members voted aye.***
23

24 2. **Approve Minutes of August 21, 2025**

25 Mr. Parcels stated that he had one small correction on page 18, line
26 25 of the Board packet. He stated that there is a "the" that should be "they."
27 Ms. Swanson stated that she had a correction on page 13, line 1. She stated
28 that the word "play" should be "pay." Mr. Armstrong noted that the clerk has
29 been doing a very good job with the minutes, as there have not been many
30 corrections to the minutes in the last several meetings.

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1 ***Ms. Palmer moved to approve the minutes of September 18,***
2 ***2025; seconded by Mr. Roberts. All members voted aye.***

3
4 3. Matters from the Public & Response to Public Comment

5
6 4. Response to Public Comment

7
8 5. Consent Agenda

9 ***a. Monthly Financial Reports –***

10 ***b. Monthly Capital Improvement Program (CIP) Report –*** Ms. Swanson
11 stated that she had a question about the Townwood Water Main
12 Replacement project on page 66. She asked if the road would be turned
13 over to VDOT. Mr. Lynn replied no. He stated that the ACSA will be getting
14 an easement from the County of Albemarle.

15 ***c. Monthly Maintenance Update –*** Mr. Parcels stated that he had a couple
16 of questions about the 80,000-gallon leak on page 81. He asked how the
17 leak was detected and if AMI was used. He also asked, regarding the
18 corrosion of the valve, why they do not test the soil now and take
19 preventative steps right away, instead of waiting to dig up a second valve.

20 Mr. Morrison stated that due to the severity of the leak and the size
21 of the hole that it left, they did not have a good soil sample to collect that
22 was in close proximity to the valve. He stated that the ACSA team is test
23 digging the adjacent valve today and collecting a soil sample that is in
24 contact with that line to determine the corrosivity level. Mr. Parcels asked
25 what criteria they have for corrosivity before they protect the new valve.
26 Mr. Morrison stated that, generally, they would look at the USDA soil
27 mapping to determine if there is a moderate or high level of corrosive soil
28 in the area. He stated that they would then use a 10-point scale to
29 determine if additional protection is needed beyond the standard zinc
30 coating. Mr. Parcels asked what that normal shelf life is for this type of
31 valve. Mr. Morrison stated that generally, they could see 40-60 years out

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1 of the valve but it depends on how often it is used and other factors, so it
2 is hard to give a specific number. He noted that they have had valves in
3 other areas with corrosion issues on the bolts. He stated that when they
4 can identify it early, they can replace the bolts ahead of a failure such as
5 this one. Mr. Parcels stated that this type of thing would not be caught
6 during a valve inspection, given that inspecting the valve just involves
7 actuating the valve. Mr. Morrison stated that this is correct. He stated that
8 they would not know if the valve bolts were corroded unless they excavated
9 and performed an additional inspection. Mr. Parcels asked what corrosion
10 prevention steps they will take if they find corrosion on the second valve.
11 Mr. Morrison replied that the newer bolts they use do not corrode as easily
12 as the older ones. He stated that they would go through and replace bolts
13 on other valves in that area to prevent another failure like this one from
14 occurring.

15 Mr. Lynn stated that RWSA had staff monitoring tank levels 24/7 and
16 they noticed the Piney Mountain tank level dropping, which serves this
17 area. He stated that they reached out to the ACSA staff and had staff
18 investigating in that area as well. He noted that when that much water is
19 being lost and the ACSA is not receiving phone calls from customers, it
20 indicates that the leak is not in a well-populated area. He stated that they
21 had staff investigate in the less-populated area and they were able to
22 locate the leak and isolate it.

23 Ms. Palmer asked how much the Piney Mountain Tank holds. Mr.
24 Lynn stated that it holds 750,000 gallons. Mr. Parcels stated that the leak
25 was 80,000 gallons. He stated that it seems like it would take more than
26 that to reduce the tank level significantly. Mr. Morrison stated that the leak
27 was more than 80,000 gallons but he would have to go back and look to
28 get the exact number.

29 Mr. Parcels asked how the Hyland Ridge aerial sewer crossing
30 structural failure was detected. Mr. Morrison stated that it was reported to
31 the ACSA by a developer that lives in that community. He stated that ACSA

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1 crews went out and placed supports on the pipe to keep it in place. He
2 noted that luckily, the pipe has restraint joints, so it did not disconnect when
3 it came off of the concrete supports.

4 Ms. Swanson stated that she had a question about the VDH monthly
5 operating reports. She asked what the ACSA is reporting to them every
6 month. Mr. Morrison replied that the reports are for each distribution
7 system and include the total volume of water that was purchased in that
8 period, which is also broken down to the daily volume. He stated that the
9 reports also include whether there were any failures within the system that
10 need to be reported outside of the two-hour reporting window.

11 Ms. Palmer stated that she had another question about the Hyland
12 Ridge aerial sewer crossing. She asked how the sewer pipe was displaced.
13 Mr. Morrison replied that they do not know how the stainless-steel supports
14 failed. He stated that they hypothesized that one of them failed with a crack
15 in the weld and when it displaced from the pier, it caused the next three to
16 fail. He stated that when they inspected, however, they found no impact to
17 the pier or pipe, or trees that had come down, so they do not know why it
18 failed.

d. IT Monthly Update

e. Rivanna Water and Sewer Authority (RWSA) Monthly Update –

f. ACSA Board Policy Future Issues Agenda 2025

g. Imagine a Day Without Water Resolution –

23 ***Mr. Parcels moved to approve the consent agenda, seconded***
24 ***by Ms. Swanson. All members voted aye.***

6. Northern Urban Area Utilities Master Plan

27 Mr. Lunsford stated that he wanted to welcome Bill Mawyer, Jennifer
28 Whitaker, and Dave Tungate from RWSA. He stated that they graciously
29 accepted his request to present to the ACSA Board today. He noted that this
30 presentation (Attached as Pages_____) was provided to the RWSA Board
31 of Directors earlier this summer and was found to be incredibly informative.

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1 He stated that it was important for the ACSA Board to see, to understand
2 some of the study work that has been done and the work that continues to
3 be done as projections evolve.

4 Bill Mawyer, RWSA Executive Director, came forward to address the
5 Board. He thanked the Board for having them today and also thanked the
6 ACSA for allowing RWSA to use their Board room while RWSA's building is
7 under renovation. He stated that starting next Tuesday, RWSA and RSWA
8 will hold their Board meetings in the ACSA Board room every fourth
9 Tuesday. He noted that they will probably be using the room for about two
10 years while theirs is being renovated.

11 Mr. Mawyer stated that he would begin the presentation by giving
12 some context to the planning efforts, and Jennifer Whitaker would present
13 on the engineering details. He noted the picture of a pipe on the title slide of
14 the presentation. He stated that this is the pipe that will go under the South
15 Fork Rivanna River, which will give them a secondary method of transferring
16 treated water to the northern area. He noted that this will allow for additional
17 capacity, as well as redundancy. He added that the work is currently
18 ongoing.

19 Mr. Mawyer stated that RWSA's mission is to ensure that there is
20 adequate water supply, treatment, and distribution for the customers in the
21 City of Charlottesville and Albemarle County. He stated that because of this,
22 master planning is a large part of what RWSA does.

23 Mr. Mawyer moved to the next slide illustrating the Urban service
24 area. He stated that the pink area is what they refer to as the Urban water
25 area, which includes the City and all of the developed areas adjacent to the
26 City that are served by the ACSA. He stated that the wastewater area shown
27 to the left is similar, but they also serve Crozet. He stated that the northern
28 service area for water and wastewater is everything north of the South
29 Rivanna River.

30 Mr. Mawyer stated that there are a number of facilities in the northern
31 area, as shown on the next slide. He stated that there is the Piney Mountain

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1 Tank, which holds about 750,000 gallons, the North Rivanna Water
2 Treatment Plant that will be decommissioned in a couple of years, the North
3 Rivanna Water Line that needs some work in the future, the Airport Road
4 Water Pump Station that was recently completed on Airport Road, and the
5 South Rivanna Water Treatment Plant, which is the largest water treatment
6 plant. He noted that the green line shows a sewer line and north of where
7 the green and red lines meet on the map is the Powell Creek Interceptor.

8 Mr. Mawyer moved to the next slide noting some of the current
9 challenges in the northern area. He stated that the largest water supply
10 reservoir is Ragged Mountain. He stated that they added the Ragged
11 Mountain Dam, increasing the reservoir from 500 million gallons to 1.4 billion
12 gallons, with a plan to go to 2.1 billion gallons. He mentioned, however, that
13 it is not well-connected to the water distribution system. He stated that they
14 will discuss how they are going to address that issue with the Central Water
15 Line. He stated that water from the Ragged Mountain Reservoir is treated at
16 the Observatory Water Treatment Plant, and there is a new pipe being put
17 in to get the water from the reservoir to the plant. He stated that the Central
18 Water Line will convey treated water throughout the city and tie into major
19 water transmission mains coming from the north, enabling them to get
20 treated water to the northern part of the Urban area. He added that the
21 solution to the northern area issue really starts with the water supply projects
22 that are underway.

23 Mr. Mawyer stated that there is vulnerability to main breaks on 29
24 North, where there is only one pipe, one crossing of the South Rivanna River
25 and only one crossing of the North Rivanna River. He stated that there will
26 be duplicate crossings at both locations to help solve the vulnerability issue.
27 He mentioned that as growth continues in the northern area, they will need
28 to add two 1-million-gallon storage tank at the Airport Road Pump Station,
29 as well as two additional pumps in the pump station to get the water to the
30 northern area. He noted that the Airport Road Pump Station was built to

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1 accept more pumping and can be expanded from 1 million gallons per day
2 (MGD) currently to about 4 MGD.

3 Mr. Mawyer moved to the next slide illustrating the various water
4 supply projects. He stated that the first project they have planned to address
5 the development in the north is the Ragged Mountain Reservoir (RMR) to
6 the Observatory Raw Water Pipe & Pump Station, which is represented by
7 the brown line on the map. He mentioned that it is currently under
8 construction and will convey raw water from the RMR to the Observatory
9 Water Treatment Plant (OBWTP). He stated that renovation of the OBWTP
10 was recently completed, and the capacity was increased from 7.7 MGD to
11 10 MGD. He added that there will be more raw water at the reservoir and
12 greater treatment capacity at the OBWTP, but as he mentioned there is
13 difficulty getting it into the city system and northern system.

14 Mr. Mawyer stated that the second project, the Central Water Line
15 Project, is going to help cure that problem. He stated that this project is also
16 under construction, and the design for a small portion of the line near East
17 High Street will be finished soon. He noted that the ACSA's share for all four
18 water supply projects is determined by the water supply agreement that is in
19 place.

20 Ms. Palmer asked if the cost sharing split was 80/20 for the Central
21 Water Line project. Mr. Mawyer replied that the cost sharing split for the
22 Central Water Line was 52/48. He stated that they worked with Gary
23 O'Connell, former ACSA Executive Director, during his tenure, on a number
24 of the agreements but most of the cost sharing goes back to the Ragged
25 Mountain Dam agreement that was put in place in 2012.

26 Mr. Mawyer stated that the biggest project that will convey untreated
27 water from the Rivanna Reservoir to the Ragged Mountain Reservoir is
28 number four on the slide. He mentioned that they expect to advertise this
29 project for construction bids on September 30, 2025, and hopefully have it
30 awarded by the end of the calendar year.

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1 Mr. Mawyer stated that project number three on the slide is raising
2 the water level at the Ragged Mountain Reservoir, and it is currently under
3 construction. He stated that Faulconer Construction was awarded the
4 project, and they need to clear the trees around the perimeter of the
5 reservoir. He mentioned that when there is a lot of rain and there is over 30
6 MGD coming through Sugar Hollow, they will be allowed to transfer water to
7 Ragged Mountain until the line from the Rivanna Reservoir to Ragged
8 Mountain is built. He added that when the line is finished, they will terminate
9 any transfers from Sugar Hollow.

10 Mr. Mawyer stated that all of these projects are under construction
11 except for the purple line, project number four, which they hope to begin
12 early next year. He mentioned that they also have the last 20% of the Central
13 Water Line project to award and get under construction.

14 Mr. Mawyer stated that the next slide shows another diagram of what
15 he just discussed. He stated that the big blue lines on the map are water
16 transmission lines they have in place, and the pink line is the Central Water
17 Line that they are about to build through the city. He noted that it will tie the
18 big transmission lines together, allowing them to move water from the
19 Observatory Water Treatment Plant and the Avon Tank to the Pantops
20 Mountain Tank and to the northern part of the system.

21 Mr. Mawyer stated that these projects should be completed over the
22 next five years, but they have a whole series of projects that extend until
23 2070 to accommodate growth, as described by the planning department at
24 the County and the UVA Foundation. He noted that this information is what
25 the Northern Area Utilities Master Plan is based on. He stated that he would
26 now turn over the presentation to Jennifer Whitaker to provide more detail.

27 Ms. Whitaker, Director of Engineering and Maintenance for RWSA,
28 came forward to address the Board. She stated that shortly after COVID, it
29 became obvious that there was an uptick of planning and development in
30 the northern area. She stated that prior to 2008, there was a rather massive
31 planning effort for the County, but the economic crash brought that to a halt.

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1 She stated that shortly after COVID, plans began to come in and there were
2 discussions about growth and development in the northern area. She noted
3 that they had just completed the 2019 Finished Water Master Plan, which
4 did include the entire Urban area. She mentioned, however, that they were
5 concerned they had not focused enough on the nuances of the northern
6 area. She stated that they decided to commission a separate plan called the
7 Northern Area Utilities Master Plan.

8 Ms. Whitaker stated that there were four goals for this master plan,
9 the first of which was to understand the upcoming developments for the
10 County and the UVA Foundation. She stated that the second goal was to
11 utilize the existing water and sewer models to see if the system reacted as
12 they expected with the additional demands that had been identified. She
13 stated that the third goal was to utilize the modeling results to confirm the
14 scope and schedule for the northern area CIP projects specifically and then,
15 lastly, compare the plan to the 2019 Urban Finished Water Master Plan.

16 Ms. Whitaker stated that there were four items RWSA considered
17 specifically in the Northern Area Utilities Master Plan. She stated that the
18 first was the background growth and development along the entire corridor.
19 She stated that the other three were very specific accelerating growth
20 patterns that had been brought to their attention. She stated that one was
21 the rezoning of the North Fork Research Park by the UVA Foundation. She
22 stated that the second item was the North Pointe development. She
23 mentioned that as recently as a couple of months ago there was another
24 rezoning to increase density in this development. She stated that the third
25 was the Rivanna Futures development. She mentioned that the County has
26 worked extensively on that property over the last few years and it continues
27 to evolve.

28 Ms. Whitaker moved to the table on the next slide. She stated that is
29 from the Northern Area Utilities Master Plan. She stated that the UFWMP is
30 the Urban Finished Water Master Plan, which show the 2019 numbers that
31 RWSA was basing its planning on. She stated that with the Northern Area

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1 Utilities Master Plan, there is about 0.5 MGD increase anticipated. She
2 stated that this validated RWSA's concerns and observations were correct,
3 and they needed to account for the higher growth and densities in the
4 northern area.

5 Ms. Whitaker stated that the table on the next slide shows existing
6 demands on an average day and a maximum day, under the UFWMP from
7 2019, as well as the current demand projections. She stated that they took
8 those numbers and projected out what they anticipated seeing in terms of
9 background growth as well as overall growth in those areas. She stated that
10 the projections showed the numbers going up by almost 0.75 MGD on a
11 maximum demand day. She noted that this was consistent with what they
12 have been observing, as they expect more growth in this area than what was
13 previously anticipated.

14 Ms. Whitaker stated that as they started working through their water
15 modeling, they came across three key challenges in the northern system. She
16 stated that for one, they were finding that increased demands lead to
17 increased pump run times. She stated that, ultimately, it exceeded the
18 capacity of the finished water pump station at Airport Road. She mentioned
19 that there is currently one 1.5 MGD pump in that pump station and a backup.
20 She stated that, luckily, they had foresight and made provisions within the
21 pump station to incrementally expand the pump station.

22 Ms. Whitaker stated that the next key challenge is that the northern
23 area is highly influenced by the South Rivanna Treatment Plant operation.
24 She stated that in order for the suction side of the Airport Road pump station
25 to run, the South Rivanna Water Treatment Plant needs to be online. She
26 stated that part of the reason for the Central Water Line is for redundancy,
27 so they can take a plant offline for maintenance. She mentioned that the
28 South Rivanna plant needs to be up and running at all times currently, which
29 is not feasible from a maintenance perspective. She stated that they are
30 looking at adding a 1-million-gallon ground storage tank at the pump station,

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1 which will allow them to use different plants when they need to and to shut
2 down the pump station when they need to do maintenance or other activities.

3 Ms. Whitaker stated that the third key challenge is they have high
4 velocity in the northern part of the system. She stated that it is far away from
5 the rest of the Urban area, so they have to send water long distances through
6 a pump station. She stated ultimately, the answer is to increase piping and
7 piping networks.

8 Ms. Whitaker moved to the next slide outlining the improvement
9 projects for the northern area water system. She stated that through their
10 study, RWSA identified all of the projects that need to happen and the
11 timeline for those projects. She stated that the dates shown for each project
12 listed are based on the findings from their study. She mentioned that they
13 also have a trigger chart which is based on actual demands. She stated that
14 the following slide shows the various projects on a map. She noted that there
15 are a few projects identified that are opportunities for the ACSA to create
16 some redundancy in the system.

17 Ms. Swanson stated that she had a question about the road
18 construction on Route 29 where RWSA upsized the pipeline at the Hydraulic
19 Road intersection. Ms. Whitaker stated that they did upsize the pipe there,
20 but they also constructed a pipeline from the South Rivanna River crossing
21 all the way north, past Target. Ms. Swanson asked if they had that pipeline,
22 another pipeline under the Rivanna River, and then another pipeline. Ms.
23 Whitaker stated that there will be two pipes under the river, a 12-inch line,
24 and they are currently putting a 24-inch pipe under the river as well. She
25 stated that they converge with the single 24-inch pipe that heads north.

26 Mr. Roberts asked if they used directional boring for both of those
27 pipes. Ms. Whitaker stated that they are using directional boring on the 24-
28 inch pipe that is being installed currently. She skipped forward to the South
29 Rivanna Crossing slide to show an illustration. She stated that they have a
30 drill pit on the north side of the river and noted the drilling machine with the
31 drill head in the middle picture. She stated that they drilled along an

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1 alignment under the river. She stated that in the top right of the slide there is
2 a picture of reaming heads. She stated that those reaming heads are
3 different diameters, which are attached to the drill head and then pulled back
4 through to slowly increase the diameter of the hole that they drilled. She
5 stated that they have made the original drilling pass and have reamed once
6 and are on the second ream which is 30 inches. She noted that there will be
7 a 38- inch ream and at the end of that, they will pull the plastic pipe back
8 through to make the interconnection.

9 Ms. Swanson asked when they anticipate doing the actual pull-
10 through. Ms. Whitaker stated that they anticipate having all of the drilling
11 work done by November. She stated that it will take a while to make the
12 interconnections after the drilling is done, but the drilling itself should be done
13 by the end of November. Ms. Palmer asked if there was any way to create a
14 time-lapse video of the work. Ms. Whitaker replied that the only catch is that
15 most of the work is underground but documenting it could be useful, and
16 they will work on that.

17 Ms. Palmer stated that there is a 12-inch water line and a 24-inch
18 water line going into a 24-inch water line. She asked if that will be enough
19 when the system reaches those higher demands. Ms. Whitaker replied that
20 it is adequate but once they get through with the current set of projects, one
21 of the items they will be looking at is that single point. She stated that when
22 you get up to the Brookhill subdivision, there are other pipes available but
23 there is a stretch just north of the river where there is a single pipe. She
24 added that this is one of the things they are looking at as part of their longer-
25 range planning.

26 Ms. Whitaker went back to the Central Water Line project slide. She
27 stated that she wanted to re-emphasize that everything they have discussed
28 in the northern area on the water side is completely contingent upon the
29 Central Water Line being completed. She stated that she refers to this project
30 as the most important project RWSA has because it ties everything together
31 and provides redundancy and flexibility. She added that it is also very

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1 important for the northern area because, depending on which water
2 treatment plant is online on any given day, they need to be able to bring
3 water from multiple directions and different treatment plants.

4 Ms. Whitaker moved to the Airport Road Water Pump Station. She
5 stated that she has to give credit to the design engineers that worked on this
6 project, as well as the RWSA project staff. She stated that this pump station
7 currently has two pumps, one of which has a capacity of 1.5 MGD. She
8 stated that they can install up to a total of four pumps, which would allow
9 them to increase the pumping capacity to 4.5 MGD. She mentioned that
10 additionally, the pumps sit in pump cans which are essentially chambers.
11 She stated that they upsized those chambers, so they can pull out each
12 pump that is 1.5 MGD and install a 2 MGD pump. She noted that, overall,
13 the future ultimate buildout of the pump station could be as high as 7-7.5
14 MGD. She added that the pump station is online, and they currently run it 3-
15 4 days a week. She stated that they keep it running 3-4 days a week to
16 ensure everything is fully operational.

17 Ms. Whitaker stated that some of the other projects that were
18 identified in the master plan included the water tanks she talked about. She
19 stated that the plan on the next slide shows the Airport Road Pump Station
20 site. She mentioned that when they bought the property and designed the
21 original site plan, they designed it to be able to accommodate two 1 MG
22 storage tanks. She stated that they have gone through the comprehensive
23 plan process with the County, thus everything is ready to go. She added that
24 when they feel the tank is needed, they can begin design and construction.
25 She stated that they are also looking at some water line replacements given
26 the age and the pressures, and eventually a second tank at the pump station
27 site.

28 Ms. Whitaker moved to the next slide to discuss the northern are with
29 regards to sewer. She stated that currently, on the RWSA side of the system,
30 the entire northern area is served by the Powell Creek Interceptor. She
31 stated that currently, average daily flows are about 0.6 MGD and peak flow

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1 is about 3x that amount during wet weather. She stated that future
2 projections, after the plan was completed, are about 1.6-1.7 MGD. She
3 stated that based on these projections, there are three key projects on the
4 sewer side that need to be completed over time.

5 Ms. Whitaker referred to the sewer needs on the next slide. She
6 stated that the first is to continue to reinvest in the infrastructure from an I&I
7 removal standpoint. She stated that this means continuing to perform
8 inspections, manual rehabilitations, and reline if necessary. She mentioned
9 that root intrusion is problematic in this area, so they need to make sure they
10 keep the roots out of the system. She stated that the second item is, after
11 they get further down in capacity, they need to do a comprehensive sewer
12 study to ensure they have the flow meters and everything else addressed
13 properly. She stated that the third item on the list is to replace and upsize
14 the upper two regions on the Powell Creek Interceptor. She stated that this
15 is a fairly substantial project. She referred to the map on the next slide, and
16 noted the purple and teal lines, PC-5 and PC-4 respectively, and stated that
17 they both need to be upgraded.

18 Ms. Palmer asked what the RWSA thinks it can do, realistically, in
19 terms of the I&I, and how much of it is ACSA. She noted that the wet weather
20 flows are 3x the average daily flows. Ms. Whitaker replied that a 3-4x peaking
21 factor for wet weather is considered outstanding performance. She stated
22 that when they began trying to tackle I&I in some parts of the system 20
23 years ago, they had anywhere from 6-8x flows during wet weather events.
24 She stated that it is realistic to plan for 3-4x, and they may be able to get it
25 lower than that. She stated that they will continue to strive collectively by
26 doing their I&I work to maintain it. She added that looking at design
27 standards that the state has for sewers, new developments are often
28 designed with that 3-4x factor.

29 Ms. Whitaker stated that the RWSA Northern Area Capacity &
30 Demand Summary chart on the next slide is just for reference for the Board
31 and ACSA staff. She stated that they looked at capacity, demand, and peak

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1 demand for water and sewer from 2024 to 2070. She stated that it is
2 important to emphasize that RWSA designs for peak design for both water
3 and sewer because they want to be able to provide water for every day,
4 including hot and dry days, as well as keep the sewer in the pipe even during
5 high rain events.

6 Ms. Whitaker stated that the last slide may be familiar. She stated
7 that it shows all of the projects she discussed on a timeline and when they
8 currently anticipate completing them.

9 Ms. Palmer asked how fire prevention fits into the demand analysis.
10 Ms. Whitaker replied that fire flow is a tank and storage issue as well as a
11 pipe capacity issue. She stated that fire flow goes on top of demand, so if
12 demand is 0.5 MGD a day then fire storage and prevention is on top of that.
13 She stated that increasing storage and the diameter of the pipeline will allow
14 them to move the water quickly when a fire happens. Ms. Palmer asked if
15 they have a fire size that they use. Ms. Whitaker replied yes. She stated that
16 every structure in the Urban area has a fire rating. She stated that typically,
17 a commercial structure would be at the 700-750 gallons per minute range for
18 two hours. She stated that you can see warehouses or large developments
19 be as high as 3,500 gallons per minute for two hours. She added that when
20 they are modeling, they always model fire flow on top of the regular demand.
21 Ms. Palmer asked if the ACSA did things differently. Mr. Lynn replied that
22 they are more so looking at the size of the pipe. He stated that looping is a
23 big benefit to ensure that the pipe size does not have to be too large due to
24 multiple feeds.

25 Ms. Palmer asked what RWSA knows about data centers and
26 demand per square foot. Ms. Whitaker replied that it is a mystery that is
27 challenging to get an answer for. She stated that what they do know is that
28 the County is looking at their code to require recirculation systems, so air-
29 cooled or power-cooled instead of water-cooled systems. She stated that in
30 terms of data centers, they are looking at the lower end of water consumption
31 rather than the higher end. She mentioned that there was a study that was

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1 published two years ago that looked at all of the data centers in Virginia at
2 that time and their water usage. She noted that with the non-water-cooled
3 plants, the usage was very similar to a hotel or large office building. She
4 added that there are areas that have water-cooled systems that have been
5 highly problematic for those communities.

6 Ms. Palmer stated that when she hears the comparison of the data
7 center usage to that of a hotel, it is a bit confusing. She stated that it seems
8 a 500,000 square foot office building would use a lot more water. Ms.
9 Whitaker stated that she has some numbers but does not remember them
10 off the top of her head. She stated that she thinks they are somewhere in the
11 0.1-0.3 MGD range. Mr. Lunsford added, for context, that when State Farm
12 was fully operational and staffed, the usage was between 1-1.5 million
13 gallons per month. Ms. Palmer asked what type of cooling system they used.
14 Mr. Lunsford replied that they had water-operated coolers. He noted that for
15 that facility, the usage was not a substantial amount. Ms. Palmer stated that
16 she remembers when UVA changed their cooling system, it made a huge
17 difference in the amount of water that was used.

18 Mr. Roberts stated that there is a large data center in Louisa, Virginia.
19 Ms. Whitaker stated that she believes it is water-cooled. Mr. Roberts stated
20 that perhaps RWSA could get some information from Louisa about the usage
21 of the data center there. Ms. Swanson stated that her next question was
22 going to be about whether they are able to share information within the utility
23 sector about how they are seeing these things play out. Ms. Whitaker stated
24 that they have started conversations, specifically with Henrico County and
25 how they have brought some of their data centers under individual service
26 contracts which allows them to be specific about how much water can be
27 used and when.

28 Ms. Palmer stated that if we see a large data center, it will most likely
29 be in the northern area. She stated that she thinks State Farm was the only
30 other area they were looking at. Mr. Lynn stated that there was a third area,
31 but North Fork and State Farm were the more likely locations. Mr. Mawyer

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1 stated that he believes the third area was the 29 South area at the 64
2 interchange. Ms. Whitaker stated that they were looking at it but ultimately
3 decided against it.
4

5 7. Customer Information System Update

6 Mr. Lunsford stated that this presentation (Attached as Pages
7 _____) is an update for the Board on where the ACSA began with the
8 Customer Information System (CIS) procurement, where they are now, and
9 where they hope to be by the end of the calendar year.

10 Mr. Lunsford stated that the current system in place is essentially
11 only for billing and does not have other components that help employees
12 outside of customer service perform their job duties. He stated that it has
13 been in place for 30+ years and there have been transformative
14 technological advances during that time that they have not been able to
15 leverage. He stated that customer expectations over the last 30 years have
16 changed as well, and they need to evaluate a new solution. He added that
17 the current system also does not integrate well with some of the ACSA's
18 newly deployed software such as Cityworks.

19 Mr. Lunsford stated that this project directly advances all four of the
20 ACSA's strategic pillars outlined in the Strategic Plan – data optimization,
21 business resilience, customer experience, and employee experience. He
22 stated that they outlined their requirements in the RFP, as well as project
23 success measures and guiding principles. He noted that what they really
24 wanted to emphasize first and foremost was improvement in the customer
25 experience. He stated that they want customers to be able to interact with
26 the ACSA in a way that suits them. He stated that the new solution needs
27 to be easy, intuitive, and provide information in a way that the customers
28 find useful. He mentioned that they utilized feedback from the formal
29 customer survey conducted a few years ago, as well as feedback they
30 receive on a daily basis. He added that they also requested in the RFP that
31 proposers illustrate how their solution creates efficiencies and is

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1 configurable for future needs. He stated that they expect a safe and secure
2 system that protects all the information and also enhances engagement.

3 Mr. Lunsford stated that early in the evaluation process, the ACSA
4 procured consulting services through a competitive process to ensure they
5 had the expertise to go through things the right way, the first time. He stated
6 that during that process, they identified a diverse group of ACSA employees
7 with different job roles, customer interaction types, and information needs
8 to develop a core team, ensuring they capture all of the needs they will need
9 the CIS system to address. He stated that the core team represents all
10 departments, from administration and customer service to IT and field
11 operations.

12 Mr. Lunsford stated that their consultant, Validos, worked with that
13 team to understand what we are currently doing and determine what is
14 difficult or inefficient, and where we can do better. He stated that this
15 information was included in the RFP as well. He noted that the ACSA is
16 incredibly grateful with the contribution from the core team, as some are
17 spending time each week contributing to the process as they procure a new
18 solution.

19 Mr. Lunsford stated that they received eight proposals from the RFP,
20 and the core group scored those proposals in a detailed manner with the
21 assistance of Validos. He stated that there was consensus that there were
22 three proposals that were better than the rest. He mentioned that from those
23 three, they have scheduled three days of onsite demonstrations for each
24 proposer, for a total of nine days of demonstrations. He mentioned that
25 different groups of ACSA employees will participate in those
26 demonstrations to see how the solution is going to work based on a script
27 that has been provided to them. He noted that those are scheduled to begin
28 on September 24th and will conclude on October 3rd. He stated that there
29 is a group that is doing reference checking, and they had their first reference
30 check meeting with a customer of one of the vendors yesterday which went
31 well.

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1 Mr. Lunsford stated that once the on-site demonstrations are
2 complete, they will score those similar to the RFPs and select the highest-
3 rated. He stated that they will then start development of a Statement of Work
4 and work through the contracting. He stated that they are hopeful to finish
5 this process by the end of the calendar year and begin the project, in
6 earnest, this coming January. He noted that the team is engaged and
7 excited about what they have seen so far. He stated that he fully expects a
8 customer portal that shows individual customer information and a much
9 simpler payment process.

10 Mr. Roberts asked if the financial system will handle all of the
11 financial information of the ACSA, or just the customer billing portion. Mr.
12 Lunsford stated that it will handle all of the billing and will feed the financial
13 system with that information. He stated that the financials will mirror the CIS
14 system.

15 Mr. Armstrong noted for the minutes that, due to the current political
16 climate, every time Mr. Lunsford said “diverse,” it would be changed to
17 varied.

18 19 8. Items Not on the Agenda

20 Mr. Roberts stated that he heard RWSA talk about directional boring.
21 He asked if there was any way the ACSA could use directional boring for
22 the Airport Trunk Sewer Upgrade project, to bore under the Willow Oak tree
23 on the Huyghe’s property . He stated that when he had his septic line put
24 in, they bored between two large trees. He stated that it would be nice if
25 they could bore under that tree out there because it is pretty important to
26 the homeowners. Mr. Lynn stated that it is not an option in this case. He
27 stated that they have to make directional changes to navigate the
28 topography in those yards so directional drilling would not be an option. He
29 stated that they did respond to Supervisor Mallek, and copied the ACSA
30 board, about the tree that Mr. Roberts was referencing. He stated that she
31 acknowledged receipt and indicated that she passed it on to the rest of the

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1 Albemarle County Board of Supervisors, but he has not heard anything
2 since. He noted that other property owners, Drs. Weiss, have reached out
3 to Delegate Laufer to push back on the ACSA's project, so Keane Rucker,
4 ACSA Senior Civil Engineer, is preparing a response to her later today. He
5 stated that they have acquired 20 of the 24 easements. He stated that of
6 the four left, there are two they believe they can get but the other two may
7 end up in front of the Board for condemnation. Mr. Roberts asked if there
8 was no possible way to spare the tree. Mr. Lynn stated that they gave the
9 homeowner an option to possibly spare it, but they cannot guarantee it. He
10 noted that they have had two arborists look at it and moving the alignment
11 will still negatively impact the tree.

12 13 9. Adjourn

14 ***There being no further business, Ms. Palmer moved that the***
15 ***meeting be adjourned, seconded by Ms. Swanson. All members voted***
16 ***aye.***

17
18

Quin Lunsford, Secretary-Treasurer