RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
August 28, 2018

A regular meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Tuesday, August 28, 2018 at 2:15 p.m. in the 2nd floor conference room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

Board Members Present: Gary O’Connell, Lauren Hildebrand, Mike Murphy, Mike Gaffney, Jeff Richardson, Liz Palmer, and Kathy Galvin.

Board Members Absent: None.

Staff Present: Mark Brownlee, Phil McKalips, Katie McIwee, Bill Mawyer, David Rhodes, Lonnie Wood, Michelle Simpson, Jennifer Whitaker, Scott Schiller, Liz Coleman, Andrea Terry, Dave Tungate, Tom Castillo, Victoria Fort, and Tom Freeman.

Also Present: Mr. Kurt Krueger, RWSA counsel, members of the public and media representatives.

1. CALL TO ORDER

Mr. Gaffney called the regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:34 p.m.

a. Welcome to new Board member, Mike Murphy, Interim City Manager

Mr. Gaffney welcomed Mr. Mike Murphy as a new Board member.

b. Nominations and Election of Board Vice-Chair

Ms. Galvin moved to elect Mr. Murphy to serve as Vice-Chair of the RWSA. Dr. Palmer seconded the motion, which passed unanimously (7-0).

2. MINUTES OF PREVIOUS BOARD MEETINGS

a. Minutes of Regular Board Meeting on July 24, 2018

There were no changes to the minutes presented.
Dr. Palmer moved to approve the RWSA Board meeting minutes of July 24, 2018. Ms. Galvin seconded the motion, which passed unanimously (7-0).

3. RECOGNITION
There were no recognitions presented.

4. EXECUTIVE DIRECTOR'S REPORT

Mr. Mawyer reported that RWSA’s laboratory was recently inspected by the Virginia Department of General Services and the lab was recertified and qualified for sampling of drinking water, and he recognized Lab Manager Dr. Bill Morris and his staff -- Patricia Defibaugh and Deborah Hoyt.

Mr. Mawyer reported that the RWSA had received a grant for $32,800 for the Beaver Creek Dam project from the Virginia Department of Conservation and Recreation, and he thanked Senior Engineer Victoria Fort for preparing and submitting the application. He added that Rivanna would pursue other federal funding for the project as each phase moved forward -- preliminary engineering, final engineering and construction.

Mr. Mawyer stated that Ms. Whitaker had given a presentation on the South Fork Rivanna dam gate repairs, and if the Board concurred, he recommended that the repairs be scheduled in the FY20 CIP so they could take place after July 1, 2019. He noted that it would be included in the FY20 budget and if the Board wanted to move it or delay it, they could during budget discussions.

Mr. Mawyer presented a slide of the Red Hill water system, which was located on Route 29 at Red Hill. He explained that the local gas station had a leaking underground storage tank in the early 2000s, which challenged the wells on Red Hill Road and at the elementary school there. He stated that DEQ has a fund to address leaking tanks, and they funded installation of a public water system. He explained that a well was developed, and he noted the location of the pump house and pump station. Mr. Mawyer referenced a picture of the chemical building, noting that the well was outside the building with the storage tank and emergency power generator.

He stated that the Albemarle County Service Authority currently operated the facility, although the RWSA owned it. Mr. Mawyer stated that the system was located along Route 29 and down Red Hill Road, serving nine houses and Red Hill Elementary. He stated that some of the chemical treatment processes there needed to be added and updated, and staff felt it was Rivanna’s area of expertise so he and Mr. O'Connell had discussed having the RWSA be operator of that system, with the ACSA continuing to have those customers.

Dr. Palmer asked if a person would have to be out there, and if so, how often.

Mr. Mawyer responded that it would need to be visited every day, but a staff person would not need to stay there. He stated that there would be electronic monitoring of the chemical systems to know whether the chemicals were going in as they should, and Mr. Tungate would have an
operator that would visit every day for a brief time. He noted that the Red Hill system would be
the fourth water system, with the Urban, Crozet, and Scottsville systems.

Dr. Palmer asked if DEQ still monitored this site and if the plume was getting any bigger.

Mr. O'Connell replied that there had been a number of tests on the well itself and there was no
contamination known. He stated that the plumes he had seen were 10-12 years old, and those
houses were originally given filters by DEQ, then a decision was made to have the community
well system.

Dr. Palmer noted that this was a long 20-year history of DEQ not necessarily communicating
well with the Health Department. She stated that she had asked about the plume because she
wondered about future additions, as that had been discussed at earlier points.

Mr. O'Connell responded that he was not aware of anyone else having issues, and the school was
part of the project when the well was designed and planned.

Mr. Mawyer stated that it would be Rivanna's intent to add fluoride to the system, as it currently
did not get fluoridated. He stated that they were discussing it with Schools and had not yet
communicate with the community, adding that all of the other systems had fluoride added.

Mr. Mawyer stated that Water Resources Manager, Andrea Terry, had presented to the ACSA
Board about the reservoir water quality program. He stated that he had spoken in North Garden
with the Cove Garden Ruritan Club about the water supply plan and solid waste facilities, and
there was a meeting scheduled with the Beaver Creek Sculling Club and Western Albemarle
Rowing Club. Mr. Mawyer added that he, Mr. O'Connell, Lauren Hildebrand, and Alison Faroli
of the Emergency Operations Center, along with ACSA, City, and RWSA Staff had a post-storm
debrief about the May 30th storm and things that went well, as well as needed areas of
improvement.

Mr. Mawyer reported that he and Ms. Hildebrand had met with Chris Engel regarding City of
Charlottesville’s Economic Development Authority, and he would also meet with the Albemarle
County Economic Development Authority in September.

Mr. Mawyer stated that there had been a project to get communication lines to facilities in Sugar
Hollow, and that was a joint effort with the community, which also wanted to hook into
communication lines -- and that project had been substantially and successfully completed.

5. ITEMS FROM THE PUBLIC

Mr. Richard Collins addressed the Board, stating that he had lived in Charlottesville since 1971
and had followed the planning process for the urban water supply. He stated that he supported
the pooled single financial plan with the Virginia Resources Authority, with one exception: if
they removed the Birdwood section for the pump-back, it could be done easily and without great
expense. Mr. Collins stated that the question was that Mr. O'Connell had indicated that the
ACSA Board gave him direction on the issue of timing, and that was what he considered this to
be. He stated that it was shovel-ready, and he supported the financial plan but wanted the
Birdwood aspect removed. He stated that he also felt that it should not be renamed the “urban
finished water supply plan” without that funding -- and the word “finished” should be removed.
He stated that it would be advisable to have the bathymetric studies completed before they
committed to something so physically and financially significant. Mr. Collins welcomed Mr.
Murphy. He stated that it was important to have the City hold a convening meeting to be updated
on these aspects of the plan, so that Council would have a chance to specify more clearly what
the plan would do, the issue of timing, and how it would be bonded.

6. RESPONSES TO PUBLIC COMMENTS

Mr. Mawyer stated that Rivanna had a presentation on the Birdwood waterline to discuss the
timing and planning, as well as the funding, and Mr. Wood could include the project in the VRA
bond borrowing at the Board’s discretion.

Dr. Palmer asked him to comment on the word “finished.”

Mr. Mawyer explained that finished water was treated water, and treated water was provided to
customers versus raw water such as what the Ragged Mountain pipeline conveyed -- but it did all
tie together.

Dr. Palmer stated the concern seems to be related to “finished” meaning that the plan was
finished.

7. CONSENT AGENDA

a. Staff Report on Finance

b. Staff Report on Ongoing Projects

c. Staff Report on Operations

d. Capital Improvement Plan Amendment – Rt. 29 N Water Pump Station Site Acquisition
Project

e. Capital Improvement Plan Amendment – Scottsville Water Treatment Plant Finished Water
Metering Improvements

Dr. Palmer moved to approve the Consent Agenda as presented. Ms. Galvin seconded the
motion, which passed unanimously (7-0).

8. OTHER BUSINESS

The Board entered into a joint meeting with the Rivanna Solid Waste Authority Board at
2:50 p.m.
a. Presentation of Quarterly Strategic Plan Update; Katie McIlwee, Executive Coordinator and Communications Manager

Ms. McIlwee reminded the Board that under the Strategic Plan there were six goal teams and the only change was that Scott Schiller was now the goal champion for the Infrastructure and Master Planning Goal Team.

She stated that when she presented to the Board in April, they had just developed how they would move forward and implement the Strategic Plan. She stated that within the six goals, there were a total of 21 strategies, which had been narrowed down to 12 priority strategies with the help of Rafteris consulting -- and from those they developed 78 total tactics. Ms. McIlwee stated that the tactics were how they would accomplish strategies, which in turn were how they would achieve goals. She presented the top strategies that each goal team selected, and they were also in the strategic plan update handouts provided to the Board.

Ms. McIlwee reported that Rivanna was 36% complete with its plan and she noted the completed items versus the goal items. She stated that the Infrastructure Team was ahead of schedule, and the other Goal Teams were slightly behind or right on schedule.

Ms. McIlwee reported that new pay scales were implemented on July 1 for Workforce Development; the Operational Optimization group completed an Authority-wide survey; the Communications team started to develop a records management policy and an employee portal is underway to increase internal communication. She stated that Environmental Stewardship team has created a standing employee environmental committee; Solid Waste Services has defined existing services and practices and is continuing to develop a list of organizations and POCs to partner with; and Infrastructure Master Planning has developed and advertised an asset management RFP, as well as identified needs for additional master plans.

Ms. McIlwee stated that next steps for Workforce include finalizing the master staffing plan; now that the new safety manager is in place, Operational Optimization, will begin to develop and implement some of their findings; Communication and Collaboration needs to complete and implement the records management plan and complete the employee portal; Environmental Stewardship will continue to coordination with other goal teams; Solid Waste Services will continue to work towards completing the master plan and communicate those services to the public; and Infrastructure and Master Planning will begin to finalize the asset management plan, put a committee together, and work with the consultant to kick off that project.

Mr. Gaffney commented that it was nice to see the progress here, as a strategic plan will often sit on a shelf.

Ms. McIlwee responded that the teams continue to meet monthly, and as they get further into their implementation, the updates will become more robust as measurable metrics begin to develop; she stated that there were measures and metrics developed in the strategic plan framework that will be related to tasks and accomplishments.

Dr. Palmer asked about the “green roadshows” mentioned in the item related to Environmental Stewardship.
Ms. Terry explained that she and Ms. McIlwee already have a roadshow ready that they take to events such as Imagine a Day Without Water, and the City’s Fix-a-Leak 5K, which is mostly conservation oriented. She stated that they would also like to upgrade their display to have more information that would allow them to participate in other community events.

b. Presentation of FY 2020 – 2025 Six-Year Staffing Plan; Lonnie Wood, Director of Administration & Finance

Mr. Wood stated that one of the strategies under the Strategic Plan’s Workforce Development goal was to put together a multi-year staffing plan, similar to a CIP that projects out several years. He stated that a staffing plan was meant to be a living document just like the CIP – looked at every year, reviewed, and revised. Mr. Wood stated that as they worked through projects in the CIP, there would be changes in technology, changes in treatment, new facilities, regulatory changes and demands, and customer expectations.

Mr. Wood stated that the Red Hill Water System would come online before the fiscal year began, and a Water Operator was needed for part of that effort – a half FTE would be needed for a Water Operator to visit that site seven days a week, varying depending on maintenance needs. He stated that the rest of the time, the water operator would be floating to non-urban plants, as they have only one operator per shift. Mr. Wood stated that sometimes there was a maintenance item, operational item, or safety item related to both of those where it was good to have two operators onsite to do a major maintenance task. He noted that it was currently being handled by managers, assistant managers, and supervisors.

Mr. Wood stated that the Construction Inspector represented a change in how Rivanna was doing its construction inspection program, and Ms. Whitaker had presented to the Board about a year earlier on the cost savings of bringing this program in house. He stated that previously, they completed through hired consultant engineers, which can be expensive. Mr. Wood noted that the second Construction Inspector was planned for 2021.

Mr. Wood reported that for Solid Waste in 2020, the attendant at McIntire was a new full-time position but would replace two part-time positions, so it was a net zero of FTEs and would be more cost for benefits. He stated that it was a challenge to staff that center with part-time employees, and consistency was an issue – so it would be better to have a full-time person at McIntire. He noted that if the Ivy recycling plans worked out, that would require an additional full-time attendant, and the Paper Sort has had volumes increase over the years primarily due to cardboard coming in. He stated that if the site came on board, there might be more material coming in that way. Mr. Wood stated that there were currently 0.25 FTEs at the site, so there was a net gain of 0.75, and they were using an operator at Ivy to fill in the gaps.

Mr. Wood explained that they were trying to get the Lab Technician in for this year, and there is a reservoir plan and sampling that has been underway for the last several years, which was new to the lab department and had put an unprecedented demand on them for laboratory analysis. He stated the rest of the positions were a combination of IT backlog needs, with the Enhanced
Nutrient Removal (ENR) system put in for wastewater treatment about 10 years ago, which increased the needs at this plant by about 500 instruments with thousands of data entry points – so it was time to maintain and replace those. Mr. Wood noted that every time they added something like GAC, it increased networking and IT needs to the infrastructure, as well as administration that had not been enhanced for 15-20 years.

He stated the volume of transactions and complications had increased over that time, and Rivanna was also now handling all of its enrollment for four different healthcare systems, previously managed by the City of Charlottesville. He noted that VRS also used to be simple and was now a hybrid system, and short-term disability also had its own sick leave policy, all requiring administrative attention.

Mr. Wood emphasized that this was just a plan and did not require action, but was just an introduction for the next budget cycle.

Mr. Gaffney noted that some of these things would save money, such as the two construction inspectors.

Mr. Wood confirmed this.

Mr. O'Connell asked why the Lab Technician positions were bumped out to 2021 since they were a current need.

Mr. Mawyer stated that they had been struggling with water quality results and were concerned that the myriad of ways they collected samples was contributing to that, but they have been able to align that over the last six months and had not had many positive total coliform samples. He stated they had also increased chlorine in some systems to help combat any irregular testing, and Dr. Morris from the lab anticipated the number of samples collected to accommodate the growing population, to show the health department that all areas were covered. Mr. Mawyer stated that there was one more year before they needed that position.

Mr. Henry asked if they did the reservoir testing onsite.

Ms. Terry clarified that they did some lab analysis onsite but also sent out algae samples for analysis.

Mr. Henry asked if there was a way to leverage to Rivanna resources for parks and recreation testing, which was currently being sent out.

Mr. Mawyer responded that it might be possible to take on that testing.

Ms. Terry stated they did the sampling themselves and did a lot of the reservoir testing in house, sending out two parameters (algae counts and cyanotoxins), but she had been discussing this with the County and staff – but not in terms of what Mr. Henry had suggested.
Mr. Mawyer stated that staff would bring to the Board next month a construction contract recommendation to upgrade the Crozet Water Treatment Plant, and next year they would have a recommendation to start construction on a project for South Rivanna and Observatory all in one contract. He noted that they reshuffled the previous year’s plan to get the construction inspectors in an adjusted time delivery capacity so they would be available when needed.

Mr. O’Connell asked if this was the big staffing change since the earlier plan.

Mr. Mawyer responded that it was, noting that they had reduced some of the water operators, with the Board granting three operators over the last two years, and now one more was needed with the next need expected in 2024. He stated that the alliance with the upgrades to the water treatment plants might require another operator, with a greater capacity and more instruments to manage.

The RSWA Board adjourned its meeting and left the joint meeting at 3:07 p.m.

c. Presentation and Request for Capital Improvement Plan Amendment: Water Line Project on the Birdwood Property

Mr. Mawyer reported that this project tied in with the community water supply plan that was completed in 2002-2012, and the plan stated that in order to provide a 50-year water supply for the community, a waterline would need to be built from the South Rivanna Reservoir to the Ragged Mountain Reservoir. He stated that this presentation would involve just the section that crossed the edge of the Birdwood Golf Course property.

Mr. Mawyer explained that in the 2006 permit application submitted to the Army Corps of Engineers and the DEQ, it was envisioned that this pipeline would be somewhere on University Foundation property at the golf course. He stated that the original plan was for the pipeline to go around the western edge of the course, but in recent years, staff had determined that a better alignment would be the eastern edge of the course adjacent to the Bellair subdivision.

He stated that they renewed discussions with the University Foundation in August 2017, with Rivanna staff meeting with the Foundation staff involved with planning the reconstruction of the golf course, and there have been many meetings with UVA Foundation regarding how Rivanna could coordinate with them and put a pipe in before remodeling and reconstructing the golf course. Mr. Mawyer stated that the scope of the work was to put in just over a mile of 36-inch ductile iron pipe, which would be raw water pipe, and this would connect the two reservoirs but was only one out of nine total miles of pipeline required to connect the reservoirs. He noted that the UVA Foundation plans to start in October 2018 and finish between May and October of 2019, with Rivanna trying to get on the same schedule with the pipeline.

Mr. Mawyer stated that Rivanna had received several emails in the last 24 hours indicating that this was a new tact by staff to move the project forward, but the minutes of RWSA Board meetings show that on December 19, 2017, they talked about the Birdwood section of the pipeline. He stated that Dr. Palmer mentioned the pipeline from South Fork to Ragged Mountain and its route across Birdwood, with UVA coming to the County and stating they had been doing
work on their master plan, and she had commented that she hoped Rivanna staff would work well with the University.

Mr. Mawyer stated that in March 2018, Rivanna staff reported to the Board that they had met with staff of the UVA Foundation to coordinate installation of this section of the pipeline and were working on the design because at the time, the UVA schedule to rework the golf course was July 2018 through April 2019. He stated that in April, he, Mr. Gaffney, and other staff had met with Tim Rose, head of the UVA Foundation, to discuss issues of coordinating the easement and logistics, which was reported in the April 24, 2018 RWSA minutes. He stated that also in April 2018, Rivanna requested and the Board approved Engineering Services to do final construction design plans for this section of the waterline, with construction to start in July 2018.

Mr. O'Connell asked what date that was approved.

Mr. Mawyer responded that it was April 24, 2018 and included approval of the design contract for final design. He stated that the June 26, 2018 minutes reflect that there was a report of RWSA meeting with the Foundation and coordinating the installation of the pipeline with their projects. He added that he had mentioned in July that there was no plan for the entire pipeline to be shovel-ready, but he should have mentioned this particular section of the pipeline.

Mr. Mawyer stated that the project budget was $7 million to complete the construction, easement acquisition, and administrative costs to pursue the project. He stated that the reason they wanted to do this now is because the UVA Foundation was reconstructing the golf course and it would be a decision to put the Rivanna pipeline in ahead of their work. Mr. Mawyer stated that this would reduce construction costs versus doing the project through a finished golf course. He added that Dominion Power was also running a powerline in the same area Rivanna wanted to run the pipe, so they would be teaming up for land disturbance activities in that area and avoiding some costs and environmental impacts. Mr. Mawyer stated that if they did that project in the future, Rivanna would probably have to ask Birdwood to close at least a section of the golf course while they did their work.

Mr. Mawyer stated that it had been asked whether it would be bad for the pipe to be in the ground for a while prior to using it, and the answer was no. He stated they had checked with the Ductile Iron Pipe Research Association, and their representatives commented that it would not be detrimental to the pipe and they have a protective polyethylene they can wrap it in, demonstrated by other similar projects wherein pipes were not put in service for years.

Mr. Mawyer stated that the pipeline would help increase safe yield to the system and also supported community values of redundancy and resiliency and environmental protection, with environmental improvement of the South Rivanna Reservoir and Moormans River when the project is finished. He noted that this section represented just over 10% of the pipeline, and Rivanna was requesting the Board’s consideration so they could coordinate with UVA Foundation.

Ms. Michelle Simpson provided a map and noted the location of Canterbury Road and the entrance to Bellair subdivision. She pointed out the RWSA’s proposed alignment and stated it
would run along the edge of the golf course up the eastern boundary and up to the point they can patch into it and cross Route 250 in the vicinity of the John Deere store. Ms. Simpson showed the location of the future golf course plan and pointed out specific elements, noting the four proposed holes for construction, which are in the boundaries of some of the tee boxes.

Ms. Simpson mentioned that Dominion Power’s project involved an electric line behind all of the homes in Canterbury and had overhead electric on poles along Birdwood’s and on Route 250. She stated that Dominion was planning to underground all of that while the golf course was closed, along with Rivanna.

Ms. Simpson reported that there were multiple project challenges, the first being access to the site. She noted that this was a very linear project, which typically involves access at each end and the whole easement really being the access road. She stated that they were looking at having an access off of Route 250 at one end of the project, with the other access being down at the end of Canterbury, going into a wooded section that is a UVA Foundation parcel that Rivanna would use for a staging area and entrance road from that end -- so construction traffic could enter at one end or the other. She added that Dominion would be using the same access points, and they would both be working in the linear path along the edge of the golf course, and Rivanna has already begun coordinating with Dominion on sharing the easement area.

Ms. Simpson reported that there would be impacts to the adjacent neighborhood and pit blasting would be required, so outside of the normal construction nuisances such as noise and additional truck traffic and 6,000 feet of pipe to be installed, with hauling of soil and stone. She stated that a lot of the homes can see right onto the golf course, and Rivanna was also clearing some trees so that would open up views to construction to those neighbors for about a year.

Dr. Palmer pointed out that they would see that with the golf course.

Ms. Simpson agreed, stating that it was a challenge but worked well while Dominion and the golf course and Rivanna were working together simultaneously -- which caused the additional noise and traffic but got all the construction for all parties out of the way at one time instead of Rivanna coming back later and prolonging the issues for another year. She emphasized that it was definitely beneficial to coordinate and plan together, and the three parties could work together on phasing, with project meetings and coordination in advance on the timing of construction elements.

Ms. Simpson mentioned that there were a lot of creek crossings and wetlands in the area, and there were a lot of water features on the golf course that would also be coordinated, with impacts minimized as much as possible by avoiding wetlands and crossing under existing water pipes so there weren’t any impacts to streams. She noted that all of the tree clearing was expected to be in the fall and winter, which worked well with the new Birdwood schedule, so they were not interrupting the April to September Indiana bat roosting season.

Dr. Palmer commented that this was in her district and she wanted to find out a lot more about the negative impacts, so she would be following up with staff on this.
Mr. O’Connell asked if it made sense to put an authorization on the table since Ms. Galvin had to leave the meeting early.

Mr. Mawyer stated that Rivanna was waiting for the UVA Foundation to provide final approval to start the project, which the Foundation indicated they would do by the end of the month. He stated that he had spoken with the Foundation yesterday, and they had high confidence that they would have the funding to do their project so Rivanna could do its project.

Mr. Richardson asked what the neighborhood backing up to the golf course knew at this point.

Mr. Mawyer asked staff if Rivanna had talked to Bellair.

Ms. Simpson stated that they were at the public meeting.

Dr. Palmer noted that they had a regular meeting every month with Bellair to go over all the plans of projects, including the golf course, and she recognized how much coordination had been going on.

Dr. Palmer moved to approve the amendment to the FY19 CIP to add $7 million to this project and authorize installation of the waterline across the Birdwood Golf Course property. Ms. Galvin seconded the motion.

Ms. Galvin stated that the water supply plan had been in place since 2012, and staff had been keeping the Board informed of the project since spring, so this was no surprise. She commented that it was refreshing to see a coordinated project that was trying to minimize disruption to the adjacent neighborhood as much as possible. She stated that it would be myopic not to realize that issuing bonds now made more sense now than later, especially in light of interest rates, so from a standpoint of good coordination, minimizing construction, and taking advantage of an open ditch, this was the most logical approach. Ms. Galvin emphasized that this was in keeping with the water supply plan, and they would be irresponsible if they didn’t take advantage of this opportunity.

Mr. Gaffney stated that if they did not do it now, they risked the chance of having to condemn the Birdwood property -- and he wasn’t even sure that was possible, but regardless there would be a lot of ramifications.

Mr. Mawyer noted that Rivanna was working on an appraisal for the easement and should have it next week, then would talk to the UVA Foundation about acquisition of the easement.

The Board thanked staff for their work on this project.

Mr. Murphy stated that he did not have enough information but he had received a lot of material from Mr. Mawyer. He stated that he did not fully understand the history of their discussions about whether they were closer to the 10-year end of this or the 40-year end of needing the pipe. He added that he did have some concern about the June 4th City Council discussion, which endorsed moving forward 8-10 years from now, and questions regarding how this section of
6,000 feet could be approved if the easements for the other sections had not been secured, as well as how it would synch up properly on either side.

Ms. Galvin stated that her understanding of the spring vote was making sure they wouldn’t be going to the last phase, and on the advice of Rivanna, they would be going to the middle two phases -- but this was not concluding or beginning the entire project. She stated that this was still the overlapping of Schedule A and Schedule B, so it was taking advantage of an opportunity that would ultimately save resources in the end. She added that she did not think it was out of line with the overall intention of what Council voted for, and this was a situation in which they had a segment they could do now to get them ahead, with B scheduled in earnest. Ms. Galvin emphasized that she did not see these as mutually exclusive.

Mr. Mawyer stated that regarding connection to the ends of the pipe once they install this, the Board does have the authority to condemn if necessary, but a lot of the property is not private and when they come up Woodburn Road and Rio Road, that is public easement. He added that going behind Albemarle High School, Jack Jouett, and Greer Elementary puts this on County School Board property. He stated that Ingleside farm would be private, but then they cut across and go in the public right of way through Colthurst Drive, then back on UVA Foundation property with Birdwood. Mr. Mawyer emphasized that there were only a few private property owners, and it was hoped that Rivanna could deal with them amenable -- but ultimately the Board had the authority to condemn if necessary.

Mr. O’Connell noted that from the ACSA perspective, their Board had recommended Option B, which was fairly close in terms of capital project timing. He stated they had to resolve that period of 2027 or 2032, but they were pretty close together on that part of it.

Ms. Galvin responded that Council had approved B or C -- not C only -- and the project had already essentially started. She stated that the coordination with UVA and Dominion only made sense and would be imprudent for them not take advantage of that situation. She stated that it wasn’t completing the project ahead of schedule.

The motion passed 5-0-1, with Mr. Murphy abstaining.

d. Presentation and Request for Capital Improvement Plan Amendment: Urban Water Supply Program Update
i. Work Authorization: Urban Water Demand & Safe Yield Study: Hazen & Sawyer Engineers
ii. Work Authorization: Urban Water Infrastructure Master Plan; Baker Engineering

Mr. Mawyer reported that when talking about the urban water supply, it included an area with all of Charlottesville and some of the developed areas of the County such as Glenmore, Forest Lakes, Ivy, and some of the southside. He stated that Ragged Mountain Reservoir supplied water to the Observatory Treatment Plant and received its water from the Sugar Hollow Reservoir through a pipeline all the way to Ragged Mountain. Mr. Mawyer stated that the South Rivanna Treatment Plant served by the South Rivanna Reservoir, and collectively most of the water in the urban system came from those two plants and those series of three reservoirs.
Mr. Mawyer stated that RWSA was currently doing task one, and he noted that safe yield was the amount of water that could safely be removed from reservoirs during a drought of record without draining the reservoirs. He stated that they would also discuss the bathymetric studies and two engineering tasks to calculate future water demand or estimated and safe yield, as well as the finished (treated) water master plan -- and they would discuss with DEQ the withdrawal permit that renewed in 2023.

Mr. Mawyer explained that Rivanna looked at several alternatives related to the community water supply plan, specifically the South Rivanna to Ragged Mountain Reservoir waterline. He stated that they looked at four alternatives and can report from Hydrologic’s work that currently there was about 16.4 million gallons per day safe yield for the community, which used about 9.5 million gallons per day, or just under 60% using the safe yield available. Mr. Mawyer stated the question was raised about how much the waterline from Rivanna to Ragged Mountain reservoirs would add in terms of safe yield, and the estimate was about 3.1 million gallons per day. He stated that similarly, if they were going to add 12 feet of water in Ragged Mountain Reservoir as stipulated in the community water supply plan -- but without the pipeline to provide it -- that would add about 2.6 MGD. Mr. Mawyer stated that both options would bring a net of about 5 MGD in additional safe yield.

Mr. O’Connell asked what safe yield meant to the community.

Mr. Mawyer responded that it means how much drinking water is available every day without draining the water supply, even in a drought of record -- which was 18 months from mid-June 2001 until November of 2002. He stated that during that period, weather data is taken and forecasted forward to assess safe yield relative to the water available in three reservoirs: the South Rivanna Reservoir, which has about 900 million gallons; Ragged Mountain, which is 1.5 billion gallons; and Sugar Hollow, which has just under 400 million gallons. Mr. Mawyer stated that they look at how that water can refill during a drought of record, and how long reservoirs can withstand a demand of 8-10 MGD to supply the community. He stated that this was currently 16 MGD, even during the drought of record.

Dr. Palmer asked for confirmation that this took into consideration the interim period in the permit that also took into consideration all the releases as specified by DEQ.

Mr. Mawyer confirmed this.

Dr. Palmer stated she also wanted to mention that Rivanna must think about its permit with each stage they go through.

Mr. Mawyer agreed, stating that the DEQ protected the community but also protected the environment and stipulated that the community could not have all the water and must release some to the waterways. He stated that in calculating safe yield, it considered the minimum instream releases that must be made.

Dr. Palmer stated that they must stipulate how much they would provide for the rivers as well as the people, and that balance was a core issue in the development of the water supply plan.
Mr. Mawyer stated that Rivanna had started a bathymetric study of the South Rivanna and
Ragged Mountain reservoirs, as required by the Ragged Mountain Agreement to have an update
of South Rivanna beginning in 2020 and taking place every 10 years after to assess how much
safe yield was in the urban water supply system. He stated that Draper Aden was in the process
of measuring how much water was in the South Rivanna and Ragged Mountain reservoirs, and
Sugar Hollow had been surveyed in 2017 so there would be data available from all three of the
urban reservoirs.

Dr. Palmer stated that this was happening now so it would take into consideration the previous
summer with a lot of rain and flooding, so it was a question of timing, and she asked if it was
heavier in rains and storms that brought more sediment.

Mr. Mawyer responded that they would not necessarily know whether a heavy rain washed more
out or brought more into a reservoir, but the bathymetric study would help inform them. He
stated that the South Rivanna Reservoir was last surveyed in 2009 and provided the volume data
used today, but in 2006 when Gannett Fleming did the joint permit application, they indicated
that about 15 million gallons a year in storage could be lost from the South Rivanna Reservoir.
Mr. Mawyer stated that nine years later, the process would give a check on how much volume
remained and how much silt and sediment had washed in.

He stated that the bathymetric study was looking at the topography under the water, with volume
calculated and the stage storage curve that showed water volume and access. Mr. Mawyer stated
that when the Beaver Creek Reservoir was full, It had 499 million gallons, and in looking at all
the normal reservoirs and establishing water levels, they went into the curves and examined axis
points to determine the volume at that level. He emphasized that it was not a uniform shape on
the bottom of the reservoir, so the bathymetric study measured the topography and surveyed the
bottom of the reservoir, as well as enabled calculation of how much volume is available at each
increment as the reservoir water level goes down.

Mr. Mawyer explained that the survey used an aerial survey with a system called Lidar and a
sonar water survey done on boats. He stated that on Ragged Mountain, they would measure the
bathymetry if the 12 feet of additional water is added and how much volume they would have, so
they were looking at the land survey as well as underwater. Mr. Mawyer stated the data on
reservoir volume should be available by December, which was about half the equation, so they
needed to make sure they had enough water to meet the demand.

Ms. Whitaker stated that the third task contemplated water demand and safe yield, and with the
2012 Agreement on water supply, one of the things the community decided to do was to look at
demand on a routine interval and would go back and reassess demand patterns, growth,
development patterns, employment patterns, and water use patterns. She stated that Rivanna
would embark on a detailed water demand study, which was based off of the AECOM study
from 2011, a community-wide study to evaluate growth patterns and water demands, as well as
future projections. Ms. Whitaker commented that this was a fairly comprehensive process and
the plan was to continue that, but the intent was to also take it one step further.
Ms. Whitaker stated that the RWSA had recently completed and reported an update of Crozet projections out to the Crozet community for the drinking water infrastructure master plan, working with Albemarle County Community Development and businesses to analyze what was happening in that area. She stated that they were looking at how water was used and what they could expect to see over the 50-year planning horizon. Ms. Whitaker pointed out that water usage over the last 10 years in this country had changed dramatically, and she wouldn’t argue whether it was good or bad but would say that it had changed. She noted that people who did this type of work were looking at the changing patterns and observations about them, regardless of the root causes, and they needed to project the true need going forward.

Ms. Whitaker reported that the other item underway was the safe yield analysis based on the new bathymetry, and evaluation of a water system included looking at demands, safe yield, the intersection of those elements, and assurance that there would not be a deficit. She stated that in this case they were looking at the demand patterns going forward, and they would look at bathymetry work and updated modeling work, then look at safe yield compared to demands to help inform future projects. She added that this work was anticipated to be done by June 2019.

Ms. Whitaker stated that regarding task four, the finished water master plan was tied in because it was part of the spectrum of water supply master planning discussed in their strategic framework for the strategic plan, but it was not on the raw water or treatment side and was geared toward what was needed for storage tanks and what was needed for transmission in the system currently, and what was needed for fire flow -- as well as how to best move water throughout the system given development in the area.

Ms. Whitaker stated that the master plan was originally planned for year 2023, however questions recently about how water is moved between the two treatment plants made it clear the plan should be completed now. She stated that the ACSA, RWSA, and the City of Charlottesville all felt that it was important to do the master plan first and pause on some of the other projects, then move forward with needed improvements to the distribution system. She stated that work was anticipated to be done by November 2019, with the fees being approximately $230K.

Ms. Whitaker reported that the last piece of the Plan included a meeting with VDEQ, with ongoing discussions happening with them. She stated that last month she presented on Rivanna’s work on the dam -- the gates and downstream work. Ms. Whitaker stated that Hydrologics had been doing analyses on the inflow calculations and how gauges were corrected, and they had come back with the conclusion that there is a better way to do this, with slight tweaks as to how to calculate inflows and get better information on what was coming into the reservoir. She stated that the question and discussion with DEQ related to the appropriate time to revisit how to calculate these inflows, with a permit renewal due in 2023 and that being the best time to go through that process, present the information, and incorporate it into the new permit renewal.

Ms. Whitaker emphasized that RWSA staff agreed that there was a better way to estimate inflow to the reservoir, and this used the Moormans and Mechums gauges in a slightly different way than what was currently done to calculate inflow -- not a dramatic impact but enough to estimate inflows. She stated that the last item related to the discharge meter for the minimum instream flows and the correlation curve created to better use that meter going forward, as well as working
with the hydrology arm of DEQ to get the permanent stream gauge put in the South Fork Rivanna River so they can calibrate the discharges coming from the reservoir and the system.

Mr. O’Connell commented that this was quite comprehensive.

Mr. Mawyer stated that they were looking at water supply in the reservoirs, water treatment by upgrading the water treatment plants, and water distribution with the finished water master plan - with all three components needing to be in place for customers to be able to get the volume and quality they expected out of their taps. He stated that staff were asking for approval of two tasks: one with Hazen and Sawyer engineers to do the urban water demand and safe yield study in an amount not to exceed $140K; and the other with Baker Engineering for the finished water master plan, not to exceed $230K.

Mr. O’Connell moved to approve authorization to contract with Hazen and Sawyer engineers to do the urban water demand safe yield study in an amount not to exceed $140K, and with Baker Engineering for the finished water master plan, not to exceed $230K. Mr. Richardson seconded the motion, which passed 6-0. Ms. Galvin had left the meeting and was not present for the vote.

e. Presentation and Request for Authorization: Series 2018 Bond Issuance; Lonnie Wood, Director of Administration & Finance

Mr. Wood reported that Rivanna had reached a point on several projects where they were having to issue debt to finance these projects, and the approved CIP in May 2018 contemplated about $96.9 million in additional debt to fund the CIP. This Bond is funding about $31 million of $96 million in addition to the $7 million for the new Birdwood pipeline project. He stated that what the Board had before them was fairly standard, and the RWSA had gone this route with VRA (Virginia Resources Authority) several times.

Mr. Wood stated there was a resolution authorizing the bond issue itself, authorizing staff and the Board’s secretary-treasurer to execute the documents at closing, scheduled sometime for November. He stated that there was also a supplemental trust agreement that was basically saying they were issuing bonds and would make them equal to all other bonds already outstanding, so they did not have special standing and assigned Bank of New York as trustee.

He stated that the last document was the VRA finance document, which basically stated VRA agreed to buy Rivanna’s bonds and become a member of a larger bond pool, and Rivanna in turn agreed to pay the debt service with certain terms and conditions. He stated all the documents had been reviewed by Mr. Krueger, bond counsel, bond counsel for the VRA, and RWSA’s financial advisors.

Mr. Wood stated that the documents were before the Board today for approval, but would change slightly as to form. He stated that the resolution itself had language indicating the amount should not exceed $41 million, and page 2 of the memo detailed what some of that was. Mr. Wood stated that the net bond proceeds needed after closing totaled $38 million, which would be deposited into a construction fund -- then they draw funds out of it as they executed the projects.
He stated they also needed to build into the bond issue an allowance for a discount bond issue, which meant they had to issue slightly more par value to get a net $38.3 million.

Mr. Wood stated that they were currently in a premium situation that allowed issuance of a smaller amount to get more money out of it, and with an election nearing, the bond market and interest rates could fluctuate significantly. He noted that there was also an item for capitalized interest, and accounting rules stated that interest during a construction period when a project was funded had to be considered part of the project cost, just like engineering fees. Mr. Wood stated that this was money to capitalize that portion of the interest payments, with the other part being issuance costs for engineering certifications, attorney’s fees, financial advisors, and underwriters. He stated that the recommendation was to have a bond issue in an amount not to exceed $41.85 million, with that number fluctuating but not exceeding that amount.

Mr. Gaffney asked what the interest rates were currently.

Mr. Wood responded that he had estimated 5% as a maximum, and that would total annual payments of about $2.75 million over 30 years.

Mr. O’Connell noted that VRA issued bigger bonds that were pooled with bigger projects.

Mr. Wood confirmed this and stated they could have 20 or 30 different localities involved in a pool, with RWSC being a small part of that pool, and in comparing doing it alone, there was a slight advantage in going for the VRA because of the backing from the Commonwealth.

Mr. Krueger commented that the VRA did this as a service to authorities, and there were a lot of authorities in the state that participated in spring and fall bond pools, which saved underwriting fees to localities.

Mr. Richardson asked if it was typical for the Authority to take on 30-year debt instead of 20-year debt.

Mr. Wood responded that they have done a combination, with wastewater projects leveraging a special lending program from the DEQ’s Water Quality Improvement Fund, which typically issued 20-year debt; and Rivanna had also done a 20-30 year bank-qualified loan recently. He mentioned that the reason these projects were recommended for 30 years was because they were anticipated to have a long asset life, and it was ideal to align them.

Dr. Palmer moved that the Board adopt the resolution authorizing the issuance and sale of the Series 2018 revenue bonds in an amount not to exceed $41.85 million; and to authorize the Director of Finance and Administration and Executive Director to take other necessary steps to fulfill the RWSC requirements of the attached Finance Agreement to properly close on or about November 14, 2018, as set forth in the resolution presented in the RWSC Board packet; and to authorize the Director of Finance and Administration to accept minor and non-substantial changes to the attached drafts of the bond documents should they be necessary to prior to closing, in consultation with the Authority’s general counsel. Ms. Hildebrand seconded the motion.
Mr. Krueger took a roll call vote: Mr. Gaffney — aye; Ms. Galvin — absent; Ms. Hildebrand — aye; Mr. Murphy — aye; Mr. O'Connell — aye; Dr. Palmer — aye; and Mr. Richardson — aye.

9. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

There were no other items presented.

10. CLOSED MEETING

There was no closed meeting held.

11. ADJOURNMENT

Mr. Richardson moved to adjourn the meeting. Dr. Palmer seconded the motion, which passed 6-0. Ms. Galvin had left the meeting and was not present for the vote.

The RWUSA Board adjourned the meeting at 4:03 p.m.

Respectfully submitted,

[Signature]

Mr. Jeff Richardson
Secretary-Treasurer