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RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
May 24, 2022

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, May 24, 2022 at 2:33 p.m. via Zoom.

Board Members Present: Mike Gaffney, Jeff Richardson, Michael Rogers, Brian Pinkston, Ann Mallek, Lauren Hildebrand, Gary O'Connell.

Board Members Absent: None

Rivanna Staff Present: Bill Mawyer, Lonnie Wood, Jennifer Whitaker, David Tungate, Deborah Anama, John Hull, Jeff Southworth, Phil McKalips, Betsy Nemeth, Andrea Bowles, Michelle Simpson, Jennifer Whitaker.

Attorney(s) Present: Carrie Stanton and Valerie Long.

1. CALL TO ORDER

Mr. Gaffney convened the May 24, 2022 regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:33 p.m.

2. STATEMENT FROM THE CHAIR

Mr. Gaffney read the following statement aloud:

"This is Mike Gaffney, Chair of the Rivanna Water and Sewer Authority.

"I would like to call the May 24, 2022 meeting of the Board of Directors to order.

"Notwithstanding any provision in our Bylaws to the contrary, as permitted under the City of Charlottesville's Continuity of Government Ordinance adopted on March 7, 2022 (Ordinance No. O-22-029), Albemarle County's Continuity of Government Ordinance adopted on April 15th, 2020, and last revised effective November 4, 2020 (Ordinance No. 20-A(16)) and Chapter 1283 of the 2020 Acts of the Virginia Assembly effective April 24, 2020, we are holding this meeting by real time electronic means with no board member physically present at a single, central location.

"All board members are participating electronically. This meeting is being held pursuant to the second resolution of the City's Continuity of Government Ordinance and Section 6 of the County's revised Continuity of Government Ordinance. All board members will identify themselves and state their physical location by electronic means during the roll call which we will hold next. I note for the record that the public has real time audio-visual access to this meeting over Zoom as provided in the lawfully posted meeting notice and real time audio access over telephone, which is also contained in the notice. The public is always invited to send questions, comments, and suggestions to the Board through Bill Mawyer, the Authority's Executive Director, at any time."

Mr. Gaffney called the roll.

Ms. Lauren Hildebrand stated she was located at 305 Fourth Street NW, Charlottesville.

Ms. Ann Mallek stated she was located at 4826 Advance Mills Road, Earlysville.

Mr. Gary O'Connell stated he was located at 1720 Yorktown Drive, Charlottesville.

Mr. Brian Pinkston stated he was located at 575 Alderman Road, Charlottesville.

Mr. Jeff Richardson stated he was located at the County Office Building, 401 McIntire Road, Charlottesville.

Mr. Michael Rogers stated he was located at City Hall, 605 Main Street, Charlottesville.

Mr. Mike Gaffney stated he was located at 3180 Dundee Road, Earlysville.

Mr. Gaffney stated the following Authority staff members were joining the meeting electronically: Bill Mawyer, Lonnie Wood, David Tungate, Betsy Nemeth, John Hull, Jeff Southworth, Andrea Bowles, Michelle Simpson, Deborah Anama, and Attorney Valerie Long of Williams Mullen.

Mr. Gaffney stated they were also joined electronically by Carrie Stanton, Counsel to the Authority.

3. MINUTES OF PREVIOUS BOARD MEETING

a. Minutes of Regular Board Meeting on April 26, 2022

Mr. Gaffney asked if there were comments or changes to the minutes before they were approved.

Ms. Stanton stated she noticed two points—on line 430 and 467—statements were attributed to herself when she believed the statements were made by either Andrea Bowles or Valerie Long.

She stated they would have to confirm to correct the minutes.

Mr. Gaffney asked what the lines were.

Ms. Stanton stated it was lines 430 and 467, with respect to the leased parcel and the Catterton Road border.

Mr. Gaffney asked if either Ms. Bowles or Ms. Long knew who made the statements.

Ms. Bowles stated she believed there was a comment made regarding the Elliott House parcel and whether it was directly adjacent to Catterton.

Mr. O'Connell moved the Board to approve the April 26, 2022 meeting minutes as

amended. The motion was seconded by Ms. Mallek and passed unanimously (7-0).

4. RECOGNITIONS

There were no recognitions.

5. EXECUTIVE DIRECTOR'S REPORT

Mr. Mawyer recognized one of the water operators, Seth Marshall, who had passed the Class III water operating license. He stated Mr. Marshall had been with the Authority for less than a year and worked at the South Rivanna WTP.

Mr. Mawyer reported that new Board member tours of the water facilities had restarted. He stated Mr. Rogers, Mr. Pinkston, Mr. Gaffney, Ms. Mallek, and Mr. O'Connell had visited the major urban water treatment plants and reservoirs. He stated Ms. Jennifer Whitaker, Director of Engineering, served as a judge for the energy and environment track of the Institute of Electrical and Electronic Engineers, which worked on sustainability for the benefit of humanity. He stated a tour was hosted for UVA students of the water treatment plants. He stated that NBC29 had a news story regarding testing wastewater for COVID-19, Mr. Tungate provided an interview, and there was good footage of the plant. He mentioned that Ms. Bowles and Ms. Anama had participated in the annual Rivanna River Festival on May 1.

Mr. Mawyer stated that he was invited by DEQ to serve on a regulatory advisory panel that would review amending the regulations and requiring every applicant for a surface water or groundwater withdrawal permit to also complete a water auditing plan and a leak detection and repair plan. He explained that a water audit plan compared how much water was produced to how much had been sold; if water was being lost, then a leak detection and repair plan was implemented. He noted that it was a new initiative.

Mr. Mawyer stated there would be a strategic plan update started soon, and the Authority had contracted again with Raftelis Consultants, who did the original strategic plan. He stated they would be in contact with the Board regarding input for the update.

Mr. Gaffney asked if there were any comments or questions.

Mr. O'Connell commented that the tours were informative.

6. ITEMS FROM THE PUBLIC

Mr. Gaffney stated that later in the meeting, there would be a public hearing on the rate schedule and operating budget. He stated that this agenda item was for anything not involving the rate schedule or operating budget, and asked if there were comments from the public.

Mr. Hull stated there was one speaker.

Ms. Dede Smith stated that she is a Charlottesville resident, and she was pleased to see the final version of the Urban Finished Water Master Plan on the agenda. She commented that parts of the plan had moved ahead despite the fact the plan was not finalized. She stated this was relevant because one of the two goals for the plan was to plan, deliver, and maintain dependable infrastructure in a financially responsible manner—which you can't do without looking at the big

picture.

Ms. Smith stated she had sent an email to the Board regarding the plan but would spend her time on Slide 4, "Water Systems Analysis," which was another way of saying water demand projections. She stated the community water plan was also based on an exaggerated prediction of future water demand, and that is no longer debatable. She stated this pattern seems to be repeating, as the Urban Finished Water Plan looked like it provided a similar projection.

Ms. Smith asked the Board to envision what would happen if those millions of dollars could be instead invested in cutting the current demand in half, which she stated could likely be done simply with toilets and washing machines. She stated it would likely happen because the western part of the country could not sustain flushing their toilets and washing their clothes with chlorinated, fluorinated drinking water. She noted that for those who grew up in a certain era, tearing up streets and laying down pipes is still considered progress—but some younger generations would not agree with the project yet and would still have to pay for it.

Mr. Gaffney asked if there were other comments from the public.

Mr. Hull stated there were no further comments.

Mr. Gaffney closed the items from the public.

7. RESPONSES TO PUBLIC COMMENTS

Mr. Mawyer stated that Ms. Smith's comments and correspondence were always appreciated. He stated Ms. Smith had often discussed the Central Water Line project and the Route 250 bypass alternative. He stated it was an alternative that was being closely examined and considered, and tentatively, there would be data to report by the next month.

8. CONSENT AGENDA

a. *Staff Report on Finance*

b. *Staff Report on Operations*

c. *Staff Report on Ongoing Projects*

d. *Staff Report on Wholesale Metering*

e. *Staff Drought Monitoring Report*

f. *Approval of the FY 2022-2023 Personnel Management Plan Update*

g. *Approval of FY 2022-2023 Pay Scale Adjustment*

h. *Award of Term Contracts for Professional Dam Engineering Services*

i. Authorization for Construction Change Order – Moores Creek Slide Gate Improvements Project

j. Update on Buck Mountain Property Management Plan

Mr. Gaffney asked if there were items any member would like to pull for comment or discussion.

Ms. Mallek stated she believed the security enhancements and fences related to Moores Creek were on the Consent Agenda. She asked about the valves that irrigation trucks used as they pulled up to fill up with water, noting that this was a concern to the citizens. She stated a one-way valve replacement was a minimum protection for the water facilities, and she would like that to be discussed at a future date. She stated she had a question regarding wholesale meters and asked if the County had invested in the infrastructure so that it would have access to 11.99 million gallons per day—as they currently used just 4.5 million.

Mr. Mawyer stated that was correct.

Ms. Mallek stated that was great, and she was in favor of planning ahead.

Ms. Mallek moved to approve the Consent Agenda as presented. The motion was seconded by Mr. O'Connell and passed unanimously (7-0).

9. OTHER BUSINESS

a. Presentation and Approval: FY 2023-2027 Capital Improvement Plan

Mr. Mawyer stated that the Capital Improvement Plan had been discussed previously, in February, and the Authority was guided by the strategic plan goal of infrastructure and master planning. He stated the FY 23–27 CIP included 41 projects that totaled $205.1M. He stated that the Authority was spending funds to improve the water systems. Expenditures on the urban water system were estimated to be $122.5M, with expenditures on the urban wastewater system totaling $44.4M. He stated expenditures on the non-urban plants and shared projects totaled $38.2M. $10M in cash reserves would be utilized to help fund the CIP, but otherwise it would take additional debt issuance of about $123M over the five years.

Mr. Mawyer stated the annual Capital Budget could be seen on the slide presented for the upcoming fiscal years, and the FY23 budget was estimated at $26 million. He stated in FY25, it was $32M—with a noticeable drop-off after that may not hold true. He stated typically as they got closer to the horizon, they find they have items that need to be funded. He stated this constituted the $205M five-year CIP.

Mr. Mawyer continued that they used the funds to manage, improve, and maintain their facilities and equipment, of which they had about $390M. He stated that included five water supply reservoirs, six water treatment plants, four wastewater treatment plants, and they also owned and managed the Lickinghole stormwater basin that served the Crozet area and helped protect the South Rivanna Reservoir.

Mr. Mawyer stated that their major programs and projects came in several categories, and they

were currently upgrading their water treatment plants at South Rivanna and Observatory. He stated they worked on reliability and redundancy within their facilities, which was why they were building the Airport Road Water Pump Station and the Central Water Line and replacing the major electrical system at Moores Creek. He stated they had operating, maintenance, and safety issues that they would address in terms of security and environmental facilities—an increasingly prevalent topic—and maintaining the facilities at Moores Creek consumed a lot of their maintenance funding.

Mr. Mawyer stated they had regulatory requirements at the Beaver Creek Dam to increase the spillway capacity so it could pass about 31 inches of water per day, and that was an increase from about 15 inches of water per day currently. He commented that this was a huge increase, but the records showed that in 1969, Hurricane Camille dumped 29 inches of water in a short amount of time in the Nelson County area, so it was not unheard of. He stated they were also about to finish the flow equalization tank, which was going to allow them to store wastewater from Crozet in a tank when rainwater was getting in the sewer pipe—rather than having it overflow somewhere between Crozet and Moores Creek, they would take it out of a pipe and store it in a tank; when the flow subsided, they would take the wastewater out of the tank and put it back into the pipe.

Mr. Mawyer reported that they also had capacity projects, including the Schenks Branch interceptor, which they were working on with the City and the County. He stated they were planning a renovation and addition to the administration building at Moores Creek, and also had the major project of the South Rivanna to Ragged Mountain Pipeline. He stated these were some of the programs and projects contained within the CIP.

Mr. Mawyer continued that some of the major projects they had heard a lot about were the community water supply projects. He stated numbers 1 and 2 on the slide were renovating their two largest water treatment plants, and number 3 was replacing a raw waterline between the Ragged Mountain Reservoir and the Observatory Water Treatment Plant as well as building a pump station with that project. He noted a short section of the Rivanna to Ragged Pipeline would be built to connect to the south end of the existing pipe they built at Birdwood.

Mr. Mawyer stated they would build the pipe between the Ragged Mountain Reservoir and the Observatory Treatment Plant so the raw water supply could be increased to the larger Observatory Water Treatment Plant. He stated they needed to build the Central Water Line pipe, to get the water from the Observatory Treatment Plant and to the full area of the City and into the County.

Mr. Mawyer stated the pipe from of the South Rivanna to Ragged Mountain Reservoir would give them raw water needed to keep Ragged Mountain full. He stated Ragged Mountain was their largest reservoir but did not fill on its own, and they had to pipe water to it. He stated that was the largest project in the program, and when completed, it would raise the water level in Ragged Mountain by 12 feet and add 700 million gallons to their storage capacity, which was a major increase.

Mr. Mawyer stated over the 15-year horizon, they estimated they had about $523M in

expenditures planned, but those costs may increase as they identified needs. He stated there were lots of emerging programs for water and wastewater treatment for which they would have to plan.

Mr. Mawyer stated in summary, they had 41 projects in the FY23–27 CIP, totaling $205.1M. He stated they estimated their charge increases to the City would be 6.9% in FY23, and to the ACSA, 9.6%. He stated they were pursuing NRCS grants to help with the Beaver Creek project, so that would help lower the ACSA's charge increase if they were successful. He stated they were exploring additional grants.

Mr. Mawyer stated that Rivanna appreciated that the County had approved $750,000 in ARPA funding for RWSA, which would help them with the Red Hill Water Treatment Plant addition and Scottsville lagoon liners replacement at the water treatment plant. He stated they applied for a $21M grant with the health department that would add more GAC facilities so they could remove PFAS, an emerging contaminant that was at the center of a national discussion—not only in drinking water but in wastewater. He noted that this was coming from the bipartisan infrastructure law with federal money available for grants.

Mr. Mawyer reported that they were poised to apply in the next month for a cybersecurity grant to help them put in a card access system for their entrance gate at Moores Creek and improve the fencing, gating and traffic access at the front gate. He stated they were also looking at a program called Building Resilient Infrastructure and Communities, which was a federally funded program that included climate change and how it may make storms more intense and droughts more extensive. If the storms were more intense, flooding at Moores Creek would impact the wastewater facilities. They were exploring that issue and how they could possibly be eligible for that grant program from the federal government.

Mr. Mawyer stated they had an extensive program trying to maintain their facilities and assets and making sure they were providing water of an adequate quality and quantity for the community, as well as treating wastewater so the environment and public were protected. He stated they appreciated the funding from the City and Albemarle County Service Authority, but they were also trying to find any funding opportunity they could through the current grant programs.

Mr. Pinkston asked to see the previous slide and asked if the charge increases were the rate increases, with the City's at 6.9 %.

Mr. Mawyer responded that they were the charge increases from Rivanna to the City. He stated Ms. Hildebrand with her staff and the finance staff would determine the retail charges to retail customers.

Mr. Pinkston asked if that number from RWSA included the annual operating costs.

Mr. Mawyer responded affirmatively. He stated even though they presented it as part of the CIP, these charges were the total Rivanna charge increases they estimated, which would be CIP debt service cost as well as the operating cost to give a comprehensive view of what the charges

would be. He stated it would not be very meaningful to tell them what the CIP would cost if they did not include what the operating programs would cost.

Mr. Pinkston asked what the operating budget for the upcoming year was.

Mr. Mawyer replied that it was $41.8M, and they would talk about that next.

Ms. Mallek asked if this resilience grant that Mr. Mawyer just mentioned could also help with the cost of the Rivanna to Ragged pipeline, because it seemed drought was as equally as possible as flooding, given climate change.

Mr. Mawyer stated they would explore that possibility with their consultant. He stated the grant programs had a maze of requirements and trying to match projects with programs for which they were eligible was a challenge. A lot of the programs had preferences for disadvantaged communities, but they were working hard to identify every project for which they had a reasonable chance of eligibility.

Mr. Gaffney asked if there were any other comments or questions.

Mr. Mawyer stated it was requested the Board approve the CIP.

Mr. Gaffney asked if there was a member of the Board who would make a motion to approve the Capital Improvement Plan for Fiscal Year 2023-2027.

Ms. Mallek motioned the Board approve the FY23-27 Capital Improvement Plan. Mr. O'Connell seconded the motion.

Mr. O'Connell asked if the next year's CIP was roughly $26M.

Mr. O'Connell asked of what big projects they could tell their customers were being funded out of the next year's funds. He stated he knew a lot of these projects were in process, like the two treatment plants for example.

Mr. Mawyer stated there were the two treatment plants, the Airport Road Pump Station was currently under construction, the Moores Creek 5kV electrical replacement was a $5M project underway, and he could send a list of the rest of the projects.

Mr. O'Connell stated that was helpful. He stated he was trying to recall the major ones.

Mr. Gaffney asked if there were any other questions. There being none, the Board voted.

The motion passed unanimously (7-0).

b. Presentation, Public Hearing, and Approval: FY 2022-2023 Rate Schedule and Operating Budget

Mr. Mawyer reported that the budget was introduced in March. He stated they were guided by their strategic plan goals that were listed on the slide. He stated that the budget for next year was estimated to be $41.8M, which was a 7.4% increase above this year's budget. He stated their debt service cost was estimated to be $19.7M, which was a 6.9% increase. He stated their expenses were to increase by $1.6M, or 7.8%. He stated they were going to contribute a small amount from reserves, $150,000 to support the GAC initiative that had been going on for several years. This would be the last year they would contribute to the GAC subsidy.

Mr. Mawyer stated the total charges to the City were estimated to be $16.5M, or a 6.9% total increase. He stated the charges to the Service Authority would be $23.6M, or a 9.6% increase over current year charges. He stated the simple pie chart for the budget showed that expenses were 53% and debt service was 47% of their $41.8M budget. He stated they were building all the major infrastructure for the water and sewer system, and they carried all the debt to support those systems for the County and the City. He stated the expenses of $22.1M—when they combined the essential costs of personnel, chemicals, equipment, building repairs, and utilities—represented about 84% of their expenses, so they did not have much flexibility within the budget.

Mr. Mawyer reported that they did have a specialty program in Wastewater Odor Control for $400,000, through which they were putting chemicals into the wastewater as it made its way from Crozet to Moores Creek, to make sure that locations along Rt. 250 were not impacted. He stated they trucked biosolids, the end-of-the-line product of wastewater treatment, to Waverly, Virginia to be used for compost. He noted that this was 3% of their budget at $735,000. He stated Information Technology was a growing part of their budget, and to take care of their Supervisory Control and Data Acquisition System (SCADA) that they used to manage and report on treatment processes, as well as asset management software and document management software, they were heavily dependent on technology and committed to those associated expenses.

Mr. Mawyer stated major projects for the fiscal year that had been mentioned already were the water treatment plant renovations and the Airport Road pump station construction. He stated they wanted to build a section of the Rivanna to Ragged pipeline, which would extend from the north end of the Birdwood waterline under Rt. 250 and Old Garth Road onto University Foundation property. He stated the Beaver Creek Dam pump station/piping design was a large project that they were continuing to work on with the NRCS in preliminary design. He stated the Central Water Line was a major project, and in the future they would be talking more about how climate change may affect these projects.

Mr. Mawyer stated Mr. Pinkston had asked why the City charge increases were different from the Service Authority charge increases. He explained that the asterisks shown on the slide noted that the water treatment plant renovations were funded 52% by the Service Authority and 48% by the City, and Airport Road would be 100% funded by the Service Authority in the new agreement. He continued that the Birdwood to Old Garth Road construction would be 80% funded by the Service Authority and 20% by the City; the Beaver Creek project was 100% funded by the Service Authority; and the Central Water Line was 52% Service Authority and 48% City. He explained that this was why there were funding and charge increase differences from Rivanna to the two organizations.

Mr. Mawyer stated some of the additional expenses they had projected for the next year, such as chemicals, biosolids transportation and disposal, and odor control, were all going up. He stated they were trying to keep up with technology and fund that appropriately for SCADA, security, and other programs. He stated they proposed a 4% merit pool to begin in July for their staff and did not propose any additional staff for next year; they continued to focus on existing staff and appreciated the 6% increase the Board had granted in February.

Mr. Mawyer stated that the financial forecast showed the rate charge increases projected for the next five years. He stated their operating budget was projected to be $41.8M for next year. He stated their capital budget was $25.8M, and their five-year CIP was $250.1M. He stated they anticipated new CIP debt of about $123M over the next five years. He stated in summary, their total budget proposed was $41.8M, a 7.4% increase above the current year. He stated the City and ACSA charges were shown on the slide and the same as previously mentioned. He stated he would be glad to answer any questions and that they had the rate schedule, which was the foundation of their budget, for viewing on the screen. He requested that the Chair have a public hearing on the rate schedule and the budget.

Mr. Gaffney opened the public hearing for the FY2022–2023 Rate Schedule and Operating Budget. He asked Mr. Hull if there were any members of the public who would like to speak at this time.

Mr. Hull indicated that there were no comments from the public.

Mr. Gaffney stated they would close the public hearing and asked the Board if there were comments or questions.

Mr. Pinkston commented to Mr. Mawyer that he was impressed by the thoughtfulness and attention to the future that the CIP represented, and the recent tour of the facilities gave him an impression of professionalism as well as preparing for the future. He emphasized that this sort of preparation and robustness they wanted to have in place came at a cost. He stated Mr. Gaffney could perhaps speak to this point, but years ago when they faced a drought, they were almost at a point of not being able to provide services. He asked to see the slide of rate increases per year again. He stated he believed those numbers were fair and accurate in terms of the CIP they were approving, the level of investment they wanted, and the quality of operations they had. He stated the other side of that, however, was a geometric sort of increase in terms of the rates.

Mr. Pinkston stated he did not know if there was a way in the future for them to do some benchmarking compared to other communities, or of that rate increase of 7% as a nominal figure for the City, how much could be attributed to inflationary pressures versus the desire to have a robust system. He stated he was not sure if he was being clear in his remarks but thought the system they had and that they were working towards was world class, and he was grateful they had and would have that. He stated he thought the geometric and exponential increase in rates should have more discussion at some point to explain to the average consumer the rationale for that. He asked Mr. Mawyer if that made sense.

Mr. Mawyer responded that it did. He stated that inflation, as in other parts of their lives, impacted the chemical costs, labor costs, and transportation and fuel costs. He stated because the chemicals were trucked to them, the cost of diesel was reflected in those charges. He stated they were sensitive to and appreciated the fact that their charges were projected to go up, and they strived to minimize and be effective and efficient but also had to balance that with system reliability and quality.

Mr. Pinkston agreed and reiterated that he was impressed by the professionalism and levels of redundancy—and from an engineering perspective, the systems that they were creating were world class. He stated that was what the community wanted and needed, but they had to be able to explain the fact that what they were getting was a world-class system that might have impacts on rates, as well as the fact they were in an inflationary period in terms of both materials and compensation. He stated he was unsure of what to do about what he just stated, but he thought they needed to be thinking about if they were making the right investments and if they were able to explain it to the people paying their water bill that it was not just the increase over the year but multiple increases over multiple years, and a lot of that had to do with inflation.

Mr. Mawyer stated they would be glad to work with him on that as they started their next budgeting process and see what they could come up with. He stated before his time here, the Authority decided they would have a granular activated carbon (GAC) water filtering process, which was expensive and generated a clear cost-benefit situation. He stated there were great benefits to the community, which he thought most people appreciated if they understood them, but there was again a cost to build it and maintain it every year. He stated those types of things he knew Mr. O'Connell focused on as well, to explain to customers the benefits they were getting for their water and sewer bill. He stated they were glad to help with that as best they could.

Ms. Mallek stated she always appreciated being able to see those benchmarks, because they made us look good. She pointed out that their water was unbelievably inexpensive. She stated when Mr. O'Connell spoke, she would like him to explain what a penny bought, because she was always pleasantly shocked by that. She stated it felt like in that past 15 years or so, the agency had pushed hard to catch up after a decade or more of total postponement of doing any improvements, and unfortunately the downside of that was that then they had to pay.

Ms. Mallek stated she was really grateful for all the planning that had gone in and the work that was going to happen, because she remembered very clearly in 2004 when the water agency stated they were seven days away from closing the University. She stated that would have had an economic impact far greater than these percentages and increases now. She stated they were a large percentage, they were pennies in the water and sewer bills and absolutely made a difference, for which the value was huge.

Mr. O'Connell stated one penny would buy someone two gallons of safe, clean, and reliable water. He stated the 9.6% increase was the wholesale charge. He stated on the retail side as to what the customer was actually charged, they had 4.6% in their budget proposal. He stated they were trying to find some other ways to help fund what he thought was necessary for what Rivanna was doing. He stated as Ms. Mallek had just mentioned, there were two major water

treatment plants that were more than 60 years old that needed major repairs, and there were some expansions but mostly delayed repairs that they at some point must do—and now seemed to be a good time.

Mr. O'Connell stated there were also some statewide dashboards, and Draper Aden had one that anyone could look at that showed their retail rates compared to the rest of the state. He stated the Service Authority rates had consistently been below the statewide average for their comparable bills, so he thought that spoke well to appreciate the value and have safe water to provide reliably to their customers.

Mr. Gaffney added that the ACSA, even before his time on this Board, for many years had hook-up fees for new construction for larger buildings so that they built a fund that helped pay for the new and improved infrastructure that was needed for the growth. He stated that was why ACSA with a 9% increase only had their rates go up 4.6%. He stated he knew the City also looked at these rates and what they charged their customers, but he was not aware as much as he was about ACSA's service fees to help pay for that infrastructure. He asked if there were any other comments or questions.

Mr. Pinkston motioned to approve the Fiscal Year 2022-2023 Rate Schedule and Operating Budget. Mr. O'Connell seconded the motion, which passed unanimously (7-0).

Mr. Mawyer thanked Lonnie Wood, Jennifer Whitaker, David Tungate, and their staff for working through the budget process from the previous August to the finalization in the following May. He stated they all had to work as a team to try to think strategically and cost effectively about what they needed to not create an unreasonable financial burden on the public. He stated he appreciated all that they did to put these budgets together.

c. Presentation: Urban Finished Water Master Plan

Ms. Michelle Simpson introduced herself and stated she would be discussing the Urban Finished Water Master Plan, which covered the urban service area, colored pink on the map shown on the slide. She stated it encompassed the City of Charlottesville and the surrounding areas served by the ACSA out to Glenmore and up to the North Rivanna zone. She stated this master plan supported their strategic plan goal for infrastructure and master planning.

Ms. Simpson noted that this was a master plan, so this was a high-level, conceptual plan for the next 50 years. She stated that a lot of this work had started in 2019, and a lot of the earlier work had been the basis for advancing several of their other CIP projects. She stated many projects they would see listed were already in progress, and they were included in the CIP. She continued that some of Urban Finished Water Master Plan goals were to identify improvements required to enhance water system efficiency, provide capacity to meet future demands, and increase operational flexibility. She stated as part of the project, they were preparing schedules and cost estimates for completing all of those improvements.

Ms. Simpson stated the water system analysis included first an update of their 2012 hydraulic model, and part of the work done by Baker Engineering was to evaluate the model for various

water demand projections out to 2070. She stated the 2070 water demand projection was about 14 million gallons per day. She stated it also evaluated needs for various operational scenarios, including their maximum day demands, imbalanced water production at the various water treatment plants, and whether there was a water transmission main or water tank out of service, under drought conditions and under fire flow conditions.

Ms. Simpson stated the master plan was organized into separate groupings of distribution system improvements, storage improvements, pumping improvements, and other studies that needed to be done. She stated first they would discuss distribution system results. She stated the slide showed specific conveyance improvements that were outlined. She stated Baker evaluated the entire distribution system, the lines of which were highlighted in yellow on the map. She stated the results showed that they had a lot of gaps in their transmission system, which resulted in a lack of hydraulic connectivity in the urban service area. She stated their goal with these improvements was to address operational and hydraulic inefficiencies in moving water across the system and improve system flexibility.

Ms. Simpson stated one of the projects for conveyance improvements was the Central Water Line, on which she had given a presentation in January. She stated it currently included about five miles of 24-inch to 30-inch transmission main and coordinated with replacement of the City's East High Street main. She stated this project would significantly improve the hydraulic connectivity between the Observatory plant, the Observatory tank, the Avon Street tank, and the Pantops tank. She stated it also allowed for the full 10-MGD capacity of the Observatory Water Treatment Plant improvements to be utilized.

She stated another conveyance improvement was the Berkmar/Airport Road Waterline project, which was currently under construction. She stated it was a new 24-inch water main that tied into their water main in Route 29, as shown on the lower part of the map. She stated the blue line on the map showed their existing line, and they were building a new 24-inch waterline behind Kohl's, which would follow Berkmar Drive to their new Airport Road pump station. She stated the pump station would have a new 16-inch waterline conveying water out into the north zone and connecting into the Service Authority's existing 12-inch line in Timberwood Boulevard. She stated they would build a Phase 2 of that project, which would be a new 16-inch waterline from the Airport Road Pump Station to Airport Road once VDOT came back and built the remaining section of Berkmar Road Extended.

Mr. Richardson asked to see the previous slide. He stated Ms. Simpson had discussed dependability and reliability. He asked if with Phase 1 of the pump station and piping, by 2025, there would be increased water capacity in that area.

Ms. Simpson responded that the new pump station would be redundant to the existing North Rivanna Water Treatment Plant until the North Rivanna Water Treatment Plant was decommissioned. She stated at that point, it would provide the same water capacity to the north zone after that, with the potential for increased capacity in the future.

Mr. Richardson thanked Ms. Simpson.

Ms. Simpson stated the next type of distribution system results in this category were reinforcement and redundancy improvements. She stated the plan recognized that there were multiple vulnerable areas in their systems, and that included areas where they had railroad crossings, river crossings, major highway crossings, and high-pressure mains. She stated these were critical assets that were difficult to access and difficult to repair, and that made them vulnerable areas.

Ms. Simpson stated for redundancy projects, they had the Emmet Street Waterline, which would be about 14,000 feet of waterline connecting near the Observatory Water Treatment Plant all the way up to Route 29 and Hydraulic Road. She stated Phase 1 of the waterline would prioritize the gap that they had between the waterlines of the Lambeth pump station area up to Hydraulic Road and Route 29. She stated this would provide redundancy to the Central Water Line and additional reliability between Observatory Water Plant and South Rivanna Water Plant.

Ms. Simpson reported that another project that had advanced was the Second South Rivanna River Crossing. She stated this was a new 24-inch line that left South Rivanna Water Treatment Plant and would have a directional drill under the river, then follow Rio Mills Road over to their 24-inch waterline in Route 29. She stated the river crossing would be parallel to the Berkmar Bridge. She stated the next project was the Second North Rivanna River Waterline Crossing and Reinforcement.

Ms. Simpson stated in the center of the screen was the North Rivanna River, and the area with the yellow box shown was their highest-pressure section of the North Rivanna Waterline at 175 PSI. She stated it was made of old cast iron, and the stars shown on the map notated the multiple waterline breaks on this old cast iron line. She stated in consideration of the breaks, the high pressure, and the age, they were looking to replace this section of pipe and strengthen the system because it was the most vulnerable area. She stated they would put in a second river crossing because of vulnerability there as well.

Ms. Simpson stated they looked at another redundant river crossing. She stated this was in the Pantops area. She stated the City's 12-inch line was shown in the bottom left of the map, at the end of Market Street. She stated the yellow line shown would be a new 16-inch redundant river crossing that went over to State Farm Boulevard and would tie in with the ACSA's 16-inch line that went around the hospital, and their line in State Farm Boulevard. She stated that would be a redundant crossing to the 24-inch river crossing on River Road. She showed on the screen some additional areas for redundancy. She stated these were various projects that the City and Service Authority and Rivanna could do within their systems to strengthen connectivity between their Southern Loop Waterline and the planned Central Water Line. She stated those could be done over a range of time and would increase connectivity through the system.

Ms. Simpson stated the next category for distribution system results were for piping replacement improvements. She stated the master planning process recognized that in the next 50 years, much of their cast iron would be over 100 years old, so the map on the slide showed the pipe ages at 2070. She stated the sections highlighted in red would be the sections that would be over 100 years old by 2070. She stated for programming purposes and to have it documented in the master plan, they assumed a 100-year useful life. She stated the specific waterlines highlighted in red

were programmed into the 50-year plan to be replaced as they reached their 100-year life.

Ms. Simpson stated overall, those distribution system improvement projects would accomplish a lot of goals. She stated they would close gaps across the Urban Service Area, address operational inefficiencies, improve system flexibility and redundancy, move more water across the transmission system, and enhance hydraulic connectivity.

Ms. Simpson stated she would now move onto the storage system results. She stated the results of the study showed that they had a lot of storage, but much of it was not usable. She stated their goals as part of this study were to increase usable storage in the existing storage tanks, add storage where needed to improve their operations, and increase water turnover and reduce water age. She continued that regarding urban zone storage, for the short term, they would be looking at opportunities to recover unusable storage by addressing high-elevation customers. She stated in the long term, they would look at moving the Pantops tank to a higher elevation when it needed to be replaced, install an elevated tank when the Avon Street tank needed to be replaced, and the new tanks could overflow at a higher elevation to match the overflow elevation of the Observatory tank.

Ms. Simpson stated for the Stillhouse tank, they were looking at installing a second 50-foot diameter, 50 feet high, 0.7 MG tank on the existing site. She continued that at Lewis Mountain, they were looking at putting a second 0.5 MG tank on the same site. She stated the Lewis Mountain and Stillhouse tanks were in their own pressure zones, so this would help to reduce pump station cycling and provide some redundancy to the existing tanks in both of those systems when one of the tanks needed to be offline for maintenance or painting.

Ms. Simpson stated that at the Airport Road Pump Station, the site had room for two future 1MG storage tanks. She stated they currently were not building those tanks with the new pump station, but they had reserved the space on the site for them. She stated they would continue to reevaluate those tanks with each master planning cycle to see if they were needed. She stated finally, the pump station results from the study identified that their pump stations were adequate for what they had, and the only new pump station that was really needed within their system was the Airport Road Pump Station.

Ms. Simpson stated it was currently being built as part of the Airport Road and Berkmar Waterline project that she discussed at the beginning of the presentation. She stated this station would have two 1.5 MGD pumps and would be used to support the north zone instead of using the temporary Kohl's pump that they used in emergencies. She stated this would support as redundancy to the North Rivanna Water Treatment Plant, and in the future when the North Rivanna Plant was decommissioned, it would serve the north zone entirely.

Mr. O'Connell asked if there was also space there for an additional larger pump there so they could get more capacity in the northern system as part of the future plan or when the growth needs occurred.

Ms. Simpson replied that this was absolutely correct. She stated right now, they were putting in 1.5MGD pumps, but there was room for four pumps in the pumps station, so they could

definitely add more pumps in the future and have a larger firm capacity for that zone. She asked if that answered Mr. O'Connell's question.

Mr. O'Connell stated yes and thanked Ms. Simpson.

Ms. Mallek asked if there were no mountains available, whether the tanks could be raised on stilts or a basement to get the higher elevation needed. She asked if that was reasonable.

Ms. Simpson asked if she meant for the Airport Road site specifically or for the rest of the urban system.

Ms. Mallek noted that Ms. Simpson had mentioned moving storage tanks to higher elevations.

Ms. Simpson stated yes. She explained that as far as the Pantops tank, they would be looking to elevate the base of it up the hill, but it would not be extensive. She stated they were talking about maintaining a very similar overflow elevation, or a few extra feet to match the Observatory tank overflow. She stated if they could get more of the tank at a higher elevation but maintain the same overflow elevation, it would help with the amount of usable storage. She stated in other words, they would be looking to have a shorter tank, but the entire tank would be up higher so it would be more usable. She stated for the Avon Street tank, that could be a shorter, wider tank on stilts.

Ms. Mallek thanked her for the explanation.

Ms. Simpson stated in the master plan, they had outlined multiple additional operational studies that would include a waterline condition assessment to better determine the condition of their aging cast iron pipe, some additional pump facility condition assessment, pressure surge investigation and mitigation in the north zone, additional model calibration, and additional storage and operations evaluations. She showed a chart of all the projects listed in the finished water master plan, noting that they totaled about $155M for the next 50 years. She commented that this did not include maintenance items such as tank painting or right-of-way clearing.

Ms. Simpson stated in summary, the 50-year comprehensive plan costs $155M. She stated all of these projects would enhance their hydraulic connectivity, address operational inefficiencies, and address increased future water demands. She stated the entire master plan was grouped in 5-year increments to program replacement of aging infrastructure, and it would improve overall system flexibility and redundancy.

Mr. Rogers thanked Ms. Simpson for the presentation. He stated he knew from his other work that the Department of Transportation would be doing major work on Hydraulic Road on Route 29 and was talking about installing a roundabout in that area. He asked if there was any coordination in terms of the street work that must be done by both agencies, so they were not impacting each other's work and creating a longer-term inconvenience for the residents in that area.

Ms. Simpson asked if Mr. Rogers was speaking about the Emmet Street Waterline. She stated the

short answer was yes: They were coordinating with VDOT, and they were aware that they were interested in waterline improvements in that area. She stated she believed the roundabout may be on Hydraulic in the vicinity of the Whole Foods entrance there, and they were looking at this work. She stated she believed what was originally planned was a grade-separated interchange there at Hydraulic, but that may have changed and would just include lane widening, so it may not be as extensive as originally planned. She added that they were coordinating with VDOT and the City on betterment opportunities in this area.

Mr. Rogers thanked Ms. Simpson and stated that was useful.

Mr. Gaffney asked Ms. Simpson if, with the new pump stations at Airport Road, there was a need to complete the Airport Road storage tanks for quite a while. He asked if they would have to wait and see.

Ms. Simpson responded affirmatively and stated it was determined that the tanks were not needed right now, so at this point they were just reserving the space on the site for them.

Mr. Gaffney asked if they were to be installed, whether they would increase the available water capacity in that part of the County, which he believed had been one of Mr. Richardson's questions earlier.

Ms. Simpson stated based on the information in the report, there was adequate water within the existing urban storage tanks now and that increased storage at the site would not provide increased water capacity to the area.

Mr. Gaffney stated okay.

Mr. Pinkston stated the purpose of this report was to focus on the finished water system. He asked if that was correct.

Ms. Simpson stated that was correct.

Mr. Pinkston stated obviously wastewater was not a component of that. He stated water treatment facilities were a part of that. He asked if that was correct.

Ms. Simpson stated water treatment was not. She stated that was separate.

Mr. Pinkston stated it was everything it takes to close the gaps.

Ms. Simpson stated once the water left the water treatment plant, it was the distribution system.

Mr. Pinkston stated he understood. He stated the net result was that for an investment of about $3M a year over the course of 50 years, in terms of the sum total of the cost outlined at the end of the presentation, that kind of investment over time would give them a tightly and interconnected distribution system. He asked if that summary sounded correct.

Ms. Simpson responded that it did, adding that there were additional studies recommended in the master plan that may give them additional projects.

Mr. Pinkston noted that the net result was that for that sort of investment per year, they could expect in 50 years to have a system that was very well interconnected and woven throughout the whole area. He stated his other question was how they were able to advance the Central Water Line prior to having this particular study completed. He stated he saw at one level why someone would think they should have the final overall plan finalized before making a major decision like the Central Water Line. He asked if they could speak at all to why they felt comfortable moving forward with the Central Water Line as one component of this, even though the overall plan was still being finalized. He asked if Ms. Simpson could say a bit more about that.

Ms. Simpson responded that the majority of the modeling was completed earlier on in 2019 and 2020. She stated the hydraulic modeling set the stage for what improvements were needed, and that was how they were able to confirm which projects were needed. She stated essentially, for a lot of these projects, they had an idea that something needed to happen but just needed the modeling to confirm it.

Ms. Simpson stated the Avon to Pantops and the Southern Loop analyses were all started before the finished water master planning began. She stated they put the Avon and Pantops work on hold, then started on the Finished Water Master Plan, and that modeling work confirmed the status and some of the things they already knew beforehand, so they were able to continue on with that project. She stated the same was true of the Airport Road Pump Station and some of the newer waterlines that were up Route 29. She stated some of that analysis was already in progress, and then the modeling confirmed the hydraulics they needed to move forward into design.

Mr. Pinkston stated it sounded like they had a thoughtful and professional sense of figuring things needed to be built, and the modeling confirmed that for them in terms of facts and figures.

Ms. Simpson stated that was correct.

Mr. Pinkston thanked Ms. Simpson.

Mr. Gaffney asked if there were any other questions.

10. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

Mr. Gaffney asked if there were other items from Board members or staff not on the agenda and heard none.

Mr. Mawyer stated there were none from staff.

11. CLOSED MEETING

There was no reason for a closed meeting.

12. ADJOURNMENT

At 3:51 p.m., Mr. Pinkston moved to adjourn the meeting of the Rivanna Water and Sewer Authority. Mr. Rogers seconded the motion, which passed unanimously (7-0).

Respectfully submitted,

Mr. Jeff Richardson
Secretary - Treasurer