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RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
January 24, 2023

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, January 24, 2023 at 2:22 p.m. in the 2nd floor conference room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

Board Members Present: Mike Gaffney, Michael Rogers, Brian Pinkston, Ann Mallek, Lauren Hildebrand, Jeff Richardson, and Quin Lunsford as alternate for Gary O'Connell.

Board Members Absent: Gary O'Connell.

Rivanna Staff Present: Bill Mawyer, Lonnie Wood, Jennifer Whitaker, Deborah Anama, Betsy Nemeth, David Tungate, Michelle Simpson

Attorney(s) Present: Carrie Stanton.

1. *CALL TO ORDER*

Mr. Gaffney convened the January 24, 2023 regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:22 p.m.

2. *AGENDA APPROVAL – (Item 11 AMENDED)*

Mr. Gaffney noted that Item 11 of the Agenda had been amended.

Mr. Mawyer stated that Item 11 was amended based on the recommendation from counsel to revise the wording for the exemption utilized for the closed session.

Ms. Mallek moved to approve the Agenda, as amended. Mr. Pinkston seconded the motion, which carried unanimously (6-0).

3. *MINUTES OF PREVIOUS BOARD MEETING*

a. *Minutes of Regular Board Meeting on December 13, 2022*

Mr. Rogers moved the Board to approve the minutes from the meeting held on December 13, 2022. The motion was seconded by Mr. Richardson and passed unanimously (6-0).

4. *RECOGNITIONS*

a. *Resolution of Appreciation for Mr. Jene R. Phillips, Jr.*

Mr. Gaffney read the resolution.

RIVANNA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS
Resolution of Appreciation for Jene R. Phillips, Jr.

***WHEREAS**, Mr. Phillips has served the Rivanna Water and Sewer Authority since May of 1982 in a number of positions, most recently as a Wastewater Operator; and*

***WHEREAS**, over the same period in excess of 40 years, Mr. Phillips has been a valuable resource and has positively impacted the Authority, its customers and its employees; and*

***WHEREAS,** the Rivanna Water and Sewer Authority Board of Directors is most grateful for the professional and personal contributions Mr. Phillips has provided to the Rivanna Water and Sewer Authority; and*

***NOW, THEREFORE, BE IT RESOLVED** that the Rivanna Water and Sewer Authority Board of Directors recognizes and thanks Mr. Phillips for his distinguished service, efforts and achievements as a member of the Rivanna Water and Sewer Authority, and presents this Resolution as a token of esteem, with its best wishes in his retirement.*

***BE IT FURTHER RESOLVED** that this Resolution be entered upon the permanent Minutes of the Rivanna Water and Sewer Authority.*

Michael Gaffney, Chairman
Lauren Hildebrand
Ann Mallek
Gary O'Connell
Brian Pinkston
Jeff Richardson
Michael C. Rogers

Ms. Mallek moved that the Board adopt the resolution. The motion was seconded by Mr. Pinkston and carried unanimously (6-0).

5. *EXECUTIVE DIRECTOR'S REPORT*

Mr. Mawyer reported that Mr. Gaffney had been reappointed by the Albemarle County Board of Supervisors and Charlottesville City Council for his 11th term. He stated that as part of the Authority's regional communication and collaboration program, he submitted a written quarterly report to City Council and the Board of Supervisors, and he provided a presentation to City Council with an update on the current status of the Authority's projects and programs.

Mr. Mawyer recognized Mr. Travis Granger, who completed state requirements to receive a Class II Water Operator license. He stated that Mr. Granger began employment with the Authority about a year and a half ago, and he started working as an unlicensed Operator. He noted that Mr. Granger was an Army veteran.

Mr. Mawyer recognized that they operated a staff Apprenticeship Program with the Maintenance

Department and Human Resources Manager. He stated that there were eight mechanics in the apprenticeship program. He stated that apprentices had to complete 8,000 hours of on-the-job training and 576 hours of classroom time to achieve a Journeyman designation. He stated that they sponsored the tuition for the classes, but apprentices completed the classroom requirements on their own time.

Mr. Mawyer recognized Mr. Kenny Lawhorne and Mr. Maurice Whitlow who had achieved Journeyman Maintenance Mechanic status. He stated that our HR Manager, Ms. Betsy Nemeth, worked with the Maintenance Department to run the program.

Mr. Richardson asked if the curriculum was operated through a college or another type of external program. He asked for more information regarding the framework.

Ms. Nemeth responded that apprentices went to Valley Career and Technical Center located in Fishersville, and they attended almost every semester. She stated that most of the partnership was with VCTC. She stated that apprentices attended classes on their own time, and the Authority paid for the courses.

Mr. Mawyer asked if the classes were online.

Ms. Nemeth responded that they were not. She stated that classes were mainly in-person.

Ms. Mallek asked if the curriculum was used nationally or if it had been developed locally.

Ms. Nemeth stated that VCTC developed the curriculum for the Journeyman designation with the Maintenance Manager.

Mr. Mawyer stated that they received a permit from the Virginia Marine Resources Commission to complete the project to install a 24-inch pipe 40 feet beneath the South Rivanna River. He stated that they were moving toward construction. He asked RWSA Senior Engineer, Ms. Michelle Simpson, when they were expected to begin construction.

Ms. Simpson stated that they hoped to begin by the summer.

Mr. Mawyer explained that they would bore a pit on both sides of the river and then bore under the river. He stated that the construction method helped expedite the permit because there were no environmental impacts. He stated that the Observatory Treatment Plant was under major renovation and was not producing water. He stated that it would remain closed until March. He stated that they received no complaints from UVA regarding noise at the construction site during the exam period.

Mr. Mawyer stated that they continued to work on major easements for piping projects with UVA and the UVA Foundation. He stated that they obtained the last private easement required. He stated that the easement was located north of Garth Road on a private horse farm. He stated that they continued to work on the Ragged Mountain to Observatory WTP pipeline. He stated that they are working with the UVA Foundation to obtain an easement across two sections of

their property.

Mr. Mawyer stated that the third large waterline project was the Central Waterline project. He stated that they continued to complete engineering design and field investigations. He stated that they were ready to review preliminary plans with the City and the ACSA. He reported that the Buck Mountain property sale closed on January 10, and they had received a payment of $136,501. He stated that the money was deposited into the Buck Mountain Management Program.

Mr. Mawyer stated that next month, they would introduce the FY24–28 CIP budget. He stated that they had two meetings with the Board's subcommittee, which included the ACSA and the City. He stated that they expected to recommend that the waterline project from South Rivanna to Ragged Mountain be accelerated by three years to help get the maximum water supply for the community as soon as possible. He stated that there would be a proposal for the Board's consideration at next month's meeting.

Mr. Gaffney asked if the easements from the UVA Foundation would be acquired concurrently or separately.

Mr. Mawyer responded that they were trying to acquire the easements concurrently. He stated that they were working with Foundation staff. He stated that easements for the remainder of the alignment had been acquired.

Mr. Gaffney asked why they were going to install the pipe 40 feet below the South Rivanna River.

Ms. Simpson responded that there were certain radii that the drilling machine could enter the ground, and there was a maximum curvature that the drilling machine could go under the river. She stated that they reviewed the elevations on either bank and the entry angle for the machine. She stated from that information, they determined how deep the pipe would be.

Mr. Gaffney clarified that the borehole would not be a tunnel.

Ms. Simpson stated that it would not be a tunnel-boring machine. She stated that it would be a horizontal directional drill.

Mr. Mawyer stated that they wanted the pipe to be deep enough so that any scouring of the riverbed would never reach the pipe.

Ms. Simpson stated that they originally looked for a minimum cover under the river of about 20 feet, but based on the other calculations, the depth ended up at 40 feet. She stated that the drill would be about 1,200 feet long.

Ms. Mallek clarified that the material extruded by the bore was pushed out.

Ms. Simpson explained that as they drilled forward, a fluid was used to keep the cutter head

lubricated, and the fluid came back out.

Ms. Mallek clarified that the fluid carried the other material out.

Ms. Simpson stated that was correct.

6. *ITEMS FROM THE PUBLIC*

For matters not listed on the agenda for public hearing

There were none.

7. *RESPONSES TO PUBLIC COMMENTS*

There were no comments from the public, therefore, there were no responses.

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

No items were pulled from the Consent Agenda for comment or question.

Mr. Rogers moved that the Board adopt the Consent Agenda. The motion was seconded by Ms. Mallek and carried unanimously (6-0).

9. *OTHER BUSINESS*

a. Presentation: Financial Update: Credit Rating, Financial Profile and Policies
Lonnie Wood, Director of Finance and Administration
Ted Cole, Senior Vice President, Davenport Public Finance

Mr. Wood stated that we would provide a brief financial update that will address the Authority's financial management practices. He stated three main areas will be reviewed, which will be financial policy guidance and a closer look at reserves held by the Authority. Lastly, we will ask Ted Cole with Davenport Public Finances to review our financial profile and bonded debt related ratings from an investor perspective.

Mr. Wood stated that the Four-Party Agreement was one of the first and most important policy-guiding documents. He stated that it addressed the two urban rate centers, one for wastewater and one for water. He stated that the City and the ACSA were part of the urban ring cost allocations. He stated that the agreement addressed other rate centers not part of the urban ring, and those were 100% funded by the ACSA. He stated that the agreement stipulated budget preparations and that the Board adopt a budget each year. He stated that the agreement required the City and the ACSA to pay the adopted charges set by the Board.

Mr. Wood stated that the Four-Party Agreement identified the initial capital improvements that the Authority was to undertake, and it gave the Authority the responsibility to issue debt to fund the capital projects. He stated that all of the capital projects had been completed, except one, to bring the Moores Creek plant from 15MGD to 20MGD.

Mr. Wood explained that the next policy guidance related to the bond indenture, or the trust agreement, which was established in the 1970s. He stated that they were using bond anticipation notes up until that time. He stated that before they began issuing revenue bonds, they had to have a trust agreement in place. He stated that the agreement created certain restricted funds held by the trustee.

Mr. Wood stated that the construction fund was a bond-proceed fund. He explained that monthly, they applied to the trustee for reimbursement. He stated that a debt service reserve fund was created. He explained that in the early days of the Authority issuing debt, their bond rating was not as high, so they were required to deposit into the debt service reserve fund 125% of the highest debt service payment annually, which was acting like a collateral account.

Mr. Wood stated that the principal and interest account was where they deposit each month's debt service. He explained that twice a year, the trustee withdrew six months' worth of deposits from the account and paid the bondholders. He stated that all of the accounts were held by the trustee, not Rivanna.

Mr. Wood stated that there were unrestricted accounts, such as the general operating cash account, the rate stabilization fund, and the capital improvement fund created by the trust agreement. He stated that in August 2011, the Board adopted internal financial policies to help guide them on capital budgeting. He stated that they were planning documents to provide management goals for their financial decisions. He stated it was crucial for financial assessments and bond ratings.

Mr. Wood stated that there were three tiers of reserves and funds. He stated that the first tier was the restricted funds, the second tier was the operating accounts created by the trustee, and the third was purely discretionary reserves controlled by the Authority. He stated that the watershed management fund was where the funds for the Elliot House were deposited. He noted that in November, the Board was presented with the disposition of the year-end results. He stated that they had withdrawn money from the reserves to make the operating account whole, which followed the financial policies.

Mr. Wood stated that in 2018 and 2019, the reserves increased to nearly $35M. He stated that in 2021, a fair amount of the reserves was used for capital spending. He stated that during the COVID-19 pandemic, they did not raise their rates for a year and relied on the reserves to fill the gap in revenue.

Mr. Wood stated that the reserves were sound financial planning and they provided the Board with the flexibility to make decisions mid-year without considering a rate increase. He stated that in 2021, they used $2.4M in COVID-19 reserves to offset the need for revenue increases. He stated that about a decade ago, there was an odor control issue at the plant because they were

composting biosolids. He stated that the Board had made a decision to stop composting which resulted in a $250K loss in revenue per year. He stated that it cost about $700K to truck the biosolids to a different location and perform the composting.

Mr. Wood stated that the reserves helped the Authority with unanticipated repair costs. He stated that pipeline breaks were expensive, and it was hard to budget for such events as they are unpredictable. He stated that they would rather use reserves to fund the repair costs.

Mr. Ted Cole, Senior Vice President of Davenport Public Finance, explained that they had served as advisors to the Authority for a number of years. He stated that the highest bond rating that any local government or local authority could achieve was triple-A. He stated that the City and the County were all rated AAA/AAA/AAA.

Mr. Cole stated that the Authority was rated Aa2 by Moody's and AA+ by Standard and Poor's (S&P). He stated that the Moody's rating was achieved in 2012 when they last published a report on the Authority for bond issuance. He explained that Moody's would periodically publish reports unassociated from bond issuances, and they last issued one for the Authority in 2021. He explained that the rating reports were available to the public.

Mr. Cole stated that the Authority was upgraded to AA+ in 2011 by S&P. He stated that S&P last published a report in 2019. He stated that the Authority's staff had to periodically interact with the rating agencies. He stated that bond issuances needed to be rated. He stated that during the interactions with the rating agencies, the rating can be increased, decreased, or remain unchanged.

Mr. Cole explained that Moody's rating process for utilities was simpler than S&P's process. He explained that Moody's looked at four areas. He stated that the S&P enterprise risk profile assessment addressed topics such as the service area, whether there was a monopoly of the service area, the demographics, the tax base, and the types of compliance with regulatory requirements. He stated that Moody's system characteristics and S&P's enterprise risk profile addressed similar topics.

Mr. Cole stated that some items the Board was able to control on a year-to-year basis, and other items were longer-term concepts that were not controlled by the Board. He stated that they tried to focus on what the Board could control in the short term. He stated that in terms of financial strength for Moody's, they reviewed cash levels, liquidity levels, and performance versus the budget. He stated management, policies, and procedures.

He stated that there were legal provisions related to the documents under which the debt would be issued. He explained that not all bond documents were exactly the same.

Mr. Cole stated that S&P reviewed financial risk profiles which included debt service coverage, liquidity in reserves, debt and liability, pension obligations, post-employment benefit obligations, and financial management. He stated that the financial policies were ways to influence control and maximize the rating. He stated that other debt issuers would perform a similar review even if they did not require a bond rating.

Mr. Cole stated that there were two key financial ratios, and they were in the Authority's policies. He stated that there was debt service coverage. He stated that when the Authority sold bonds, it sold revenue bonds. He stated that the bondholder's security was on the net revenues of the Authority. He explained that the Authority did not have taxing authority, so there was no general obligation pledge.

Mr. Cole stated that they did not have a lien on any asset, building, or equipment, so the security was a lien on the net operating revenues. He explained that net operating revenues were all the dollars available after accounting for operating expenses. He stated that once the operating costs were paid, the remaining was the net operating revenue.

Mr. Cole stated that the Authority must be able to demonstrate by virtue of its bond documents that for every dollar of debt service that the Authority owed, there was at least one dollar of revenues to pay it for a minimum coverage of one times debt coverage. He stated that this originated from the documents that Mr. Wood had referenced and from the fact that the Authority was a wholesale operation with only two customers, billing and collecting revenue for debt service not on flow but on fixed cost component.

Mr. Cole stated that as a wholesaler, the market was willing to accept that lower level of debt coverage. He stated that from a policy and management perspective, the expectation would be that they would operate at a higher level, with a policy that set rates and charges at such a level so that they could achieve 1.5 times debt coverage—so that if there were an unexpected increase in expenses or decrease in revenues, there would be more cushion that helped ensure that the bondholders were paid and the Authority avoided defaulting.

Mr. Cole stated that the second ratio was system reserves. He stated liquidity was a large part of the credit methodology from rating agencies and other lenders. He stated that they measured liquidity as a percentage of the operating budget in terms of days of cash on hand, or how many days of operating expenses could be covered from the reserves as if no operating revenue were coming in.

Mr. Cole stated that if they had a policy that they wanted to be at 100% of budget for reserves, that would be 365 days cash on hand. He stated that their policy stated that between the Tier 2 and Tier 3 reserves, they wanted to operate such that they were at 150% of budget or about 550 days of cash on hand in order to provide financial flexibility.

Mr. Cole stated that they had subscribed to a database that Moody's maintained, and would give a few pages of comparisons in order to see this perspective. He stated that they would be compared to a number of groups; at the top of the table were AAA-rated utilities by Moody's, Aa1 and Aa2. He stated that most peer groups would be from Moody's, and they looked more closely at Virginia and water-only or sewer-only authorities.

Mr. Cole stated that one entity displayed on the screen was another wholesale entity, and all the others were retail systems, which had distribution and billing of all end users. He stated that the very bottom group on the slide was combined water and sewer systems across Virginia that were

at least AA rated.

Mr. Cole stated that the first slide they looked at was liquidity, and on the lefthand side was the historical performance of Rivanna, including FY18–FY22 from the audit. He stated that the green bars represented the operating days' cash on hand, and the policy was 550 days, and unrestricted cash as a percentage of operations was a green line, and it had trended as high as 300%, and was now sitting at about 175%. He stated that the policies were 150% of the operating and maintenance budget, or 548 cash on hand, and in FY21 and FY22, they were on top of that policy.

Mr. Cole stated that on the right side of the page was the comparison, which measured unrestricted cash as a percentage of the budget. He stated that they had finished at 175%, with a brown bar representing their data point, and in gold the AA or higher-rated water and sewer authorities, the light green indicated the water or sewer entities, and the dark green at the top was the national AAA, Aa1, Aa2 medians. He stated that they compared at or above the national Aa1 and Aa2 at the medians and were on the higher end of the light green bar, and on the lower end of the gold peer group.

Mr. Cole stated that they particularly related to UOSA in that they were a wholesale operator, and on that profile, the Authority was stronger than them. He summarized that they had a good policy that they were in compliance with, and their position on liquidity was expected for the rating and even for the above categories.

Mr. Gaffney asked if, in order to get AAA rating on the national average, they would have to double their reserves.

Mr. Cole stated that that was not the only thing. He stated that reserves were 40% of the rating, so there were other ways to improve to get to that AAA level. He stated that to get into the AAA category for the reserves, it may not need to be doubled, but would need to be higher than what was currently had.

Mr. Cole stated that the debt coverage was for the bond documents, and they had to be in 1.5 times coverage or better, which they had been for all years shown. He stated that the green line was their actual coverage, and the gold line was the policy target of 1.5 times. He stated that over the last five or six years, they had fallen a little bit short of that target, but were far above the minimum. He stated that they had finished in 2022 at about 1.3 times. He stated that looking at the bottom left matrix for standard providers, they were in the good to strong category, and the comparison to others was located on the righthand side.

Mr. Cole stated that they were on the lower end related to all of their peer groups, commensurate with another wholesaler, with the mitigating factor that the revenue needed for debt service was being billed not on flow but on a fixed rate basis. He stated that it would be ideal for them to be closer to the policy, but he knew that was something they would continue to manage with each budget. He stated that he did not anticipate any downward pressure on the rating, and he thought they could get the Moody's rating up to a level that was commensurate with S&P and potentially higher.

Mr. Gaffney asked what the difference in rates was between AAA and AA+.

Mr. Cole stated that it would vary between markets, but a good estimate today would be the difference of borrowing at 3% AAA versus 3.15% AA+. He stated that it was a bit of a higher borrowing rate, but everything added up, typically with a large CIP. He stated that however, it could vary, and the important level to be mindful of in that regard was the A category, where interest rates spread out and widen out, perhaps to a difference of borrowing at 3% versus 3.50%.

Mr. Cole stated that creditors and investors had comfort with governments or local issuers such as the Authority so long as they were in the AA category. He stated that he saw no risk of that happening on the horizon. He stated that they were well-positioned to get capital at attractive interest rates and reasonable terms and conditions.

Mr. Gaffney asked Mr. Wood what the credit rating of the Authority was in 2002.

Mr. Wood stated that it had moved three or four times during his time here. He stated that it likely would have been in the high single-A's.

Mr. Mawyer asked Mr. Wood what the debt was.

Mr. Wood stated it was $200 million.

Mr. Mawyer stated that 0.15 rate times $200 million added up.

Mr. Cole agreed that it did. He stated that he did not mean to minimize it.

b. Presentation: History and Organizational Agreements of the RWSA

Mr. Mawyer stated that he wanted to begin 2023 with a review of some of the foundational documents and how they related to the budget, because they would be discussing budget and costs in February and March. He stated that Rivanna was created in 1972 by the City and the County through the State Corporation Commission.

Mr. Mawyer stated that the federal government was making money available, but stated that if the locality wanted it, they had to give it to one organization to represent both the City and the County, because they were not going to give it to each locality. He stated that the County and City wrote the Four-Party Agreement, the Articles of Incorporation, and the by-laws in 1973.

Mr. Mawyer stated that the Articles of the Incorporation had been revised several times and had to be revised with the approval of City Council and the Albemarle County Board of Supervisors, then forwarded to the State Corporation Commission. He stated that they were most recently revised in 2017 when the City decided to split the Department of Public Works between Public Works and the newly created Utilities Department, because their articles stated that the Director of Public Works would sit on the RWSA Board, and the revision was to put the Director of Utilities on the RWSA Board and Director of Public Works on the RSWA Board.

Mr. Mawyer stated that the by-laws included that the Board could change them with all members present, but it did not have to be a unanimous vote. The by-laws were most recently amended last year in 2022 by this Board to add the remote participation policy, which allowed members to participate remotely while out of town as well as to have virtual Board meetings, a change that came from state legislation.

Mr. Mawyer noted that within the Articles of Incorporation in 2009, the City and the County decided to increase the Board from 5 to 7 members by putting an elected official from the City and County on the Board. He stated that there were several working agreements that they had completed between the City and ACSA about who would pay for certain projects.

Mr. Mawyer stated that they had the Joint Resolution in 1983 to purchase the Buck Mountain property of 1,300 acres. The Southern Loop Agreement of 1987 was created with the purpose of getting water distributed from the Observatory Treatment Plant around the east and west sides of the City, and was the predecessor of the Central Waterline Project.

Mr. Mawyer stated that the South Rivanna Water Treatment Plant Expansion had numerous aspects about how they would pay for capacity and non-capacity CIP projects, and that debt service allocation of 48% to the City and 52% to the ACSA continued.

Mr. Mawyer stated that he discussed last month the Ragged Mountain Dam Project Agreement of 2012, which directed Rivanna to build the new Ragged Mountain Dam and a pipeline from the South Rivanna Reservoir to Ragged Mountain Reservoir to fill that larger reservoir. He stated that the Water Cost Allocation Agreement set forth that the Service Authority would pay for 85% of the dam and 80% of the pipeline project costs.

Mr. Mawyer stated that the Amendment to the Four Party Agreement in 2015 may be what Mr. Cole just mentioned, which was that the debt service charges changed in 2015 from a flow-based charge to a monthly charge. He stated that more recently, in 2019, they ended the Buck Mountain surcharge that charged for every new water connection in the City and County to pay for the proposed reservoir.

Mr. Mawyer stated that now that there was no reservoir, the charge had ended in 2019. He stated that they had renewed and updated the Observatory Water Treatment Plant ground lease with the University of Virginia in 2020, and most recently, the Northern Area Drinking Water Area Projects Agreement, which generally allocated all of the costs to the Service Authority for construction projects located north of the South Rivanna River.

Mr. Mawyer stated that they had several foundational documents, by-laws, and agreements, and the staff worked hard to keep these allocations managed. He stated that generally, any time a new facility was built, they had to determine who needed the facility, then craft an Agreement to allocate the debt service costs between the City and ACSA.

(reconvene RSWA for a JOINT SESSION with the RWSA)

Mr. Gaffney called to order the joint session of the RWSA and RSWA.

c. *Presentation: Sustainability and Climate Action Overview*

Ms. Jennifer Whitaker stated that she was presenting the collective work of numerous staff in both authorities in an effort to provide insight into how the Authorities fit into the regional fabric of the community's climate action plans. She stated that at their core, both authorities were environmental protection organizations, citing that both their vision and mission talked about sustainability, environmental protection, and public health.

Ms. Whitaker stated that the 1972 Clean Water Act established wastewater treatment targets and clean water goals. She stated that the 1974 Safe Drinking Water Act established public health and public protection through drinking water treatment, and that the 1976 RCRA Act set the groundwork for modern-day solid waste and recycling services. Ms. Whitaker stated that given this core mission, staff were working to understand what it meant to be sustainable and responsible for climate action, when their day to day work already addressed so many different aspects. She stated that the organization has taken some time to find out the next steps.

Ms. Whitaker stated that similar to many organizations, the Authorities were adjusting to a dynamic and unpredictable environment in several areas: (a) climate change, (b) regulatory requirements, and (c) scientific discovery and best practices, noting the industry was changing rapidly. Ms. Whitaker stated that in the past, they would have conceived a project, constructed it, and complete it. The process would have taken nearly 10 years. Now, however, work must be completed in much shorter periods of time with frequent mid-stream changes. She noted that it is difficult to measure progress and success in this environment. She stated that they have adjusted how they provide service, while still striving to meet the core mission, by internally changing work processes. Ms. Whitaker stated that they were attempting to better understand where their impacts and footprint. Going forward the organization is focusing on practical climate- based outcomes with measurable results and not just policy and conversation.

Ms. Whitaker stated that the 2023 strategic plan had five key priorities, including one for environmental stewardship. She stated that it weaved its way through everything they were doing, but also was worthy as a priority to stand on its own. She focused on and emphasized the first four words of the goal statement, "To demonstrate and promote." Ms. Whitaker explained that as an organization of people who "did things" by trade, they wanted to ensure that they were able to champion real change and make a difference. Ms. Whitaker stated that they also discussed sustainability, research, conservation, and environmental education, with strategies identified. She stated that they focused on outreach and how to work with other agencies to bring technical expertise forward, how to educate others, and how to help make collaborative decisions. Ms. Whitaker stated that they also are asking what their inward sustainability initiatives were, and what they could do to enhance the environmental protection work they wanted to achieve. She stated that the third item was about business practices and equity, specifically referencing solid waste in the strategic plan.

Ms. Whitaker stated that staff have developed an approach to working on this program that allows for input, problem solving and results at various points within the organization. She stated that on one side of the equation is a strategic plan goal team, composed of representatives of different departments in the Authority who have some interest or job authority for sustainability. Ms. Whitaker stated that those members had begun meeting and had set goals and

objectives about educational outreach and finding opportunities to engage internally in the departments. She stated that she was impressed with the work accomplished by the team recently. The team feeds into the planning, strategy, coordination, policy and management aspect of the program. She stated that on the other side of the equation, sustainability focused capital and operating projects were utilizing traditional project management staff. She stated that by doing so, they were able to develop policies and be reactive to the impacts of climate change.

Ms. Whitaker stated that there were three key areas of focus for the Authorities at this time: (1) climate action and GHG emissions; (2) natural resources protection, and (3) climate change resiliency.

Ms. Whitaker notes that the climate action-related projects, included a greenhouse gas baseline assessment for the Moores Creek facility, which was the largest electricity user. She stated that a pilot project would be conducted before expanding it to the other facilities so that they had a clear picture of the actual carbon footprint.

Ms. Whitaker stated that they were working their way through how to calculate this footprint, and one way was by putting in submetering and linking it to the SCADA system, so they would be able to see in real time the power consumption throughout all different parts of the plant. This will allow staff to have a better understanding of what was driving power consumption and how they might reduce it.

Ms. Whitaker stated that they were intending to establish targets and goals, which would take a while to do, because the baseline work must be completed first. Ms. Whitaker acknowledged the County and City had greenhouse gas reduction goals through their climate action plans: to reduce 45% by 2030 and going to net zero by 2060. She stated that they understood that they were a part of the community and a part of achieving that goal.

Ms. Whitaker stated that the next project was focused on methane gas utilization. She stated that they had a cogeneration facility that was not very functional at the moment, and a study was being conducted to determine how the wastewater biogas industry had evolved. She stated that staff were reviewing cogeneration, microturbines, and/or potentially cleaning the gas for pipeline use. She stated that the investigative phase was currently underway, with the hope of using that energy source at the facility in a better way.

Ms. Whitaker stated that they were looking at renewable energy projects such as solar installation on the new Administration Building and the Ivy MUC brownfields installation. Ms. Whitaker noted that Dominion power had recently taken a greater interest in the Ivy MUC project, indicating it is becoming a likely candidate for their solar development program. She stated that things like operational optimization such as chemical, electrical use reduction, and vehicle driving reduction required finer process control at the plants. She stated that this would entail more SCADA control and more process programming, among other things.

Ms. Whitaker stated that granular activated carbon (GAC) was harvested out of the earth and was thus a carbon-intensive process. She stated that review of carbon regeneration and its footprint was being reviewed.

Mr. Richardson asked if Ms. Whitaker would be discussing anything regarding fleet.

Ms. Whitaker stated that it is intended to be part of the program. She stated that they had done research on fleet, but a very large portion of their fleet were heavy-duty trucks, and the industry currently was not quiet fulling developed for fleet vehicles. She stated that they were looking at adding eV-charging infrastructure at this building for guests, employees, as well as fleet. Additionally, she indicated that they were investigating installing eV-charging infrastructure at key fleet maintenance and storage areas. She stated that they were looking at replacing some lighter vehicles with eVs, and indicated that eventually the truck market would evolve.

Ms. Mallek stated that the EPA was working on a program side for heavy vehicles, and some communities were getting fire engines and trash trucks, so it may be quicker than previously thought for this to come forward. She stated that the policy was there, but the substructure was missing.

Ms. Whitaker stated that a large issue was that many vehicles were demonstration vehicles or were very expensive.

Ms. Mallek stated that it was important to think about the entire cost of the vehicle, not only the diesel and the electricity. She asked if the methane was currently being released.

Ms. Whitaker stated no, and that by law, they were not allowed to release methane, nor did they want to. She stated that they were doing a combination of use in their boiler system and flaring, and they wanted to get away from doing that.

Ms. Mallek asked if flaring was the same as releasing.

Ms. Whitaker responded that it wasn't and stated that flaring was burning, and it converted it to a much less impactful emission.

Mr. Mawyer stated that they used electric golf carts on-site to reduce gas consumption.

Ms. Whitaker stated that they were also using more electrical tools in place of gas-powered tools as the market evolved. She stated that they were taking little steps in an effort to understand where the markets were going.

She continued that for natural resource protection, the Moores Creek plant was an enhanced nutrient reduction plant, and most of the wastewater in the region came to the facility. She stated that the community did a great job, with their nutrient reduction targets exceeded across the board, and they continued to work to lower those. She stated that eventually, the regulations would become state-of-the-industry targets, so they would continue to work on that as well.

Ms. Whitaker stated that water quality had been an emphasis for a long time, and in Virginia, they were an early adopter in looking at raw water nutrients, algae monitoring, and reservoir treatment. She stated that they had an in-stream flow program and had recently worked with

DEQ to update this plan to better mimic the data they had. She indicated that DEQ had been a good partner in that as staff have enhanced the understanding of river flows, through data analysis, they have allowed the in-stream flow requirement to be altered to better mimic actual river conditions. She stated that they would be removing the dam at the North Fork Rivanna River when they decommissioned the North Fork water treatment plant, returning the river to a natural flow.

Ms. Whitaker stated that for land use management practices, there were forestry management practices being implemented at various sites. She stated that the expansion of the recycling and composting centers was done in concert with the County, and that staff continued to grow and regionalize cardboard baling and glass recycling. She stated that they were continuing with the residential compost facility drop-off program and with UVA dining composting. She stated that they were continuing the e-waste and hazardous waste disposal programs to keep those items out of landfills.

Ms. Whitaker stated that a key factor for the program area of climate change resiliency was that they were anticipating much larger precipitation flood events and much drier and deeper droughts. She stated that it was what California was seeing right now, and their infrastructure was not set up to fully catch and utilize the heavy rainfall to refill the reservoirs. She stated that on the east coast, they had been buffered from that for a little bit, but it was coming, and they must be preparing for it.

Ms. Whitaker stated that to this point, they had done some building flood resiliency evaluations, working under the EPA and FEMA guidelines, and the evaluations were done based on the 100-year flood, the 100-plus-two feet, and the 500-year flood. She stated that they were going to start doing some mitigation activities with a target of all of the facilities being 500-year-flood-proof.

Ms. Whitaker stated that there were capital improvement projects to construct redundant water supply pipelines at critical river crossings for both the North Fork Rivanna and South Fork Rivanna Rivers. She stated that they were also designing and constructing the South Rivanna Reservoir to Ragged Mountain Reservoir (SFR to RMR) and the Ragged Mountain Reservoir to Observatory Water Treatment plant pipeline system, which would dramatically help with system operation as well as drought resilience by fully interconnecting the raw water resources and treatment capacity.

Ms. Whitaker stated that this also allowed them to refill the Ragged Mountain Reservoir at the rate of 25 million gallons per day as opposed to the current 3.3 MGD. She stated that when there was a large rain event, they could take in more water, allowing them to quickly collect water and take advantage of those events. She stated again that they were decommissioning the North Fork Water Treatment Plant, which in turn allowed for dam removal and better flood resiliency.

Ms. Whitaker stated that staff were implementing "design policies" as part of their infrastructure resiliency standards. She stated that they have implemented a policy of installing exterior bypass pumping connections on every pump station. She stated that this is in addition to emergency power generation. She indicated that if there was something that destroyed the interior of the pump station such as a flood or fire, they could quickly tie in on the suction and discharge side

with temporary pumping and keep the system operational. She stated that it was expected to be a policy moving forward.

Ms. Whitaker discussed dam safety and showed images on the slide of the 2018 flood. She stated that they had adopted a "design standard" to size dams for 100% of the probable maximum precipitation/flood, although Virginia only required 90%. She stated that they were also working with the dam safety community to understand the recent research on anticipated future flood event and the impact of climate change on those events.

Ms. Whitaker stated that for regional coordination, all the agencies, committees, and groups that they were either a part of or advisors to or stakeholders in were displayed on the current slide. She stated that their goal was to use their technical expertise to be helpful to others and to make sure that they were tied in regionally and understood the community goals, so that their work was in concert with what was being asked of them.

Ms. Mallek asked what the 2018 flood was in comparison to a 100-year flood.

Ms. Whitaker stated that published literature stated that it was close to a 1000-year storm event. She stated that however, it was not the storm of record, and was not a probable maximum flood. She stated that for this area, PMF precipitation was somewhere in the 30 inches in a 24-hour rain event. She stated that the 30+-inch storm was based on the existing calculations, so the future may be more than that.

Mr. Rogers asked if there was a form that they were sharing with the City Climate Action Team.

Ms. Whitaker stated that they were part of that group and had sessions within that group in which the members shared what they were currently working on, but she had not shared this presentation. She stated that they had shared some of the information but could certainly share this with the City staff as well.

10. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

There were none.

11. CLOSED MEETING

At 3:45 p.m., Ms. Mallek moved the Rivanna Water and Sewer Authority enter into a joint closed session with the Rivanna Solid Waste Authority to discuss the evaluation of performance of departments where such evaluation will necessarily involve discussion of the performance of specific individuals as permitted by the personnel exemption at Section 2.2-3711(A)(1) of the Code of Virginia. Mr. Pinkston seconded the motion, which passed unanimously (6-0), by roll-call vote.

At 4:47 p.m., Ms. Mallek moved to certify the closed session whereas, the Rivanna Water and Sewer Authority has convened a joint closed meeting with the Rivanna Solid Waste Authority on this date pursuant to an affirmative, recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act, and whereas Section 2.2-3712(D) of the Code of Virginia requires a certification by the Rivanna Water and Sewer

Authority that such closed meeting was conducted in conformity with Virginia law; now, therefore, be it resolved that the Rivanna Water and Sewer Authority hereby certifies by recorded vote that, to the best of each member's knowledge, only public business matters lawfully exempted from the open meeting requirements of the Virginia Freedom of Information Act and identified in the motion authorizing the closed meeting were heard, discussed or considered in the closed meeting to which this certification resolution applies. Mr. Pinkston seconded the motion, which passed unanimously (6-0), by roll-call vote.

12. ADJOURNMENT

At 4:50 p.m., Ms. Mallek moved to adjourn the meeting of the Rivanna Water and Sewer Authority. Ms. Hildebrand seconded the motion, which passed unanimously (6-0).

Respectfully submitted,

Mr. Jeff Richardson
Secretary - Treasurer