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**RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
June 27, 2017**

A regular meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Tuesday, June 27, 2017 in the 2nd floor conference room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

Board Members Present: Mr. Mike Gaffney – Chair, presiding, Ms. Kathy Galvin, Ms. Lauren Hildebrand, Mr. Maurice Jones, Mr. Gary O’Connell, and Dr. Liz Palmer.

Board Members Absent: Mr. Doug Walker.

Staff Present: Mr. Tim Castillo, Dr. Richard Gullick, Ms. Teri Kent, Mr. Doug March, Mr. Bill Mawyer, Mr. Philip McKalips, Dr. Bill Morris, Mr. Scott Schiller, Ms. Michelle Simpson, Ms. Jennifer Whitaker, Ms. Betsy Wilson and Mr. Lonnie Wood.

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

1.0 Call to Order

The regular meeting of the RWSA Board of Directors was called to order by Mr. Gaffney on Tuesday, June 27, 2017 at 2:33 p.m.

2.0 Closed Meeting – Personnel Matters

Dr. Palmer made the following motion, seconded by Mr. O’Connell.

RESOLVED that the Board of Directors of the Rivanna Water and Sewer Authority enter into a joint closed meeting with the Rivanna Solid Waste Authority Board to discuss confidential personnel matters as permitted by Section 2.2-3711.A.1 of the Code of Virginia.

The motion was approved by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

At 3:32 p.m., Mr. Krueger read the following resolution into the record:

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 that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law, and (ii) only such public business matters as were identified in the motion by which the closed meeting was convened were heard, discussed or considered in the closed meeting by the Rivanna Water and Sewer Authority.

Dr. Palmer moved that the RWSA Board adopt the resolution to certify the closed meeting. Mr. O'Connell seconded the motion. Roll was called, and the motion passed by the following recorded vote: Ms. Hildebrand – Aye; Mr. Jones – Aye; Ms. Galvin – Aye; Mr. Gaffney – Aye; Dr. Palmer – Aye; Mr. O'Connell – Aye. Mr. Walker was absent from the meeting and the vote.

3.0 Minutes of Previous Board Meeting

a) Minutes of the Regular Meeting of the Board on May 23, 2017

Mr. Gaffney asked if there were any changes or comments to the minutes. There were none provided.

Mr. Jones moved to approve the minutes of May 23, 2017 as presented. Dr. Palmer seconded the motion, which passed by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

4.0 Recognition

a) Restatement of the Articles of Incorporation of the RWSA for the Appointment of the City Utilities Director, Lauren Hildebrand

Mr. Krueger indicated that the Virginia State Corporation Commission had accepted the Authority's Articles of Restatement and issued a Certificate of Restatement, so no action needed to be taken on this item.

b) Charles M. Satterwhite, III – Retirement

Mr. Gaffney read the following resolution into the record:

WHEREAS, Mr. Satterwhite has served in a number of positions, most recently as a Wastewater Operator, for the Rivanna Water and Sewer Authority since August, 2003; and

WHEREAS, over the same period in excess of 13 years, Mr. Satterwhite has demonstrated leadership in his field and has been a valuable resource to the Authority and its employees; and

WHEREAS, Mr. Satterwhite's understanding of the Authority's operation and dedication and loyalty to the Authority 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. Satterwhite has provided to the Rivanna Water and Sewer Authority and to its customers and its employees; and

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water and Sewer Authority Board of Directors recognizes, thanks and commends Mr. Satterwhite 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.

Dr. Palmer moved to adopt the resolution recognizing Charles M. Satterwhite, III as presented. Mr. O'Connell seconded the motion, which passed by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

Mr. O'Connell asked if Rivanna offered any additional recognition for retiring employees beyond recognition at board meetings.

Mr. Mawyer responded that Rivanna holds a retirement social for employees.

Mr. Wood stated this was offered depending on what the individual employee wanted.

c) Ralph G. Bridgewater – Retirement

Mr. Gaffney read the following resolution into the record:

WHEREAS, Mr. Bridgewater has served in a number of positions, most recently as a Wastewater Operator, for the Rivanna Water and Sewer Authority since October, 1983; and

WHEREAS, over the same period in excess of 33 years, Mr. Bridgewater has demonstrated leadership in his field and has been a valuable resource to the Authority and its employees; and

WHEREAS, Mr. Bridgewater's understanding of the Authority's operation and dedication and loyalty to the Authority 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. Bridgewater has provided to the Rivanna Water and Sewer Authority and to its customers and its employees; and

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water and Sewer Authority Board of Directors recognizes, thanks and commends Mr. Bridgewater 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.

Dr. Palmer moved to adopt the resolution recognizing Ralph G. Bridgewater as presented. Mr. O'Connell seconded the motion, which passed by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

d) June 30, 2017 – Drinking and Wastewater Professionals Day

Mr. Gaffney read the following resolution into the record:

WHEREAS, June 30, 2017 is Drinking Water and Wastewater Professionals Appreciation Day in the Commonwealth of Virginia; and

WHEREAS, treatment of, on average, 9.4 million gallons of drinking water daily plays a crucial role in the health and safety of the citizens of the City of Charlottesville and Albemarle County; and

WHEREAS, treatment of, on average, 9.2 million gallons of wastewater daily plays a critical role in the preservation of our local environment and the health of the watershed; and

WHEREAS, the Rivanna Water and Sewer Authority employees do important work every day, year-round to protect our environment and to preserve the quality of life for the citizens they serve; and

WHEREAS, the Rivanna Water & Sewer Authority Board of Directors is most grateful for the professional dedication of those Departments and their members to the Rivanna Water & Sewer Authority, and its customers;

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water & Sewer Authority Board of Directors recognizes and commends the men and women who work tirelessly to ensure that our water resources are protected, properly managed, and that the drinking water we deliver to our two customers, the ACSA and the City of Charlottesville, is clean, safe, and reliable. For their dedication, work and service, we present this resolution as a token of esteem and appreciation.

BE IT FURTHER RESOLVED that this Resolution of Appreciation be entered upon the permanent minutes of the Rivanna Water & Sewer Authority.

Dr. Palmer moved to adopt the resolution recognizing June 30, 2017 and Drinking and Wastewater Professionals Day, as presented. Mr. Jones seconded the motion, which passed by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

5.0 Executive Director's Report

Mr. Mawyer introduced Dr. Bill Morris, who has been hired as Rivanna's new Laboratory Manager in Operations, stating that Dr. Morris earned his BS degree in Chemistry from the University of North Carolina – Wilmington, and a PhD in Chemistry from the University of Virginia, where he also worked as a post-doctoral research associate in the Department of Chemical Engineering, conducting research on developer polymer materials for water desalination.

The board welcomed Dr. Morris.

Mr. Mawyer reported that the RWSA had met on June 21, 2017 with the Crozet Community Advisory Committee to introduce the drinking water infrastructure plan to the Crozet community, to let them know the purpose and process to get to the end of that project. He stated that Rivanna also agreed to contract with CenturyLink to provide communication service to RWSA facilities in Sugar Hollow, which he hoped would be ready by January 2018. This service would allow for better control and monitoring of those facilities. Additionally, he stated that there were three partners with this project, including the Inn at Sugar Hollow and the Sugar Hollow DSL Citizens Group, and collectively this made it viable for CenturyLink to put in the cable – so they were installing five miles of cable to get it to Sugar Hollow. Mr. Mawyer stated that the net result was that it improved the cost for all parties, with Rivanna's cost at about \$720 per month, and ability now to see and monitor devices at Sugar Hollow and the dam, including the water level gauge and control valves, rather than staff having to do those things manually.

Dr. Palmer asked if this reduced the costs for everyone for the installation, with the monthly charge being the standard for services.

Mr. Mawyer confirmed that this was the case, and stated that the Inn at Sugar Hollow would be paying the same \$720 per month that Rivanna is paying, with no infrastructure change. The citizens' group wanted a different plan – which includes a smaller monthly fee with an up-front infrastructure charge.

Mr. Gaffney asked how many additional citizens were affected by this.

Mr. Mawyer responded that there were about 25 in the citizen's group plus the Inn.

Mr. Mawyer reported that Mr. Castillo had provided a group from UVA with a tour of wastewater facilities, and Assistant Manager of Water Matt Bustle had given another UVA group a tour of one Rivanna's water treatment plants.

Mr. Mawyer noted that the strategic planning process had commenced on June 15 and was underway.

Mr. Mawyer reported that Jennifer Whitaker led Rivanna in a South Rivanna Dam tabletop exercise with representatives from the City, the Service Authority, the County, UVA, the Federal Energy Regulatory Committee (FERC), and the State in a meeting at Zehmer Hall to address handling emergencies such as major damage to the reservoir dam. He stated they discussed establishment of an emergency action plan and communications, and it was a valuable exercise.

6.0 Items from the Public

There were no items from the public presented.

7.0 Responses to Public Comments – No Responses This Month

There were no responses to public comments this month.

8.0 Consent Agenda

a) *Staff Report on Finance*

b) *Staff Report on Operations*

c) *Staff Report on Ongoing Projects*

d) *Recommendations for an Additional Holiday on July 3, 2017*

e) *Construction Contract Award – Rivanna Interceptor Repair*

f) *Engineering Contract and Work Authorization #1 – Drinking Water Infrastructure Plan for the Crozet Area*

Mr. Jones moved to approve the Consent Agenda as presented. Ms. Galvin seconded the motion, which passed by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

9.0 Other Business

a) *Authorization to Create a New “Department of Engineering and Maintenance”*

Mr. Mawyer reported that having been Executive Director for about eight months and monitoring the Authorities, he would like to create a new Department of Engineering and Maintenance, and the Rivanna Personnel Manual requires the Board to approve creation of any new position or department. He presented an organizational chart showing the two existing departments – Finance/Human Resource/Information Technology/Administrative, with Dr. Gullick’s area containing everyone else, including Lab/Engineering/Maintenance/Wastewater/Water Resources Manager/Water Department. Mr. Mawyer noted that 72 of 87 employees were in the Department of Operations, and he felt the structure could benefit from reorganization.

Under the newly proposed structure, he stated that the Department of Finance and Administration remains the same, but the Department of Operations is divided to create a new Department of Engineering and Maintenance. Mr. Mawyer noted that he has grouped the engineering staff with

the inspectors and GIS coordinator, as well as the water resources manager and the maintenance group. He stated that this group would focus on facilities – asset management – and Ms. Whitaker would serve as a Director, supervising the GIS coordinator, and an engineer supervising three inspectors, as well as three additional engineers in that group along with the Maintenance group and the Water Resources Manager.

Mr. Mawyer stated that the benefits of restructuring are an integrated focus on facilities planning, design, construction, and maintenance. Additionally, he noted that the Department of Operations would now have the lab, the wastewater plant, and the water plants. He emphasized that this group could focus on their core duties of treating water and wastewater, doing scientific reviews and studies of chemicals, and addressing water quality issues in the distribution system – all under the direction of Dr. Gullick. Mr. Mawyer reported that there would now be 44 employees in Operations and 28 in the Department of Engineering and Maintenance, and there would be no additional positions beyond reclassification of the Chief of Engineering to Director of Engineering and Maintenance.

Mr. Gaffney commented that the proposal makes perfect sense.

Mr. Mawyer stated that he has discussed this with Mr. Wood, Dr. Gullick, and Ms. Whitaker, as well as getting feedback from all staff – and most has been very positive.

Mr. O’Connell asked for clarification that the Water Resources Manager was moving.

Mr. Mawyer confirmed that she would be moving to Engineering and Maintenance, with a focus on the water supply and permitting aspects, with some of the water quality aspects staying in Operations.

Ms. Galvin commented that there was a really nice logic to what Mr. Mawyer has proposed, and asked what were his desired outcomes.

Mr. Mawyer responded that there would be better focus on asset management and systems creation, including getting asset data in the system. He stated there would be a focus on infrastructure in between the plants such as pipelines and responses to water breaks, including a plan for emergency response, rather than having a water treatment plant manager address it. Mr. Mawyer noted that Rivanna hoped to have another team to address emergencies like the recent water line breaks on Route 29 with Engineering and Maintenance responding to those types of issues, as well as Maintenance working closely with Engineering when they identify a problem or deficiency – including recommendations on design based on avoidance of issues that have previously surfaced.

Mr. Mawyer stated that the restructuring reduces the span of control of Operations, and there may be future improvements in Engineering and Maintenance to further reduce that span of control. He noted there would be three positions reporting to Finance and three to Operations, with Engineering having eight.

Mr. Jones moved to authorize the Department of Engineering and Maintenance for the RWSA. Dr. Palmer seconded the motion, which passed by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

b) Water Supply and Drought Management Presentation

Ms. Whitaker stated that there had been a few questions over the last several months as to how Rivanna operates the water supply system and how Rivanna operates in a drought. She noted that currently there were the South Fork, Sugar Hollow, and Ragged Mountain reservoirs – which all feed into a single system serving the urban area. Ms. Whitaker stated that Totier Creek serves the Scottsville area, and Beaver Creek Reservoir is the sole supply for Crozet.

Ms. Whitaker presented a diagram showing the systems are all interconnected to one another, stating that there is also a North Fork river intake, and stated that Sugar Hollow – coming off of the Moormans River – currently goes to Ragged Mountain to refill. She noted that Beaver Creek feeds into the Mechums River, so both of those rivers flow into the South Fork Reservoir, which then flows into the river; the North Fork has an in-river intake that also goes to the urban system; Totier Creek has both a reservoir and intake serving the Scottsville water system. She presented information on each reservoir, its total volume and watershed, and illustrated why the system relies so heavily on the South Fork Reservoir despite having such a large volume in Ragged Mountain. Ms. Whitaker stated the South Fork watershed was massive compared to some of the other watersheds, and thus it contributed a tremendous amount of water to the overall system.

Ms. Whitaker explained that the water system is a series of storage, transfers, and intakes, guided by minimum instream flow requirements. She stated that when Ragged Mountain was built and permitted, Rivanna did a permitting process that captured all of the urban reservoirs – so there are instream flow requirements to the Moormans River, South Rivanna, and Moores Creek downstream from Ragged Mountain. She noted that prior to that permitting Rivanna had voluntary releases, but since Ragged Mountain was permitted, Rivanna has had a series of permitted releases. Ms. Whitaker stated there were currently two phases, including one after the Ragged Mountain Reservoir was built but before the South Fork to Ragged Mountain pipeline is built, whereby releases would increase after the pipeline is built.

Ms. Whitaker reported that Rivanna tries to fill Ragged Mountain during the winter and wet seasons, and that was done either by rainfall and runoff or by transferring water from Sugar Hollow. She stated that Ragged Mountain's watershed was only two square miles, so it necessitated some infill/inflow requirement to keep it full.

Dr. Palmer asked for clarification that about 90% of the water in Ragged Mountain came from Sugar Hollow, with only a small percentage coming from runoff or rain.

Ms. Whitaker responded that it would depend on the amount of runoff or rain, and Rivanna is currently transferring at a maximum of 4MGD from Sugar Hollow to Ragged Mountain – so it depends on how much rain was actually falling on the two square mile watershed.

Dr. Palmer stated that regardless, the vast majority was from Sugar Hollow, with a very small amount coming from rain and runoff.

Ms. Whitaker responded that this was particularly true in the recharge, with the pipeline playing a tremendous role in keeping the Ragged Mountain Reservoir full at springtime.

Ms. Whitaker reported that Sugar Hollow and South Fork were the primary water sources, with Sugar Hollow either overflowing the dam or being released through the minimum release requirements, and anything overflowing or discharging flowing into the South Fork Reservoir. She stated that if everything was full with all dams overflowing, the water generally moves downstream to South Fork Dam – but if for any reason one reservoir is drawn down, anything released from Sugar Hollow went to fill up South Fork. Ms. Whitaker stated that the goal was to use Ragged Mountain after Sugar Hollow and South Fork levels had receded. Ms. Whitaker summarized that Rivanna uses Sugar Hollow/South Fork first and then Ragged Mountain.

Ms. Whitaker explained that the drought management plan was developed in 2004 by committee, with representation from the County, ACSA, City, and Rivanna, and established the Rivanna Regional Drought Response Committee. She stated that the most recent update of that plan was done in 2015 and was currently in the process of being updated again. Ms. Whitaker stated that there were basically three drought stages: a watch, a warning, and an emergency. She stated that a watch indicated that there some issues being monitored, with voluntary conservation measures enacted by the City and the Albemarle County Service Authority, followed by the more severe warning and emergency phases. Ms. Whitaker noted that the responsibility for identifying the drought stage resting with Rivanna and the responsibility for conservation measures and public input resting with both the City and the Service Authority.

Ms. Whitaker reported that there were four measures Rivanna used to predict drought conditions or identify that the area was in drought conditions: observations of the weather, including forecasts, and long dry spells with predictions for no rain in the forecast; review of streamflow data; use of a hydrologic model, currently done by the Hydrologics company using the “Oasis” model – combining hydrology and weather information for the past hundred years, predicting the weather and using the current water supply data to provide a probability model that predicts drought likelihood; and the Virginia Drought Monitoring Task Force report and DEQ drought monitoring. She explained that precipitation, groundwater, reservoir volume, and flow were all factors considered, and the use of regional data in combination with streamflow data and local precipitation informing what is going on locally. Ms. Whitaker noted that there was currently a groundwater emergency that has caused a watch in the entire region, with stream flows not as high as DEQ would like but the region still considered “normal.”

Ms. Whitaker explained that the drought notification procedure is for the Executive Director to recommend to the Board a declaration of the drought stage, which can be done in regular meetings or special meetings if needed. She stated that the RWSA notifies the City, County, and the Service Authority – with the City and Service Authority responsible for conservation measures and notification to the public, and in the past this has been a highly coordinated effort for public information. Ms. Whitaker added that if the Governor declares a drought stage, the City and ACSA

must follow, regardless of the condition of the local water supplies, in part to have constant and consistent messaging.

Ms. Whitaker reported that when Rivanna starts seeing Sugar Hollow and South Fork reservoir levels begin to drop, Rivanna maximizes production at the North Fork Treatment Plant and at South Fork. She stated that modeling shows that with droughts in late August or September, there is not a tremendous amount of supply in the North Fork, so it will actually taper off. Ms. Whitaker stated that as the community begins to enter a dry period in May or June, Rivanna tries to maximize production from those facilities, and tries to hold Ragged Mountain in storage as long as possible, which means minimizing Observatory treatment plant production but also meeting the needs of the University and that side of town. She stated that as the reservoir levels at Sugar Hollow and Rivanna start becoming significantly reduced, Rivanna will actually ramp up production at Observatory and tries to balance the production between South Fork and Observatory – and at that point, the North Rivanna Water Treatment Plant production can be very sporadic based on water availability. Ms. Whitaker noted that at this point, Rivanna was also starting to look at the coordination activities in order to use emergency water supply sources, so Rivanna does not wait until those resources are used.

Dr. Palmer asked how much water could be processed at Observatory Hill now.

Ms. Whitaker responded that it was about 3-5 MGD, although it was permitted for 7 MGD and once Rivanna does the upgrades, Rivanna will be able to reach that number.

Ms. Whitaker stated that the emergency water sources were shown on the map provided, with Beaver Creek Reservoir identified as one emergency resource. She explained that ensuring adequate supply for Crozet was the first priority, with a 20% reserve, and there was an opportunity to bring some of that water to the urban system through discharges at Beaver Creek, which flow into the South Fork Reservoir. Ms. Whitaker stated that the other two options in the region were Chris Greene Lake, which can release into the North Fork Rivanna River to be picked up by the North Fork plant; and Lake Albemarle, which could be pumped into Mechums River and also picked up at South Fork.

Dr. Palmer asked for confirmation that Rivanna was still considering Chris Greene Lake as a potential water source in an emergency.

Ms. Whitaker responded that it would be in an emergency, but there would be significant challenges in getting that water ready for use – as the dam itself did not have the right structures for water supply intakes and discharges. She stated that Rivanna currently had ample supply with Ragged Mountain only, but in the worst possible future conditions, Rivanna is looking at the lakes as a possible source.

Mr. O’Connell asked if there was a change in the County’s plan recently.

Dr. Palmer responded that there was, but it was something she would address at a future time.

Ms. Whitaker noted that Lake Albemarle was a Department of Conservation and Recreation fishing lake, but Rivanna has some tentative provisional agreements with DCR on how to get some water out.

Mr. Krueger stated that with the future pipeline between Ragged Mountain and South Fork, Rivanna could also push water down the pipe to feed South Fork Reservoir.

Ms. Whitaker confirmed this, stating that the future pipe would interconnect the South Fork and Ragged Mountain reservoirs, which would allow them to maximize water treatment plant capacity on either end of the pipe. She stated that how Rivanna operates now is based on existing physical infrastructure, and some of those limitations would likely go away in the future, allowing greater flexibility and redundancy.

Dr. Palmer commented that South Fork was a wonderful place to collect and Ragged Mountain was a wonderful place to store it, so Rivanna needed to finish implementing the water supply plan.

10.0 Other Items from Board/Staff not on Agenda

There were no additional items presented.

11.0 Adjournment

Mr. Jones moved to adjourn the RWSA Board meeting. Dr. Palmer seconded the motion, which was approved by a vote of 6-0. Mr. Walker was absent from the meeting and the vote.

There being no further business, the meeting adjourned at 4:10 p.m.