A regular meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Tuesday, April 25, 2017 at 2:15 p.m. 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, Mr. Maurice Jones, Mr. Gary O’Connell, Dr. Liz Palmer and Mr. Doug Walker.

**Board Members Absent:** None.

**Staff Present:** Mr. Tim Castillo, Ms. Victoria Fort, Dr. Richard Gullick, Ms. Teri Kent, Mr. Doug March, Mr. Bill Mawyer, Mr. Scott Schiller, Ms. Michelle Simpson, Ms. Jennifer Whitaker and Mr. Lonnie Wood.

**Also Present:** Ms. Lauren Hildebrand, 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, April 25, 2017 at 2:34 p.m., and he noted that a quorum was present.

2.0 **Minutes of Previous Board Meeting**

a) *Minutes of the Regular Meeting of the Board on March 28, 2017*

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

Dr. Liz Palmer moved to approve the minutes of February 28, 2017 as presented. Mr. O’Connell seconded the motion, which passed 6-0.

3.0 **Recognition**

a) Recognition of Staff Members Who Obtained Licenses
Mr. Mawyer recognized Jody Schwake, who completed the requirements to move from a Class 3 to a Class 2 water plant operator; and Matthew Walker, who recently received his Class A commercial driver's license (CDL), which would authorize him to operate heavy vehicles on the public highway.

4.0 Executive Director's Report

Mr. Mawyer reported that Rivanna continues to work on the Crozet Water Master Plan and would be interviewing firms the following week, with Mr. O'Connell of the Albemarle County Service Authority and Frank Pohl of the County serving on the committee as part of a joint effort to look at a long-range drinking water master plan for the Crozet water system. He stated that the rain had been beneficial and all reservoirs were full except for Ragged Mountain, which was about 1.2 feet low and about 95% full, with transfer continuing from Sugar Hollow until it was completely full – hopefully over the next few weeks. Mr. Mawyer noted that as a whole, the urban reservoirs were 97% full.

Mr. Mawyer said that Rivanna continues its community outreach, with the Communications Manager and Wastewater Manager giving a tour of the Moores Creek plant to 60 juniors and seniors from Charlottesville High School. He stated that Ms. Kent also gave a presentation on "how water works" to 85 third graders from Hollymead Elementary School, held at the Rivanna/UVA Rowing Complex. He added that Rivanna was moving forward with its strategic plan for the Authorities.

Dr. Palmer asked what the plan was for operating the Ragged Mountain Reservoir in the summertime and how far Rivanna would let it go down before they stop the transfer from Sugar Hollow to Ragged Mountain.

Mr. Gaffney asked whether Rivanna would stop transferring from Sugar Hollow once it filled Ragged Mountain Reservoir, or if Rivanna would continue to transfer as long as it was filled.

Mr. Mawyer responded that Rivanna would intend to transfer a small amount to keep Ragged Mountain Reservoir full, because 1 MGD is typically pulled out each day for the Observatory Treatment Plan – but during all of these transfers, Rivanna was meeting the in-stream flow requirements of the Moorman’s River, and water could be overflowing the dam at Sugar Hollow. He stated that Rivanna has not established a specific drawdown level for the Sugar Hollow reservoir, which was recently down as much as 6 feet. Information from 2015 indicates the reservoir was drawdown 36 feet. Mr. Mawyer said that the drawdown would likely be between 6 and 10 feet, but would depend on the summer weather and drinking water demand, since Sugar Hollow is a drinking water supply reservoir.

Dr. Palmer asked for confirmation that Sugar Hollow was the first source, not Ragged Mountain Reservoir.

Mr. Mawyer confirmed that it was, stating that Rivanna can only take a limited amount out of Ragged Mountain because the Observatory Treatment Plant normally only treats about 1 MGD – whereas the South Fork Rivanna Water Treatment Plant was treating 8-10 MGD. He stated that Rivanna needs more water coming from Sugar Hollow to the South Rivanna Reservoir, so that
would be the first source. He stated that Rivanna's strategy is to hold Ragged Mountain as full as possible for as long as possible to address any drought, with Sugar Hollow and South Rivanna used first and Ragged Mountain used last.

Dr. Palmer asked how long Rivanna could use a full Ragged Mountain in the summertime if it was not taking anything out of Sugar Hollow at all to go to Observatory, and taking 1 MGD from Ragged Mountain.

Mr. Mawyer responded that there were 1.5 billion gallons in Ragged Mountain. He stated that within the water treatment plant options of North Rivanna, South Rivanna and Observatory which supply the urban area, there is redundancy which allows Rivanna to do some balancing and make strategic decisions about which water source Rivanna wants to use first. Mr. Mawyer said that the water from Sugar Hollow is flowing down the Moorman's River and through the Rivanna Reservoir, across the dam, and is then gone – whereas Ragged is more static and the water is held there, and is not leaving as it does when passing over the South Fork Rivanna Reservoir dam. He stated that this was why Rivanna's strategy is to use the water in Sugar Hollow and South Fork first and hold Ragged Mountain full, using it through Observatory, for as long as possible. Mr. Mawyer said that the community water supply plan includes constructing a pipe from the Rivanna reservoir to Ragged Mountain, with water pump stations at both locations, so Rivanna can pump from the Rivanna Reservoir to help fill Ragged Mountain, and when Sugar Hollow and South Rivanna water supplies were low, Rivanna could pump from Ragged Mountain to the South Rivanna Treatment Plant because it has the largest treatment capability at that plant.

Mr. Gaffney said his understanding is that Rivanna would use 1 MGD while South Rivanna was spilling, and asked if we would then increase the use of Observatory Water Treatment Plant when South Rivanna stopped spilling.

Mr. Mawyer responded that if there was not an adequate water supply from South Rivanna, we could increase production at the Observatory Water Treatment Plant, while holding Ragged Mountain water levels high for as long as possible.

Dr. Palmer said that one of the reasons she asked was to see if the plan had changed at all, because when Rivanna did the water supply plan it was with the intention of keeping Ragged Mountain as full as possible all the time.

Mr. Mawyer confirmed that it was the same operational plan.

Ms. Jennifer Whitaker stated that as Rivanna developed the water supply plan, the safe yield optimization was geared towards being able to maximize use of the water in all of its various locations as a unit. She said that to do that based on the hydrology, topography, weather, and existing infrastructure, it almost has to be used in that order – otherwise Rivanna is just taking from one system to give it to another. Ms. Whitaker stated that if Rivanna uses the water at Ragged Mountain early in a drought and can't get water there, it won't be there to use when it's actually needed. She added that there is some flexibility, but using the reservoirs completely out of order reduces their safe yield.
Dr. Palmer stated that the Board needs to be able to explain this, because they often receive many questions related to Sugar Hollow.

Dr. Gullick said that an analogy might be a checking account and a savings account, and Ragged is the savings account – with the other sources serving more as checking accounts, with water flowing through. He stated that Rivanna would intend to keep Ragged Mountain full, but would not overflow Ragged when transferring water from the Sugar Hollow watershed over to Ragged and out, so the water stayed in its watershed other than what was taken for the community water supply.

Dr. Palmer stated that this was a positive attribute, because 15 years ago, that was exactly what was happening.

Dr. Gullick emphasized that Rivanna needs to focus on saving the water for drought situations, and hypothetically Ragged would be filled in the winter and used in the summer, and how full it would be would depend on how it uses the pipeline.

Mr. Mawyer stated that staff would put together a presentation with some photos and graphics to illustrate how this works.

Mr. Gaffney suggested that RWSA offer it to the Board of Supervisors and City Council also.

Ms. Galvin noted that there were Council members who knew nothing of the history of the water supply plan.

Dr. Gullick mentioned that it was important for everyone to understand that the purpose of Sugar Hollow is for drinking water and therefore the water level goes up and down. He stated that it filled very quickly because it is a small reservoir in a decent size watershed. He added that recreation was not its primary purpose.

Mr. O'Connell asked if he thought the construction at the water treatment plants over the summer would change that.

Mr. Mawyer responded that they have not gotten that deep into that analysis, but at present he did not see it changing anything.

Ms. Whitaker agreed, stating that Rivanna had passed the most difficult parts of construction – the filter upgrades at South Fork – and those were all back in service at this point. She stated that it would likely be a day or a few days here and there, but not wholesale changes.

5.0 Items from the Public
There were no items from the public presented.

6.0 Responses to Public Comments – No Responses This Month
There were no responses to public comments this month.
7.0 Consent Agenda

    a) Staff Report on Finance
    b) Staff Report on Operations
    c) Staff Report on Ongoing Projects
    d) Reimbursement Resolution – Capital Funding
    e) Deposit Account Authorization
    f) Contract Award – Term Contract Dam Engineering Services
    g) Request for Easement from Dominion Virginia Power

Mr. Jones moved to approve the Consent Agenda as presented. Mr. O’Connell seconded the motion.

Mr. O’Connell asked if Rivanna would need to use the fund surplus to make up the deficit with wastewater.

Mr. Wood responded that the reserve was there for instances like this in which Rivanna had to repair one of the clarifiers.

The motion passed by a 6-0 vote.

8.0 Other Business

    a) Presentation on the North Rivanna Water Treatment Plant

Mr. Mawyer stated that he would continue the series of virtual tours of Rivanna facilities, stating that he would present the North Rivanna Water Treatment Plant. He said that the facility was constructed in the 1970s, and inside the building was the operator and controls to run the treatment process, the lab, filters, chemicals, and a clearwell where about 60,000 gallons of treated water was stored temporarily. He noted that this plant is one of three that serves the Urban Area. Mr. Mawyer stated that the plant was constructed in 1973 and had a current capacity of 2 MGD, getting its water from the North Fork of the Rivanna River. He said that there was additional storage and primary storage at the Piney Mountain Tank, which holds 750,000 gallons, and Rivanna only operates the plant during daytime hours, seven days per week. Mr. Mawyer noted the location of the treatment plant on a map provided, pointing out its proximity to 29 North, the U.S. Army facility, UVA Research Park, Airport Road and the Airport, and Forest Lakes. He stated that the North Rivanna plant can be accessed by going through the Camelot subdivision.

Mr. Mawyer mentioned that water from the North Rivanna Water Treatment Plant can flow south into the urban area primarily served by the South Rivanna Water Treatment Plant. He stated Rivanna can supply treated drinking water from the north to the south, but in order to get water to
Mr. Mawyer stated that the North Rivanna Water Treatment Plant intake is on the North Rivanna River. There is a concrete dam that impounds the water behind the dam, with the intake structure in the river. He said that the North Rivanna Treatment Plant uses a conventional treatment process with a flocculation basin that is found at all water treatment plants, with alum added so that suspended solids settle out of the water in the sedimentation basins. Mr. Mawyer noted the location of the new granular activated carbon building for this plant. He stated that the operator workspaces inside the plant are not glamorous but are functional, and he pointed out the location where the operator sat. He said the operator does all of the onsite testing in the lab within the facility. Mr. Mawyer said the primary water storage facility was the Piney Mountain tank, located toward the west of the treatment plant. This was a 750,000-gallon tank, with the CIP including resources for some structural repairs and painting on the tank in the upcoming fiscal year.

Mr. Krueger asked if that was raw water storage.

Mr. Mawyer responded that it was finished water storage, and after it has been through the plant, it was pumped and held in the tank – then that feeds into the system and helps maintain the pressure in the system.

Dr. Palmer asked if the water ever stopped going over the dam.

Mr. Mawyer responded that in the summer, it does, and Rivanna took water from the pool behind the dam – as long as there was water there – but there were occasions when the North Rivanna River got very dry and needed to fill, then the water was pumped out and treated when the pool refilled.

Dr. Palmer asked if North Rivanna had no in-stream flow requirements because it was grandfathered.

Mr. Mawyer confirmed this.

Dr. Palmer asked what would happen to that plant if Rivanna got in-stream flow requirements.

Mr. Mawyer responded that it would render the plant unusable for a significant part of the summer.

Ms. Whitaker stated that it would depend on what the in-stream flow requirements were, and in Virginia they are generally negotiated based on a series of models and other factors. She said that the 1970s and 1980s requirements were always a percentage of the water, but now they were modeled up and down based on the seasons – so there would be a negotiated in-stream flow requirement through the permitting process. Ms. Whitaker stated that during the 2002 drought, Rivanna would not have been able to use the plant.

Mr. Mawyer pointed out that in-stream flow requirements usually mimicked the natural flow of
the river, so if there was little no water, it would not change their operating procedures – so Rivanna
wouldn’t be required to maintain water in the river because it couldn’t if there was no water.

Dr. Palmer commented that her understanding was that when you get to the moderate drought
conditions, having the in-stream flow requirements actually helps the health of the river
downstream from the treatment plant.

Mr. Gaffney stated that he thought Rivanna would have to build a dam to be able to provide
downstream flows during those times because it would have to have water.

Mr. Mawyer said this would be to increase the impounding so Rivanna could serve the water
supply and the river.

Dr. Palmer stated that there were now in-stream flow requirements at Sugar Hollow and at South
Fork, and asked if the plan was to use the North Rivanna water treatment plant in the indefinite
future.

Mr. Mawyer explained that Rivanna staff was working on a study to address that issue because
there were three plants serving the Urban Area and it needed to be determined whether it is most
effective to continue with that model or provide a different approach. He stated that possibly North
Rivanna would be eliminated, as it is the smallest plant, and use of South Rivanna and Observatory
would be increased. Mr. Mawyer commented that it was difficult to eliminate a facility that was
already in operation, but Rivanna must consider all requirements.

Mr. O’Connell asked what the pieces were for the 10-year CIP, with permanent movement of water
from the urban system into North Rivanna Water Treatment Plant.

Mr. Mawyer responded that the 29 North Pump Station was in the CIP, and the plan was to split
the North Rivanna zone into two zones to help serve the areas better because the pressure was very
high in that zone.

Mr. Gaffney asked if the new tank by Hollymead was for the north system.

Mr. Mawyer replied that it would help to create the two new pressure zones.

9.0 Other Items from Board/Staff not on Agenda
There were no additional items presented.

10.0 Closed Meeting
There was no closed meeting held.

11.0 Adjournment
Mr. Jones moved to adjourn the RWSA Board meeting. Ms. Galvin seconded the motion,
which was approved by a vote of 6-0.
There being no further business, the meeting adjourned at 2:59 p.m.