A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, August 27, 2019 at 2:35 p.m. in the 2nd floor conference room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

Board Members Present: Mike Gaffney, Tarron Richardson, Kathy Galvin, Gary O’Connell, Liz Palmer.

Board Members Absent: Lauren Hildebrand, Jeff Richardson.

Rivanna Staff Present: David Rhoades, Phil McKalips, Michelle Simpson, Austin Marrs, Andrea Terry, Victoria Fort, Jennifer Whitaker, Scott Schiller, Lonnie Wood, Liz Coleman, Dr. Bill Morris, Dyon Vega, Katie McIlwee, Bill Mawyer.

Attorney(s) Present: Kurt Krueger, RWSA counsel, members of the public and media representatives.

1. CALL TO ORDER
Mr. Gaffney called the August 27, 2019 regular meeting of the Rivanna Water and Sewer Authority Board of Directors to order at 2:35 p.m.

2. MINUTES OF PREVIOUS BOARD MEETINGS
   a. Minutes of Regular Board Meeting on May 28, 2019
   b. Minutes of Regular Board Meeting on July 23, 2019

Mr. Gaffney asked Mr. Krueger which members would be able to vote on the meeting minutes.

Mr. Krueger replied that for the May 28, 2019 meeting, the Board members absent were Ms. Hildebrand, Mr. Richardson, and Dr. Palmer, and that there were four members present who could vote.

Mr. Gaffney asked the Board members if there were any questions or comments about the May 28, 2019 meeting and heard none.

Mr. O’Connell moved that the Board approve the minutes of the regular Board meeting of May 28, 2019. The motion was seconded by Ms. Galvin and passed 4-0-1. Dr. Palmer abstained from the vote. Mr. Richardson and Ms. Hildebrand were absent from the meeting and the vote.

Mr. Gaffney asked the Board members if there were any questions or comments about the July 23, 2019 meeting and heard none.

Mr. O’Connell moved that the Board approve the minutes of the regular Board meeting of
April 23, 2019. The motion was seconded by Dr. Palmer and passed unanimously (5-0). Mr. Richardson and Ms. Hildebrand were absent from the meeting and the vote.

3. RECOGNITIONS
There were no recognitions.

4. EXECUTIVE DIRECTOR’S REPORT
Mr. Mawyer stated that for the Strategic Plan update for this quarter, the Communication and Collaboration Team was participating in an “Imagine a Day Without Water” event with Mr. O’Connell and the City. He stated that school children are invited to draw pictures of what it would be like to have a day without water, and that some of this artwork could be seen in the hallway.

Mr. Mawyer stated that RWSA is also participating in the United Way’s Day of Caring on September 25 and going to Camp Holiday Trails to work on a trail improvement project.

Mr. Mawyer stated that RWSA continues to optimize its operations and security by installing security cameras at a number of its reservoir locations. He stated that they also plan to keep the front gate closed longer in the morning, starting Monday, September 3, 2019. He explained that it currently opens at about 6:00 am when there is a shift change, but that there are only two staff on the property until after 7:00 am and they would therefore leave the gate closed until 7:00 am, staying open until 5:30 pm.

Mr. Mawyer continued that a letter was sent to about 140 haulers who are the frequent early-morning customers, informing them that the schedule has changed and noting that they can still come in 24 hours a day, 7 days a week, but they must call the operator on duty to have the gate opened. He stated that if the haulers choose to do this there is a fee, except for the one hour of 6:00-7:00 am so that the new schedule change will not affect the haulers.

Mr. Gaffney asked if there were only two people there after 7:00 am.

Mr. Mawyer replied that there are two staff present before 7:00 am, and that those two operators work alone all night.

Mr. Gaffney asked if it was expensive to put up an automatic gate.

Mr. Mawyer replied that this would be considered as part of the security project that was approved the prior month, noting that he wasn’t sure what the specific cost would be. He stated that there is currently an automatic gate there now and that he can click with his remote to open it. He stated that staff have clickers to obtain access 24-7, but the private haulers and anyone from the public do not have these.

Mr. Gaffney stated that he didn’t know if someone could call the operator and if the operator could open the gate.

Mr. Mawyer replied that they currently cannot do this remotely.
Mr. Mawyer stated that the Infrastructure and Master Planning Initiative is continuing and that work is underway for the second phase of the Asset Management Program. He stated that a pilot study would be done on the relatively new Rivanna Pump Station to catalogue assets and help develop a new asset management software system.

Mr. Mawyer stated that, as he mentioned at the last Board meeting, there was training as part of Workforce Development on the OSHA-10 safety topics, as well as in CPR.

Mr. Mawyer stated that for environmental stewardship, the water resources manager has been coordinating with County staff about algae blooms in the reservoirs.

Mr. Mawyer stated that also in regard to infrastructure and master planning, work is being done on the Buck Mountain Property Master Plan and there would be interviews the following week with consultants who would help move this project forward. He stated that Mr. Krueger has helped to craft a resolution to eliminate the Buck Mountain surcharge and was coordinating with the City, County, and ACSA attorneys. He stated that Mr. Wood is coordinating with the bond trustee, who also have to approve termination of the surcharge. He stated that after approval is obtained from the bond trustee, it would be brought to the Board for review and approval, then would be passed on to the City, the County and the Service Authority for Council and their Boards to approve the resolution to terminate the surcharge.

Mr. Mawyer stated that negotiations are continuing with property owners to acquire the Rivanna to Ragged Mountain water line property easements.

Mr. Mawyer stated that work is continuing with UVA staff on the lease for the Observatory Water Treatment Plant. He stated that they received comments from UVA in the week prior and that there would be a meeting with them on Thursday to begin to wrap up negotiations.

Mr. Mawyer stated that he and staff are working on a capacity increase agreement with the City and the ACSA for the Observatory WTP project. A 2003 agreement provides that if there is any new capacity built in the urban water system, there will need to be a new agreement between the City and the ACSA to allocate funding for the project. He stated that they are adding 2.3 million gallons capacity at the Observatory Treatment Plant as a new project, and that an agreement was drafted with Mr. O‘Connell, Ms. Hildebrand, and Mr. Krueger, which will soon come to the Board (possibly in September) for review. He stated that it would then move forward to the City and Service Authority for final approval.

Mr. Mawyer stated that after recently speaking with Mr. Jeff Richardson about responsibilities for the reservoirs, as well as concerns about traffic, parking and trash, a memorandum of understanding is being drafted between the County, the City, and Rivanna about the five reservoirs that Rivanna uses and what the responsibilities would be for the various aspects. He stated that he plans to send a letter to Dr. Tarron Richardson and Mr. Jeff Richardson in the next week or so with the proposed plan of responsibilities.

Dr. Palmer stated that the prior weekend, she walked along the South Fork at Mormon’s River
down to Skyline Drive, down to the “Blue Hole,” which is City property. She stated that as soon as she arrived on the City property, there was a steady stream of people coming there to go swimming. She stated that a large number of people had coolers and some had large cases of beer. She stated that there was a significant amount of alcohol there, and she wasn’t sure how this relates with the City in terms of insurance. She stated that there is also a rope swing there that doesn’t look like it is in good shape. She stated that this may be something to consider for insurance purposes.

Mr. Mawyer stated that guidance was found in the original Four-Party Agreement about limiting Rivanna’s responsibility for municipal purposes at the reservoirs - that it is in charge of the structures, but not municipal activities - which was the guideline for the matrix.

Ms. Galvin stated that it seemed that some of the standards and guidelines in public parks would apply, because the areas are used as parks.

Mr. Mawyer stated that this is what was suggested – that others are responsible for park-related activities and not Rivanna.

Ms. Galvin expressed that it was good to make this clear.

Mr. Mawyer stated that RWSA has received calls about who would retrieve dead animals, trash, and about parking at Sugar Hollow (where emergency vehicles cannot get through). He stated that there was also damage to the gate, which RWSA repaired, but at Mr. Richardson’s suggestion, he made a list of responsibilities to communicate to the groups responsible.

Mr. O’Connell asked which reservoirs this pertained to.

Mr. Mawyer replied that it was all five – Ragged Mountain, Sugar Hollow, South Fork, Totier, and Beaver Creek. He stated that three are owned by the City and two by the County.

Dr. Palmer stated that taking the trash cans away from Sugar Hollow has helped dramatically, as the trash can was usually overflowing. She stated that people do use doggie bags there and they can be found all along the trails.

Mr. Krueger added that one of the reasons Rivanna had a relatively limited scope of duties at the reservoirs was the recognition of the fact that Rivanna has no police powers, but the County does. He stated that Rivanna could enact regulations but that they had no way to enforce them. He stated that this was the original thought process when the original 1972 Four-Party Agreement was put together.

Mr. Mawyer stated that the matrix tries to follow this guidance.

Mr. Gaffney stated that Rivanna does not want police powers.

Mr. Mawyer stated that Rivanna is at the threshold of getting started with the Observatory Water Treatment Plant and South Rivanna Treatment Plant upgrades, through which the two buildings
will be combined into one construction mega-contract relative to Rivanna. He stated that to encourage competitive bidding, they would invite contractors to an informational meeting on September 26 and that the meeting would be advertised in national newspapers to improve interest and pricing. He stated that likely in October to November, they would advertise for and receive bids.

Mr. Mawyer stated that in environmental stewardship, as well as infrastructure and master planning, Ms. Whitaker and Ms. Terry have been coordinating with the Virginia DEQ and had a stream gauge replaced below the South Fork-Rivanna Reservoir Dam. He stated that this gauge can be used to help measure and estimate flow out of the reservoir. He stated that when there are meters in the reservoir, they can calibrate and cross-check them with the gauge that DEQ has put in the river. He stated that it would also have a monitoring station online and that anyone can see what the gauge is reading.

Mr. Mawyer stated that a grant application for AEDs (automated external defibrillators) was made for the RWSA, which was approved for $4,000 from the Virginia Resource Sharing Association, who is RWSA’s property and liability insurance company. He thanked Safety Manager, Liz Coleman, for managing this project.

Dr. Palmer asked where the cameras at Sugar Hollow are located.

Ms. Whitaker stated that there is the ability to see the whole downstream piece of the dam.

Mr. Mawyer asked if they were on the dam.

Ms. Whitaker replied they are mounted to the dam.

Mr. Gaffney asked if they were in the parking area, too.

Ms. Whitaker replied that only a small portion of the parking area had cameras.

Mr. Gaffney asked about the eagle’s nest across the reservoir.

Ms. Whitaker replied no.

5. **ITEMS FROM THE PUBLIC**

Mr. Gaffney opened the meeting to the public.

As no one came forward to address the Board, Mr. Gaffney closed this portion of the meeting.

6. **RESPONSES TO PUBLIC COMMENTS**

Mr. Gaffney stated that there were no responses to public comments.

7. **CONSENT AGENDA**

   a. *Staff Report on Finance*
b. Staff Report on Ongoing Projects

c. Staff Report on Operations

d. Professional Services Authorization and CIP Budget Amendment: Moores Creek Wastewater Facilities Master Plan; Hazen And Sawyer Engineers

e. Professional Services Authorization – Asset Management Plan, Phase 2; GHD, Inc.

Mr. Gaffney asked Board members if there are any items they would like to pull. There were none.

Mr. O’Connell asked if an update could be provided on wholesale meters.

Mr. Mawyer stated that they have been working on the wholesale meter project for some time and experts have helped with it. He stated that the week prior, a calibration firm calibrated the meters. He stated that they have 25 total meters and 20 have passed calibration now, 3 have failed and attempts are being made to determine why, one has a problem with a test port, and one is on its way back from the factory to be reinstalled and tested.

Mr. Gaffney asked Mr. Mawyer if, on the list of projects, it would be possible to note if the projects have had any changes to their write-ups since the last meeting. He stated that he ends up reading the project completely each month and if it hasn’t changed, he doesn’t realize until he’s read it.

Ms. Galvin noted that they used to bold anything that was new.

Mr. Mawyer stated that the current status is intended to be new every month unless a project is on hold. He stated that the updates could be bolded.

Mr. Gaffney suggested that on-hold projects be noted as such.

Mr. Mawyer suggested that anything that isn’t current is moved into the history section. He asked if this was what Mr. Gaffney meant.

Mr. Gaffney replied yes.

Mr. O’Connell asked if Mr. Mawyer could speak more about the Wastewater Master Plan, noting that it was a CIP item and asking if there were concerns about capacity.

Mr. Mawyer stated that there were no concerns and that it was determining what is needed over the next 50 years. He stated that the Urban Water Master Plan is being done for 50 years in advance and commensurate with that, they are looking at which wastewater facilities have needs. He stated that they considered putting an addition on the Administration building and want to make sure they program all the wastewater facilities for the next 50 years before they plan any
Administration building changes. He stated that it is purely a planning document and there were no concerns about immediate capacity issues.

Mr. O'Connell asked if they were getting rock boring on McIntire Road for the Schenks Branch project.

Mr. Mawyer replied this was correct. He stated that they were getting borings at the baseball field to determine the rock profile through the field and street, and that the information would be provided to the Board as a comparison to help decide which path to take for that project.

Mr. Schiller stated that geophysical analysis was done the week prior, which was non-destructive and was completed for both the road and the ball field alignment. He stated that they would be going there again the week of September 9 to do a few borings to correlate and create a profile, and that the report would be complete in October.

Dr. Palmer moved that the Board approve the Consent Agenda. The motion was seconded by Ms. Galvin and passed unanimously (5-0). Ms. Hildebrand and Mr. Richardson were absent from the meeting and the vote.

7. OTHER BUSINESS

a. Presentation and Request for Approval: University of Virginia Rowing Team and Rivanna Rowing Club Waiver Extension - Kevin Sauer, Head Coach, UVA Women's Rowing Team

Mr. Kevin Sauer thanked the Board for allowing him to present. He praised the efforts of a particular company UVA has been working with for the past three years to get the new electric motor, and that they are the first rowing company in the United States to have this.

Mr. Sauer noted that UVA has secured $85,000 in funds from a foundation, and the UVA Athletic Department has promised $75,000. He stated that there has been a huge investment of time, money, and effort to make this work. He noted it was in beta testing for the company in Seattle, and that he was informed the day prior that the company has approached two engineers from Tesla, which he found to be impressive.

Mr. Sauer indicated to the Board the size of the battery, noting the battery alone was $8,500. He stated that the motor itself is $6,000, with a charging system of about $2,000, totaling $16,000-$17,000 for the power plant per motorboat, which was a significant investment. He explained they have the motorboats they need and that they just need to buy the power plants.

Mr. Sauer presented two pictures showing the outfit, which was put on the day prior by the company. He stated that it was tested and pointed to a picture of the motor, noting that it was not very big. He showed a picture of the battery, noting its size, and the line that connects it. He stated that a 200-amp service was brought to the dock the year prior so that the charging can be done at the dock, noting that there was beta testing being done relating to this as well.

Mr. Sauer played some videos of what the launch looks like in operation. He pointed out the motor and the battery, and the engine in operation taking off from the dock, noting how quickly it came to speed. He stated that the motorboat he has currently, which has a gasoline engine, was
outrun by the new motors. He mentioned there was minimum wake and that helped with erosion control, as had been discussed in years past. He stated that this was the first time he felt confident that they have the ability to have a power plant that will keep up with the rowing shells for safety and coaching reasons. He also noted that UVA received this before the University of Washington (in Seattle) got one.

Mr. Sauer noted again that they are in beta testing, and that $42,000 was invested so far. He stated that the women’s program is the “guinea pig,” and the men’s program is watching closely. He stated that he could not promise exactly how long it would take to get everything outfitted, but that testing would continue, and the final product would arrive in the spring, with at least two, and one more each year (possibly more).

Ms. Galvin asked about maintenance and what happens if it breaks down.

Mr. Sauer replied that he asked the same question the day prior, as there are not many people who work on them. He explained that it is a very simple process and because it’s an electric motor, there is no carburetor or cooling system. He noted that a tech on the East Coast would be available to help during R&D, adding that UVA has budgeted to have a spare motor and a spare battery if one is down. He stated that he also offered to send his boat repairman to Seattle to learn the system, but the company assured him that there was nothing that he would need to know besides the electric engineering between the battery, motor, and throttle.

Mr. Sauer stated that one of the videos had sound associated, and the actual wind of the boat going 15 mph produced more sound than the motor itself. He noted this would be great for the rowers and coaches.

Mr. Gaffney asked how many launches there would be.

Mr. Sauer replied that they would like to eventually have 10 up and running across the UVA women’s and men’s teams and Rivanna Rowing Club. He stated that he confirmed with the company that they would have enough amperage at the boathouse to get charging stations for all the motors. He stated that his hope was in five years, they would have everyone up to speed.

Mr. Gaffney asked if all the bass boaters would want these.

Mr. Sauer recognized that as soon as they would see the new motor, they would likely want it, and wasn’t sure if this would cause problems or not. He stated that the owners of the company were rowers, and that bass fishing (which is a $20 million industry) would likely follow with this type of motor. He noted it is cost-restrictive, but that some of the bass boats are expensive and could go in this direction. He stated that the disadvantage is that this motor typically goes 20-25 mph and when the bass boats want to go fast, it’s typically at about 80 mph. He expressed doubt that the high-tech bass fishermen would be interested, but that some boaters on the reservoir may want to invest in it, again stating that it was expensive.

Mr. O’Connell asked how long Mr. Sauer had been coaching.
Mr. Sauer replied that he was in his 43rd year of college coaching and his 32nd year at UVA.

Ms. Galvin asked if Mr. Sauer wanted to purchase as many of the motors as he could today, how many would he want.

Mr. Sauer replied 10 at maximum, noting that this was all that was needed across all the programs. He stated that doing the math, with the boats, it’s about a $160,000 investment.

Ms. Galvin asked if others schools (such as the University of Richmond and VCU) would be interested.

Mr. Sauer replied yes, explaining that he has already started to receive phone calls. He stated that the video was posted to social media the day prior and that he had already received about 3-4 calls.

Ms. Galvin stated that her son is a volunteer coach for VCU’s rowing team and would love it.

Mr. Sauer noted that even people who don’t have restrictions are interested in the product because of the environmental aspects, making it very popular. He stated that he was glad that the project was finally happening.

Dr. Palmer moved that the Board authorize the Executive Director to expand UVA’s waiver to August 2021 to allow the use of gasoline-powered safety and coaching launches by the UVA Women’s and Men’s Rowing Teams and the Rivanna Rowing Team, subject to UVA agreeing to other conditions and what RWSA deems necessary to protect the treatment of water supply and the quality of the South Fork Rivanna Reservoir to include continued research on electric motor technology. The motion was seconded by Ms. Galvin and passed unanimously (5-0). Ms. Hildebrand and Mr. Richardson were absent from the meeting and the vote.

Mr. Mawyer noted that one interesting point that was reviewed was that the prohibition on combustion engines on the reservoirs is a County ordinance requirement, but the ordinance delegates authority to the RWSA Board to authorize waivers.

Mr. Sauer stated that regarding the maintenance of each reservoir in the County, he gets a 5-gallon bucket per practice of trash, and he tells all the other coaches that there is a 5-gallon bucket on the front of each boat and asks them to pick up any trash they see.

b. Presentation: Major Construction Projects and Value Engineering Update

Mr. Scott Schiller, Engineering Manager, began his presentation by reviewing completed projects.

Mr. Schiller stated that the Crozet Finished Water Pump Station was done to increase the capacity in the pump station from 1 MGD to 1.6 MGD and to replace old infrastructure from the 1960s. He stated that the project was completed in June 2019, noting construction had been
extended for quite awhile and that it was ready to be expanded in the future as the plant continues to upgrade and expand its capacity.

Dr. Palmer asked when Mr. Schiller believed it would be needed to expand it beyond the 1.6 MGD.

Ms. Whitaker replied it would be in 2032.

Dr. Palmer asked if she meant the project would be completed by then or would be starting then.

Ms. Whitaker replied that the expansion accounted for future capacity upgrades.

Mr. Schiller spoke to the project for the Birdwood raw water main located along the side of the golf course, explaining that 5,900 linear feet of 36-inch raw water main had been installed as part of the future South Rivanna Reservoir to Ragged Mountain Reservoir transfer line. He stated that all pipe work was completed in June 2019, but reports show 99% complete as there are still some negotiations associated with permanent seeding with the UVA Foundation. He stated that the pipe is installed, and the easement areas are fairly well restored.

Mr. Schiller stated that regarding the Sugar Hollow Reservoir to Ragged Mountain Reservoir Transfer Flow Meter, the project expanded as it was developed, with an existing, older Venturi style flow meter that was replaced and a new automatically controlled flow isolation valve, which now will allow for the transfer of water from Sugar Hollow to Ragged Mountain remotely as opposed to being physically present to slowly open the valve throughout the course of the day. He stated that with direction from the City, many of the outbuildings that were there were removed. He stated that a shed and a barn were also demolished and removed, as well as a couple buildings related to the water line and old facilities that were removed as well.

Mr. Schiller presented a picture of what the area looks like presently, noting that it has been cleared.

Mr. Schiller stated that the Piney Mountain Tank Rehabilitation was completed in July 2019 and was put back into operation the first week of August. He stated that it involved some structural repairs to the roof as well as fully sand blasting and recoating the interior, in addition to some retouch work on the exterior. He stated that week, there were some punch list items done outside of the tank, noting that the tank is in operation and everything is complete otherwise.

Mr. Schiller stated that there are some projects currently under construction. He stated that the major current project is the Crozet Water Treatment Plant Expansion, which is to increase the capacity of the plant by modernizing the existing equipment. He stated that the footprint of the site is limited and capacity is trying to be maximized within the space that is available. He stated that powder activated carbon contactors are being added, plate settlers installed into the sedimentation basins, the chemical building backwash storage is being added and filters are being rebuilt among other general improvements. He stated that the project is approaching the first major milestone and the rest of the work is scheduled to be complete by May of 2020.
Mr. Schiller stated that the Moores Creek Digester Coating is a project to seal the internal roof of the digestor to improve odor control and gas collection and to stop any structural degradation occurring from the sludge that it’s storing. He stated that they have completed the coatings on Digesters 1 and 2 and are currently working on Digester 3. He stated that unfortunately, Digester 3 does not seem to be taking the initial coating, as well as the additional coatings that were tried, so designers and contractors are being consulted to determine the best way to move forward. He stated that based upon this process, they are estimating completion by summer of 2020.

Ms. Galvin asked about Digester 3 not taking the coating.

Mr. Schiller explained that pull tests are performed on the coating to determine if it is adhering to the concrete. He stated that four tests have been done on the original coating product, and one on a second coating product, and none of the pull tests have held. He noted the digestors were all built at the same time and have the same coating, but for some reason the concrete in Digester 3 doesn’t want to accept the coating. He stated that they are looking into other options as far as what they can do to make this work.

Mr. Schiller stated that a coating project has been started at Glenmore Wastewater Facility to recoat the metal components of the secondary clarifiers at that plant. He stated that the coatings are over 10 years old and they needed to recoated to protect them against further metal deterioration. He stated that this is currently being prepped for coating, which should be done by Winter 2019.

Mr. Schiller stated that there were other projects that would soon start construction, noting the Scottsville Water Treatment Plant Finished Water Flow Meter project. He stated that currently, finished flow is determined by using the run time calculation, which is not the most accurate method, and so a finished flow meter will be put in to provide better data. He stated that in order to do this, some of the finished water piping will be modified to shoehorn in a flow meter. He stated that there is a signed contract now, so the project will begin shortly, with an estimated completion of Spring 2020.

Mr. Schiller stated that the Bucks Elbow Ground Storage Tank project and system improvements looks to boost chlorine at this location and that the current chlorine feed process is a generally labor-intensive process, with multiple people involved to haul equipment out to the site. He stated that in order to make this a less labor-intensive process, a permanent chemical feed system will be installed, which will be in building off to the side with a permanent piping connection to the top of the tank. He stated that they are in the midst of signing contracts for this and that it has an estimated completion of Spring 2020.

Dr. Palmer asked about the location.

Mr. Schiller replied it is northwest of town proper.

Mr. O’Connell asked if you pass by Mint Springs to get there.

Ms. Terry stated that it was just before Mint Springs.
Mr. Schiller stated that the Moores Creek Aluminum Slide Gates Replacement Project is to replace slide gates at the Moores Creek Pump Station as well as the UV facility. He stated that the Moores Creek project would require almost a full bypass of the flow coming into the Moores Creek pump station, so this would be done after getting through dealing with the UV facility. He stated that the bid package for this work was advertised in August 2019 and the bids should be received on September 5.

Mr. Mawyer asked if Mr. Schiller could point to the gates.

Mr. Schiller indicated on a picture to the aluminum slide gates that will be replaced. He stated that there has been some degradation and noted it was a difficult working environment, especially in the UV facility. He stated that these gates would be replaced by June 2020 and that the full project budget was $470,000.

Mr. Schiller recalled that with the Security Enhancement Project, approval had been asked for the previous month for an access control implementer. He stated that the contract is being finalized and signed, and then the project will be moving into access control at the main facilities (Moores Creek facility, South Rivanna, Observatory, and Crozet). He stated that with access control, this would include all the exterior doors, motorized gates, and some of the interior doors. He stated that as these are worked on, this would be rolled into other facilities, as well as some other security enhancements, as budget allows. He noted there is currently a $1 million budget and that the full completion schedule accounts for all the facilities that would potentially get incorporated.

Mr. Schiller stated that related to the earlier question, part of the situation is determining if there is a system that can be operated remotely at some of the facilities as far as opening and closing the gates.

Mr. Schiller stated that he would speak about projects that are near completion of the design phase and upcoming construction projects. He showed a picture of the Crozet flow equalization tank on the wastewater system in Crozet, which will be located next to the existing Pump Station #4. He stated that the intent of the tank is to shave off the peak of the wet weather events so as not to impact the capacity of downstream sewer systems as a result of that process. He stated that this was identified and confirmed as being needed during the 2016 study. He stated that it will have a one million-gallon capacity and there would be some improvements to the pump station as well. He stated that advertising is estimated to start Fall 2019 and that construction should begin Winter 2019, with an expected completion of 2021, and a budget of $4.6 million.

Mr. Schiller stated that for the South Rivanna and Observatory Water Treatment Plants, there are long-awaited overall improvements within this major project. He stated that it will increase the capacity of Observatory to 10 MGD and that this will be done through installation of plate settlers into two sedimentation basins, as well as rebuilding the filters. He stated that the backwash pumps will also be replaced, with a new building being created for them adjacent to the filter room. He stated that they will replace the settled water flume and build a new chemical
building. He presented a rendering of the new chemical building that will be located next to the existing chemical building.

Mr. Schiller stated that for South Rivanna, there are general improvements that will be done there associated with the new chemical storage building for alum and fluoride, raw water and finished water pumping improvements, and the addition of two new filters. He stated that a new administration building will be constructed as well. He presented a rendering that showed the extension of the two additional filters onto the existing filter buildings, with new exits that will be necessary as a result of the extended area. He stated that construction would begin Winter 2019 with a completion of 2023.

Mr. Schiller stated that the estimated budget for the South Rivanna and Observatory project is $40.5 million, which accounts for the option to add four additional GAC vessels at Observatory. He noted the capital budget hasn’t been increased for that purpose, but it will likely be included as an alternate item in the bid to see what the cost would be, and then it would be brought to the Board to determine if it is a fair value.

Mr. Schiller stated that for this project, they also performed a value engineering project in April of 2019. He explained that this was done in accordance with RWSA policy and that if a project is over $5 million in total capital costs, a value engineering workshop is done. He stated that SEH is the design engineer and that they participated, as well as Hazen and Sawyer and others, over the course of four days, with multiple site visits to review field conditions. He stated that they came up with a number of enhancements and identified an amount just short of $800,000 in cost savings, which included removal of a high service pump they felt they did not need.

Dr. Palmer asked about the high service pump.

Mr. Schiller stated that there was an option to have a fifth high service pump, explaining that it feeds the water into the urban system so that the treated water from the plant gets pushed into the system. He stated that it was determined that the fifth pump was not needed. He stated that they also made sure to size buildings appropriately to make sure they were not creating too much square footage, and so there were cost savings there as well. He stated that they also discussed optimizing HVAC needs and about which areas need or need not be conditioned, and that this also resulted in cost reduction.

Mr. Schiller stated that in addition to cost reductions, enhancements and improvements were identified. He stated that there is a need to ensure an appropriate plant water supply for the plant water system at Observatory, as raw water is needed to make finished water. He stated that they also evaluated the power transfer process at South Rivanna and its open and close transitions to ensure the impact on operators is diminished when there is a loss of power and the plant has to be brought back into operation. He noted that these improvements will increase the overall value of the project.

Mr. Schiller stated that the Route 29 pump station and North Rivanna transmission main will be used to provide a reliable and redundant source of water for the North Rivanna area. He mentioned the term “Kohls pump” which will be permanently replaced by this pump station, and
it will be a permanent transfer location for water from the more urban, South Rivanna side of the system up to the north system. He stated that it is located in the Hollymead Town Center and is part of the future development of what will eventually be the Airport Pressure Zone. He referenced the site plan, explaining where the ground storage tanks would be located as well as the booster pump. He stated that construction is anticipated to begin in Fall 2020 and completing sometime in 2022, noting that the design phase is just beginning for this project.

Mr. Schiller stated that there were projects relating to dams and mentioned the Sugar Hollow Dam - Rubber Crest Gate Replacement and Intake Tower Repairs project. He stated that the rubber dam is 20 years old and at the end of its serviceable life, so it will be replaced. He presented a picture of when it was being installed, and the bladder in operation that would be replaced on top of the concrete structure. He stated that the intake tower would also be evaluated and addressing some of the issues associated with the tower. He stated that this work will start in Summer 2020, to be completed in 2021.

Mr. Schiller stated that there would be gate repairs to the South Rivanna dam. He stated that this would either repair or replace the 36" slide gates at both the north and south gate locations. He stated that they would also work on improving access to the north tower, noting that it is daunting to currently access it and that they would devise some way to access it more safely. He stated that there will also be minor repairs associated with the concrete face of the raw water pump station. He stated that this was estimated to start in Summer 2020.

Dr. Palmer stated that when the UVA Foundation did the erosion control at the Birdwood Golf Course, they used an erosion control matting that contains plastic. She stated that when she visited the site, there were a number of things trapped in it, including black snakes and small reptiles. She stated that there were many alternatives that exist for erosion control matting and that some of the UVA Foundation and UVA people had already been looking at alternatives, but they weren’t requiring them at this point. She stated that she was told that they will, except for in certain situations where it is not appropriate, such as on steep slopes. She stated that the County stated that they would not use the plastic anymore, except in extreme situations where they have to.

Mr. Mawyer stated that he would look into alternative materials. He asked Mr. Schiller to introduce his staff.

Mr. Schiller introduced Michelle Simpson, Austin Marrs, Victoria Fort, and Dyon Vega.

Mr. Mawyer recognized the staff, who made up the team who manages the projects, noting that they have about 60 projects they are currently working on in various phases. He stated that there was a lot of work going on in Engineering and Maintenance, explaining that this was the engineering side of that division.

Ms. Galvin noted this was all based on building out the water supply plan, which was based on population buildup and numbers that were generated by AECOM. She asked when this took place.
Mr. Mawyer replied it was in 2010.

Ms. Galvin asked if there has been an update on the population numbers.

Mr. Mawyer replied that this was being done currently. He stated that they are receiving information from Weldon Cooper, County Planning, City Planning, and UVA.

Ms. Galvin asked if she could see the numbers from 2010 compared to the final buildout. She stated that this is becoming a major issue in the City regarding what their buildout number is.

Mr. Mawyer stated that RWSA goes by what those departments tell them, to a large degree.

Dr. Palmer stated that it was done every 10 years.

Mr. Mawyer agreed and stated that every 10 years, they measure how much water they have in the reservoirs, and they estimate the demand for the next 50 years and make sure there is enough water to cover that demand. He stated that there would be a report available to the Board sometime between December 2019 and Spring 2020.

Dr. Palmer noted the growth in the City has become a big part of this and responding to some of the changes that are being seen.

Mr. Mawyer stated that Ms. Simpson was working on this project and working to schedule meetings with all the parties involved.

9. **OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA**

Dr. Palmer stated that one of the members of the Board of Supervisors recently expressed concerns to her about the defunct RWSA structure near Lambs Road and was glad to find out that it would be removed. She stated that this brought up the question of if there is an inventory of other defunct infrastructure that some people may consider an eyesore.

Mr. Mawyer replied that they do plan to remove the structure. He stated that they had two clarifiers on the Moores Creek plant and that they were crafting a plan to remove them. He stated that the old Mechums River pump station is defunct and needs to be removed. He stated that there is a plan to get a preliminary estimate to remove all the facilities and when RWSA comes to the Board for the CIP in the Spring, they will see how the projects fit in the priorities and funding.

Dr. Palmer suggested that the ones that are in the urban areas and more visible would be higher priority.

Mr. Mawyer stated that the two on Lambs Road were evaluated along with School Facilities, and they agreed that they should be removed. He stated that there is a pump station there that needs to be rebuilt, along with easements for the Rivanna-to-Ragged Mountain pipeline.

Ms. Galvin recalled that there used to be regular reports about the condition of the algae blooms in the reservoirs and facilities. She stated that the reason this was coming up was reports about
domesticated animals ingesting river bacteria that is connected with the algae, becoming sick and dying. She asked if there was any understanding about how this is impacting the operations of RWSA and what is being done about this.

Ms. Terry replied that RWSA’s monitoring program is extremely proactive and because of that, when these events occur, they know that the reservoir had just been sampled to determine what was in it. She stated that the week prior, two treatments were done (one at Beaver Creek and one at South Rivanna), and that the one at South Rivanna tested for toxins associated with the blue-green algae because it was at a level that was much higher than the treatment level. She stated that the treatment level is 10,000 cells per milliliter and that it had gotten up to 65,000 at South Rivanna. She stated that toxins were tested at South Rivanna and that they did not have any hits.

Mr. Mawyer asked how frequently this is monitored.

Ms. Terry stated that they have it set up to monitor every other week (mainly for Beaver Creek and South Rivanna) and that Ragged Mountain and Totier can be more spread out. She stated that it has been weekly at Beaver Creek for awhile now, and they are upping the frequency on South Rivanna as well.

Dr. Palmer stated that it was her understanding regarding the incident that was reported for Chris Greene Lake, the dog died the following day and the owner stated that the dog had been to Chris Greene Lake but that there was no direct correlation with anything that the dog ingested. She stated that it was out of an abundance of caution that the County decided to close it to test it. She asked if there was any update on Mint Springs.

Ms. Terry replied that she did not, acknowledging that they were closed. She asked if Chris Greene is still open.

Dr. Palmer replied that it is open. She stated that Mint Springs was closed down for the rest of the year. She stated that she was unsure if they found toxins, but they found algae. She wanted to know if they had come to a next step in the investigation.

Ms. Terry replied that she did not know. She noted that regarding the dog that died after being in the Rivanna River, this was not an algae-related event but a different kind of illness.

Mr. Mawyer stated that the reservoirs are regularly monitored for algae.

10. Adjournment

At 3:35 p.m., Dr. Palmer moved to adjourn the meeting of the Rivanna Water and Sewer Authority. The motion was seconded by Ms. Galvin and passed unanimously (5-0). Mr. Richardson and Ms. Hildebrand were absent from the meeting and the vote.
Respectfully submitted,

Mr. Jeff Richardson
Secretary-Treasurer