RIVANNA
WATER & SEWER AUTHORITY

Board of Directors Meeting

December 12, 2023

2:15pm

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

BOARD OF DIRECTORS

Regular Meeting of the Board of Directors of the Rivanna Water & Sewer Authority

DATE: **DECEMBER 12, 2023**

LOCATION: **Virtual Meeting via Zoom**

TIME: **2:15 p.m.**

AGENDA

1. ***CALL TO ORDER***
2. ***AGENDA APPROVAL***
3. ***MINUTES OF PREVIOUS BOARD MEETING ON NOVEMBER 14, 2023***
4. ***RECOGNITION***
5. ***EXECUTIVE DIRECTOR'S REPORT***
6. ***ITEMS FROM THE PUBLIC***
   Matters Not Listed for Public Hearing on the Agenda
7. ***RESPONSES TO PUBLIC COMMENTS***
8. ***CONSENT AGENDA***

   a. *Staff Report on Finance*

   b. *Staff Report on Operations*

   c. *Staff Report on CIP Projects*

   d. *Staff Report on Administration and Communications*

   e. *Staff Report on Wholesale Metering*

   f. *Staff Report on Drought Monitoring*

   g. *Approval of Term Contract for Environmental Engineering Consulting Services - ECS Mid-Atlantic, LLC*

h. *Approval of the First Amendment to the Ragged Mountain Dam Project Agreement*

9. OTHER BUSINESS

a. *Presentation and Vote on Acceptance: FY 23 Audit Report*
Matthew McLearen, Robinson, Farmer, Cox Associates

b. *Presentation: Dam Safety Program Overview*
Victoria Fort, P.E., Senior Civil Engineer

10. OTHER ITEMS FROM BOARD/STAFF NOT ON THE AGENDA

11. CLOSED MEETING

12. ADJOURNMENT

GUIDELINES FOR PUBLIC COMMENT AT RIVANNA BOARD OF DIRECTORS MEETINGS

If you wish to address the Rivanna Board of Directors during the time allocated for public comment, please raise your hand or stand when the Chairman asks for public comments.

Members of the public requesting to speak will be recognized during the specific time designated on the meeting agenda for "Items From The Public, Matters Not Listed for Public Hearing on the Agenda." Each person will be allowed to speak for up to three minutes. When two or more individuals are present from the same group, it is recommended that the group designate a spokesperson to present its comments to the Board and the designated speaker can ask other members of the group to be recognized by raising their hand or standing. Each spokesperson for a group will be allowed to speak for up to five minutes.

During public hearings, the Board will attempt to hear all members of the public who wish to speak on a subject, but it must be recognized that on rare occasion comments may have to be limited because of time constraints. If a previous speaker has articulated your position, it is recommended that you not fully repeat the comments and instead advise the Board of your agreement. The time allocated for speakers at public hearings are the same as for regular Board meetings, although the Board can allow exceptions at its discretion.

Speakers should keep in mind that Board of Directors meetings are formal proceedings and all comments are recorded on tape. For that reason, speakers are requested to speak from the podium and wait to be recognized by the Chairman. In order to give all speakers proper respect and courtesy, the Board requests that speakers follow the following guidelines:

- Wait at your seat until recognized by the Chairman.
- Come forward and state your full name and address and your organizational affiliation if speaking for a group;
- Address your comments to the Board as a whole;
- State your position clearly and succinctly and give facts and data to support your position;
- Summarize your key points and provide the Board with a written statement, or supporting rationale, when possible;
- If you represent a group, you may ask others at the meeting to be recognized by raising their hand or standing;
- Be respectful and civil in all interactions at Board meetings;
- The Board may ask speakers questions or seek clarification, but recognize that Board meetings are not a forum for public debate; Board Members will not recognize comments made from the audience and ask that members of the audience not interrupt the comments of speakers and remain silent while others are speaking so that other members in the audience can hear the speaker;
- The Board will have the opportunity to address public comments after the public comment session has been closed;
- At the request of the Chairman, the Executive Director may address public comments after the session has been closed as well; and
- As appropriate, staff will research questions by the public and respond through a report back to the Board at the next regular meeting of the full Board. It is suggested that citizens who have questions for the Board or staff submit those questions in advance of the meeting to permit the opportunity for some research before the meeting.

The agendas of Board meetings, and supporting materials, are available from the RWSA/RSWA Administration office upon request or can be viewed on the Rivanna website.

Rev. September 7, 2022

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
November 14, 2023

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, November 14, 2023 at 2:45 p.m. at 695 Moores Creek Lane, Charlottesville, Virginia.

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

Board Members Absent: None.

Rivanna Staff Present: Bill Mawyer, Lonnie Wood, David Tungate, Betsy Nemeth, Jacob Woodson, Deborah Anama.

Attorney(s) Present: Valerie Long.

1. CALL TO ORDER

Mr. Gaffney convened the November 14, 2023 regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:45 p.m.

2. AGENDA APPROVAL

Mr. Gaffney asked if there were any changes or suggestions regarding the agenda. Hearing none, he asked if there was a motion.

Ms. Mallek moved the Board to approve the agenda. Mr. O'Connell seconded the motion, which passed unanimously (7-0).

3. MINUTES OF PREVIOUS BOARD MEETING ON OCTOBER 24, 2023

Mr. Gaffney asked if there were any comments or changes to the minutes of the previous meeting. Hearing none, he asked if there was a motion.

Mr. O'Connell moved the Board to approve the minutes of the October 24, 2023 meeting. Ms. Mallek seconded the motion, which passed unanimously (7-0).

4. RECOGNITION

There were no recognitions.

5. EXECUTIVE DIRECTOR'S REPORT

Mr. Mawyer stated that they experienced an unfortunate incident at the South Rivanna Water Treatment Plant where they released approximately 1,200 gallons of liquid lime. He stated that the photographs on the slide depicted the large white lime storage tanks inside the chemical building. He stated that they were transferring a lime slurry from one white tank to another when an overflow occurred. He stated that some of the lime could be seen on the concrete floor, which was captured within the containment system as intended.

Mr. Mawyer stated that there was a sump pump in the containment with a pipe connected that exited through the building wall. He stated that the pipe coming out of the wall did not have the green hose attached to it, resulting in the slurry being emptied onto the ground where it flowed into a stormwater basin. The lime slurry came out of the outfall from the storm pipe and flowed into the South Rivanna River.

Mr. Mawyer stated that this unfortunate incident was the result of several operational noncompliances. The Water Plant Managers have been working diligently with staff to ensure they fully understand the processes and procedures to prevent such incidents from occurring again. He stated that they immediately contacted the Department of Environmental Quality and Albemarle County Fire Rescue Department when the release was found. Both groups came to the site to assist them in assessing the situation. He stated that the lime reached the river, which increased the pH of the water in the river. He stated that this change affected some aspects of the environment between the location of the incident and the Route 29 bridge.

Mr. Mawyer stated that DEQ and staff assessed this area to determine the extent of the impact. He stated that for five days, staff collected a series of water samples from that section of the river. He stated that the spill occurred on November 2, and by November 6, the pH of the water in the river had returned to its normal level. He stated that they anticipated receiving a report from DEQ regarding potential violations and fines. He stated that RWSA apologized for the event and were taking measures to prevent it from happening again in the future.

Mr. Pinkston asked if this was something that had happened before.

Mr. Mawyer stated no, not with lime, but they did have a sodium permanganate release in 2019 near the reservoir. He stated that it had occurred without the containment equipment they had for the lime, but they had addressed that situation then and continued to monitor and take corrective measures now.

Ms. Mallek asked how high the pH level was during the monitoring.

Mr. Mawyer stated that the pH was as high as 12.5 at 4:15 p.m. on November 2. He stated that by November 6, the pH was 7.5.

Ms. Mallek stated that such a high pH could burn someone as badly as acid. She stated that both ends of the pH scale were extremely hazardous. She stated that she was glad they had taken care of the situation.

Mr. Mawyer stated that Virginia DEQ had RWSA establish five sampling locations along the

stretch of the river, and water department staff monitored the pH levels between November 2 and November 6. He stated that the level steadily came down and returned to normal on November 6. He stated that there was no impact on the drinking water, as all treatment processes proceeded normally and properly. He stated that it was solely an impact on that section of the South Rivanna River.

Mr. Mawyer stated that on a positive note, two staff members and wastewater group operators passed their licensing exams. He stated that Schuyler Deal obtained the class four license, having been with them for about 18 months. He stated that Kyle Nielson secured the class two license, having worked with them for approximately four months. He stated that Mr. Nielson was a graduate of his own alma mater, Albemarle High School.

Mr. Mawyer stated that they celebrated Employee Appreciation Day on the afternoon of November 2. He stated that they held a service recognition ceremony for staff members in the parking lot of their building, where they served a picnic lunch and presented service awards. He stated that they had applied for a grant from the Virginia Department of Health for their Emerging Contaminants Program, which had awarded them $3.17 million the previous year. He stated that this year, they received a grant of $260,000 from the program. He stated that these funds were an extension of the federal BIL legislation distributed thru the State.

Mr. Mawyer stated that these two grants, totaling almost $3.5 million, would be allocated to the Crozet Water Treatment Plant's granular activated carbon addition project that they were designing. He stated that he was a member of the Virginia Water and Wastewater Authority's Association, where he served as a director. He stated that they had recently attended their annual meeting in Staunton.

Mr. Mawyer stated that they had proposed in the Consent Agenda the Board meeting dates for year 2024. He stated that the Board would meet in-person every month on the fourth Tuesday at 2:15 p.m., except for November and December, which they offset due to holidays. He mentioned that they had discussed at the Solid Waste Board the possibility of returning to in-person public comment since meetings would be held in person, so persons wishing to speak from the public would no longer be able to use speak virtually to the Board. He stated that however, the Solid Waste Board opted not to follow this approach and wished to retain the virtual comment option for the public. He stated that he mentioned this so the Board could decide whether to approve it as part of the consent agenda.

Mr. Pinkston stated that he would assume it would be the same for both Boards.

Ms. Mallek stated that she strongly supported the decision made by the Solid Waste Board to keep that option open. She stated that it was far more advantageous to the agency so that people who had questions could ask them while it was cool and calm, before it came before a large group. She stated that in communities where there had been issues, the way it had been resolved successfully was to require people to register, even if providing virtual comment, to deter any kind of bad behaviors. She stated that she hoped they would consider that.

Mr. Mawyer clarified that they had never experienced any bad behavior, but was trying to be

proactive. He stated that if it was the Board's pleasure, they would continue to have virtual comment from the public.

Mr. Gaffney asked if there were any other comments from Board members on this topic.

Mr. O'Connell stated that he supported it. He asked if a motion was necessary.

Mr. Gaffney stated that they would only need a motion to eliminate it.

Mr. Mawyer noted that video recordings of the meetings had been available for the public since the onset of COVID-19, and the public could access those on the Rivanna website at any time. He continued to report that they had been monitoring the drought conditions, and fortunately, South Rivanna was still full, as was Totier Creek at Scottsville. He stated that however, there had been a 16-inch, or 45%, deficit in precipitation this calendar year and approximately 22 inches or 18% lower than normal over the past 34 months.

Mr. Mawyer stated that according to the drought status map, VDEQ had classified the central Virginia area as in an emergency status due for reservoir levels. He stated that they did not face this issue currently, as South Rivanna was full, and their other reservoirs were in good condition. He stated that they were under a warning status concerning groundwater levels and stream flow levels, but in a normal status for precipitation, which did not align with their own data. He stated that they monitored local data, focusing on the status of the reservoirs and what the precipitation records were in Charlottesville.

Mr. Mawyer stated that this would be the last in-person meeting of Calendar Year 2023, as next month's meeting would be held virtually. He stated that he appreciated everyone's attendance and wished them happy holidays. He stated that regarding the consent agenda, there was also the holiday schedule for the Calendar Year 2024, which included 12.5 regular normal holidays. He noted that there was one additional holiday proposed on the consent agenda, which was Friday, July 5, following the July 4 holiday.

Mr. Richardson asked for clarification about how many holidays were proposed.

Mr. Mawyer stated that there were 13.5. He stated that the half day was the day before Thanksgiving. He noted that many of their holidays were considered floating days, meaning they could fall on different dates each year. He stated they maintained operations and their offices were only closed for six major holidays. He stated that their water and wastewater operators worked around the clock, 24/7/365, so they never closed for holidays. He stated that those dedicated employees were accommodated with additional pay.

Ms. Mallek stated that the Moormans River experiencing a 16 million gallon drop per day was a significant change in its stream flow, She stated that this change may not be directly affecting South Fork at present, but it had led to noticeable changes in the environment. She stated that for the first time in her life, the Mechums River was low enough that someone could walk across without getting wet. She stated that the situation both downstream and at the Moormans had been going on for quite some time.

Ms. Mallek expressed gratitude that they were planning ahead and taking precautions to address these challenges. She stated that however, she would emphasize that it was essential not to become overly confident just because their reservoirs were currently high. She mentioned that in 2002, the reservoirs were also falling rapidly; South Fork was dropping three feet per day in September. She stated that she would stop over the bridge and would call Mr. Mawyer's predecessor to inform them that the level continued to drop. She stressed that it was crucial to remain vigilant and proactive in addressing these issues.

Mr. Mawyer stated that he wanted to mention that they had been working with Ms. Long and Mike Derdeyn, attorney for ACSA, as well as the City's attorney, Mr. Stroman, to develop the amendment to the Ragged Mountain Dam project agreement they discussed last month. He stated that Ms. Hildebrand was prepared with Mr. Sanders to present this amendment to the Council on December 4. He stated that the amendment would enable the City or the Service Authority to request Rivanna to proceed with adding 12 feet of additional water to the Ragged Mountain Reservoir, which equaled approximately 700 million gallons. He stated that this would result in an increase from 1.4 billion to 2.1 billion gallons in water storage capacity at the Ragged Mountain reservoir, a 50% increase.

Mr. Mawyer stated that the amendment would also allow them to begin the design of these changes right away. He stated that they would need to complete grading around the reservoir and modify the gates on the intake tower before proceeding with transfer of the additional water. He stated that within two years, Ragged would be ready to accept more water. He stated that the dam was originally built high enough to accommodate the additional 12 feet, and the amendment to the project agreement would allow them to start transferring water from Sugar Hollow to Ragged under three conditions, which he would now discuss.

Mr. Mawyer stated that if the water level in Sugar Hollow was significantly overflowing, defined as 30 million gallons per day (MGD) or more, they could transfer water to Ragged for the purpose of filling the additional 12 feet. He stated that during normal operation such as when Ragged was almost five feet below its normal level, if they anticipated rain with a forecast of several weeks, they would open the transfer valve and immediately start transferring water from Sugar Hollow to Ragged in order to refill it. He stated that they wished to retain this right and opportunity.

Mr. Mawyer clarified that they were not limited to the 30 MGD condition when the level of Ragged was below the existing pool level, which was at an elevation of 671 above sea level, the normal level now. He stated that if it was below that level, they could transfer water whenever they deemed it appropriate, just like they had always been able to do. He stated that they wanted to retain this right to make such transfers. He stated that the 30 MGD restriction would apply if they were raising the water level above the existing pool for the purpose of reaching the additional pool level, which was 12 feet higher at elevation 683.

Mr. Mawyer stated that if they faced an emergency such as not being able to use water from the South Rivanna Reservoir due to contamination, they must rely more on Ragged and produce treated water at Observatory. He stated that in such cases, they would be able to transfer water

from Sugar Hollow as needed. He stated that these three conditions were outlined in the amendment to the Ragged Mountain Dam Project Agreement. He stated that the amendment would be presented to City Council on December 4. He stated that if Council approved it, the ACSA nd the RWSA Boards would be asked to approve it, and upon that approval, they would be able to move forward.

Mr. Mawyer stated that in 2012, when the agreement was written and approved, there was not a concept of changing climate conditions and extreme droughts that they faced now. He stated that their objective was to ensure that the community and their water supply were as full of water as possible so that they could provide additional water if needed. He stated that although they were currently experiencing a drought, having 34 months of low rainfall and being 18% below average, he hoped this situation would improve over time. He stated that to be as well-prepared as possible, their aim was to have as much water in storage in their reservoirs as feasible.

Mr. Pinkston asked if the University had to sign off on this agreement.

Mr. Mawyer replied that the University was a customer of the City, and was not a signator on the Ragged Mountain Dam Project Agreement.

Mr. Pinkston asked if the fire in Madison County was far away from Sugar Hollow.

Ms. Mallek stated that it was about 30 miles, but the fire could travel quickly.

Ms. Mallek asked if the intake in Sugar Hollow reservoir was still far below the level of the dam.

Ms. Mallek clarified that she was talking about where the water came into the pipeline and was removed from Sugar Hollow.

Mr. Mawyer stated that they had a tower structure with gates to remove water from the reservoir. One gate was about 15 feet below the top of the dam, and another located 35 feet below the top.

Ms. Mallek stated that that would basically empty the reservoir, so they would not use that lower gate very often.

Mr. Mawyer stated that was correct. He stated that the depth of the reservoir was approximately 50 feet including the impacts from a previous landslide of logs and debris. He stated that they could not effectively drain the lowest levels of the reservoir without using mud gate at the bottom.

Mr. Tungate stated they were not using the mud gate now. He stated that the two highest operational intake gates were currently open now.

Ms. Mallek asked if that tower was the same that they had just recently visited in May.

Mr. Mawyer stated yes, they had taken a tour of the dam and intake tower facility.

6. ITEMS FROM THE PUBLIC

Matters Not Listed for Public Hearing on the Agenda

There was no one wishing to speak.

7. RESPONSES TO PUBLIC COMMENTS

There was no response to public comment.

8. CONSENT AGENDA

a. Staff Report on Finance

b. Staff Report on Operations

c. Staff Report on CIP Projects

d. Staff Report on Administration and Communications

e. Staff Report on Wholesale Metering

f. Staff Report on Drought Monitoring

g. Approval of Board Meeting Schedule for Calendar Year 2024

h. Approval of the Rivanna Holidays for Calendar Year 2024

i. Approval to Increase Design Contingency – MCAWRRF 5kV Electrical System Upgrade – Hazen & Sawyer

j. Approval of Resolution of Official Intent to Reimburse Expenditures with Proceeds of a Borrowing

Mr. Pinkston asked if more information could be provided about item J.

Mr. Wood stated that every year after the CIP, they had consistently implemented a similar resolution to this one. He stated that the resolution stated their intention as an authority to finance part of their CIP with bonded debt. He stated that this arrangement enabled them to reimburse themselves essentially, as it was a reimbursement resolution. He stated that as an example, currently they were using cash funds to design the central water line project. He stated that at some point in the future when they needed to issue bonds, they could go back and repay a portion of that funding to themselves, replenishing their capital fund. He stated that this resolution simply reserved the option for them to do so.

Mr. Mawyer clarified that this resolution was not a commitment to borrow funds. He stated that the authorization only allowed them to potentially borrow funds in the future. He assured that they would present a separate resolution when a specific bond issue was proposed.

Mr. O'Connell moved the Board to approve the Consent Agenda as presented. Ms. Mallek seconded the motion, which passed unanimously (7-0).

9. OTHER BUSINESS

a. Presentation: Class Action Litigation and Proposed PFAS Settlements

Mr. David Tungate stated that he would discuss the PFAS settlement and the pending litigation. He stated that to begin, he would define a class action. He stated that it was a legal proceeding where one or more plaintiffs brings a lawsuit on behalf of a market group, known as the class. He stated that any proceeds from a class action suit after legal fees, whether through a judgment or a settlement, were shared among the members of the class.

Mr. Tungate stated that this settlement class consisted of water utilities that had suffered harm due to the presence of PFAS in drinking water. The presence of PFAS could be from pro-active water quality monitoring or resulted from the Unregulated Contaminant Monitoring Rule (UCMR) 5. He stated that these impacted Utilities alleged that the settlement defendants were liable for damages and other forms of compensation for such harm and costs.

Mr. Tungate stated that he would take a step back and discuss their resources. He stated that they had five surface water reservoirs, which were South Rivanna, Sugar Hollow, Ragged Mountain, Beaver Creek in Crozet, and Totier Creek in Scottsville. He stated that South Rivanna, Sugar Hollow, and Ragged Mountain were the three urban water reservoirs that together held approximately 3.3 billion gallons of water when they were full. He stated that their water treatment facilities included South Rivanna, Observatory, North Rivanna, Crozet, Red Hill, and Scottsville plants.

Mr. Tungate stated that the first three reservoirs made up their urban water system, with the Crozet plant serving the area around Crozet. He stated that the Red Hill plant served nine homes and the Red Hill school, while the Scottsville plant provided water to the entire Scottsville area. He stated that granular activated carbon (GAC) contactors or vessels were present in five of their facilities, the South Rivanna, Observatory, North Rivanna, Crozet, and Scottsville. He stated that they currently had a project underway to install a GAC vessel at the Red Hill facility. He stated that in 2018, RWSA put the GAC treatment system on-line for total organic carbon removal, which also provides additional benefits of PFAS removal.

Mr. Tungate stated that their five surface water treatment plants included the largest granular activated carbon facilities at the South Rivanna Treatment Plant, which had 320,000 pounds of granular activated carbon. He stated that the Observatory Treatment Plant now featured six contactors with 240,000 pounds of GAC. He stated that North Rivanna had one contactor with 40,000 pounds of GAC. He stated that Crozet had two contactors that totaled 40,000 pounds of GAC. He stated that Scottsville also had two vessels with 12,000 pounds of GAC combined.

Mr. Tungate stated that a project was currently under design to add additional contractors to Crozet and Red Hill. He stated that the litigation timeline saw a settlement in June of 2023, involving two defendants, Dupont and 3M. He stated that in August of 2023, the U.S. District Court in South Carolina granted preliminary approval of the settlement. He stated that in

September 2023, the notice program and settlement administration process began. He stated that the Dupont settlement was approximately $1.185 billion, while the 3M settlement ranged from $10.5 to $12.5 billion.

Mr. Tungate stated that the Dupont and 3M settlement class definitions were similar. He stated that the Dupont settlement encompassed all public water systems in the United States that drew or otherwise collected water from any source before June 30, 2023, and were tested or analyzed for PFAS and found to contain PFAS at any level. He stated that it included public water systems participating in UCMR 5, the EPA's fifth, unregulated contaminant monitoring, as of June 30, 2023.

Mr. Tungate mentioned the key difference between the Dupont and 3M settlements was the deadline for participation, which was June 22, 2023, in the case of the 3M settlement. He stated that it did not change anything for their organization because they met both definitions. He stated that settlement benefits were paid to each class member based on allocation procedures detailed in estimated allocation range tables, which they would briefly discuss. He stated that allocation procedures reflected factors used in designing treatment systems in connection with the volume of flow and the degree of impact.

Mr. Tungate stated that there was a formula that applied to eligible claimants. He stated that they had options to participate in the class action settlement or opt out of it. He stated that if they participated in the settlement, there was a release of liability on certain claims against 3M and Dupont. He stated that the allocation tables represented the volume of impacted flow, which was crucial because it referred to a 24-hour flow. He stated that RWSA has five of their six water treatment plants operating on a start-stop basis, reducing the volume of flows for the 24-hour period. He stated that they would see this later when they went through the recovery calculation process.

Mr. Tungate stated that the South Rivanna WTP was currently the only one to operate 24 hours a day, while all others stopped after their tank was full, and did not run continuously. He stated that Red Hill operated a groundwater system that filled a hydropneumatic tank at the well site. He stated that the allocation calculations were calculated based on which system had the highest historical concentrations of PFOA and PFOS, as well as any other PFAS compound. He stated that they would perform a volume calculation and a PFAS score analysis for this process.

Mr. Tungate stated that the PFAS score was based on the maximum PFOA level plus the maximum PFOS level or the maximum PFOA plus the maximum PFOS and PPOS levels averaged with the square root of the maximum value of any other PFAS listed in the claims form. He stated that in September 2023, they conducted a sampling event for PFAS at the North Rivanna treatment plant. He stated that on the raw side, there were low detection levels, while on the finished side, it was below detection level.

Mr. Tungate stated that this highlighted the heterogeneity and variability of PFAS contaminants. He stated that at the North Rivanna site, their facility had the highest PFOA detection on May 24, 2023 with 25 parts per trillion. He stated that on the same date they recorded 6.5 parts per trillion of PFOS. He stated that there were several different derivatives of PFAS that they could

detect. He stated that there was a proposed MCL for PFOA and PFOS. He stated that the highest detections in their system were at North Rivanna in late May.

Mr. Mawyer stated that the proposed level for detection was four parts per trillion. He stated that if it was greater than 4, it exceeded the proposed standard.

Ms. Mallek stated that that was the measurable standard. She stated that on the left side of the slide, it indicated values for July and August. She said that it stated that the measurements were 11.9 and 14.9, respectively.

Mr. Tungate stated that those numbers were the sum of PFAS detected. He stated that this was the raw total PFAS derivative, then there was a total, and they would categorize them over on the right. He stated that speciation was crucial because there were now 28 PFAS derivatives detectable, but the five lab methods depended on the specific species, such as PFOS and PFOA. He mentioned that there were six to nine thousand derivatives in use, and the EPA had approved testing for only 28 of those.

Mr. Tungate stated that they calculated PFAS scores and flow rates. He stated that North Rivanna had their highest PFAS score, which was the sum and maximum of the PFOS and PFOA values, resulting in a score of 31.5. He stated that the North Rivanna flow rate was 299 gallons per minute. He stated that the plant operated for 8 to 10 hours daily, so it was off for 14 to 16 hours. He stated that the flow rate was calculated over a 24-hour period. He stated that their second highest facility had as score of 1.03 parts per trillion.

Mr. Tungate stated that the facility operated for 6 to 8 hours daily. He stated that therefore, the average flow rate over a 24-hour period was 41 gallons per minute. He stated examining the list, the South Rivanna had a PFAS score of 0.65, but the flow rate was 5,000 gallons per minute. He stated that this facility operated 24 hours a day. He stated that Observatory, once again, had the same score. The flow rate was only 1,324 gallons per minute. He stated that Red Hill had a score of zero due to its low flow rate of 1.29 gallons per minute.

Mr. Tungate stated that the next slide showed an example which demonstrated the scoring sheet used in litigation from the 3M settlement case. He stated that the PFOA concentration recorded on May 24, 2023 was 25 parts per trillion. He stated that the PFOS levels were simultaneously measured, resulting in a value of 6.5. He stated that by combining these values, they obtained a PFAS score of 31.5. He stated that on the X-axis, there was a flow rate of 299 gallons per minute. He stated that on the Y axis, they were at 31.5, which placed them between 10 and 50. He stated that the red box represented an estimate of their current position when calculating potential settlement amounts. He stated that this was used for estimation purposes, and they anticipated approximately $300,000 for North Rivanna.

Mr. Tungate stated that they performed this analysis for all six facilities, using the tables as a reference. He stated that it was essential to note that these estimates were not official; they were determined based on their interpretation of the provided data. He stated that between the 3M and Dupont settlements, they estimated a total of $960,000 or approximately $1M. He stated that they used the tables provided to obtain these figures. He stated that this was their best estimation,

although it should be noted that the actual earnings may differ from these amounts. He noted that they would potentially receive more money from 3M than Dupont.

Mr. Pinkston asked if the notion would be to take this money and invest it in new GAC.

Mr. Tungate acknowledged that it was an option. He stated that the additional costs for treating PFAS in their drinking water were outlined in their Capital Improvement Plan (CIP), where they had projects that added extra GAC vessels to their existing facilities for total organic carbon removal. He estimated that they would need two more vessels at South Rivanna and two additional ones at Observatory, in addition to what was already planned. He stated that their CIP costs were $10 to $15 million dollars. He stated this did not include the cost of piping and buildings required to house the vessels.

Mr. Tungate mentioned that the additional operating costs would be approximately $500,000 per year. He stated that if they added two more vessels in South Rivanna WTP and two at the Observatory, it was estimated that they would spend around $500,000 annually on operating expenses from replacement of carbon media. He stated that they had plans to increase the number of vessels by four in South Rivanna and four at Observatory for total organic carbon (TOC) testing for disinfection by-products reduction. He stated that this expansion could potentially result in disinfection and bioproduction costs ranging from $15 to $20 million dollars.

Mr. Pinkston asked if the GAC was used to remove perfluoroalkyl and polyfluoroalkyl substances (PFAS).

Mr. Tungate stated it took out some of the PFAS. He stated that it did not take out all of the PFAS. He stated that it depended on what derivative they had. He stated that GAC was the best management practice for the majority of PFAS, but not all.

Ms. Mallek asked if it would take a longer time in exposure to the GAC in order to be effective.

Mr. Tungate stated yes. He stated that in the process of designing the GAC system for Crozet, they considered altering the particle size of their current activated carbon product. He stated that this modification would slow down the flow rate through the vessels and potentially enhance the removal of PFAS. He stated that they finalized this study yesterday.

Ms. Mallek asked if the smaller particle had a larger surface area so there was more exposure to the filter element.

Mr. Tungate stated yes, it slowed it down. He stated that they were unsure about whether they needed additional vessels, but were in the process of evaluating it. He stated that questions to consider included whether additional PFAS compounds can be detected in drinking water, if PFAS can travel through air, and if they will get more money in the future. He explained that it was likely that as laboratory technology continued to improve, more PFAS compounds would be detected in water. He stated that the EPA approval process took time and was quite intense.

Mr. Tungate stated that regarding PFAS traveling through the air, it was true that there were some

examples that may release PFAS into the outdoor air, and these sources were not PFAS manufacturers, nor did they use PFAS chemicals at the levels noted in states in which atmospheric deposition has been demonstrated. He noted that in fall of 2022, staff collected rainwater samples at three treatment plants to see if there were PFAS in the rain. He stated that they did not detect any PFAS in the rainwater. He stated that they used special PFAS-free pans to catch the water in as well as multiple other controls. He stated that they did not find it in rainwater in three of their locations.

Mr. Mawyer stated that other localities had found PFAS in their rainwater, including in Michigan.

Mr. Tungate noted that RWSA staff collected rainwater sample for PFAS analysis only once.

Ms. Mallek stated that the wind could affect how much PFAS was in the air or rainwater.

Mr. Tungate stated that regarding the question of whether they would get more money in the future, their PFAS scores were relatively low except at North Rivanna. He stated that they had plans to decommission that plant in 2026. He stated that it was a significant risk for individual utilities or a second group of Utilities to hire attorneys and expect higher compensation.

Mr. Pinkston asked for clarification regarding the latter sentence.

Mr. Tungate clarified that if RWSA entered in a separate lawsuit with 3M or Dupont, , they would have to hire their own legal representation and not be a part of the class action lawsuit.

Mr. Pinkston stated that it seemed that there could be another class action lawsuit if they discovered 29 more.

Mr. Tungate stated that they had discussed this extensively internally, and considered what their expectations were. He stated that they were one industry, the water industry, and there were many other industries lining up to seek compensation regarding PFAS. He stated that where that put them was undetermined.

Mr. Gaffney stated that this waiver of liability applied to the entire group of chemicals, not just one.

Mr. Mawyer stated that this was for drinking water, not wastewater.

Mr. Tungate confirmed that this was correct. Mr. Tungate stated that another question was if there would be funds remaining from responsible parties if they opted out now in anticipation of future litigation. He stated that there may be additional parties seeking awarded damages. He stated that attorney fees were anticipated to be 25%. He stated that another question was when they could expect to receive these funds. He stated that they should receive 50% of the PFAS settlement money in two years and the rest over the next eight years.

Mr. Tungate stated that they were a part of VAMWA, an organization for municipal water

utilities. He stated that they participated in a survey of 41 mid-Atlantic utilities from Virginia, Maryland, West Virginia, South Carolina, and North Carolina. He stated that of the Utilities surveyed, 59% had chosen to remain in this class action. He stated that 32% Utilities had decided to opt out, and 9% were either on the fence or undecided. He stated that out of this group of 41, 18, who belonged to large utilities with a PFAS detection greater than four parts per trillion, had chosen to stay in.

Mr. Tungate stated that 39% of the surveyed utilities had opted out, and 11% remained uncertain. As RWSA is a large utility with a PFAS detection greater than four parts per trillion, they must consider their options carefully. He also mentioned that another 15 large utilities, which had a PFAS detection below four parts per trillion, faced no expected costs. He stated that 73% had decided to stay in, while 13% had opted out, and 13.5% were still undecided.

Ms. Mallek asked if they could qualify for both.

Mr. Tungate answered no. Mr. Tungate stated that it utilized the highest reading, using that PFAS score. He stated that key dates and deadlines, such as submitting objections to Dupont and 3M had passed them now. He stated that a deadline for submitting requests for exclusion or opting out is December 12 for Dupont and December 4 for 3M. He stated that the court's final hearing fairness hearing for Dupont is on December 14, and for 3M it is on February 2. He noted that phase one water system claim forms were due 60 days after the effective date.

Mr. Tungate stated that in summary, testing indicates that their community has low levels of PFAS in the drinking water. He stated that RWSA had GAC filters to reduce the levels of total organic compounds and PFOA/PFOS at treatment plants. He stated that additional GAC filters would be required to treat all the water for PFAS removal. He stated that remaining in the class action litigation may result in an estimated award of $500,000 to $1 million. He stated that with regards to future drinking water litigation, these two defendants would be waived. He stated that the outcome of future litigation, if any, was uncertain. He indicated on the slide a photograph of the South Rivanna Dam on November 2, 2023.

Mr. Tungate stated that alternatives were to remain a member of the class action litigation and accept any settlement while giving up rights to future litigation against Dupont and 3m for PFAS damages to water system r to opt out of the class action litigation, thereby reserving all rights, and pursue separate litigation, if any, in the future.

Mr. O'Connell asked if they had to make an active claim to do that.

Mr. Tungate stated that if they did nothing, they stayed in, and if they opted out, that was the second option.

Mr. Mawyer clarified that they would do nothing but would still have to file the claims.

Mr. Tungate stated that was correct. He stated that if they decided not to participate by opting out, that preserved all their rights for preserving separate litigation. He stated that the request from the Board was that they authorize the Executive Director to register for a PFAS settlement

agreement claims form and account and remain a member of the class action litigation. He stated that this was staff's recommendation.

Mr. Gaffney asked if it would be about $800,000 and $1M, less 25% for legal fees, spread over 8 years.

Mr. Tungate stated that 50% of the money would be within the first two years, then in the remaining 8 years they would receive the other 50% of the money.

Mr. Gaffney stated that would buy them a tiny bit of a GAC container.

Ms. Mallek stated that it could offset a lot of years of operating costs.

Mr. Tungate stated that they spent between $800,000 and $1M annually for GAC operating costs currently with the inventory they currently had.

Ms. Mallek stated that was for the disinfection by-products.

Mr. Tungate stated that was correct.

Mr. Gaffney stated that there were 80 additional companies which could be potential litigants for PFAS. He asked if anyone knew what was going on with them.

Mr. Mawyer stated no, there were other companies lining up to litigate with Dupont and 3M.

Mr. Gaffney stated that he was talking about other water treatment companies.

Mr. O'Connell stated that the firefighting foam company had gone bankrupt. He stated that there was that possibility.

Mr. Gaffney stated that 3M recently settled for $6 billion for their ear plugs.

Mr. Tungate stated that 3M had allocated approximately $10.5 to $12.5 billion for this specific class action.

Mr. O'Connell stated that the Service Authority was also notified of the claims settlement, and it was still unclear about if Rivanna and the Service Authority can make the claim. He stated that however, their Board approved them to move forward, so there was a possibility to have Rivanna's claim as well as ACSA's claim. He stated that the way it was worded and the way their permit was written, they were thinking they could make the claim, so they would pursue it.

Mr. Mawyer stated that guidance information was issued recently regarding wholesalers and connecting systems. He stated that the intent that there would be one party which would receive any damages.

Ms. Mallek asked if their application would reinforce the other in a way.

Mr. Mawyer stated that they would not pay both agencies. He stated that it would not be duplicative, but they may split it up between a wholesaler and retailer. He stated that the City was in the same discussion with them.

Mr. Pinkston asked if RWSA had a recommendation.

Mr. Mawyer stated that their recommendation was to remain in the class action lawsuits against 3M and DuPont. He stated that there were reasons not to do so, but he did talk with their agency's counsel for environmental issues, and was advised that it would be very risky not to participate in the class action, with little hope of recovering in a second round should there even be one. He stated that by the time they paid their own attorneys and worked through the time and effort, it was risky. He stated that some of the larger utilities were opting out, so it was not unheard of, but was not recommended.

Mr. Tungate stated that based on the highest PFAS score being at North Rivanna and the fact that the plant was to be decommissioned in two years, if they were on their own, it would potentially undermine their position.

Mr. Mawyer stated that their locality did not have a PFAS issue right now.

Mr. O'Connell stated that they had implemented the GAC as a protective measure, which a lot of places did not have.

Ms. Mallek stated that they may not decommission North Fork.

Mr. Mawyer stated that the plan was to decommission it as soon as they got the pipe under the South Rivanna river in place to create redundancy to the northern area, and once the Airport Road pump station was finished. He stated that those were the facilities necessary before they could stop using North Rivanna.

Mr. Pinkston stated that this money was supposed to be remedial for past damages as well as future protections.

Mr. Gaffney noted that it did not come anywhere close. He stated that they were not the only two companies either. He noted that they were still legal to manufacture.

Mr. Tungate stated that everyone in the room benefited from PFAS materials. He stated that they included wrinkle-free clothes, Gore-Tex, and food wrappers.

Ms. Mallek stated that one had to work very hard to avoid those materials.

Mr. Gaffney stated that they had to decide whether to stay in the class action lawsuit at this meeting because the deadlines were December 4 and December 11.

Ms. Hildebrand stated that she supported staff's position to remain in the class action litigation,

because the other options were risky.

Mr. Gaffney stated that he felt that they were letting them off the hook easy, but he did not see another way. He stated that at some point, they would declare bankruptcy and reorganize. He stated that in one case, a judge did not allow a company to declare bankruptcy. He stated that he approved of staying in.

Ms. Mallek stated that she agreed.

Mr. O'Connell moved the Board to authorize the Executive Director to register for a PFAS Settlement Agreement Claims Form / Account and remain a member of the class action litigation. Ms. Mallek seconded the motion, which passed unanimously (7-0).

b. Presentation: Paychex Payroll and Human Resources Information System (HRIS) Review

(reconvene RSWA for a JOINT SESSION with the RWSA)

At 3:39 p.m., Mr. Pinkston moved to reconvene the Rivanna Solid Waste Authority Board. Mr. Richardson seconded the motion, which passed unanimously (6-0).

Ms. Betsey Nemeth stated that she would present information about the organization's new payroll and HRIS system, Paychex. She stated that over a year ago, they started looking for a new payroll-only system, as they had been using accounting software before. She stated that they wanted to enhance their employee experience around payroll and other parts of human resources, ultimately achieving efficiency and cost-effectiveness. She stated that they chose Paychex from several different vendors. She stated that they had customized the organization's payroll processing to their specifications, and they were a little bit different than most places because they worked 24/7 and on holidays, so there were varying kinds of pay.

Ms. Nemeth stated that she was excited about the addition of an entire electronic application system and the ability to post job openings on multiple recruiting websites simultaneously. She stated that when she input a job into the system, it posted across various platforms, including their own website. She mentioned that electronic onboarding will be implemented, allowing new hires to complete their onboarding forms from home. She stated that this included electronic I-9 and E-Verify employment eligibility verification processes. She stated that there was a significant achievement in implementing a learning management system (LMS).

Ms. Nemeth stated that they had introduced a time and attendance system for hourly employees, replacing manual tracking with punching into a timeclock. She stated that multiple methods existed for employees to punch in and out using their cell phones, computers, or a timeclock. She stated that in addition, all pay stubs and tax forms were now available electronically for employees, when before they were solely on paper. She stated this system allowed employers to file state federal employer payroll taxes by Paychex, with the payment being sent through the system itself.

Ms. Nemeth stated that employees could make changes to their personnel information electronically without submitting any paperwork. She stated that the management system handled leave, including sick time, vacation time, bereavement time, and volunteer time off. She stated that there were three ways for employees to access the clock, including the dashboard, computer, or timeclock.

Ms. Nemeth stated that the computer displayed information about their new system. She explained that there was a green button for hourly employees to punch in and that they could also use their cell phones for this purpose. She mentioned that geotracking would be used, so they would know the location of employees who punched in from their living rooms rather than a work site. She stated that the third picture showed the actual time clock at Ivy, which was the only one being used. She stated that employees used their employee numbers to punch in and out.

Ms. Nemeth stated that the application system was exciting because it automatically posted jobs on numerous job boards and the website, tracking the entire hiring process electronically. She stated that from the job posting to the onboarding process, hiring involved numerous steps, including interviews, questions asked, and application design tailored to specific positions. She stated that the system maintained a comprehensive list by job that tracked individuals' progress throughout this process. She stated that the job description library was continually expanding, ensuring they had accurate and detailed descriptions for each role.

Ms. Nemeth stated that currently, their website featured a single job application for all available positions. She stated that with the new system, she could now create customized applications for each position, such as water manager, HR manager, safety manager, or water operator, to gather specific information relevant to the role. She stated that upon hiring someone, they sent an onboarding email containing instructions for completing all required documents. She stated that the program would include a copy of their handbook for participants to read and sign off on. She stated that additionally, E-Verify would be used for completing the I-9 employment eligibility form, verifying with the government that the individual was legally allowed to work in the United States.

Ms. Nemeth stated that they had recently begun working on integrating Paychex learning management into their system, which aligned well with their strategic plan. She stated that as outlined in the plan, they aimed to track and manage various types of training for employees. She stated that Paychex already featured a learning library covering safety, HR, and IT topics. She stated that this integration allowed them to create personalized learning journeys for individual employees based on their areas of improvement or focus, such as leadership development. She stated that reporting was available for each employee's training hours, allowing them to receive an individualized training and learning transcript.

Ms. Nemeth stated that they could add their own training activities to the transcript. She stated that for example, she took courses to maintain certifications and could include all her external training in the transcript. She stated that they could upload various training modules, not just job-specific ones. She stated that in the past week, they had added their safety training, which was conducted as a module every other week, and all of this information was now available in the

system. She stated that additionally, employees who wanted to create their own training modules or come up with new ideas could submit them for inclusion in the system.

Mr. Gaffney asked if Ms. Nemeth was looking forward to the new program.

Ms. Nemeth stated yes. She stated that the training was very interesting. She stated that the software would be tracking most of the training they did, rather than tracking it on spreadsheets. She stated that it would also be great for their employees because they no longer had to call her on the phone to ask for paper paystubs. She stated that employees could access all of that information on their phones now.

Mr. Pinkston asked if this was similar to Workday.

Ms. Nemeth stated yes. She stated that their organization was not large enough to use Workday, but it was similar.

Ms. Mallek asked where they were in terms of the implementation process.

Ms. Nemeth stated that all paperwork was being processed there now. She stated that she hoped the application process would be operational in January. She stated that the LMS was integrated but not yet activated. She stated that she wanted to do a few modules herself and make sure it was acceptable.

Ms. Mallek asked if those were their modules.

Ms. Nemeth stated that she was referring to the outside modules. She clarified that they could be both. She stated that they had already uploaded their in-house safety training, but Paychex had their own modules that she wanted to review before sending them to employees to complete.

Ms. Mallek asked if it would include cyber training.

Ms. Nemeth stated that they got cyber training from a different vendor and had not crossed that bridge yet. She stated that she would be curious to see what their IT team thought of that.

Ms. Mallek asked if the I-9 notification to the government was required at the very end. She asked if it would be more sensible to get that done before sending the onboarding email to someone.

Ms. Nemeth stated that she would have to do it after she offered the job to them. She stated that as part of their onboarding process, she had to verify their ID. She stated that she would have to rescind the offer if they were not qualified to work in the U.S.

10. OTHER ITEMS FROM BOARD/STAFF NOT ON THE AGENDA

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

Ms. Mallek stated that at the last meeting, a member of the public asked a question about clients of RWSA who had put in private wells and were drawing groundwater from their neighbors in order to water their grass. She stated that she wanted to ask the question about if there were any requirements when one signed up to get Rivanna Water and Sewer coverage.

Mr. Mawyer stated that those clients would either sign up with the City or the Service Authority, but not with RWSA.

Mr. O'Connell stated that they disconnected wells when people signed up for public water.

Ms. Mallek stated that they may not be aware of new wells that had been installed. She stated that it was particularly important because their water table was so low.

Mr. Gaffney asked if the removal of the wells was required.

Mr. O'Connell confirmed that they were not legally allowed per Albemarle County code. He stated that if someone connected to public water, they had to disconnect the well. He stated that they had enforced it in a couple of places. He stated that it was unlikely someone could have gone in and done it unbeknownst to anyone, because the Health Department usually would be aware of such a situation.

Ms. Hildebrand stated that according to the City's Standard and Design Manual, if someone was a water customer of the City, they could not install a well, and it was not allowed.

11. CLOSED MEETING

There was no reason for a closed meeting.

(Adjournment of RSWA Board)

3:52 p.m. Mr. Andrews moved to adjourn the meeting of the Rivanna Solid Waste Authority. Mr. Richardson seconded the motion, which passed unanimously (6-0).

12. ADJOURNMENT

At 3:52 p.m., Ms. Mallek moved to adjourn the meeting of the Rivanna Water and Sewer Authority. Mr. Pinkston seconded the motion, which passed unanimously (7-0).

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **EXECUTIVE DIRECTOR'S REPORT**

DATE: **DECEMBER 12, 2023**

STRATEGIC PLAN PRIORITY: OPTIMIZATION AND RESILIENCY

Wastewater Permit Modification

We applied to the Virginia Department of Environmental Quality (DEQ) for a modification to the testing requirement of our permit for a pollutant (e. Coli) in wastewater. DEQ evaluated our application, reviewed our testing data, and granted the modification to the current permit, thereby reducing testing from 6 days/week to 4 days/week. The new testing schedule will begin in January 2024 and will eliminate the need for our chemists to work overtime on weekends to run samples. Testing 6 days/week required staff to work 4 hours each Saturday and Sunday to perform the necessary testing and read the results. The elimination of staff overtime hours on the weekends will result in a savings in personnel cost of about $9,300 from January through June 2024.

Urban Water Permit Extension

We recently received a 10-year extension until the year 2033 from the Army Corps of Engineers for our permit to construct the S. Rivanna to Ragged Mtn Reservoir water line project. The original permit from the ACOE was issued in 2008 for construction of the new Ragged Mtn Dam and pipeline infrastructure required to complete the community's water supply plan. A permit is required from the ACOE to mitigate impacts to the wetlands and streams of the U.S. created by these projects. A second permit is also required from the Virginia Department of Environmental Quality. The DEQ permit is under an administrative continuance, with our permit renewal application currently under review by DEQ.

STRATEGIC PLAN PRIORITY: ENVIRONMENTAL STEWARDSHIP

Drought Monitoring

Albemarle County and Charlottesville are experiencing Severe drought conditions, according to the U. S. Drought Monitoring report. Area precipitation is 16 inches, or 41%, below normal for the year to date, and about 22 inches, or 18%, below normal for the past 35 months. However, the South Rivanna, Sugar Hollow and Totier Creek (Scottsville) reservoirs are 100% full, while Beaver Creek reservoir (Crozet) is 95% full, and Ragged Mtn reservoir is 83% full.

Renewable Natural Gas

We appreciate the hospitality of the Western Virginia Water Authority in Roanoke for hosting RWSA and City staff on November 15 to tour its Renewable Natural Gas facility. The visit provided helpful insights as we explore opportunities to collaborate with the City to utilize methane gas from wastewater as a useable energy source in the City's natural gas system.

STRATEGIC PLAN PRIORITY: COMMUNICATION AND COLLABORATION

Imagine a Day Without Water 2023

Our 9th annual "*Imagine a Day Without Water Art Contest"* received many talented entries from Charlottesville and Albemarle students in grades K-12. Fan favorite voting ended on December 6th and winners in each grade category will be announced on December 13th. This year's theme is "*Tell us your action to save water!"* which was highlighted in the artwork entries. Rivanna, along with the City and ACSA, is sponsoring this annual contest and prizes will be awarded this month.

Toy Lift

On December 1, staff members volunteered at the "Toy Lift" event to help with receiving and sorting toys. The Toy Lift has been a local charity event since 1989 and helps thousands of families each holiday season, providing toys, bicycles, and books to local area children.


Debra Hoyt


Patricia Defibaugh


Alisa Cooper

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **LONNIE WOOD, DIRECTOR OF FINANCE AND INFORMATION TECHNOLOGY**

REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **OCTOBER MONTHLY FINANCIAL SUMMARY – FY 2024**

DATE: **DECEMBER 12, 2023**

Financial Snapshot

The Authority has an overall net surplus of $697,300 for the first four months of this fiscal year due to operating rate revenue being above average and receipt of the annual septage receiving support from the County. Total revenues are $1,046,100 over budget estimates and total expenses are $348,800 over budget. Urban Water flows and operations rate revenue are 11.3% above budget estimates, and Urban Wastewater flows and operations rate revenue are 3.6% over budget. Revenues and expenses are summarized in the table below:

	Urban Water	Urban Wastewater	Total Other Rate Centers	Total Authority
Operations				
Revenues	$ 3,824,310	$ 3,713,497	$ 949,262	$ 8,487,069
Expenses	(3,503,863)	(3,544,087)	(925,916)	(7,973,866)
Surplus (deficit)	$ 320,447	$ 169,410	$ 23,346	$ 513,203
Debt Service				
Revenues	$ 3,732,675	$ 3,556,235	$ 905,176	$ 8,194,086
Expenses	(3,684,035)	(3,430,258)	(895,692)	(8,009,985)
Surplus (deficit)	$ 48,640	$ 125,977	$ 9,484	$ 184,101
Total				
Revenues	$ 7,556,985	$ 7,269,732	$ 1,854,438	$ 16,681,155
Expenses	(7,187,898)	(6,974,345)	(1,821,608)	(15,983,851)
Surplus (deficit)	$ 369,087	$ 295,387	$ 32,830	$ 697,304

A more detailed financial analysis is in the following monthly report and reviews more closely actual financial performance compared to budgeted estimates. There are comments listed that will reference the applicable line items in the financial statement for each rate center and each support department in the following pages. Please refer to the Budget vs Actual financial statements when reviewing these comments.

Detailed Financials

The Authority's total operating revenues through October are $615,300 over the prorated annual budget estimates, and operating expenses are over budget by $102,100 resulting in a net operating surplus of $513,200. The following comments explain most of the other budget vs. actual variances.

A. Annual and Quarterly Transactions - Some revenues and expenses are over the prorated year-to-date budget due to one-time receipts of revenues for the year and quarterly or annual payments of expenses. These transactions appear to have significant impacts on the budget vs. actual monthly comparisons, but usually even out as the year progresses. Septage receiving support revenue of $109,440 is billed to the County annually in July. Annual payments are made in the first quarter for certain maintenance agreements and for employer contributions to employees' health savings accounts. The annual payment to UVA for the Observatory lease was made in September ($175,000). Insurance premiums are paid at the beginning of each quarter.
B. Personnel Costs (all departments) –The prorated budget amounts through October are calculated as 4/12 (or 33.3%) of the annual budget on these financial statements. However, actual payroll is paid biweekly, and there have been 9 pay periods so far this year out of 26 total (or 34.6%). This affects the comparison of budget vs. actual payroll costs over all departments/rate centers. Urban Water salaries are also higher than budgeted due to pay increases for plant operators who achieved higher licenses.
C. Other Services & Charges (Urban Water, Crozet Water, Urban Wastewater – pages 2, 3, 5) – Utility costs are running higher than originally estimated for Urban Water and Urban Wastewater. Urban Water, Crozet Water, and Urban Wastewater paid unbudgeted annual DEQ permit application fees this quarter of $25,000, $15,000, and $10,650, respectively.
D. Equipment Purchases (Urban Water – page 2) Urban Water incurred $10,500 in unbudgeted equipment rental costs.
E. Communications (Administration – page 8) – Telephone and data service costs for the Administration department are currently over budget.

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023
Fiscal Year 2024

Consolidated Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Operations Rate Revenue		$ 22,727,003	$ 7,575,668	$ 8,071,388	$ 495,720	6.54%
Lease Revenue		124,000	41,333	46,746	5,413	13.10%
Admin., Maint. & Engineering Revenue		781,000	260,333	263,725	3,392	1.30%
Other Revenues		647,267	215,756	271,389	55,634	25.79%
Use of Reserves (Water Resources Fund)		80,000	26,667	49,200	22,533	84.50%
Interest Allocation		47,250	15,750	48,347	32,597	206.96%
Total Operating Revenues		**$ 24,406,520**	**$ 8,135,507**	**$ 8,750,796**	**$ 615,289**	**7.56%**
Expenses						
Personnel Cost	**B**	$ 11,625,091	$ 3,875,030	$ 4,022,922	$ (147,892)	-3.82%
Professional Services		467,850	155,950	123,711	32,239	20.67%
Other Services & Charges	**C**	3,479,955	1,159,985	1,416,869	(256,884)	-22.15%
Communications	**E**	221,440	73,813	93,486	(19,672)	-26.65%
Information Technology		1,269,575	423,192	294,173	129,018	30.49%
Supplies		46,300	15,433	15,751	(318)	-2.06%
Operations & Maintenance	**A**	6,035,808	2,011,936	1,860,790	151,146	7.51%
Equipment Purchases	**D**	345,500	115,167	104,889	10,278	8.92%
Depreciation		915,000	305,000	305,000	-	0.00%
Total Operating Expenses		**$ 24,406,519**	**$ 8,135,506**	**$ 8,237,591**	**$ (102,084)**	**-1.25%**
Operating Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 513,205**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 22,119,060	$ 7,373,020	$ 7,373,024	$ 4	0.00%
Septage Receiving Support - County		109,440	36,480	109,440	72,960	200.00%
Buck Mountain Lease Revenue		1,600	533	1,884	1,350	253.17%
Trust Fund Interest		179,830	59,943	169,733	109,790	183.16%
Reserve Fund Interest		879,900	293,300	540,003	246,703	84.11%
Total Debt Service Revenues		**$ 23,289,830**	**$ 7,763,277**	**$ 8,194,084**	**$ 430,807**	**5.55%**
Debt Service Costs						
Total Principal & Interest		$ 16,168,944	$ 5,389,648	$ 5,389,648	$ -	0.00%
Reserve Additions-Interest		879,900	293,300	540,003	(246,703)	-84.11%
Debt Service Ratio Charge		725,000	241,667	241,667	-	0.00%
Reserve Additions-CIP Growth		5,516,000	1,838,667	1,838,667	-	0.00%
Total Debt Service Costs		**$ 23,289,844**	**$ 7,763,281**	**$ 8,009,985**	**$ (246,703)**	**-3.18%**
Debt Service Surplus/(Deficit)		**$ (14)**	**$ (5)**	**$ 184,099**		

Summary

Total Revenues	$ 47,696,350	$ 15,898,783	$ 16,944,880	$ 1,046,096	6.58%
Total Expenses	47,696,363	15,898,788	16,247,575	(348,788)	-2.19%
Surplus/(Deficit)	**$ (13)**	**$ (4)**	**$ 697,304**		

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Urban Water Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 10,021,362	$ 3,340,454	$ 3,718,645	$ 378,191	11.32%
Lease Revenue		94,000	31,333	35,822	4,488	14.32%
Miscellaneous		-	-	-	-	
Use of Reserves (Water Resources Fund)		80,000	26,667	49,200	22,533	84.50%
Interest Allocation		34,200	11,400	20,644	9,244	81.09%
Total Operating Revenues		**$ 10,229,562**	**$ 3,409,854**	**$ 3,824,310**	**$ 414,456**	**12.15%**
Expenses						
Personnel Cost	**B**	$ 2,384,332	$ 794,777	$ 872,239	$ (77,462)	-9.75%
Professional Services		178,500	59,500	41,637	17,863	30.02%
Other Services & Charges	**C**	769,233	256,411	377,097	(120,686)	-47.07%
Communications		103,200	34,400	32,819	1,581	4.60%
Information Technology		127,650	42,550	39,914	2,636	6.20%
Supplies		7,000	2,333	6,458	(4,125)	-176.78%
Operations & Maintenance	**A**	2,905,068	968,356	936,917	31,439	3.25%
Equipment Purchases	**D**	20,100	6,700	17,181	(10,481)	-156.43%
Depreciation		300,000	100,000	100,000	-	0.00%
Subtotal Before Allocations		$ 6,795,083	$ 2,265,028	$ 2,424,262	$ (159,234)	-7.03%
Allocation of Support Departments		3,434,478	1,144,826	1,079,602	65,225	5.70%
Total Operating Expenses		**$ 10,229,561**	**$ 3,409,854**	**$ 3,503,863**	**$ (94,009)**	**-2.76%**
Operating Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 320,447**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 10,193,779	$ 3,397,926	$ 3,397,928	$ 2	0.00%
Trust Fund Interest		77,500	25,833	73,121	47,288	183.05%
Reserve Fund Interest		423,100	141,033	259,742	118,708	84.17%
Lease Revenue		1,600	533	1,884	1,350	253.17%
Total Debt Service Revenues		**$ 10,695,979**	**$ 3,565,326**	**$ 3,732,674**	**$ 167,348**	**4.69%**
Debt Service Costs						
Total Principal & Interest		$ 6,964,779	$ 2,321,593	$ 2,321,593	$ -	0.00%
Reserve Additions-Interest		423,100	141,033	259,742	(118,708)	-84.17%
Debt Service Ratio Charge		400,000	133,333	133,333	-	0.00%
Est. New Debt Service - CIP Growth		2,908,100	969,367	969,367	-	0.00%
Total Debt Service Costs		**$ 10,695,979**	**$ 3,565,326**	**$ 3,684,035**	**$ (118,708)**	**-3.33%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 48,640**		
Rate Center Summary						
Total Revenues		$ 20,925,541	$ 6,975,180	$ 7,556,985	$ 581,804	8.34%
Total Expenses		20,925,540	6,975,180	7,187,898	(212,718)	-3.05%
Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 369,087**		
Costs per 1000 Gallons		$ 3.01		$ 2.78		
Operating and DS		$ 6.16		$ 5.70		
Thousand Gallons Treated		3,397,700	1,132,567	1,260,986	128,419	11.34%
or						
Flow (MGD)		9.309		10.252		

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Crozet Water Rate Center
Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Operations Rate Revenue		$ 1,234,752	$ 411,584	$ 411,584	$ -	0.00%
Lease Revenues		30,000	10,000	10,925	925	9.25%
Interest Allocation		4,600	1,533	2,756	1,222	79.72%
Total Operating Revenues		**$ 1,269,352**	**$ 423,117**	**$ 425,264**	**$ 2,147**	**0.51%**
Expenses						
Personnel Cost		$ 341,691	$ 113,897	$ 122,228	$ (8,331)	-7.31%
Professional Services		22,900	7,633	-	7,633	100.00%
Other Services & Charges	**C**	133,426	44,475	70,743	(26,268)	-59.06%
Communications		17,600	5,867	5,763	104	1.77%
Information Technology		32,400	10,800	3,324	7,476	69.23%
Supplies		1,500	500	629	(129)	-25.87%
Operations & Maintenance		335,700	111,900	109,089	2,811	2.51%
Equipment Purchases		3,200	1,067	1,067	(0)	0.00%
Depreciation		60,000	20,000	20,000	-	0.00%
Subtotal Before Allocations		$ 948,417	$ 316,139	$ 332,842	$ (16,704)	-5.28%
Allocation of Support Departments		320,940	106,980	100,833	6,147	5.75%
Total Operating Expenses		**$ 1,269,357**	**$ 423,119**	**$ 433,675**	**$ (10,556)**	**-2.49%**
Operating Surplus/(Deficit)		**$ (5)**	**$ (2)**	**$ (8,411)**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 2,385,720	$ 795,240	$ 795,240	$ -	0.00%
Trust Fund Interest		13,500	4,500	12,781	8,281	184.02%
Reserve Fund Interest		34,500	11,500	21,060	9,560	83.13%
Total Debt Service Revenues		**$ 2,433,720**	**$ 811,240**	**$ 829,081**	**$ 17,841**	**2.20%**
Debt Service Costs						
Total Principal & Interest		$ 1,216,725	$ 405,575	$ 405,575	$ -	0.00%
Reserve Additions-Interest		34,500	11,500	21,060	(9,560)	-83.13%
Estimated New Principal & Interest		1,182,500	394,167	394,167	-	0.00%
Total Debt Service Costs		**$ 2,433,725**	**$ 811,242**	**$ 820,802**	**$ (9,560)**	**-1.18%**
Debt Service Surplus/(Deficit)		**$ (5)**	**$ (2)**	**$ 8,279**		

Rate Center Summary

Total Revenues	$ 3,703,072	$ 1,234,357	$ 1,254,345	$ 19,988	1.62%
Total Expenses	3,703,082	1,234,361	1,254,477	(20,117)	-1.63%
Surplus/(Deficit)	**$ (10)**	**$ (3)**	**$ (132)**		
Costs per 1000 Gallons	$ 6.26		$ 5.07		
Operating and DS	$ 18.27		$ 14.68		
Thousand Gallons Treated	202,697	67,566	85,479	17,913	26.51%
Flow (MGD)	0.555		0.695		

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Scottsville Water Rate Center
Revenues and Expenses Summary

	Budget FY 2024	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual					
Notes					
Revenues					
Operations Rate Revenue	$ 656,460	$ 218,820	$ 218,820	$ -	0.00%
Interest Allocation	2,150	717	1,305	589	82.14%
Total Operating Revenues	**$ 658,610**	**$ 219,537**	**$ 220,125**	**$ 589**	**0.27%**
Expenses					
Personnel Cost	$ 223,641	$ 74,547	$ 81,050	$ (6,503)	-8.72%
Professional Services	5,000	1,667	618	1,049	62.92%
Other Services & Charges	31,800	10,600	14,463	(3,863)	-36.44%
Communications	6,750	2,250	2,863	(613)	-27.26%
Information Technology	19,700	6,567	4,600	1,967	29.95%
Supplies	100	33	85	(52)	-155.24%
Operations & Maintenance	134,800	44,933	28,210	16,723	37.22%
Equipment Purchases	2,000	667	1,010	(343)	-51.48%
Depreciation	40,000	13,333	13,333	0	0.00%
Subtotal Before Allocations	$ 463,791	$ 154,597	$ 146,233	$ 8,365	5.41%
Allocation of Support Departments	194,815	64,938	61,110	3,828	5.90%
Total Operating Expenses	**$ 658,606**	**$ 219,535**	**$ 207,342**	**$ 12,193**	**5.55%**
Operating Surplus/(Deficit)	**$ 4**	**$ 1**	**$ 12,783**		
Debt Service Budget vs. Actual					
Revenues					
Debt Service Rate Revenue	$ 158,736	$ 52,912	$ 52,912	$ -	0.00%
Trust Fund Interest	1,650	550	1,562	1,012	183.92%
Reserve Fund Interest	10,300	3,433	6,480	3,047	88.74%
Total Debt Service Revenues	**$ 170,686**	**$ 56,895**	**$ 60,954**	**$ 4,058**	**7.13%**
Debt Service Costs					
Total Principal & Interest	$ 148,991	$ 49,664	$ 49,664	$ -	0.00%
Reserve Additions-Interest	10,300	3,433	6,480	(3,047)	-88.74%
Estimated New Principal & Interest	11,400	3,800	3,800	-	0.00%
Total Debt Service Costs	**$ 170,691**	**$ 56,897**	**$ 59,944**	**$ (3,047)**	**-5.35%**
Debt Service Surplus/(Deficit)	**$ (5)**	**$ (2)**	**$ 1,010**		

Rate Center Summary

Total Revenues	$ 829,296	$ 276,432	$ 281,079	$ 4,647	1.68%
Total Expenses	829,297	276,432	267,286	9,146	3.31%
Surplus/(Deficit)	**$ (1)**	**$ (0)**	**$ 13,793**		
Costs per 1000 Gallons	$ 38.22		$ 29.26		
Operating and DS	$ 48.13		$ 37.71		
Thousand Gallons Treated	17,230	5,743	7,087	1,344	23.40%
or					
Flow (MGD)	0.047		0.058		

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Urban Wastewater Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 9,908,321	$ 3,302,774	$ 3,420,303	$ 117,530	3.56%
Stone Robinson WWTP		17,267	5,756	6,471	716	12.43%
Septage Acceptance		550,000	183,333	211,003	27,670	15.09%
Nutrient Credits		80,000	26,667	49,915	23,248	87.18%
Miscellaneous Revenue		-	-	4,000	4,000	
Interest Allocation		3,300	1,100	21,804	20,704	1882.21%
Total Operating Revenues		**$ 10,558,888**	**$ 3,519,629**	**$ 3,713,497**	**$ 193,868**	**5.51%**
Expenses						
Personnel Cost	**B**	$ 1,458,300	$ 486,100	$ 528,522	$ (42,422)	-8.73%
Professional Services		40,000	13,333	17,647	(4,313)	-32.35%
Other Services & Charges	**C**	2,271,556	757,185	867,569	(110,384)	-14.58%
Communications		11,600	3,867	6,422	(2,555)	-66.08%
Information Technology		110,600	36,867	12,623	24,244	65.76%
Supplies		1,200	400	1,034	(634)	-158.53%
Operations & Maintenance		2,086,800	695,600	659,622	35,978	5.17%
Equipment Purchases		73,500	24,500	27,065	(2,565)	-10.47%
Depreciation		470,000	156,667	156,667	(0)	0.00%
Subtotal Before Allocations		$ 6,523,556	$ 2,174,519	$ 2,277,170	$ (102,652)	-4.72%
Allocation of Support Departments		4,035,331	1,345,110	1,266,917	78,194	5.81%
Total Operating Expenses		**$ 10,558,887**	**$ 3,519,629**	**$ 3,544,087**	**$ (24,458)**	**-0.69%**
Operating Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 169,410**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 9,339,509	$ 3,113,170	$ 3,113,172	$ 2	0.00%
Septage Receiving Support - County	**A**	109,440	36,480	109,440	72,960	200.00%
Trust Fund Interest		86,900	28,967	81,981	53,014	183.02%
Reserve Fund Interest		410,200	136,733	251,642	114,908	84.04%
Total Debt Service Revenues		**$ 9,946,049**	**$ 3,315,350**	**$ 3,556,235**	**$ 240,885**	**7.27%**
Debt Service Costs						
Total Principal & Interest		$ 7,812,249	$ 2,604,083	$ 2,604,083	$ -	0.00%
Reserve Additions-Interest		410,200	136,733	251,642	(114,908)	-84.04%
Debt Service Ratio Charge		325,000	108,333	108,333	-	0.00%
Est. New Debt Service - CIP Growth		1,398,600	466,200	466,200	-	0.00%
Total Debt Service Costs		**$ 9,946,049**	**$ 3,315,350**	**$ 3,430,258**	**$ (114,908)**	**-3.47%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 125,977**		
Rate Center Summary						
Total Revenues		$ 20,504,937	$ 6,834,979	$ 7,269,732	$ 434,753	6.36%
Total Expenses		20,504,936	6,834,979	6,974,345	(139,366)	-2.04%
Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 295,387**		
Costs per 1000 Gallons		$ 3.11		$ 3.03		
Operating and DS		$ 6.05		$ 5.96		
Thousand Gallons Treated		3,390,400	1,130,133	1,170,535	40,402	3.57%
or						
Flow (MGD)		9.289		9.517		

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Glenmore Wastewater Rate Center
Revenues and Expenses Summary

	Budget FY 2024	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Notes					
Revenues					
Operations Rate Revenue	$ 521,916	$ 173,972	$ 173,972	$ -	0.00%
Interest Allocation	1,700	567	1,015	449	79.17%
Total Operating Revenues	**$ 523,616**	**$ 174,539**	**$ 174,987**	**$ 449**	**0.26%**
Expenses					
Personnel Cost	$ 127,879	$ 42,626	$ 46,441	$ (3,815)	-8.95%
Professional Services	25,000	8,333	9,974	(1,640)	-19.68%
Other Services & Charges	35,400	11,800	17,971	(6,171)	-52.29%
Communications	3,450	1,150	1,301	(151)	-13.11%
Information Technology	13,000	4,333	413	3,921	90.47%
Supplies	-	-	-	-	
Operations & Maintenance	143,550	47,850	34,508	13,342	27.88%
Equipment Purchases	3,800	1,267	1,267	(0)	0.00%
Depreciation	25,000	8,333	8,333	0	0.00%
Subtotal Before Allocations	$ 377,079	$ 125,693	$ 120,207	$ 5,486	4.36%
Allocation of Support Departments	146,534	48,845	45,900	2,945	6.03%
Total Operating Expenses	**$ 523,613**	**$ 174,538**	**$ 166,107**	**$ 8,431**	**4.83%**
Operating Surplus/(Deficit)	**$ 3**	**$ 1**	**$ 8,881**		

Operating Budget vs. Actual

Debt Service Budget vs. Actual

Revenues					
Debt Service Rate Revenue	$ 22,680	$ 7,560	$ 7,560	$ -	0.00%
Trust Fund Interest	200	67	204	137	205.51%
Reserve Fund Interest	-	-	-	-	
Total Debt Service Revenues	**$ 22,880**	**$ 7,627**	**$ 7,764**	**$ 137**	**1.80%**
Debt Service Costs					
Total Principal & Interest	$ 18,729	$ 6,243	$ 6,243	$ -	0.00%
Estimated New Principal & Interest	4,150	1,383	1,383	-	0.00%
Reserve Additions-Interest	-	-	-	-	
Total Debt Service Costs	**$ 22,879**	**$ 7,626**	**$ 7,626**	**$ -**	**0.00%**
Debt Service Surplus/(Deficit)	**$ 1**	**$ 0**	**$ 137**		

Rate Center Summary

Total Revenues	$ 546,496	$ 182,165	$ 182,751	$ 586	0.32%
Total Expenses	546,492	182,164	173,733	8,431	4.63%
Surplus/(Deficit)	**$ 4**	**$ 1**	**$ 9,018**		
Costs per 1000 Gallons	$ 12.65		$ 10.89		
Operating and DS	$ 13.20		$ 11.39		
Thousand Gallons Treated	41,401	13,800	15,254	1,454	**10.53%**
or					
Flow (MGD)	0.113		0.124		

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Scottsville Wastewater Rate Center
Revenues and Expenses Summary

	Budget FY 2024	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual					
Notes					
Revenues					
Operations Rate Revenue	$ 384,192	$ 128,064	$ 128,064	$ -	0.00%
Interest Allocation	1,300	433	822	389	89.67%
Total Operating Revenues	**$ 385,492**	**$ 128,497**	**$ 128,886**	**$ 389**	**0.30%**
Expenses					
Personnel Cost	$ 127,949	$ 42,650	$ 46,441	$ (3,792)	-8.89%
Professional Services	5,000	1,667	-	1,667	100.00%
Other Services & Charges	24,800	8,267	12,233	(3,966)	-47.98%
Communications	3,800	1,267	1,219	47	3.73%
Information Technology	14,025	4,675	413	4,262	91.17%
Supplies	-	-	475	(475)	
Operations & Maintenance	49,500	16,500	7,265	9,235	55.97%
Equipment Purchases	3,700	1,233	1,233	0	0.00%
Depreciation	20,000	6,667	6,667	(0)	0.00%
Subtotal Before Allocations	$ 248,774	$ 82,925	$ 75,946	$ 6,978	8.42%
Allocation of Support Departments	136,722	45,574	42,844	2,729	5.99%
Total Operating Expenses	**$ 385,495**	**$ 128,498**	**$ 118,791**	**$ 9,708**	**7.55%**
Operating Surplus/(Deficit)	**$ (3)**	**$ (1)**	**$ 10,095**		
Debt Service Budget vs. Actual					
Revenues					
Debt Service Rate Revenue	$ 18,636	$ 6,212	$ 6,212	$ -	0.00%
Trust Fund Interest	80	27	85	58	218.19%
Reserve Fund Interest	1,800	600	1,080	480	80.01%
Total Debt Service Revenues	**$ 20,516**	**$ 6,839**	**$ 7,377**	**$ 538**	**7.87%**
Debt Service Costs					
Total Principal & Interest	$ 7,471	$ 2,490	$ 2,490	$ -	0.00%
Reserve Additions-Interest	1,800	600	1,080	(480)	-80.01%
Estimated New Principal & Interest	11,250	3,750	3,750	-	0.00%
Total Debt Service Costs	**$ 20,521**	**$ 6,840**	**$ 7,320**	**$ (480)**	**-7.02%**
Debt Service Surplus/(Deficit)	**$ (5)**	**$ (2)**	**$ 57**		
Rate Center Summary					
Total Revenues	$ 406,008	$ 135,336	$ 136,263	$ 927	0.68%
Total Expenses	406,016	135,339	126,111	9,228	6.82%
Surplus/(Deficit)	**$ (8)**	**$ (3)**	**$ 10,152**		
Costs per 1000 Gallons	$ 16.30		$ 18.49		
Operating and DS	$ 17.17		$ 19.63		
Thousand Gallons Treated	23,643	7,881	6,423	(1,458)	**-18.50%**
or					
Flow (MGD)	0.065		0.052		

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Administration

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ 781,000	$ 260,333	$ 260,333	$ 0	0.00%
Bond Proceeeds Funding Bond Issuance Costs		-	-	-	-	
Miscellaneous Revenue		-	-	841	841	
Total Operating Revenues		**$ 781,000**	**$ 260,333**	**$ 261,175**	**$ 841**	**0.32%**
Expenses						
Personnel Cost		$ 2,930,008	$ 976,669	$ 955,379	$ 21,291	2.18%
Professional Services		136,450	45,483	49,455	(3,972)	-8.73%
Other Services & Charges		140,760	46,920	43,932	2,988	6.37%
Communications	**E**	42,800	14,267	27,081	(12,815)	-89.82%
Information Technology		778,800	259,600	218,571	41,029	15.80%
Supplies		22,800	7,600	5,587	2,013	26.49%
Operations & Maintenance		64,200	21,400	12,053	9,347	43.68%
Equipment Purchases		15,000	5,000	5,000	-	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 4,130,818**	**$ 1,376,939**	**$ 1,317,057**	**$ 59,882**	**4.35%**

Department Summary

Net Costs Allocable to Rate Centers	**$ (3,349,818)**	**$ (1,116,606)**	**$ (1,055,883)**	**$ (60,723)**	**5.44%**
Allocations to the Rate Centers					
Urban Water	44.00% **$ 1,473,920**	**$ 491,307**	**$ 464,588**	**$ 26,718**	
Crozet Water	4.00% **$ 133,993**	**44,664**	**42,235**	**2,429**	
Scottsville Water	2.00% **$ 66,996**	**22,332**	**21,118**	**1,214**	
Urban Wastewater	48.00% **$ 1,607,913**	**535,971**	**506,824**	**29,147**	
Glenmore Wastewater	1.00% **$ 33,498**	**11,166**	**10,559**	**607**	
Scottsville Wastewater	1.00% **$ 33,498**	**11,166**	**10,559**	**607**	
	100.00% **$ 3,349,818**	**$ 1,116,606**	**$ 1,055,883**	**$ 60,723**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Maintenance

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ -	$ -	
Miscellaneous Revenue		-	-	1,067	1,067	
Total Operating Revenues		**$ -**	**$ -**	**$ 1,067**	**$ 1,067**	
Expenses						
Personnel Cost		$ 1,553,212	$ 517,737	$ 511,326	$ 6,412	1.24%
Professional Services		25,000	8,333	-	8,333	100.00%
Other Services & Charges		36,400	12,133	7,757	4,376	36.06%
Communications		11,300	3,767	9,504	(5,737)	-152.32%
Information Technology		17,500	5,833	342	5,492	94.14%
Supplies		4,000	1,333	-	1,333	100.00%
Operations & Maintenance		114,150	38,050	39,860	(1,810)	-4.76%
Equipment Purchases		201,000	67,000	43,333	23,667	35.32%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 1,962,562**	**$ 654,187**	**$ 612,122**	**$ 42,065**	**6.43%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (1,962,562)**	**$ (654,187)**	**$ (611,054)**	**$ (40,998)**	**6.27%**
Allocations to the Rate Centers						
Urban Water	30.00%	**$ 588,768**	**$ 196,256**	**$ 183,316**	**$ 12,940**	
Crozet Water	3.50%	**68,690**	**22,897**	**21,387**	**1,510**	
Scottsville Water	3.50%	**68,690**	**22,897**	**21,387**	**1,510**	
Urban Wastewater	56.50%	**1,108,847**	**369,616**	**345,246**	**24,370**	
Glenmore Wastewater	3.50%	**68,690**	**22,897**	**21,387**	**1,510**	
Scottsville Wastewater	3.00%	**58,877**	**19,626**	**18,332**	**1,294**	
	100.00%	**$ 1,962,562**	**$ 654,187**	**$ 611,054**	**$ 43,133**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Laboratory

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
N/A						
Expenses						
Personnel Cost	**B**	$ 456,056	$ 152,019	$ 162,383	$ (10,364)	-6.82%
Professional Services		-	-	-	-	
Other Services & Charges		14,580	4,860	465	4,395	90.43%
Communications		1,400	467	234	233	49.89%
Information Technology		1,000	333	-	333	100.00%
Supplies		1,200	400	271	129	32.29%
Operations & Maintenance		115,300	38,433	20,387	18,046	46.95%
Equipment Purchases		1,700	567	567	(0)	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 591,236**	**$ 197,079**	**$ 184,306**	**$ 12,772**	**6.48%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (591,236)**	**$ (197,079)**	**$ (184,306)**	**$ (12,772)**	**6.48%**
Allocations to the Rate Centers						
Urban Water	44.00%	**$ 260,144**	**$ 86,715**	**$ 81,095**	**$ 5,620**	
Crozet Water	4.00%	**23,649**	**7,883**	**7,372**	**511**	
Scottsville Water	2.00%	**11,825**	**3,942**	**3,686**	**255**	
Urban Wastewater	47.00%	**277,881**	**92,627**	**86,624**	**6,003**	
Glenmore Wastewater	1.50%	**8,869**	**2,956**	**2,765**	**192**	
Scottsville Wastewater	1.50%	**8,869**	**2,956**	**2,765**	**192**	
	100.00%	**$ 591,236**	**$ 197,079**	**$ 184,306**	**$ 12,772**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - October 2023

Engineering

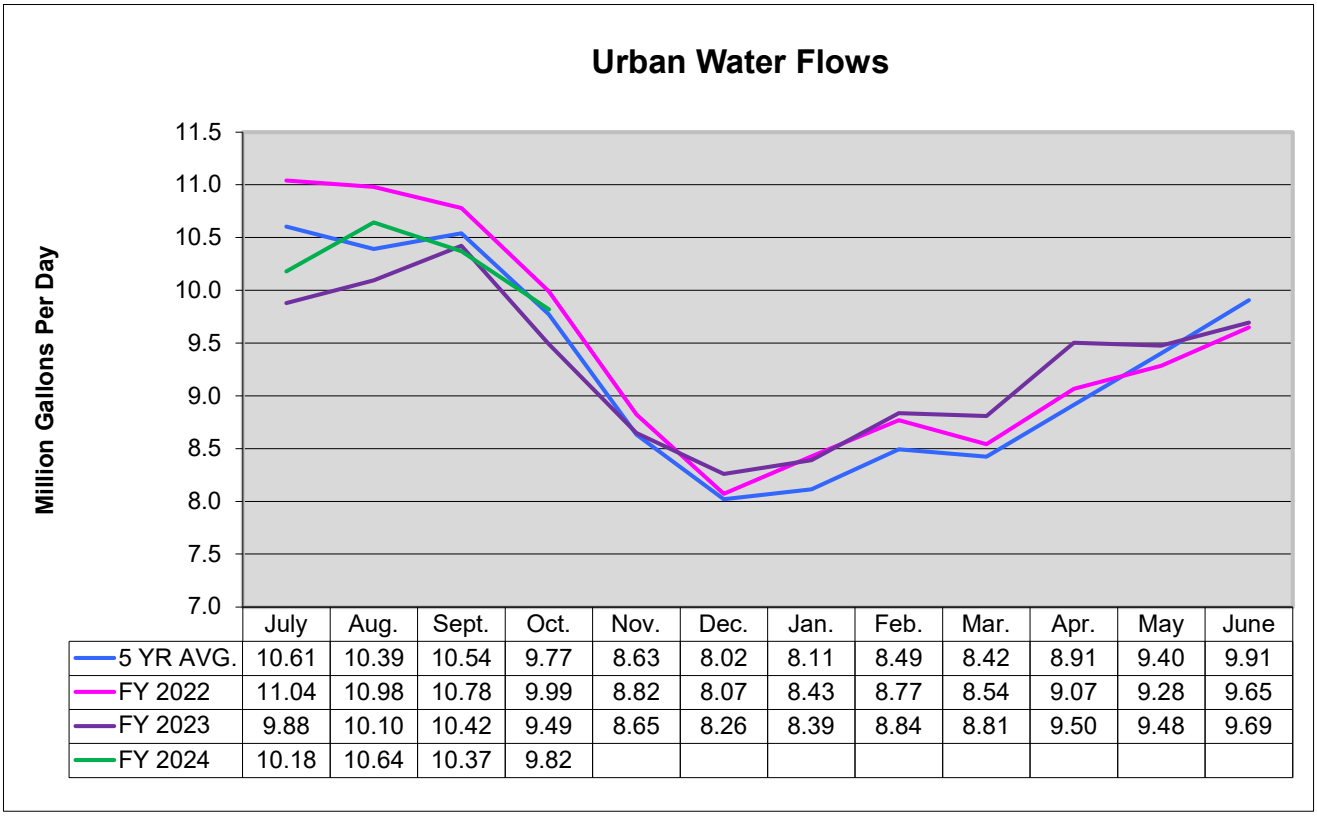
Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ 1,483	$ 1,483	
Total Operating Revenues		**$ -**	**$ -**	**$ 1,483**	**$ 1,483**	
Expenses						
Personnel Cost	**B**	$ 2,022,024	$ 674,008	$ 696,914	$ (22,906)	-3.40%
Professional Services		30,000	10,000	4,381	5,619	56.19%
Other Services & Charges		22,000	7,333	4,638	2,695	36.75%
Communications		19,540	6,513	6,280	234	3.59%
Information Technology		154,900	51,633	13,975	37,659	72.93%
Supplies		8,500	2,833	1,212	1,622	57.23%
Operations & Maintenance		86,740	28,913	12,879	16,034	55.46%
Equipment Purchases		21,500	7,167	7,167	0	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 2,365,204**	**$ 788,401**	**$ 747,445**	**$ 40,957**	**5.19%**

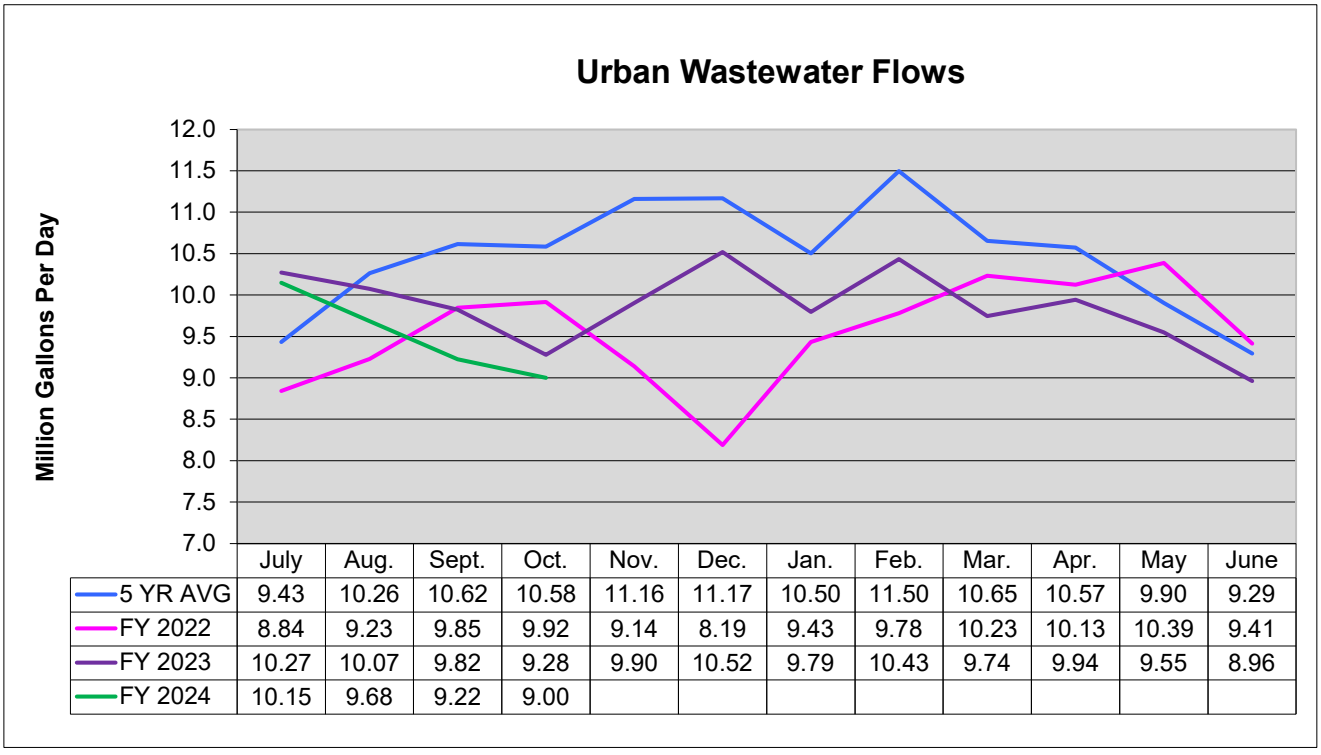
Department Summary

Net Costs Allocable to Rate Centers		**$ (2,365,204)**	**$ (788,401)**	**$ (745,962)**	**$ (39,473)**	**5.01%**
Allocations to the Rate Centers						
Urban Water	47.00%	**$ 1,111,646**	**$ 370,549**	**$ 350,602**	**$ 19,947**	
Crozet Water	4.00%	**94,608**	**31,536**	**29,838**	**1,698**	
Scottsville Water	2.00%	**47,304**	**15,768**	**14,919**	**849**	
Urban Wastewater	44.00%	**1,040,690**	**346,897**	**328,223**	**18,673**	
Glenmore Wastewater	1.50%	**35,478**	**11,826**	**11,189**	**637**	
Scottsville Wastewater	1.50%	**35,478**	**11,826**	**11,189**	**637**	
	100.00%	**$ 2,365,204**	**$ 788,401**	**$ 745,962**	**$ 42,440**	

Rivanna Water and Sewer Authority
Flow Graphs



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
5 YR AVG.	10.61	10.39	10.54	9.77	8.63	8.02	8.11	8.49	8.42	8.91	9.40	9.91
FY 2022	11.04	10.98	10.78	9.99	8.82	8.07	8.43	8.77	8.54	9.07	9.28	9.65
FY 2023	9.88	10.10	10.42	9.49	8.65	8.26	8.39	8.84	8.81	9.50	9.48	9.69
FY 2024	10.18	10.64	10.37	9.82								



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
5 YR AVG	9.43	10.26	10.62	10.58	11.16	11.17	10.50	11.50	10.65	10.57	9.90	9.29
FY 2022	8.84	9.23	9.85	9.92	9.14	8.19	9.43	9.78	10.23	10.13	10.39	9.41
FY 2023	10.27	10.07	9.82	9.28	9.90	10.52	9.79	10.43	9.74	9.94	9.55	8.96
FY 2024	10.15	9.68	9.22	9.00								

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **DAVE TUNGATE, DIRECTOR OF OPERATIONS & ENVIRONMENTAL SERVICES**

REVIEWED BY: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **OPERATIONS REPORT FOR NOVEMBER 2023**

DATE: **DECEMBER 12, 2023**

WATER OPERATIONS:

The average and maximum daily water volumes produced in November 2023 were as follows:

Water Treatment Plant	***Average Daily Production (MGD)***	***Maximum Daily Production in the Month (MGD)***
South Rivanna	7.51	8.95 (11/30/2023)
Observatory	0.99	1.50 (11/15/2023)
North Rivanna	0.45	0.56 (11/8/2023)
Urban Total	8.95	10.05 (11/8/2023)
Crozet	0.60	0.73 (11/21/2023)
Scottsville	0.04	0.059 (11/7/2023)
Red Hill	0.0018	0.003 (11/16/2023)
RWSA Total	9.59	-

- All RWSA water treatment facilities were in regulatory compliance during the month of November.

Status of Reservoirs (as of December 5, 2023):

- Urban Reservoirs are 91% of Total Useable Capacity
  - South Rivanna Reservoir is full
  - Ragged Mountain Reservoir is 83% full
  - Sugar Hollow Reservoir is full
- Beaver Creek Reservoir (Crozet) is 95% full
- Totier Creek Reservoir (Scottsville) is 100% full

WASTEWATER OPERATIONS:

All RWSA Water Resource Recovery Facilities (WRRFs) were in regulatory compliance with their effluent limitations during November 2023. Performance of the WRRFs in November was as follows compared to the respective VDEQ permit limits:

WRRF	*Average Daily Effluent Flow (MGD)*	*Average $CBOD_5$ (ppm)*		*Average Total Suspended Solids (ppm)*		*Average Ammonia (ppm)*	
		RESULT	*LIMIT*	*RESULT*	*LIMIT*	*RESULT*	*LIMIT*
Moores Creek	8.95	<QL	9	0.24	22	<QL	2.2
Glenmore	0.136	2.8	15	4.4	30	NR	NL
Scottsville	0.041	1.0	25	10.3	30	NR	NL
Stone Robinson	0.002	NR	30	NR	30	NR	NL

NR = Not Required
NL = No Limit
<QL: Less than analytical method quantitative level (2.0 ppm for CBOD, 1.0 ppm for TSS, and 0.1 ppm for Ammonia).

Nutrient discharges at the Moores Creek AWRRF were as follows for November 2023.

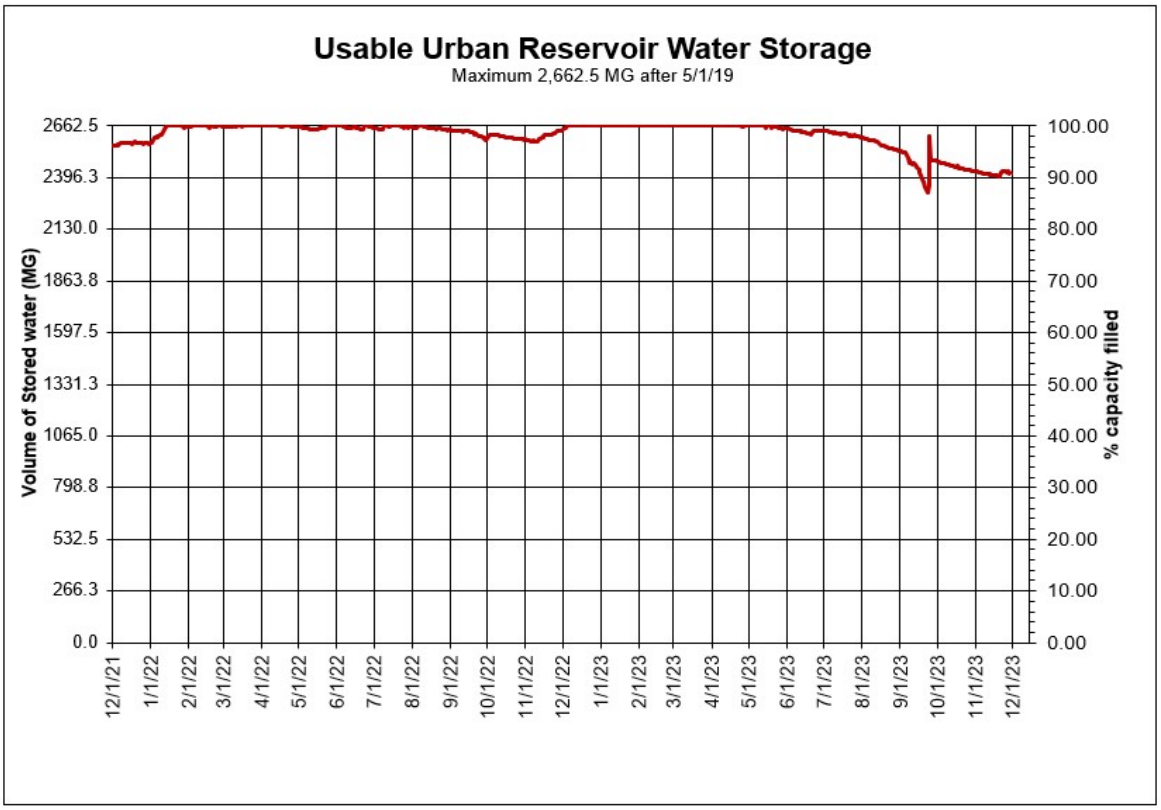
State Annual Allocation (lb./yr.) Permit		*Average Monthly Allocation (lb./mo.) **	*Moores Creek Discharge November (lb./mo.)*	*Performance as % of monthly average Allocation**	*Year to Date Performance as % of annual allocation*
Nitrogen	282,994	23,583	10,480	44%	38%
Phosphorous	18,525	1,636	437	27%	25%

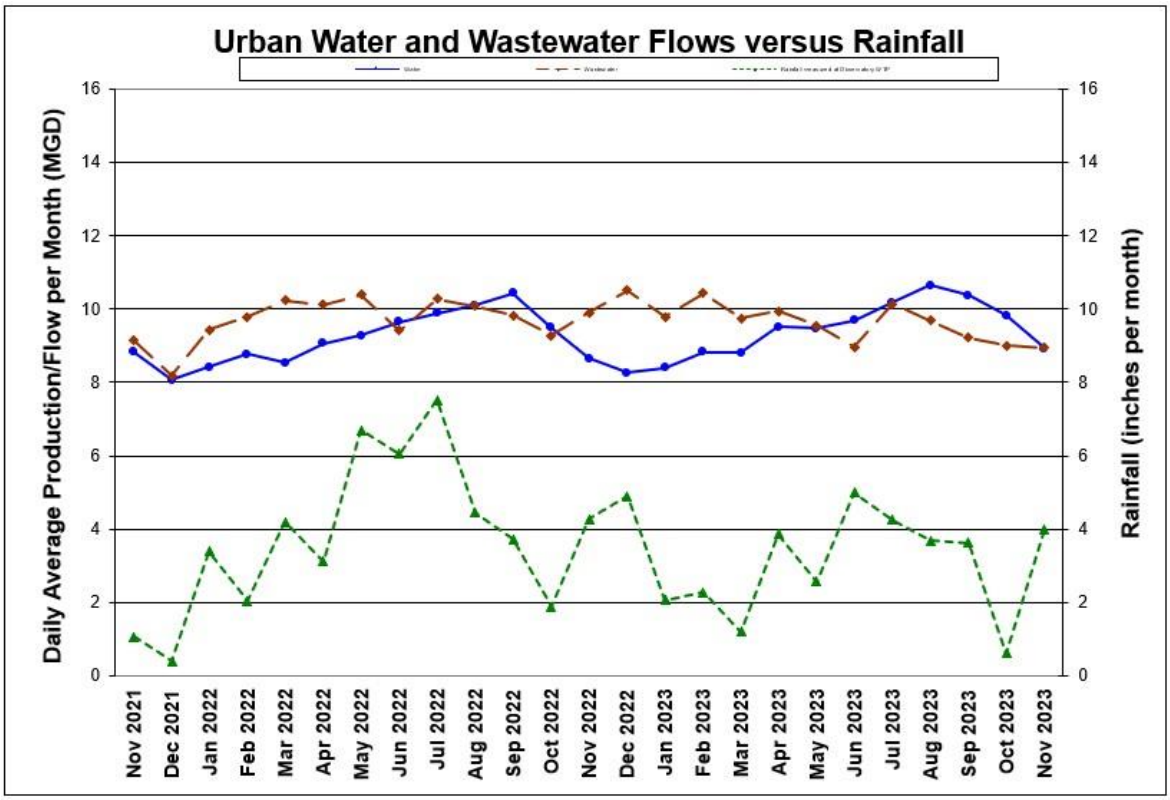
*State allocations are expressed as annual amounts. One-twelfth of that allocation is an internal monthly benchmark for comparative purposes only.

WATER AND WASTEWATER DATA:

The following graphs are provided for review:

- Usable Urban Reservoir Water Storage
- Urban Water and Wastewater Flows versus Rainfall


Usable Urban Reservoir Water Storage
Maximum 2,662.5 MG after 5/1/19
Volume of Stored water (MG)
2662.5
2396.3
2130.0
1863.8
1597.5
1331.3
1065.0
798.8
532.5
266.3
0.0
% capacity filled
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
12/1/21
1/1/22
2/1/22
3/1/22
4/1/22
5/1/22
6/1/22
7/1/22
8/1/22
9/1/22
10/1/22
11/1/22
12/1/22
1/1/23
2/1/23
3/1/23
4/1/23
5/1/23
6/1/23
7/1/23
8/1/23
9/1/23
10/1/23
11/1/23
12/1/23


Urban Water and Wastewater Flows versus Rainfall
Daily Average Production/Flow per Month (MGD)
Rainfall (inches per month)
16
14
12
10
8
6
4
2
0
Nov 2021
Dec 2021
Jan 2022
Feb 2022
Mar 2022
Apr 2022
May 2022
Jun 2022
Jul 2022
Aug 2022
Sep 2022
Oct 2022
Nov 2022
Dec 2022
Jan 2023
Feb 2023
Mar 2023
Apr 2023
May 2023
Jun 2023
Jul 2023
Aug 2023
Sep 2023
Oct 2023
Nov 2023

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **JENNIFER WHITAKER, DIRECTOR OF ENGINEERING & MAINTENANCE**

REVIEWED BY: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **CIP PROJECTS REPORT**

DATE: **DECEMBER 12, 2023**

This memorandum reports on the status of the following Capital Projects as well as other significant operating, maintenance, and planning projects.

For the current CIP and additional project information, please visit: https://www.rivanna.org/wp-content/uploads/2023/06/2024-2028-CIP-FINAL-DRAFT-1.pdf

Summary

	Project	Construction Start Date	Construction Completion Date
1	SRWTP and OBWTP Renovations	May 2020	March 2024
2	Airport Rd. Water Pump Station and Piping	December 2021	September 2024
3	MC 5kV Electrical System Upgrades	May 2022	December 2024
4	South Fork Rivanna River Crossing	May 2024	March 2026
5	Red Hill Water Treatment Plant Upgrades	April 2024	June 2025
6	Central Water Line	December 2024	December 2028
7	Scottsville WRRF Whole Plant Generator and ATS	TBD	TBD
8	MC Administration Building Renovation and Addition	September 2024	May 2027
9	RMR to OBWTP Raw Water Line and Pump Station	September 2024	December 2028
10	MC Building Upfits and Gravity Thickener Improvements	August 2024	August 2026
11	Emmet Street Water Line Betterment	October 2024	October 2026
12	MC Structural and Concrete Rehabilitation	September 2024	December 2026
13	Crozet Pump Stations Rehabilitation	January 2025	December 2026
14	Crozet WTP GAC Expansion – Phase I	April 2025	October2026
15	Beaver Creek Dam, Pump Station and Piping	April 2026	January 2029
16	SFRR to RMR Pipeline, Intake, and Facilities	June 2025	December 2030
17	Upper Schenks Branch Interceptor, Phase II	TBD	TBD

Under Construction

1. South Rivanna and Observatory Water Treatment Plant Renovations
2. Airport Road Water Pump Station and Piping
3. MC 5kV Electrical System Upgrades

Design and Bidding

4. South Fork Rivanna River Crossing
5. Red Hill Water Treatment Plant Upgrades
6. Central Water Line
7. Scottsville WRRF Whole Plant Generator and ATS
8. MC Administration Building Renovation and Addition
9. RMR to OBWTP Raw Water Line and Pump Station
10. MC Building Upfits and Gravity Thickener Improvements
11. Emmet Street Water Line Betterment
12. MC Structural and Concrete Rehabilitation
13. Crozet Pump Stations Rehabilitation
14. Crozet WTP GAC Expansion – Phase I
15. Beaver Creek Dam, Pump Station, and Piping
16. SFRR to RMR Pipeline, Intake, and Facilities
17. Upper Schenks Branch Interceptor, Phase II

Planning and Studies

18. Asset Management Plan
19. MCAWRRF Biogas Upgrades
20. North Rivanna Water Treatment Plant Decommissioning

Other Significant Projects

21. Urgent and Emergency Repairs
22. Security Enhancements

Under Construction

1. South Rivanna and Observatory Water Treatment Plant Renovations

Design Engineer:	Short Elliot Hendrickson, Inc. (SEH)
Construction Contractor:	English Construction Company (Lynchburg, VA)
Construction Start:	May 2020
Percent Complete:	93%
Base Construction Contract + Change Orders to Date = Current Value:	$36,748,500 + $1,329,762 = $38,078,262
Completion:	March 2024
Budget:	$43,000,000

Current Status: Improvements continue at the OBWTP including completion of the new Chemical Building and general site improvements. At the SRWTP, sludge pump improvements, general site

improvements and final instrumentation programming work continues.

2. Airport Road Water Pump Station and Piping

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	Anderson Construction, Inc. (ACI) (Lynchburg, VA)
Construction Start:	December 2021
Percent Complete:	75%
Base Construction Contract + Change Order to Date = Current Value:	$8,520,312 + $205,908 = $8,726,221
Completion:	September 2024
Budget:	$10,000,000

Current Status: Water line installation is 95% complete at the Town Center traffic circle. Water line testing and disinfection is on-going in segments. Paving of Berkmar Drive will begin following completion of the water line testing. The pump station is dried-in and the electrical and plumbing work is underway. Dominion is scheduled to run underground electric to the site before the end of the year.

3. MCAWRRF 5kV Electrical System Upgrades

Design Engineer:	Hazen and Sawyer (Hazen)
Construction Contractor:	Pyramid Electrical Contractors (Richmond, VA)
Construction Start:	May 2022
Percent Complete:	23%
Base Construction Contract + Change Order to Date = Current Value:	$5,180,000 - $848,368 = $4,331,632
Completion:	December 2024
Budget:	$5,635,000

Current Status: All major site-related work, including underground electrical ductbank, equipment pads, and curb and gutter replacements, is complete. Electrical equipment for this project has begun to arrive at the site, with the majority of the equipment scheduled to arrive this Winter.

Design and Bidding

4. South Fork Rivanna River Crossing

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2020
Project Status:	90% Design
Construction Start:	May 2024
Completion:	March 2026
Budget:	$7,000,000

Current Status: Easement acquisition work is on-going. A required easement on the south side of the river is on a remnant property from the VDOT Berkmar Bridge project, and we cannot finalize that easement until the property transfer back to the original property owner is complete. We had a meeting with VDOT in an effort to move this acquisition forward. Another outstanding easement is on a

Virginia Dominion Power parcel for which we completed a Phase 1 Environmental Survey because Virginia Dominion Power prefers that we purchase the small parcel instead of acquiring an easement. The final outstanding easement is with Albemarle County for an easement across the Brookhill Park property along Rio Mills Rd for which a final draft is pending.

5. Red Hill Water Treatment Plant Upgrades

Design Engineer:	Short Elliot Hendrickson (SEH)
Project Start:	July 2022
Project Status:	Bidding
Construction Start:	April 2024
Completion:	June 2025
Budget:	$800,000

Current Status: Efforts are underway to encourage additional bidders, as there appeared to be limited interest in this small project. The bid acceptance date has been extended to December 21, 2023. This project received 50% grant funding from Albemarle County.

6. Central Water Line

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	65% Design
Construction Start:	December 2024
Completion:	December 2028
Budget:	$41,000,000

Current Status: Design of 90% construction documents and easement acquisitions are underway. Soil borings are complete and utility test pits along the alignment are on-going and will be completed soon.

7. Scottsville WRRF Whole Plant Generator and ATS

Design Engineer:	Wiley|Wilson
Project Start:	December 2021
Project Status	100% Design
Construction Start:	TBD
Completion:	TBD
Budget:	$520,000

Current Status: A recent update from VDEM indicated that the grant approval and funding process may continue until Summer 2024. As a result, the overall project schedule is uncertain. The electrical design alterations have been completed and revised easement documents are being generated.

8. Moores Creek Administration Building Renovation and Addition

Design Engineer:	SEH
Project Start:	October 2022
Project Status:	60% Design
Construction Start:	September 2024

Completion:	May 2027
Budget:	$20,000,000

Current Status: The 60% design review and Value Engineering analysis have been completed. The design team is completing 90% documents while incorporating elements selected from the VE effort as well as educational components of the facility.

9. Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Line and Pump Station

Design Engineer:	Kimley-Horn
Project Start:	August 2018
Project Status:	84% Design
Construction Start:	September 2024
Completion:	December 2028
Budget:	$44,000,000

Current Status: Design of the pump station is 75% complete. Waterline design has reached 90% completion between the Ragged Mountain Reservoir and Fontaine Avenue, and 50% design completion between Fontaine Avenue and OBWTP.

10. MCAWRRF Building Upfits and Gravity Thickener Improvements

Design Engineer:	Short Elliot Hendrickson (SEH)
Project Start:	March 2023
Project Status:	5% Design
Construction Start:	August 2024
Completion:	August 2026
Budget:	$5,000,000

Current Status: Design of the construction plans and specifications is underway.

11. Emmet Street Water Line Betterment

Design Engineer:	Whitman, Requardt & Associates (WRA)
Project Start:	September 2021
Project Status:	Ivy Corridor Public Realm – Complete Contemplative Commons – Complete Emmet Streetscape –70% Design Hydraulic/29 – Preliminary Design
Completion:	2024 - 2026, Phase I
Budget:	$2,900,000

Current Status: WRA has completed 70% design drawings for the water main. Permitting efforts are underway. RWSA is coordinating with the City for construction of a 24-30" water main in Emmet Street from Ivy Road to Arlington Boulevard as part of the City's Emmet Streetscape Phase I project. A Betterment Agreement and costs are under review by the City.

An analysis of possible water main alignments along the Emmet Street Corridor was completed for the section between Morton Drive and Hydraulic Road. The report detailing this analysis is expected to be finalized by the end of 2023.

12. MCAWRRF Structural and Concrete Rehabilitation

Design Engineer:	Hazen and Sawyer (Hazen)
Project Start:	April 2023
Project Status:	Preliminary Engineering
Construction Start:	September 2024
Completion:	December 2026
Budget:	$13,550,000

Current Status: A Preliminary Engineering Report associated with interim digester repairs has been completed.

13. Crozet Pump Stations Rehabilitation

Design Engineer:	Wiley | Wilson
Project Start:	July 2023
Project Status:	40% Design
Construction Start:	January 2025
Completion:	December 2026
Budget:	$10,350,000

Current Status: Development of 60% design documents continues.

14. Crozet GAC Expansion – Phase I

Design Engineer:	SEH
Project Start:	July 2023
Project Status:	Preliminary Engineering
Construction Start:	April 2025
Completion:	October 2026
Budget:	$6,550,000

Current Status: Preliminary engineering evaluations and coordination with regulatory authorities are underway.

15. Beaver Creek Dam, Pump Station and Piping Improvements

Design Engineer:	Schnabel Engineering (Dam)
Design Engineer:	Hazen & Sawyer (Pump Station)
Project Start:	February 2018
Project Status:	5% Design
Construction Start:	April 2026
Completion:	January 2029
Budget:	$43,000,000

Current Status: Design work is underway by Hazen for the new raw water pump station, intake, raw water main, and hypolimnetic oxygenation system, and by Schnabel Engineering for final design of the dam spillway upgrades, temporary detour, and spillway bridge.

16. SFRR to RMR Pipeline, Intake, and Facilities

Design Engineer:	Kimley Horn/SEH
Project Start:	July 2023
Project Status:	8% Design
Construction Start:	June 2025
Completion:	December 2030
Budget:	$79,700,000

Current Status: Boundary survey of the of the watermain alignment in VDOT right-of-way is underway. A geotechnical investigation along the watermain alignment will be completed this Fall/Winter. The project will require closure of the public boat ramp at the site once construction begins. Modifications to the Ragged Mtn Reservoir intake tower and perimeter grading will be also included in this overall project. A short section of the 36" raw water main will be constructed with the Victorian Heights housing development on Woodburn Road. Construction of that section of main is expected to begin this winter.

17. Upper Schenks Branch Interceptor, Phase II

Design Engineer:	CHA Consulting
Project Start:	July 2021
Project Status:	Design
Construction Start:	TBD
Completion:	TBD
Budget:	$4,725,000

Current Status: The design team has provided additional information to assist the County with easement acquisition considerations.

Planning and Studies

18. Asset Management Plan

Design Engineer:	GHD, Inc.
Project Start:	July 2018
Project Status:	AMP Implementation – 70% Complete
Completion:	AMP Implementation – 2024
Budget:	$1,180,000

Current Status: Work continues to fully implement the Asset Management program across all applicable Authority facilities with refinement of a linear asset Excel model and planning associated with performing condition assessments on critical RWSA assets.

19. MCAWRRF Biogas Upgrades

Design Engineer:	SEH
Project Start:	October 2021
Project Status:	Preliminary Engineering/Study (99%)
Completion:	December 2024
Budget:	$2,145,000

Current Status: This project now includes the Methane Sphere Rehabilitation, in addition to possible Cogeneration Upgrades. RWSA and City staff continue to discuss all available options to reuse the biogas, with further investigation and analysis ongoing. City and RWSA staff toured the biogas facility owned by Roanoke Gas at the Western Virginia Water Authority's wastewater treatment facility last month as part of this overall investigation.

20. North Rivanna Water Treatment Plant Decommissioning

Design Engineer:	SEH
Project Start:	July 2019
Project Status:	Work Authorization Development
Completion:	March 2027
Budget:	$2,425,000

Current Status: SEH is preparing a scope of work for design of the plant decommissioning. Staff are also pursuing funding and administrative assistance for removal of the North Fork Rivanna low head dam from the U.S. Fish and Wildlife Service through their Partners for Fish and Wildlife Program.

Other Significant Projects

21. Urgent and Emergency Repairs

Staff are currently working on several urgent repairs within the water and wastewater systems as listed below:

Project No.	Project Description	Approx. Cost
2023-01	Finished Water System ARV Repairs	$150,000
2022-03	RVI Erosion	$35,000
2023-12	Stillhouse Waterline Leak @ Terrell Road West	$40,000
2023-13	NRWTP Non-Potable Waterline Leak	$5,000

- RWSA Finished Water ARV Repairs: RWSA Engineering staff recently met with Maintenance staff to identify a list of Air Release Valves (ARVs) that need to be repaired, replaced, or abandoned. Several of these locations will require assistance from RWSA On-Call Maintenance Contractors, due to the complexity of the sites (proximity to roadways, depth, etc.). The initial round will include six (6) sites, all along the South Rivanna Waterline, and will be completed starting as early as this Winter. The Contractor is currently working on acquiring applicable VDOT permits for the work and plans to complete the first site along Woodburn Road as weather allows.

- RVI Erosion: RWSA's Rivanna Interceptor (RVI) traverses a large river bottom in the Still Meadow Community. As this river bottom is down slope of a large development, excess drainage has caused a small washout area over the interceptor. Staff investigated the area with its On-Call Maintenance Contractor, Faulconer Construction, and rip-rap armament was recommended in the area to protect the sewer line. Work was completed during the week of November 27th.

- Stillhouse Waterline Leak @ Terrell Road West: On Monday, November 20th, at approximately 7 AM, RWSA was notified of an apparent water leak along Terrell Road West, which is located just off of Georgetown Road in Albemarle County. RWSA and ACSA crews promptly mobilized to the site and determined that the leak was from RWSA's 12" Stillhouse Waterline. Although the leak was small in nature and not actively impacting RWSA's operations, crews began repair efforts later in the morning, and had the leak repaired and main back in service around 11 PM that evening. Site restoration was completed at approximately 3 AM on Tuesday, November 21st. Paving of the impacted roadway was completed on Tuesday, November 28th.

- NRWTP Non-Potable Waterline Leak: On Friday, November 24th, RWSA Operations staff identified a water leak on a 4" non-potable waterline at the North Rivanna WTP. The leak was able to be safely isolated without an impact to treatment processes, and the leak was repaired by RWSA Maintenance staff during the week of November 27th.

22. Security Enhancements

Design Engineer:	Hazen & Sawyer
Construction Contractor:	Security 101 (Richmond, VA)
Construction Start:	March 2020
Percent Complete:	90% (WA6), 99% (WA7), 5% (WA9)
Based Construction Contract + Change Orders to Date = Current Value:	$718,428 (WA1) + $814,420 (WA2-9)
Completion:	December 2023 (WA6), November 2023 (WA7), June 2024 (WA9)
Budget:	$2,810,000

Current Status: WA6 includes card access installation at RWSA's remote sites, including all dams and pump stations. Conduit work and device installation has been completed at nearly all sites, with programming and testing work ongoing. WA7, which includes a pilot of a program that will test electronic padlocks at several RWSA facilities, has begun. These electronic padlocks have the potential to add an extra layer of security to unmanned facilities such as tanks, dams, and other facilities. If the pilot is successful, wide scale implementation of this technology is possible. The locks have been distributed to staff for use as of the week of November 27th. WA9 will include installation of card access on all exterior doors at the South Rivanna WTP. This work was recently authorized, and materials are being procured. Design of MCAWRRF entrance modifications with Hazen & Sawyer also continues, with discussions with Dominion Energy also ongoing, as relocation of existing electrical infrastructure will be required. This relocation process will need to be finalized prior to the project proceeding to the bidding phase. Relocation of existing electrical infrastructure will require coordination with the adjacent landowner, as the infrastructure must be completely relocated from the entrance area. As these discussions are ongoing, staff has submitted appropriate permitting documents with Albemarle County.

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **BETSY NEMETH, DIRECTOR OF ADMINISTATION AND COMMUNICATIONS**

REVIEWED BY: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **ADMINISTRATION AND COMMUNICATIONS DIVISION REPORT**

DATE: **DECEMBER 12, 2023**

Human Resources

The Leadership Development Group for our Directors held their final session of the year on December 5. The participants were paired into teams and those teams presented a Capstone Project to the group and the Executive Director.

We will hold our annual employee Holiday Luncheon on Thursday, December 14, 2023.

Safety

We are working with the new Paychex Learning Management System to put together a new employee safety orientation program.

Community Outreach

The "Imagine a Day Without Water" Art Contest will announce the contest winners on Wednesday, December 13. A total of 271 entries were received this year.

We had several employees use their Volunteer Time Off (8 hours allowed per year) to work at the annual "Toy Lift Charlottesville" event on Friday, December 1. They worked at Fashion Square Mall collecting donated toys that will be given to children in the area who might otherwise not receive any holiday gifts.

We have added a new page on our Rivanna.org website which will help to educate the public about PFAS.

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **JENNIFER WHITAKER, DIRECTOR OF ENGINEERING & MAINTENANCE**

REVIEWED BY: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **WHOLESALE METERING REPORT FOR NOVEMBER 2023**

DATE: **DECEMBER 12, 2023**

The monthly and average daily Urban water system usages by the City and the ACSA for November 2023 were as follows:

		Month	***Daily Average***	
City Usage (gal)		129,839,467	4,327,982	**48.5%**
ACSA Usage (gal)		138,001,206	4,600,040	**51.5%**
Total (gal)		**267,840,673**	**8,928,022**	

The *RWSA Wholesale Metering Administrative and Implementation Policy* requires that water use be measured based upon the annual average daily water demand of the City and ACSA over the trailing twelve (12) consecutive month period. The *Water Cost Allocation Agreement (2012)* established a maximum water allocation for each party. If the annual average water usage of either party exceeds this value, a financial true-up would be required for the debt service charges related to the Ragged Mountain Dam and the SRR-RMR Pipeline projects. Below are graphs showing the calculated monthly water usage by each party, the trailing twelve-month average (extended back to December 2022), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA). Completed in 2019 for a cost of about $3.2 M, our Wholesale Metering Program consists of 25 remote meter locations around the City boundary and 3 finished water flow meters at treatment plants.

Note 1: Meter 8 was not in service for 3 days at the beginning of November. Maintenance was able to repair the meter, and a 3-month average was used for this month.

Note 2: Due to the early Board meeting, there are 4 meter accounts that accounted for a total of 23,400 gallons of flow last month that did not yet receive data from the ACSA-to-City swap meters. Last month's values are being used.

Figure 1: City of Charlottesville Monthly Water Usage and Allocation

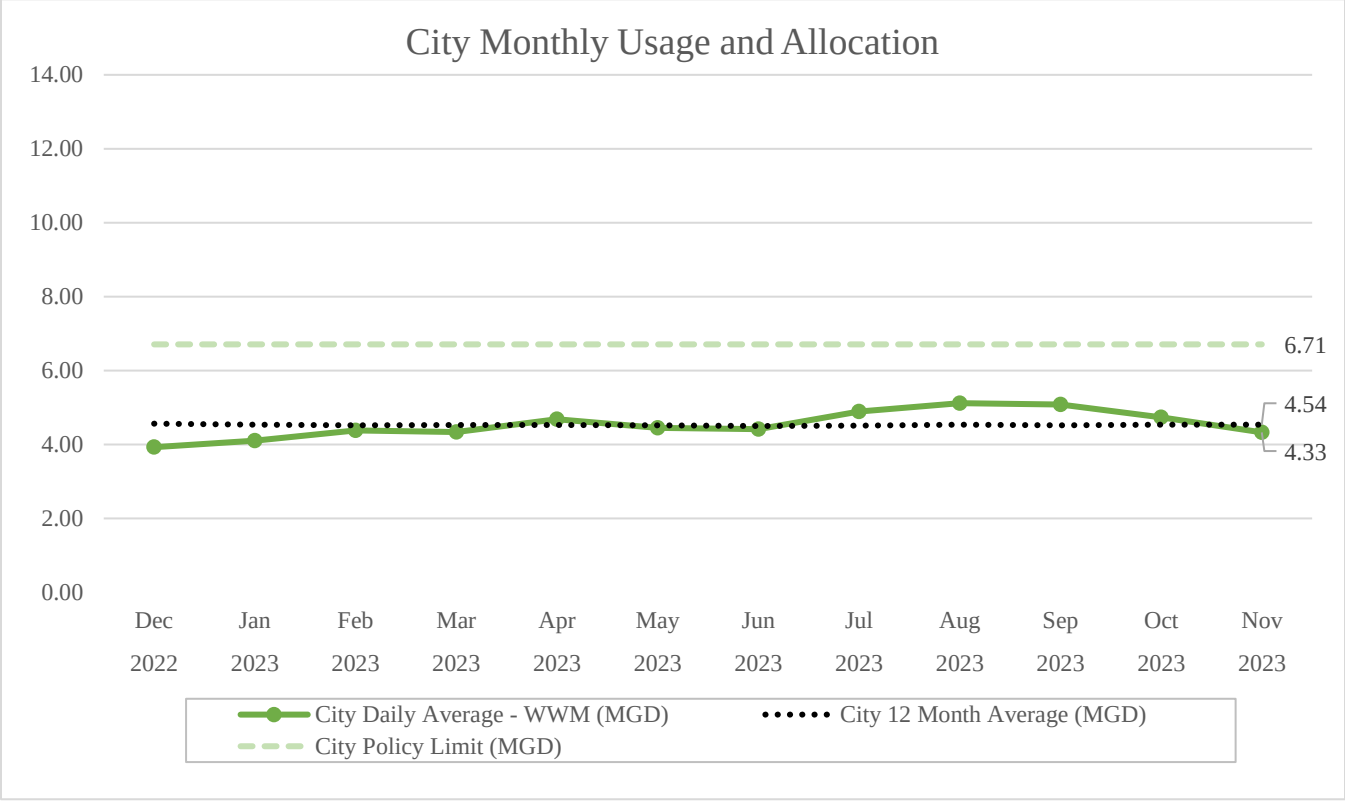
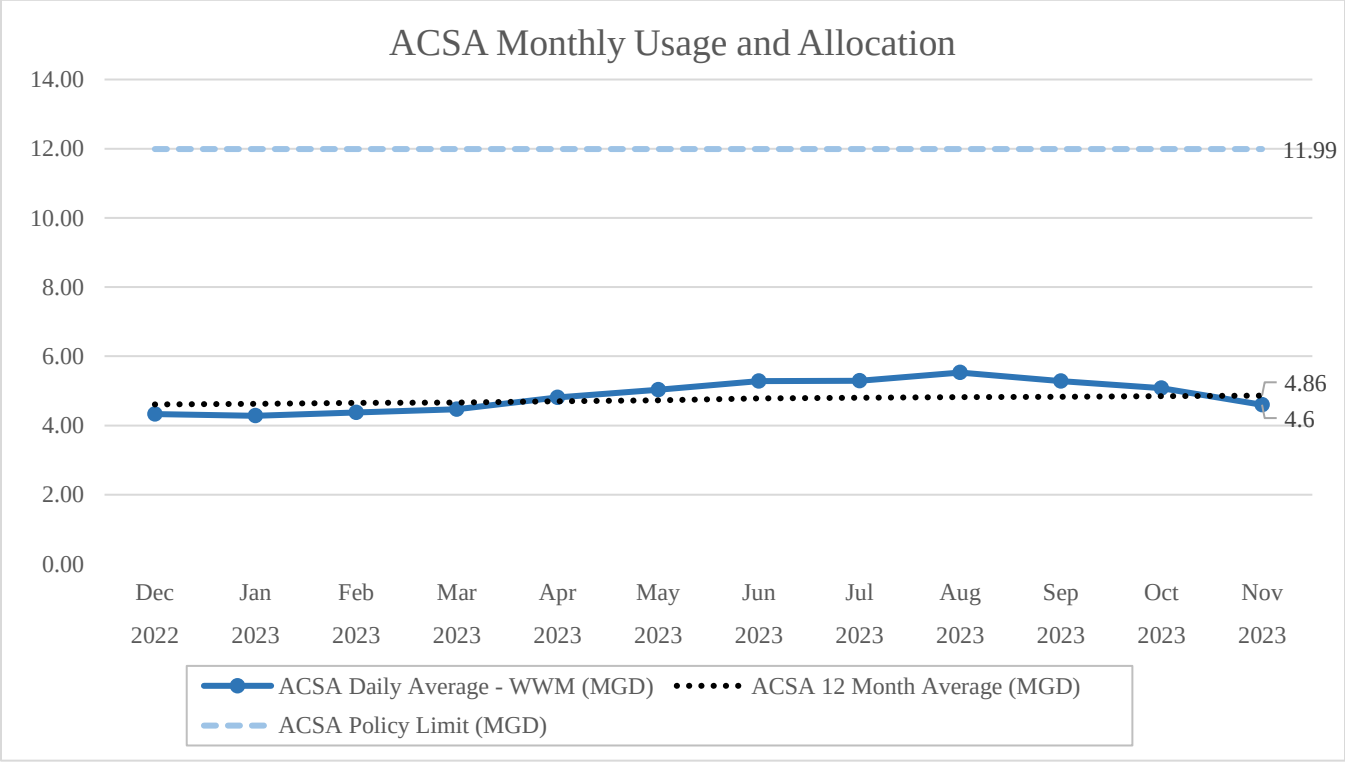


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation



Meter Locations for the Wholesale Water Metering Project

695 Moores Creek Lane | Charlottesville, Virginia 22902
434.977.2970
434.293.8858
www.rivanna.org

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **ANDREA BOWLES, WATER RESOURCES MANAGER**
JENNIFER WHITAKER, DIRECTOR OF ENGINEERING & MAINTENANCE

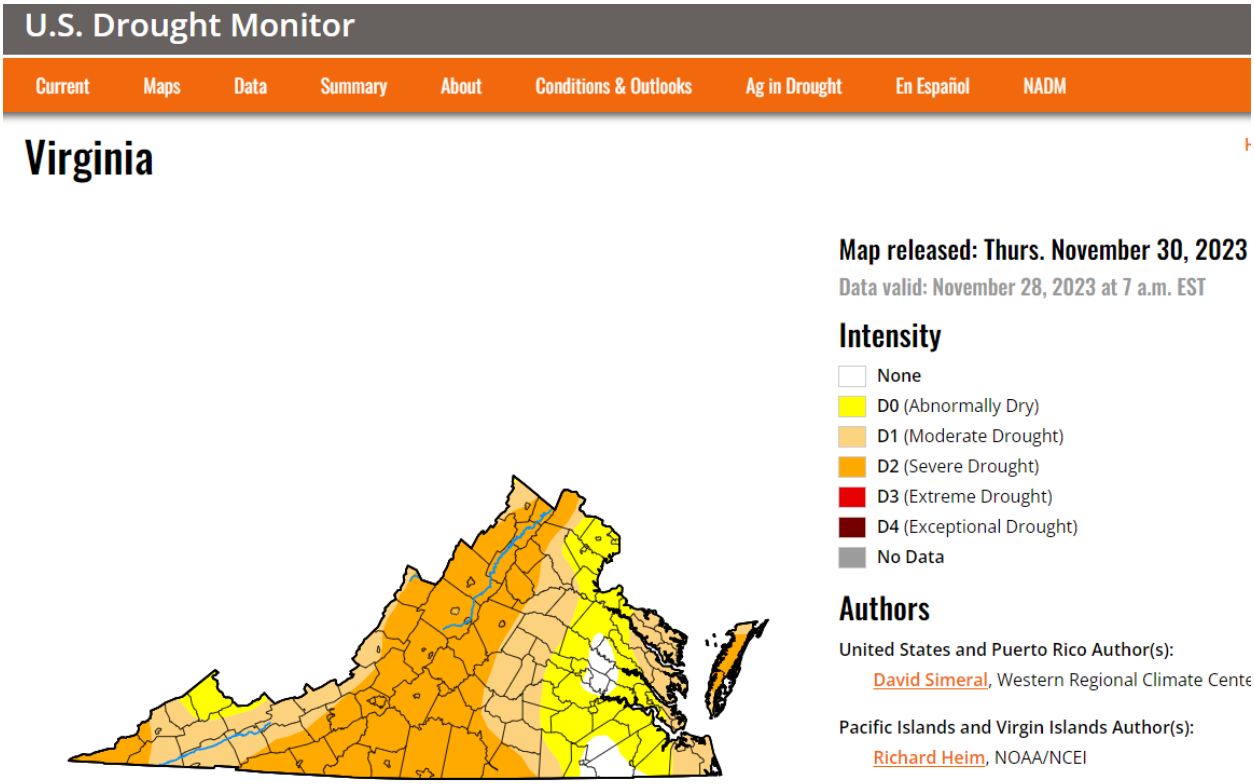
REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **DROUGHT MONITORING REPORT**

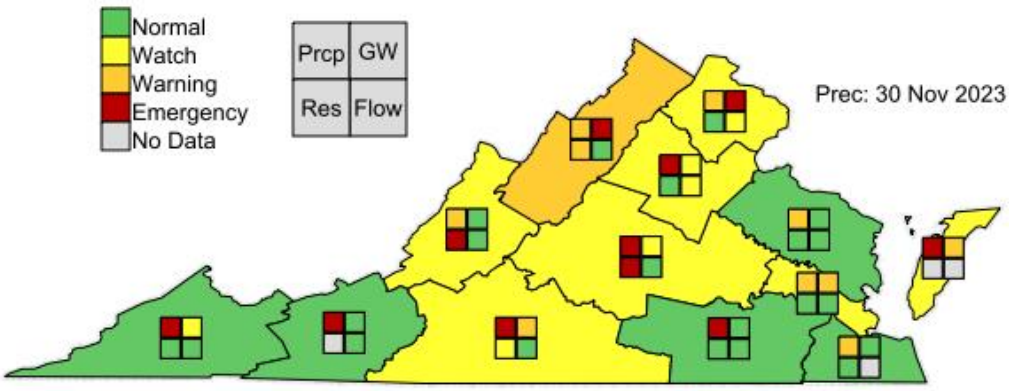
DATE: **DECEMBER 12, 2023**

State and Federal Drought Monitoring, as of November 30, 2023:

- U.S. Drought Monitoring Report: Indicates Charlottesville and most of Albemarle County are experiencing Severe drought conditions. The far eastern border of the County is listed as being in a Moderate Drought.



- VDEQ Drought Status Report: Our region is listed as being in a "Normal" level for streamflows, "Watch" level for groundwater levels, and an "Emergency" level for precipitation and reservoir levels. The VDEQ issued a Drought Watch Advisory for this region as of November 27, 2023. While recent rain helped alleviate dry conditions for the short term, it has not been sufficient to overcome the deficits.



Precipitation & Stream Flows

Charlottesville Precipitation					
Year	Month	Observed (in.)	Normal (in.)	Departure (in.)	Comparison to Normal (%)
2021	Jan - Dec	33.82	41.61	-7.79	-19
2022	Jan - Dec	43.53	41.61	+1.92	+5
2023	Jan – Nov	22.59	38.57	-15.98	-41
Precipitation over past 35 months is 18% below normal					

Source: National Weather Service, National Climatic Data Center, Climate Summary for Charlottesville, Charlottesville Albemarle Airport station

USGS Stream Gaging Station Near the Urban Area (November 21-27)				
Gage Name	Rolling 7-day Avg. Stream Flow		Median Daily Streamflow	
	cfs	mgd	cfs	mgd
Mechums River	71.0	45.9	75	48.5
Moormans River	26.5	17.1	57	36.8
NF Rivanna River	60.8	39.3	84	54.3
SF Rivanna River	178.2	115.2	158	102.1

Median daily flow: November 27th for the period of record (approx. 30 - 80 years)

Status of Reservoirs (as of December 4, 2023)

- Urban Reservoirs are 91% of Total Useable Capacity
  - South Rivanna Reservoir is 100%
  - Ragged Mountain Reservoir is 83%
  - Sugar Hollow Reservoir is 100%
- Beaver Creek Reservoir (Crozet) is 95%
- Totier Creek Reservoir (Scottsville) is 100%

Drought History in Central Virginia

- Severe: 1930, 1966, 1982, 2002
- Longest: May 2007 - April 2009 = 103 weeks
- Significant: every 10 -15 years
- Drought of Record: 2001- 2002; 18 months

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **JENNIFER A. WHITAKER, DIRECTOR OF ENGINEERING AND MAINTENANCE**

REVIEWED BY: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **APPROVAL OF TERM CONTRACT FOR ENVIRONMENTAL ENGINEERING CONSULTING SERVICES - ECS Mid-Atlantic, LLC**

DATE: **DECEMBER 12, 2023**

This request is to authorize the award of a Term Engineering Services Agreement with ECS Mid-Atlantic, LLC to provide environmental engineering consulting services and future work authorizations less than $200,000 under the conditions of the Term Agreement. Fees for each work authorization will be negotiated based on the services required and hourly rates from the consultant which have been approved by staff. The term of the contract will be for one year, with the option for three one-year renewals.

Background

RWSA has maintained an environmental engineering consulting services contract for the last 10 years. As the current contract has expired, RWSA needed to procure these services again to provide services related to environmental designs, permitting, studies, coordination with regulatory agencies, wetland and stream mitigation, and various other environmental support services to support our operation and maintenance projects, capital improvement projects, and other upgrades or improvements to any of our facilities.

A Request for Proposals (RFP 23-03) for a new term contract was developed and advertised on October 12, 2023. Six proposals were received on October 25, 2023. Based on the qualifications of the firms, the RFP selection committee short-listed and scheduled interviews with three firms. Interviews were conducted on November 7, 2023, and the committee determined that ECS Mid-Atlantic, LLC was the firm best qualified to provide these services. ECS Mid-Atlantic has experience working for RWSA.

Board Action Requested:

Authorize the Executive Director to execute a Professional Engineering Services Term Agreement with ECS Mid-Atlantic, LLC for Environmental Engineering Consulting Services and future work authorizations less than $200,000.

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **APPROVAL OF THE FIRST AMENDMENT TO THE RAGGED MOUNTAIN DAM PROJECT AGREEMENT**

DATE: **DECEMBER 12, 2023**

This request is to authorize the Executive Director to execute an Amendment to the Ragged Mountain Dam Project Agreement (RMDPA) completed in 2012. The City, ACSA, and RWSA entered into the RMDPA for the purposes of replacing the existing dams at the Ragged Mountain Reservoir to increase the water storage capacity of the Urban Water System. This Amendment will remove requirements in the RMDPA which restricted increasing the normal pool level from 671 to 683 feet due to its impact on the surrounding natural area.

Background information includes:

- The current reservoir dam was constructed in 2014 to a height which allows it to impound an additional 700 million gallons. No additional work on the dam is required.
- Grading and removal of some vegetation around the reservoir, along with modifications to the intake tower, over the next 2 years will be required before the 700 MG can be added to the reservoir.
- The existing trails around the reservoir were built at an elevation above the new pool elevation (683). Those trails will not be impacted by the higher pool level.
- The Amendment allows the additional 700 MG to be transferred from Sugar Hollow Reservoir when the inflow to SHR is equal to or greater than 30 million gallons per day. Otherwise, the additional 700 MG will be transferred from S. Rivanna Reservoir after the new connecting pipeline is completed in about 2030.

Charlottesville City Council approved this Amendment on December 4, 2023, and the ACSA Board of Directors will consider approval this month. The 700 MG will increase the public water supply and better prepare our community for uncertain climate conditions and the possibility of more severe and extended droughts.

Board Action Needed:

Authorize the Executive Director to execute the "First Amendment to the Ragged Mountain Dam Project Agreement" which will allow RWSA to add 700 million gallons of water to the Ragged Mountain Reservoir as soon as possible.

Albemarle County
TMP # 07500-00-00-00100

Prepared by:
Valerie W. Long, Esq., VSB # 42968
Williams Mullen
321 E. Main Street,
Suite 400
Charlottesville, VA 22902

EXEMPTED FROM RECORDATION TAXES UNDER SECTIONS 58.1-811.A.3 and 58.1-811E OF THE CODE OF VIRGINIA, (1950), AS AMENDED

FIRST AMENDMENT TO RAGGED MOUNTAIN DAM PROJECT AGREEMENT

This **FIRST AMENDMENT TO RAGGED MOUNTAIN DAM PROJECT AGREEMENT** (this "Amendment") is made for purposes of identification on _____, 2023, by and between the **CITY OF CHARLOTTESVILLE, VIRGINIA**, a municipal corporation (the "City"), Grantor and Grantee for indexing purposes; the **ALBEMARLE COUNTY SERVICE AUTHORITY**, a public body politic and corporate ("ACSA"), Grantor and Grantee for indexing purposes; and the **RIVANNA WATER AND SEWER AUTHORITY**, a public body politic and corporate ("RWSA"), Grantor and Grantee for indexing purposes.

WITNESSETH:

A. The City, ACSA, and RWSA (the "Parties") entered into that certain Ragged Mountain Dam Project Agreement dated January 1, 2012, recorded in the Clerk's Office of the Circuit Court of Albemarle County, Virginia, in Deed Book 4124, page 697 (the "Project Agreement") regarding the construction by RWSA of the New Ragged Mountain Dam, the expansion of the Ragged Mountain Reservoir, the South Rivanna Reservoir to Ragged Mountain Reservoir Pipeline (the "SRR-RMR Pipeline"), and other improvements necessary thereto, each as individually described in the Project Agreement and collectively referred to therein as the "Project," for the purposes of replacing the existing dams at the Ragged Mountain Reservoir and increasing the pool elevation of the Ragged Mountain Reservoir to increase the safe yield of the Urban Water System (as the Urban Water System is defined in the Project

Agreement). The Urban Water System is sometimes also referred to as the "Urban Area Water System." The Urban Area (the "Urban Area") currently consists of all of the City and designated portions of the County that are served by public water that has been treated at one of the following three water treatment plants owned and operated by RWSA: the Observatory Water Treatment Plant, the South Rivanna Water Treatment Plant, or the North Rivanna Water Treatment Plant (collectively, the "Urban Area Water System Plants"). Other areas within the County that are served by public water that is not treated at one of the Urban Area Water System Plants (such as areas in Crozet, Red Hill, and Scottsville, each of which are served by other water treatment plants owned and operated by RWSA) are not part of the Urban Area as that term is referred to in Section 7.2 of the Four Party Agreement, and as that term is used in this First Amendment.

B. Construction of the New Ragged Mountain Dam was completed in 2014, and initial filling of the expanded Ragged Mountain Reservoir to the Initial Pool Level of Six Hundred Seventy-One (671) feet above mean sea level (the "Initial Pool Level") was completed in 2016 (hereinafter such current operating pool level at the Initial Pool Level shall be referred to herein as the "Existing Reservoir Pool Level"). The route for the SRR-RMR Pipeline has been established, and acquisition of easements necessary for construction of the SRR-RMR Pipeline have been secured. Design and construction of the SRR-RMR Pipeline is scheduled to be completed between 2023 and 2030, or as funding permits.

C. Paragraph 3 of the Project Agreement provides that the normal operating reservoir pool level of the expanded Ragged Mountain Reservoir shall be limited to the Existing Reservoir Pool Level when initially constructed, and shall only be increased to the Additional Pool Level of Six Hundred Eighty-Three (683) feet above mean sea level (the "Additional Pool Level") when water projections and surveys conducted pursuant to the methods described in paragraph 3 of the Project Agreement demonstrate that the Urban Area water demand is ten (10) years away from reaching Eighty-Five Percent (85%) of the available water capacity (the

"Capacity Threshold"). Paragraph 3 of the Project Agreement further provides that when the Capacity Threshold is reached, that RWSA, upon the written request of either ACSA or the City, shall modify the intake tower and remove trees and other vegetation necessary to allow the New Ragged Mountain Dam to impound and support a reservoir pool to the Additional Pool Level (the "Reservoir Modifications"), and RWSA shall raise the Existing Reservoir Pool Level by twelve (12) feet to the Additional Pool Level.

D. In the intervening years since the Project Agreement was executed in 2012, the Parties have determined that due to the current and projected future effects of a changing climate, including more frequent and severe storms, more severe and longer periods of drought, more frequent and severe heat waves, and the need to improve the resiliency and reliability of the Urban Area Water System to ensure that necessary infrastructure is in place to provide sufficient water storage and water treatment to increase the available safe water supply yield to meet the future demand for water in the Urban Area, that it is in the community's best interest to have more water storage capacity in the Ragged Mountain Reservoir, and to raise the Existing Reservoir Pool Level to the Additional Pool Level even if the Capacity Threshold has not been met, and even if the SRR-RMR Pipeline has not been started or substantially completed.

E. As such, the Parties desire to amend the Project Agreement to remove the restriction on raising the Existing Reservoir Pool Level to the Additional Pool Level until the Capacity Threshold has been met, to permit RWSA to carry out the Reservoir Modifications at any time following full execution of this Amendment, and to commence raising the Existing Reservoir Pool Level to the Additional Pool Level.

F. Capitalized terms not expressly defined herein shall have the meanings set forth in the Project Agreement.

AGREEMENT

NOW THEREFORE, for and in consideration of the premises, the cost allocations and other expense reimbursements set forth in the Cost Allocation Agreement (as the Cost Allocation

Agreement is defined in the Project Agreement), and other good and valuable consideration, the receipt of all which is hereby expressly acknowledged, the Parties hereby agree as follows:

1. Paragraph 3 of the Project Agreement is hereby amended to delete the last sentence of Paragraph 3 in its entirety.

2. Notwithstanding any other provision in the Project Agreement to the contrary, any conditions limiting, or any references to limitations on raising the Existing Reservoir Pool Level to the Additional Pool Level (including such references in Paragraph 1(a), 1(c), and (1(f), and Paragraph 2) are hereby deleted and shall be disregarded.

3. Upon the written request of either ACSA or the City, and without further authorization or approval from the other party, RWSA may commence and carry out the Reservoir Modifications at any time.

4. Following substantial completion of the Reservoir Modifications, RWSA may commence increasing the Existing Reservoir Pool Level to the Additional Pool Level, even if the SRR-RMR Pipeline and related elements of the Project have not yet started or been substantially completed. RWSA estimates that the Reservoir Modifications will commence approximately one (1) year following full execution of this Amendment, and thereafter take approximately one (1) additional year to complete.

5. Prior to the completion and operation of the SRR-RMR Pipeline and related elements of the Project, RWSA will utilize the Sugar Hollow Reservoir and the existing pipeline connecting the Sugar Hollow Reservoir to the Ragged Mountain Reservoir to raise the Existing Reservoir Pool Level to the Additional Pool Level only (i) when water inflow to the Sugar Hollow Reservoir is measured at or greater than thirty (30) million gallons per day, or as otherwise required by any permit issued to RWSA by the Virginia Department of Environmental Quality (“DEQ”); (ii) when the water level in the Ragged Mountain Reservoir falls below the Existing Reservoir Pool Level; or (iii) during any emergency situation, such as, but not limited to, drought, or damage to or contamination of the South Rivanna Reservoir or the Ragged Mountain Reservoir. Upon

completion and operation of the SRR-RMR Pipeline and related elements of the Project, if the Existing Reservoir Pool Level has not yet been fully raised to the Additional Pool Level, further work to raise the Existing Reservoir Pool Level to the Additional Pool Level shall utilize the SRR-RMR Pipeline and related elements of the Project, and use of the Sugar Hollow Reservoir for purposes of filling the Ragged Mountain Reservoir shall cease.

6. This Amendment shall be binding upon, inure to the benefit of, and be enforceable by the Parties and their respective successors and assigns.

7. The Project Agreement is hereby amended to the extent necessary to give effect to this Amendment, and the terms of this Amendment shall supersede any contrary terms in the Project Agreement. All references in the Project Agreement to "this Agreement" shall be deemed to refer to the Project Agreement as amended hereby. In all other respects, the terms and conditions of the Project Agreement remain unmodified and are hereby ratified and confirmed by the Parties.

IN WITNESS WHEREOF, the duly authorized officers of the City of Charlottesville, Virginia, the Albemarle County Service Authority, and the Rivanna Water and Sewer Authority have executed this Amendment as of the date first above written.

[SIGNATURE PAGES IMMEDIATELY FOLLOW]

[SIGNATURE PAGE 1 of 3 OF FIRST AMENDMENT TO RAGGED MOUNTAIN DAM PROJECT AGREEMENT]

CITY OF CHARLOTTESVILLE, VIRGINIA

By: _____
Samuel Sanders, Jr., City Manager

COMMONWEALTH OF VIRGINIA
CITY OF CHARLOTTESVILLE, to wit:

The foregoing instrument was acknowledged by me this _____ day of _____, 2023, by Samuel Sanders, Jr., City Manager of the City of Charlottesville, Virginia.

_____
Notary Public

Registration No.: _____

My Commission expires: _____

APPROVED AS TO FORM:

_____
Jacob Stroman, City Attorney

[SIGNATURE PAGE 2 OF 3 OF FIRST AMENDMENT TO RAGGED MOUNTAIN DAM PROJECT AGREEMENT]

ALBEMARLE COUNTY SERVICE AUTHORITY

By: _____
Gary B. O'Connell, Executive Director

COMMONWEALTH OF VIRGINIA
CITY OF CHARLOTTESVILLE, to wit:

The foregoing instrument was acknowledged by me this _____ day of _____, 2023, by Gary B. O'Connell as Executive Director of the Albemarle County Service Authority.

_____
Notary Public

Registration No.: _____

My Commission expires: _____

[SIGNATURE PAGE 3 OF 3 OF FIRST AMENDMENT TO RAGGED MOUNTAIN DAM PROJECT AGREEMENT]

RIVANNA WATER AND SEWER AUTHORITY

By: _____
William I. Mawyer, Jr. P.E., Executive Director

COMMONWEALTH OF VIRGINIA
CITY OF CHARLOTTESVILLE, to wit:

The foregoing instrument was acknowledged by me this _____ day of _____, 2023, by William I. Mawyer, Jr. P.E. as Executive Director of the Rivanna Water and Sewer Authority.

_____
Notary Public

Registration No.: _____

My Commission expires: _____

45346078_17

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
434.977.2970
434.293.8858
www.rivanna.org

MEMORANDUM

TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

FROM: **LONNIE WOOD, DIRECTOR OF FINANCE AND INFORMATION TECHNOLOGY**

REVIEWED BY: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **ANNUAL COMPREHENSIVE FINANCIAL REPORT FISCAL YEAR ENDING JUNE 30, 2023**

DATE: **DECEMBER 12, 2023**

The Authority's Annual Comprehensive Financial Report for the fiscal year ending June 30, 2023 is included with your Board packet. A large part of preparing the financial statements involves having the financial reports audited for the purpose of obtaining an opinion from an independent Certified Public Accountant as to the accuracy of the information presented in the report.

The audit also reviews internal accounting controls and tests for compliance with relevant laws and regulations as a function of expressing the firm's opinion on the financial information. I am pleased to inform you that the Authority received an unmodified opinion, which is the highest opinion that the financial statements are materially accurate and fairly presented.

Mr. Matthew McLearen, a principal of the Charlottesville office of Robinson, Farmer, Cox Associates, will be at the meeting to give a brief review of the audit and discuss any audit findings the firm may have. A letter communicating several aspects of the review is attached for you as well.

I would also like to thank Kathy Ware, Senior Accountant, who performed much of the detailed work in the preparation of this report. The entire administrative staff deserves management's appreciation for their hard work during the year in processing our transactions and their assistance during the audit.

This report will be submitted to the Certification Program of the Government Finance Officers Association.

Board Action Requested

Accept the FY 2023 Annual Comprehensive Financial Report from Robinson, Farmer, Cox Associates.

Attachment: Annual Comprehensive Financial Report
Communication with Those Charged with Governance

DAM SAFETY PROGRAM OVERVIEW

PRESENTED TO THE BOARD OF DIRECTORS BY:

VICTORIA FORT,

SENIOR CIVIL ENGINEER

DECEMBER 12, 2023

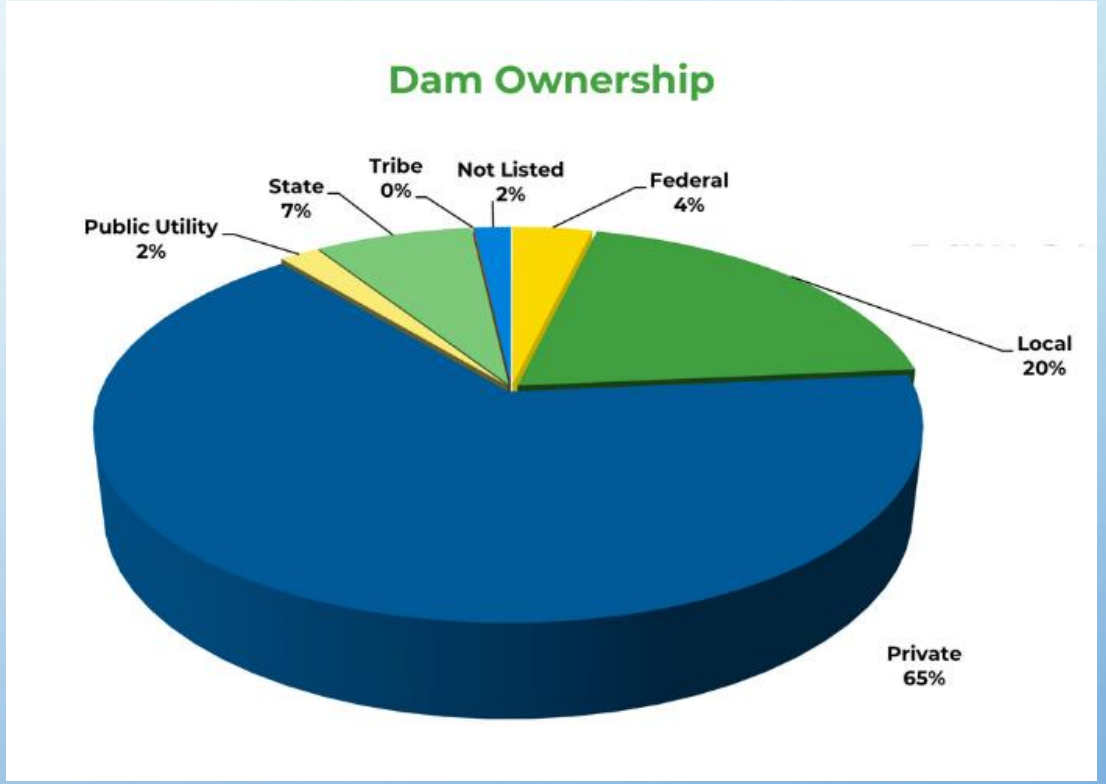
Totier Creek Reservoir

AGENDA

- Dam Safety Regulations
- RWSA Dam Safety Program Overview
- RWSA Dams & Features
- Planning for Dam Emergencies
- Recent and Current Dam Safety Projects

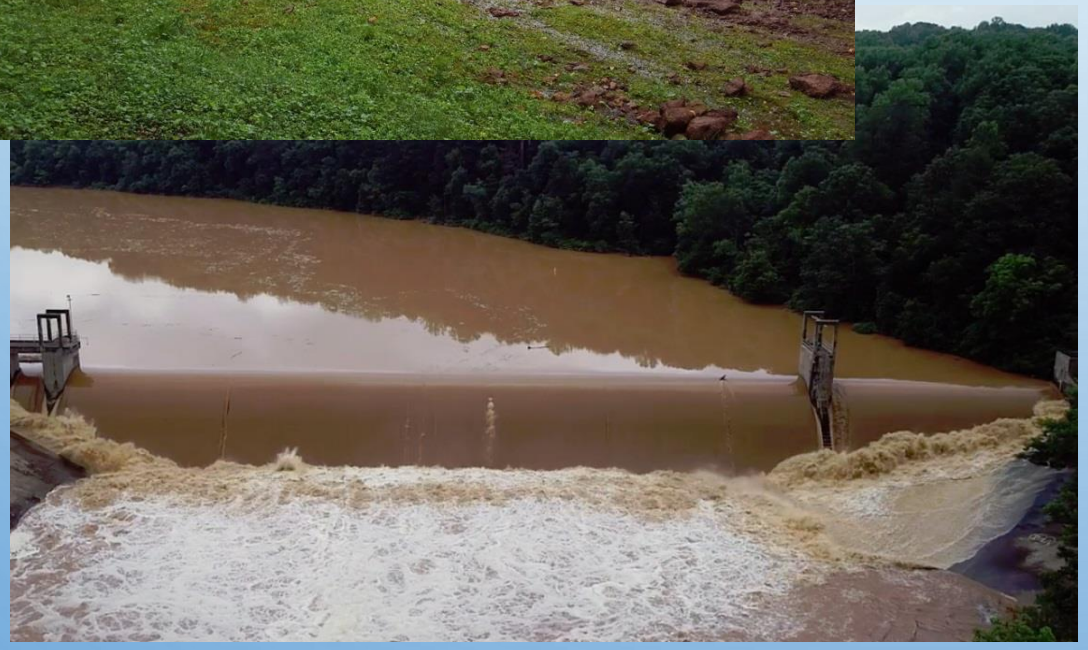
WHY IS DAM SAFETY IMPORTANT?

- **>92,000 DAMS IN THE UNITED STATES**
  - **AVERAGE AGE = 61 YEARS**
  - **>15,000 HIGH HAZARD, ~15% OF WHICH ARE DEFICIENT**
- **3,709 DAMS IN VA (2,753 REGULATED)**
  - **>1,700 UNKNOWN HAZARD CLASSIFICATION**
- **240 DAMS IN ALBEMARLE COUNTY (167 REGULATED)**
  - **20 HIGH HAZARD**
  - **118 UNKNOWN HAZARD POTENTIAL CLASSIFICATION**



Source: https://damsafety.org/media/statistics

WHY IS DAM SAFETY IMPORTANT?



- **39 dam incidents have been recorded in Virginia since 2018 (5 resulting in dam failure)**
- **Dam failures can have catastrophic flooding consequences and cause loss of life and significant economic damage**
- **Clover Dam in the West Leigh neighborhood (left top photo) overtopped in June of 2018, causing severe erosion. The dam did not fail but faces significant repair costs.**
- **The same storm on May 30-31, 2018 led to record reservoir levels at the RWSA South Rivanna Dam (left bottom photo). The dam did not sustain any significant damage.**

VIRGINIA DAM SAFETY REGULATIONS

- The Virginia Department of Conservation and Recreation (VA DCR) is Virginia's regulatory authority ensuring that Virginia's dams have proper and safe design, construction, operation, and maintenance to protect public safety.

- All dams in Virginia are subject to the VA DCR Dam Safety Regulations, <u>except</u>:
  - Dams under a certain size (height and/or impounded water volume)
  - Dams owned or licensed by the federal government (e.g. FERC)
  - Dams operated for mining, agricultural, or canal purposes

RWSA DAM SAFETY PROGRAM OVERVIEW

- Permitting & Regulatory Compliance
- Emergency Action Plan (EAP) updates, training, and exercises (internal and regional)
- Maintenance & Vegetation Control
- Repairs/Upgrades
- Public Safety and Outreach
- Studies and Reports
- Inspections and Surveys
- Monitoring
- Operations

RWSA/RSWA DAM FACILITIES

- **HIGH HAZARD DAMS:**
  - South Fork Rivanna Dam (FERC)
  - Ragged Mountain Dam
  - Sugar Hollow Dam
  - Beaver Creek Dam – Crozet
- **LOW HAZARD DAMS:**
  - Totier Creek Dam – Scottsville
  - Lickinghole Creek Dam – Crozet
  - Buck Mountain Property Dam – Free Union
- **OTHER:**
  - North Fork Rivanna Low Head Dam (Located at NRWTP)
  - Mechums River Low Head Dam
  - Ivy MUC Pond Dam (RSWA)

SOUTH FORK RIVANNA DAM

- FEDERALLY REGULATED DAM (FERC)
- BUILT IN 1965
- SMALL HYDROPOWER FACILITY ADDED IN 1987 (DECOMMISSIONING UNDERWAY)
- CONCRETE GRAVITY DAM
- 700 FEET LONG, 54 FEET TALL

RAGGED MOUNTAIN DAM

- STATE REGULATED DAM (DCR)
- BUILT FROM 2012-2014
- HISTORICAL DAMS 1885 & 1908
- EARTHFILL DAM
- 785 FEET LONG, 125 FEET TALL
- CONSTRUCTED TO IMPOUND AN ADDITIONAL 12 FEET OF WATER = 700 MG

SUGAR HOLLOW DAM

- STATE REGULATED DAM (DCR)
- BUILT IN 1948, UPGRADED IN 1998
- CONCRETE GRAVITY DAM
- RUBBER CREST GATE (REPLACED IN 2021)
- 480 FEET LONG, 96 FEET TALL

BEAVER CREEK DAM

- STATE REGULATED DAM (DCR)
- BUILT IN 1963
- EARTHFILL
- 530 FEET LONG, 60 FEET TALL
- ALBEMARLE COUNTY PARK IN CROZET
- STATE ROAD ON CREST (BROWNS GAP TURNPIKE
- SPILLWAY UPGRADE DESIGN UNDERWAY WITH FUNDING FROM NRCS (FEDERAL)

TOTIER CREEK DAM

- STATE REGULATED DAM (DCR)
- EARTHFILL DAM, BUILT IN 1971
- 277 FEET LONG, 35 FEET TALL
- ALBEMARLE COUNTY PARK IN SCOTTSVILLE

LICKINGHOLE CREEK DAM

- STATE REGULATED DAM (DCR) IN CROZET
- BUILT IN 1995
- CONCRETE GRAVITY DAM, SERVES AS A SEDIMENT BASIN
- 458 FEET LONG, 32 FEET TALL

BUCK MOUNTAIN PROPERTY DAM

- STATE REGULATED DAM (DCR), LOW HAZARD POTENTIAL
- BUILT IN EARLY 1980'S, ACQUIRED BY RWSA AS PART OF BUCK MOUNTAIN PROPERTY
- EARTHFILL
- 190 FEET LONG, 33.5 FEET TALL
- PRIMARY SPILLWAY CONDUIT HAS REACHED THE END OF ITS USEFUL LIFE – DAM WILL REQUIRE REPAIR OR REMOVAL TO ADDRESS KNOWN DEFICIENCIES

NORTH RIVANNA LOW HEAD DAM

IVY MUC POND DAM

MECHUMS RIVER LOW HEAD DAM

PLANNING FOR DAM EMERGENCIES

- Dam emergencies are *low probability events* with the potential for extremely high impact
- Dams are designed with a high level of conservatism to minimize the potential for failure or other emergencies
- Potential causes of dam emergencies and failure:
  - Rainfall exceeds dam design
  - Material failure
  - Vandalism/terrorism
  - Accidents / public safety

HAZARD POTENTIAL CLASSIFICATION

- Dams are categorized according to the severity of consequences from their failure or misoperation (not a reflection of a dam's condition)

  HIGH HAZARD POTENTIAL – upon failure would cause probable loss of life or serious economic damage

  SIGNIFICANT HAZARD POTENTIAL– upon failure might cause loss of life or appreciable economic damage

  LOW HAZARD POTENTIAL – upon failure would lead to no expected loss of life or significant economic damage

- Dam hazard potential dictates design criteria/spillway capacity requirements

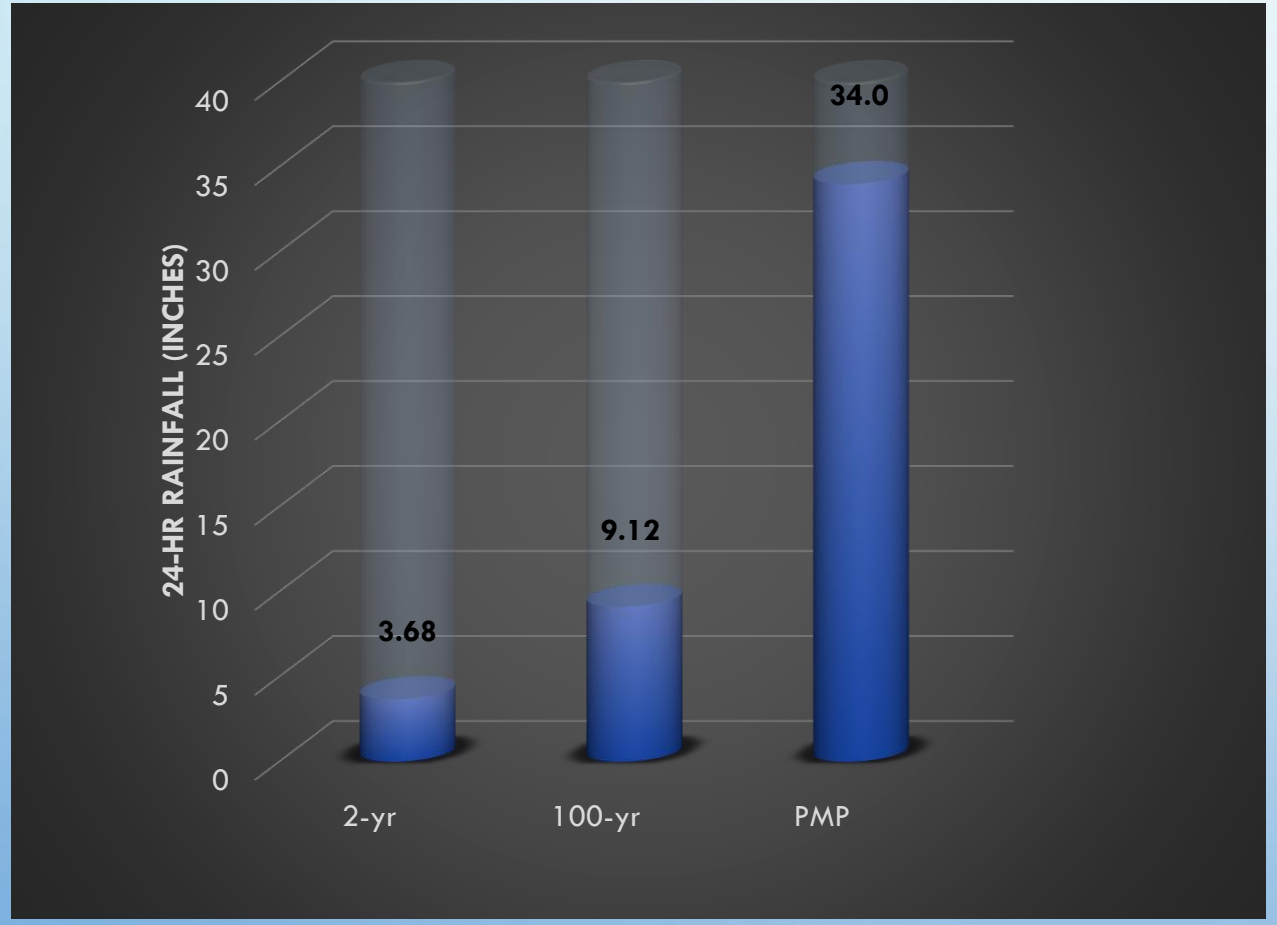
PROBABLE MAXIMUM PRECIPITATION (PMP)

"The theoretically greatest depth of precipitation for a given duration that is physically possible over a particular drainage area at a certain time of the year."

- American Meteorological Society, 1959

In Virginia, dams with a **high hazard potential** must be designed to pass 90% of the Probable Maximum Flood (PMF), the flood resulting from the PMP, without failure or overtopping. RWSA requires its high hazard dams to pass 100% of the PMP.

PROBABLE MAXIMUM PRECIPITATION (PMP)



Rainfall Recurrence Intervals for Charlottesville Area, from NOAA Atlas 14 (Volume 2, Version 3) & VA DCR PMP Study for Virginia, November 2015

- PMP is different for each watershed and storm duration
- The chart to the left shows the 2-year, 100-year, and PMP storm rainfall amounts for a 24-hour storm event in the Sugar Hollow watershed
- 24-hour PMP rainfall values for RWSA dams range from 23.7" – 34.0"
- Hurricane Camille in Nelson County (1969) brought >27" of rain overnight, 81% of PMP
- Madison County (1995) saw 25-30" of rain in 16 hours, 86% of the PMP

EMERGENCY RESPONSE PLANNING FOR DAMS

OWNERS DAM SAFETY PROGRAM

- Safe Dam Design And Quality Construction
- Dam Safety Policies
- Internal Training And Procedures
- Dam Maintenance And Monitoring

EMERGENCY ACTION PLANS (EAPS)

- Coordination With Emergency Response And Planning Agencies

EAP REVIEW, TRAINING, AND EXERCISING

- Drills, Functional Exercises

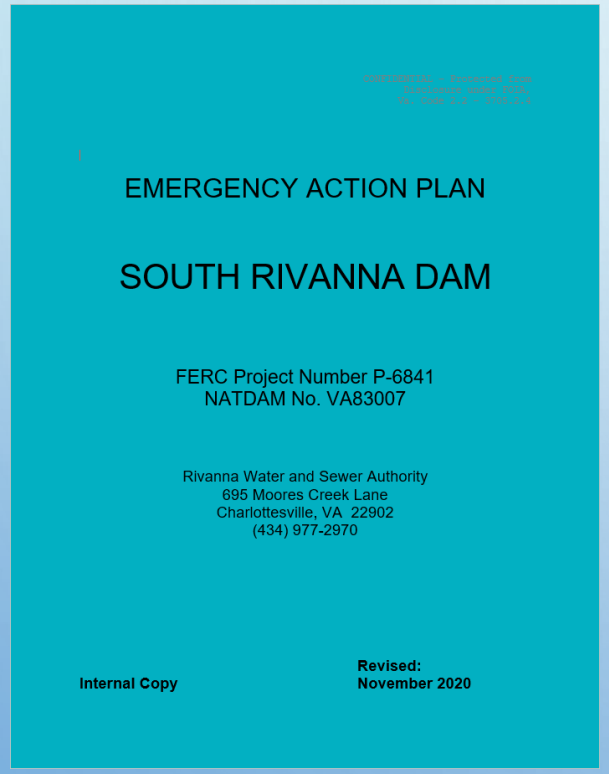
PUBLIC SAFETY PLANNING AND EDUCATION

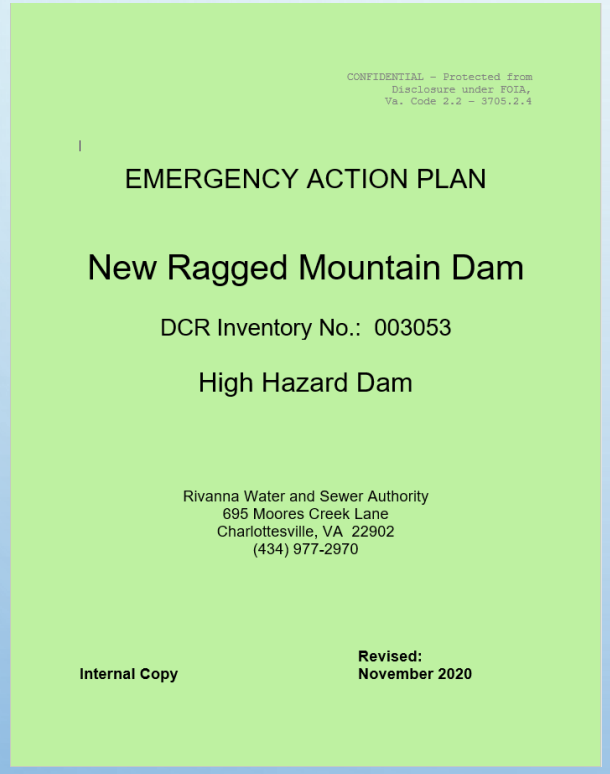
- Signs, Alarms, Downstream Notifications, Outreach

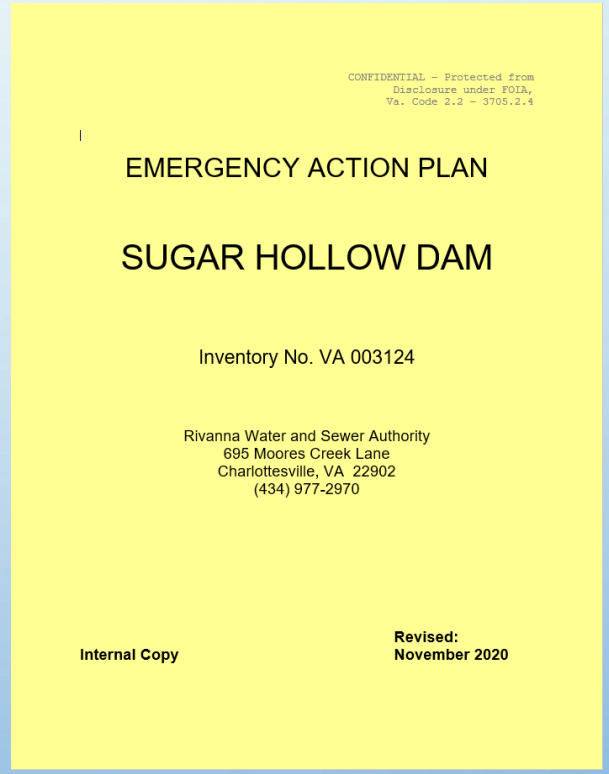
DAM EMERGENCY ACTION PLANS

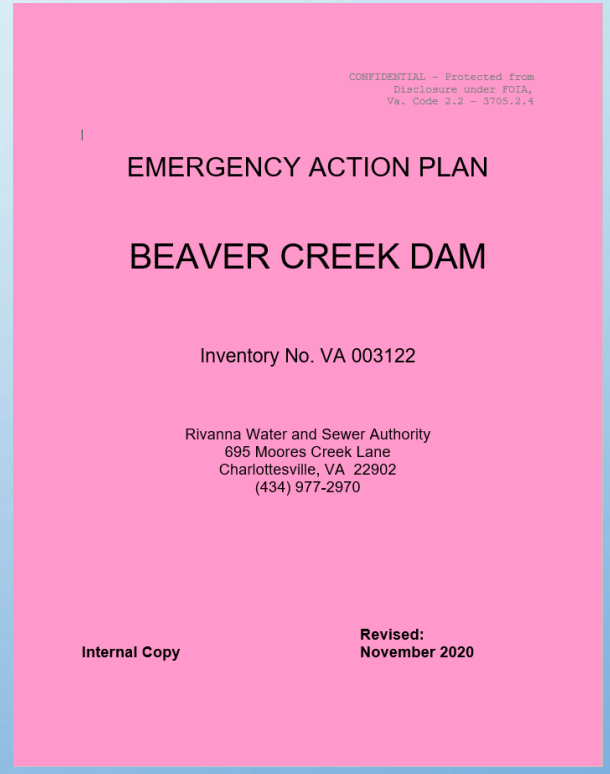
- An Emergency Action Plan (EAP) is a set of preplanned actions to minimize or alleviate emergency conditions at the dam.
  - Contains procedures and information on issuing early warning notifications to minimize loss of life and property damage during an emergency event.
  - Requires coordination among VDEM, ECC, local police, fire and rescue, VDOT, media, local government, and others
- RWSA maintains EAPs for each of its four high-hazard dam. Updates are underway and will be distributed in 2024.

DAM EMERGENCY ACTION PLANS









RESPONSIBILITIES UNDER THE EAP'S

- **RWSA:**
  - Verify and assess emergency conditions at the dam
  - Notify participating emergency management agencies
  - Take corrective action at facility, if possible
  - Issue condition status reports
  - Declare termination of emergency at facilities

- **OUTSIDE AGENCIES (EMERGENCY COMMUNICATIONS CENTER, COUNTY AND CITY GOVERNMENTS):**
  - Receive condition status reports from RWSA
  - Notify public
  - Coordinate and conduct evacuation from inundation areas, if required
  - Provide mutual aid, if requested and able

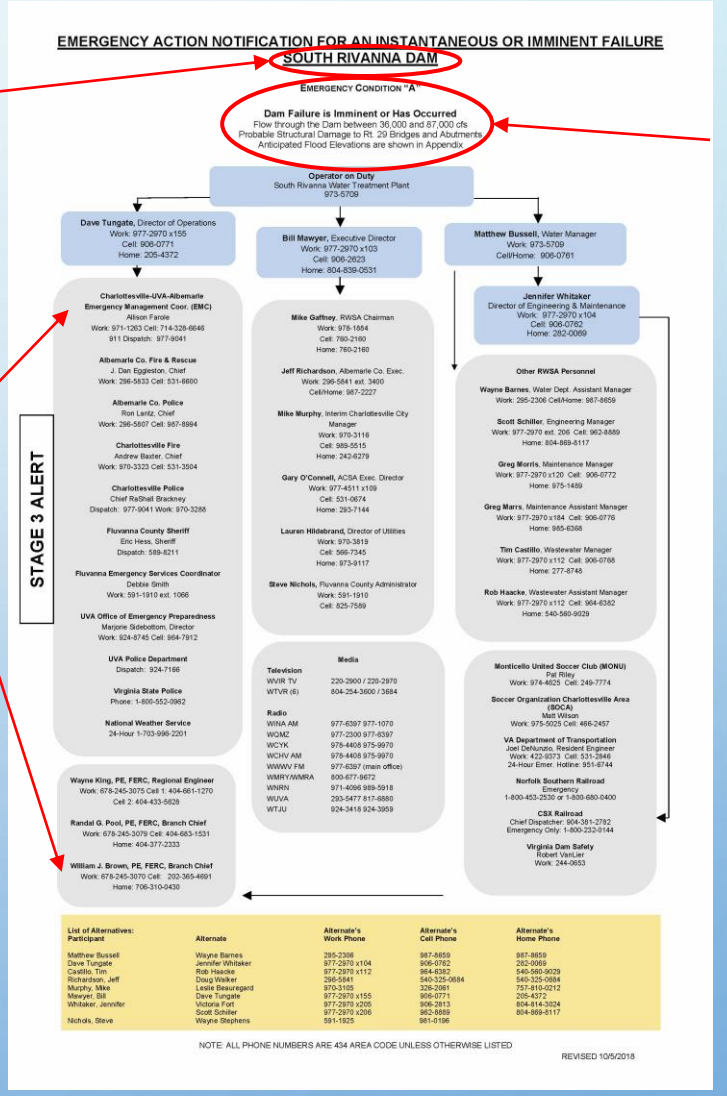
EAP NOTIFICATION CHARTS

- EAPs provide descriptions of various emergency scenarios and three emergency stages:
  - Non-failure Emergency Condition (Stage I)
  - Potential Failure Situation Is Developing (Stage II)
  - Failure Is Imminent Or Has Occurred (Stage III)
- Written message prompts are provided for clear, concise communication

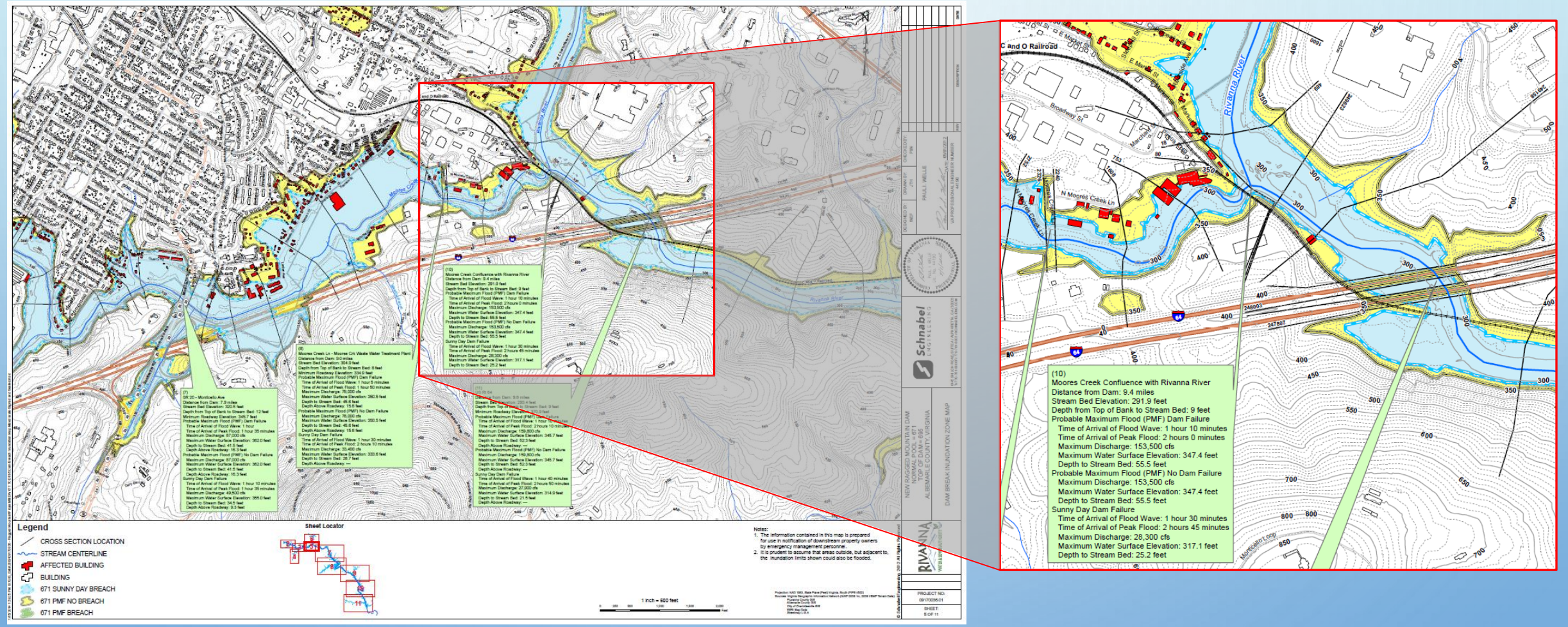
Dam Facility Name

Event Scenario & Description

Notification Calldown List



DAM BREACH INUNDATION MAPS



RWSA DAM PROJECTS

UNDERWAY OR RECENTLY COMPLETED:

- South Rivanna Dam hydropower decommissioning (underway, estimated completion in early 2024)
- Reservoir level monitoring station at Lickinghole Creek Dam

PLANNING OR DESIGN PHASE:

- Beaver Creek Dam spillway upgrades – final design underway (NRCS funded)
- Dam Concrete & Steel Repairs
- Public Safety Plan & Signage Design
- Buck Mountain Property Dam Remediation

ANNUAL MAINTENANCE AND PERMITTING ACTIVITIES:

- Monthly tree and brush clearing, seasonal clearing of brush in stream channels
- Instrumentation maintenance & calibration
- EAP tabletop exercise planned for 2024

QUESTIONS?