RIVANNA
WATER & SEWER AUTHORITY

Board of Directors Meeting

August 27, 2024

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: **AUGUST 27, 2024**

LOCATION: **Rivanna Administration Building (2nd Floor Conference Room), 695 Moores Creek Lane, Charlottesville, VA 22902**

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

AGENDA

1. ***CALL TO ORDER***
2. ***AGENDA APPROVAL***
3. ***MINUTES OF PREVIOUS BOARD MEETING ON JULY 23, 2024***
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*

9. OTHER BUSINESS

a. *Presentation: Annual Reservoir Update*
Bethany Houchens, Water Resources Coordinator

b. *Presentation: Water Treatment Facilities Overview*
David Tungate, Director of Operations and Environmental Services

c. *Presentation: Virginia Water Protection Permits Update*
Jennifer Whitaker, P.E., Director of Engineering and Maintenance

d. *Presentation: Water Supply Planning Regulations*
Bill Mawyer, Executive Director

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

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RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
July 23, 2024

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, July 23, 2024 at 2:15 p.m. at the Moores Creek Administration Building, 695 Moores Creek Lane, Charlotteville, VA 22902.

Board Members Present: Mike Gaffney, Sam Sanders, Jeff Richardson, Brian Pinkston, Ann Mallek, Quin Lunsford, Lauren Hildebrand

Board Members Absent: None

Rivanna Staff Present: Bill Mawyer, Lonnie Wood, Jennifer Whitaker, David Tungate, Jacob Woodson, Deborah Anama, Betsy Nemeth, Leah Beard

Attorney(s) Present: Micah Schwartz (Williams Mullen)

1. *CALL TO ORDER*

Mr. Gaffney convened the July 23, 2024 regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:20 p.m.

2. *AGENDA APPROVAL – As Amended*
8i: Change "Utilities" to "Public Works" Department

Mr. Gaffney stated that they would defer Item 9(c) so that they could address the bylaws at the same time as RSWA.

Ms. Mallek moved to approve the Agenda as amended. Mr. Pinkston seconded the motion, which carried unanimously (7-0).

3. *MINUTES OF PREVIOUS BOARD MEETING ON JUNE 25, 2024- As Amended*

Line 578: Add word ON - "Ms. Mallek stated that it was astonishing to see how lawn chairs and other belongings disappeared from people's properties, only to be found later at a height of 8 feet above on the road."

Line 1393: "nonconfrontational" should be "noncommittal". "Ms. Mallek stated that the wastewater testing will definitely be coming. She stated that the EPA was noncommittal when they were asked to address the production of the chemicals, and because it was a legislative issue, they should all consider contacting their congress representatives. She stated that if they did not address the source, all of this work was pointless."

Mr. Pinkston moved the Board to approve the minutes from the meeting held on June 25, 2024 as amended. Ms. Mallek seconded the motion, which passed unanimously (7-0).

4. *RECOGNITIONS*

Mr. Mawyer stated that he wanted to thank Mr. Micah Schwartz, who was joining the meeting in place of Ms. Long, who was away. He stated that Mr. Schwartz was an attorney with Williams Mullen. He stated that they welcomed their new member, Mr. Quin Lunsford, ACSA Executive Director.

5. *EXECUTIVE DIRECTOR'S REPORT*

Mr. Mawyer stated that they had another successful internship program that summer. He stated that they had four outstanding interns who had worked with them. He asked the interns to introduce and share a bit about themselves.

Jenny Little stated that during the beginning of her summer, she spent time working with the operators at the wastewater facility. She stated that now, she had been dedicating a significant amount of time to administrative work, specifically focusing on communications, and starting an Instagram account for Human Resources. She stated that she had a QR code for it. She stated that at that time, they had 44 followers, and she aimed to reach 200 by the time she finished the internship in two and a half weeks.

Jenny stated that she was a student at William & Mary, majoring in English and Environmental Science. She stated that she planned to stay in touch with Ms. Nemeth and contribute about five hours a week until someone was secured for the social media position permanently. She stated that she intended to engage in professional development activities.

Ben Stevens stated that he had been studying data analytics and computer science at Virginia Tech, and he had served as a SCADA and IT intern. He stated that he had spent a significant amount of time with Will Dobson and Tanner Wright. He stated that through this experience, he had gained a lot of relevant exposure to programs like SQL and CAD drawings. He stated that he had developed a comprehensive overview of how a SCADA system operates.

Sofia Beard stated that she was a bio-chem major at Catawba College, and she had been working with Michael Webb, collecting samples and testing them in the lab. She stated that this process had allowed her to see the results of her work after the collection of the samples.

Florence Pinkston stated that she was an intern at the Moores Creek Wastewater Treatment Plant. She stated that she had been shadowing the wastewater operators and learning about their work. She stated that as a graduate of Piedmont Virginia Community College, she had hoped to pursue a career in environmental science and conservation and stewardship. She stated that she had enjoyed her time at the plant and believed she had gained valuable insights from the wastewater operators.

Mr. Mawyer stated that they had an outstanding group of interns this summer; they were very smart and engaging. He stated that the internship program continued to pay rewards for them. He stated that the Board had approved a Deputy Executive Director position, and they had hired a firm called POLIHIRE from Washington, D.C., to assist them in recruiting for the position. He stated that they had requested proposals for a compensation and classification study for RWSA and RSWA with the aim of obtaining the information by the end of the calendar year to include it

in the next year's proposed budget.

Mr. Mawyer stated that under their strategic plan priority of Environmental Stewardship, drought had been a topic of concern for many people recently. He stated that according to the National Weather Service, Virginia had the record dryest weather in June in the country. He stated that the state had the lowest precipitation for June in 130 years, with Charlottesville and Albemarle County with the third and fourth lowest precipitation level in 130 years, respectively. He stated that Albemarle County had transitioned from a moderate to a severe drought status. He stated that the map indicated that extreme drought was advancing from west to east across the state.

Mr. Mawyer stated that the Virginia DEQ map showed that Albemarle County remained in a watch status. He stated that other parts of the Middle James Region also remained in the watch category. He stated that all four factors—precipitation, groundwater levels, reservoir levels, and stream flow levels—continued to be rated as normal within their respective categories. He stated that these analyses were conducted at various locations throughout the Middle James area. He stated that groundwater was measured in Buckingham and streamflow monitoring was done in the Appomattox River near Farmville. He stated that their five reservoirs, which were monitored, were all rated as normal. He stated that he did not know the source of the precipitation monitoring, but it was also rated as normal within the district. He stated that the good news was that the weather had been cooler recently. He stated that it was expected to remain cooler for the next 10 days. He stated that showers may occur on Thursday, but there was no significant rain forecast in the next 10 days.

Mr. Mawyer stated that their drought model, which had been run by a consultant, indicated that the South Rivanna Reservoir had reached the trigger for a warning stage. He stated that this meant that there was a greater than 10% chance that the reservoir would be less than 70% full within the next 10 weeks. He stated that the model analyzed historical precipitation data over the last 100 years. He stated that they relied on the South Rivanna Reservoir for water supply. He stated that they could not obtain sufficient water from the Observatory WTP to meet the needs of the entire urban area.

Mr. Mawyer stated that as of midnight the previous night, the South Rivanna WTP's production had been reduced to approximately 6 million gallons per day, while Observatory's output was about 4 million gallons, which was the maximum they could produce through the older pipeline from Ragged Reservoir to the plant and then into the distribution system. He stated that the situation necessitated the implementation of two major pipe construction projects aimed at replacing both the Ragged Reservoir to Observatory water line and the Central Water Line, which extended from Observatory WTP to the Long St Bridge.

Mr. Mawyer stated that the recent rains, which had occurred from Monday until today, had been beneficial. He stated that the water level of the South Rivanna Reservoir had risen by about three inches, or 0.23 feet, putting it back on par with its level around July 15. He stated that this meant they were about 10 days closer to recovery from the drought. He stated that the Drought Committee, which included representatives from the City, the ACSA, and the County, along with their own team, had convened the previous week to discuss drought triggers and the potential for issuing a warning. He stated that a warning stage would create mandatory water conservation

measures in the City and the County.

Mr. Mawyer stated that the Albemarle County Board of Supervisors was required to enact these measures, and ACSA was responsible for implementing them. He stated that they were discussing a level of 2 to 2.5 feet down in the South Rivanna Reservoir before declaring a drought warning. He stated if the water level reached five feet below the top of the dam, it would be considered an emergency stage.

Mr. Mawyer stated that despite the worsening conditions, they were relieved to see that the water level in the South Rivanna had stabilized over the last 10 days and was not continuing to decline. He stated that it was previously declining by 0.10 feet per day. He stated that if they did not receive more rain and faced extreme high temperatures, it would likely start declining again.

Mr. Mawyer that they monitored Mechums River, and as an example, on Monday before the rain, there were approximately 6 million gallons flowing down the river, and after the rain the previous day, the flow had increased to about 20 million gallons.

Mr. Mawyer stated that this morning, it had dropped back to 12 million gallons. He stated that rivers and streams flash during storms and then returned to lower levels. He stated that they were capturing a significant portion of this rain in their reservoirs. He stated that more than just a shower was needed to alleviate the drought-like conditions.

Ms. Mallek asked if the model considered that during the summer months, the population was lower since students went back home.

Mr. Mawyer stated that they were aware of that reduced demand factor. He stated that in a couple of weeks, the UVA population would return. He stated that they were attempting to balance the community's water conservation efforts against the challenges that arose when businesses had to reduce their water usage.

Mr. Mawyer stated that they had received an additional grant of almost $200,000 from FEMA through the Virginia Department of Emergency Management for a study on climate change and its impact on wastewater facilities. He stated that the study aimed to examine their facilities, especially those constructed near rivers, and determine if accommodations were necessary to protect them against rising flood levels. He stated that Ms. Whitaker, Director of Engineering and Maintenance, had provided a presentation to the Avon CAC as part of their communication and collaboration outreach.

Mr. Pinkston asked if Mr. Mawyer could summarize and encapsulate the situation regarding their challenging position with their water supply due to the ongoing drought, and the drought committee involved. He inquired what the deliberations of this committee might entail and the potential outcomes. He stated that they had members of the media present earlier. He asked what kind of information they would receive and what notification would happen.

Mr. Mawyer reported that the good news was that their reservoir at South Rivanna was at 94% capacity. He stated that Sugar Hollow reservoir was also in good condition.

Mr. Mawyer stated that he could not provide an exact number of days, but they had been monitoring a specific volume and level to determine how many days' supply of water they had. He stated that they had been observing the decline and trying to identify a suitable threshold for implementing mandatory and emergency restrictions. He stated that the Regional Drought Management Plan provided guidance to consider all factors before making a recommendation.

Mr. Mawyer stated that the plan recommended use of the model, stream conditions, and weather forecasts, and then using the data to formulate a recommendation. He stated that the committee had been following this approach. He stated that when the committee agreed on a threshold, such as 2.5 feet below the top of the South Rivanna dam, and there was no rain in the forecast, they would send a letter to the City and the County recommending implementation of emergency water conservation ordinances.

Mr. Mawyer stated that Ms. Hildebrand and her department would enforce the ordinances for the City, while the Albemarle Service Authority would implement conservation measures for County public water users. He stated that both ordinances included fines for non-compliance. He stated that there might be a warning initially, but it could eventually lead to a fine. He asked Mr. Lunsford if he had any further comments on this.

Mr. Lunsford stated that in 2017, they exercised a plan that had been developed in the early 2000s. He stated that they coordinated with Ms. Hildebrand's team at the City and developed a number of different advertisements and PSAs. He stated that these materials had been distributed and were starting to inform homeowners about the drought watch and voluntary restrictions on outside irrigation. He stated that they also explained that if they were to take the next step, mandatory restrictions would be implemented, which would impact homeowners and some businesses.

Mr. Mawyer explained that more stringent conservation measures included no fountains allowed or washing driveways, and citizens should be irrigating with a handheld hose only. He stated that irrigation would be allowed in some locations only between 9:00 p.m. and 6:00 a.m. He stated that there were a number of measures in the City and County ordinances that were meant to serve as conservation measures. He stated that the emergency threshold would include a similar letter with emergency provisions that would kick in, which were more stringent.

Mr. Pinkston asked if the university was involved with all of this at some level.

Mr. Mawyer stated yes, because they were a customer of the City and were required to comply.

Ms. Hildebrand stated that the process was that once the letter from Bill was received, it had to be placed on a Council agenda for authorization. She stated that the Council then approved implementation of the conservation measures.

Ms. Mallek asked how far the reservoir was from the threshold of 2.5 feet down.

Mr. Mawyer stated that today, they were at 0.34 feet down, or approximately 4 inches. He stated

that they had a way to go before it got to 2.5 feet. He stated that they got to the drought watch stage the Board approved last month before the guidelines indicated they should, but that was because the whole State had been declared to be in a drought watch. He stated that now, the State had issued a drought warning. He stated that the committee would need to consider the timing of the local issuances.

Ms. Mallek stated that if Orange County received three inches of rain, that would not benefit them, but it would significantly alter the virtual measurement for precipitation, which did impact the drought stages. She stated that the method of data collection on that map was quite unusual.

6. *ITEMS FROM THE PUBLIC*

Matters Not Listed for Public Hearing on the Agenda

There were none.

7. *RESPONSES TO PUBLIC COMMENTS*

There were no items from the public, so there were no responses.

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 the Updated Purchasing Manual

h. Approval of Engineering Services – Rivanna Pump Station Reconstruction – Short Elliot Hendrickson Engineers

i. Approval of Betterment Agreement with City of Charlottesville Utilities Department – Emmet Streetscape Water Line

j. Approval to Amend Professional Engineering Services Work Authorization – Observatory & South Rivanna Water Treatment Plants, Rehabilitation and Expansion Project – Short Elliot Hendrickson Engineers

k. Approval of Additional Engineering Services – Moores Creek Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades – Hazen and Sawyer Engineering

Mr. Sanders moved to approve the Consent Agenda. Ms. Mallek seconded the motion, which passed unanimously (7-0).

9. *OTHER BUSINESS*

(Joint Session with the RSWA)

a. Presentation: Strategic Plan Update

Betsy Nemeth, Director of Administration and Communications

Betsy Nemeth, Director of Administration and Communications, stated that she would provide an update the strategic plan, which was the second iteration for 2023. She stated that their vision was to become a recognized leader in environmental stewardship by offering exceptional water and solid waste services. She stated that their mission was to serve the Charlottesville, Albemarle, and UVA community with high-quality water and wastewater treatment, refuse, and recycling services in a financially responsible and sustainable manner.

Ms. Nemeth stated that their values represented a change from their first strategic plan, because they are now better defined. She stated that their first priority was communication and collaboration. She stated that they had several tours at their facilities, including Woodbrook Elementary first graders who visited the Ivy Convenience Center and Transfer Station, with 96 students participating. She stated that they were terrific, and staff received letters from the students afterward. She stated that the school had also been teaching them about recycling and solid waste.

Ms. Nemeth stated that they had signed a contract with WNRN, a nonprofit listener-supported independent radio network, to discuss their solid waste services. She stated that this initiative included special information on hazardous household waste (HHW). She stated that they were also redesigning the Rivanna website. She stated that they had chosen Red Orange Studio to do the project, and they were currently in the middle of it.

Ms. Nemeth stated that by the end of the year, they would have a main site for Rivanna.org, as well as two child sites: RivannaWater.org and RivannaSolidWaste.org, which were specific to those authorities. She stated that she believed it would be a really neat thing once they were done. She stated that coming back around the bend, the UVA public health class had toured Moores Creek Treatment Plant. She stated that this class visited the plant every year. She stated that the Authorities were now on Facebook and Instagram, and she encouraged everyone to visit their pages.

Ms. Nemeth stated that their staff also attended Riverfest this year, so they were pretty busy with public outreach. She stated that they were excited to add an outreach coordinator this year, which would help them expand those efforts. She stated that regarding environmental stewardship, she observed that pollinators were arriving at the no-mow area of the Ivy site, which elevated the environmental education efforts. She stated that Jennifer Whitaker, along with Leah Beard and Dave Tungate, volunteered with the Rivanna Conservation Alliance, teaching children about the environment, stream health, and more.

Ms. Nemeth stated that the 10th-grade class from St. Anne's Belfield had also participated in cleaning up the Moores Creek wetlands, removing tubes from trees and exploring an interesting area of our property that was not often seen. She stated that regarding their clean fill area, Mr. McKalips calculated that it prevented 780 tons of CO2 being discharged into the environment because it reduced the distance trucks had to travel to get clean fill.

Ms. Nemeth stated that regarding workforce development, David Rhodes received his Bachelor's Degree in Environmental Science from Southern New Hampshire University. She stated that due to Rivanna's tuition reimbursement program that got him through, he would begin his Master's program in January.

Ms. Nemeth stated that they were using Barrenridge Consulting for individual leadership coaching for all their new and current leaders. She stated that their consultant Tim Smith had developed a Rivanna-specific program, which spoke to their organization's values. She stated that they continued to update their existing job descriptions, for which they had a 20% per year goal. She stated that the creation of new job descriptions for new positions occurred as well.

Ms. Nemeth stated that they just had two mechanics attend a Commercial Driver's License (CDL) class at PVCC and they received their Class A CDLs. She stated that they used PVCC because of a federal law that required the organization to use an accredited teacher. She stated that another goal for the workforce development team was to expand candidate-sourcing to increase diversity of candidates. She stated that their Paychex payroll system also served as a hiring and recruiting application system, so they automatically posted jobs on multiple job boards.

Ms. Nemeth stated that they also posted some water and sewer jobs to the American Waterworks Association website as well. She stated that regarding optimization and resiliency, at Moores Creek they optimized the caustic feed into the wastewater aeration basins, which saved them $173,000. She stated that regarding safety, they conducted ARC Flash training for 38 employees and introduced an electrical safety chapter into their safety manual by collaborating with UVA.

Ms. Nemeth stated that these initiatives not only provided valuable resources but also demonstrated the benefits of partnership in the area. She stated that they were standardizing equipment across different plants, simplifying operator training. She stated that the implementation of a specialized alum feed system for South Rivanna was expected to save approximately $20,000 annually through determining the correct feed amount for treatment conditions at the plant.

Ms. Nemeth stated that regarding planning and infrastructure, one of their challenges was cost-efficient project planning. She stated that the image on the slide was a report from value engineering sessions for the Moores Creek building. She stated that while not every idea presented had resulted in cost savings, they provided a comprehensive view of possible areas for efficiency improvements. She stated that the sessions involved experts from various fields, not just their own team.

Ms. Nemeth stated that the top two images illustrated the maintenance team using the asset

management system, CityWorks, for documenting preventive maintenance and maintaining equipment records. She stated that another image on the slide was of staff using iPads to input information into CityWorks, keeping their maintenance records up-to-date. She stated that DocLink, their document storage system, had seen a 4.7% increase in 2024 so far, with a goal of achieving a 5% annual increase.

Ms. Nemeth stated that this was important because it made their information much more accessible and easier to find; it was categorized, which helped them with quicker decisions. She stated that a significant change they had previously discussed and likely to be mentioned by Ms. Beard as well was regarding their turnover goal for the Solid Waste Authority. She stated that their turnover goal for the Solid Waste Authority was currently 10%, but this year they had seen a 22.6% turnover rate with six employees leaving between July 1, 2023, and June 30, 2024, out of 24 employees.

Ms. Nemeth stated that their new number of positions was 28. She stated that if they lost three more this year, they would exceed their goal. She stated that they aimed to set realistic, transparent, and achievable goals, yet challenging ones. She stated that therefore, they were changing the Solid Waste turnover goal to 15%, to recognize that it was difficult to maintain unskilled labor positions while still keeping a challenging goal. She stated that they were not changing the Water and Sewer turnover goal of 10%.

Ms. Hildebrand asked if the turnover rate also included people who were retiring.

Ms. Nemeth stated yes.

Mr. Mawyer stated that they did not exclude any category from that number. He stated that regardless of whether they retired or left in any other way, they were included in the turnover rate.

b. Presentation: Human Resources Update
Leah Beard, Human Resources Manager

Leah Beard, Human Resources Manager, stated that she had been part of the organization since January and felt honored to share the work they do. She stated that staff wanted to emphasize the importance of helping employees understand their total rewards package, which includes benefits. She stated that she had been conducting one-on-one sessions with employees in the Solid Waste Department, because sometimes they only focused on the extra dollar offered in a new job, not realizing the full benefits package.

Ms. Beard stated that something she found extraordinary about Rivanna was that although Anthem costs had risen 30% during this renewal, the Board and Executive Director had decided that Rivanna would absorb that cost so that employees would not have to pay for those increases. She stated that employees may not immediately recognize the importance of insurance rates staying the same for the past seven years, so she wanted to ensure that employees were aware of all the benefits available.

Ms. Beard stated that they had started open enrollment in May, which took place online through Paychex. She stated that they had re-evaluated their dental and vision plans due to feedback from employees about the network quality. She stated that they switched to another company, hoping to improve those benefits for their employees. She stated that Alisa Cooper, the Payroll and Benefits Administrator, had been instrumental in making the process easy for everyone. She stated that she ensured the open enrollment process was streamlined and made easy for their employees.

Ms. Beard stated that she had hosted numerous in-person sessions aimed at educating employees about their benefits. She stated that she was initiating this process with her new hires, ensuring they understood the differences between high and low deductibles. She stated that staff also conducted retirement sessions, including early retirement through the state of Virginia, as the organization operated on the VRS system. She stated that their goal was to offer various opportunities for employees' growth and learning. She stated that for instance, she had recently held a session with AFLAC discussing supplemental health benefits for those considering retirement.

Ms. Beard stated that this was just one example of the different opportunities they provided. She stated that the managers and supervisors were actively engaging with employees to help them reach their career goals. She stated that since she had been there since January, they had seen 15 internal promotions, a testament to the team's dedication to employee development. She stated that they had also welcomed 14 new hires. She stated that they were beginning to establish a baseline for their diversity through review of those policies.

Ms. Beard stated that 18% of their current employees were composed of people of color (POC). She stated that 40% of their executive leadership team were women. She stated that they were establishing this baseline to improve their rates of diversity and inclusion. She stated that for recruiting, they had created an online job portal, which Ms. Nemeth had also spoken about. She stated that they were posting to eight different external sites to attract potential candidates. She stated that she had started conducting in-person interviews on site at the location where the candidate would be working if hired.

Ms. Beard stated that regarding workforce development, some of the information in her report was repeating Ms. Nemeth's discussion on the strategic plan, which emphasized organizational growth and development. She stated that this included their five-year staffing plan, addition of more positions, the offering of tuition reimbursement for employees, and the evaluation of turnover rates to retain employees. She stated that for employee growth and development, speaking to their internal processes, they should view their employees as an investment, not a liability on their budget sheets.

Ms. Beard stated that they had paid bonuses for individuals in the Maintenance department who earned certifications outside of the organization, and they developed specific training for wastewater and water employees, which had helped them with their continuing education. She stated that leadership training had been offered to recently promoted supervisors and managers. She stated that training was now available on phones and mobile devices through Paychex, allowing individuals who were not in front of a desktop to access it.

Ms. Beard stated that LinkedIn Learning was offered as a free opportunity for all their employees. She stated that staff had hosted sessions with local community partners, including Star Hill Pathways, which had collaborated with them over the last couple of years, and they gave them a tour of one of their water plants. She stated that they had also visited Beaver Creek to see both sides of the operation. She stated that they had conducted tours with local elementary, middle, and high schools. She stated that they were working with local Rivanna watershed organizations, such as the Rivanna Conservation Alliance and the Rivanna Stormwater Education Partnership.

Ms. Beard stated that their interns this summer were also contributing to these efforts. She stated that she had reached out to an individual who was new to the Career Center at UVA, serving as a liaison between the Career Center at UVA and the Virginia Talent and Opportunity Partnership (VTOP). She stated that their goal was to open more internships, job shadowing, and mentoring programs to the local community.

c. Presentation and Consider Vote to Approve: Amended and Restated By-Laws
Lonnie Wood, Director of Finance and Information Technology

Item was deferred.

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

There were none.

11. *CLOSED MEETING*

(Motion, second and roll call vote to enter into a joint closed session to discuss confidential information related to cybersecurity and the security of the authorities' physical premises as permitted by the public safety exemptions at Section 2.2-3711-A(19) of the Code of Virginia and confidential performance evaluations, goals and objectives of specific personnel as permitted by the personnel exemption at Section 2.2-3711-A(1) of the Code of Virginia).

Motion: I move that the Rivanna Water & Sewer Authority enter into a joint closed session with the Rivanna Solid Waste Authority to discuss confidential information related to cybersecurity and the security of the authorities' physical premises as permitted by the public safety exemptions at Section 2.2-3711-A(19) of the Code of Virginia, and confidential performance evaluations, goals and objectives of specific personnel as permitted by the personnel exemption at Section 2.2-3711-A(1) of the Code of Virginia.*

(Motion, second and roll call vote to certify the closed session)

Motion: The Rivanna Water and Sewer Authority hereby certifies by recorded vote that, to the best of each member's knowledge, only public business matters lawfully exempted from the open meeting requirements of the Virginia Freedom of Information Act and identified in the motion authorizing the*

closed meeting were heard, discussed or considered in the closed meeting to which this certification resolution applies.

** Closed meeting motion subject to change**

(Complete and close the RWSA meeting, then complete and close the RSWA meeting)

Ms. Mallek moved to enter a closed session. Mr. Sanders seconded the motion, which passed unanimously (7-0) with roll call vote.

Ms. Mallek moved to certify the closed session. Mr. Pinkston seconded the motion, which passed unanimously (7-0) with roll call vote.

Ms. Mallek moved to approve the 3% salary increase effective July 1, 2024 for the Executive Director. Mr. Pinkston seconded the motion, which passed unanimously (7-0).

12. *ADJOURNMENT*

At 4:08 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
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www.rivanna.org

MEMORANDUM

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

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **EXECUTIVE DIRECTOR'S REPORT**

DATE: **AUGUST 27, 2024**

STRATEGIC PLAN PRIORITY: EMPLOYEE DEVELOPMENT

New Credentials and Promotions for Team Members

The professional qualifications of our staff continue to improve and enhance our services. We congratulate the following employee for successfully completing the requirements for a license from the State:

- Drew Prothero, Wastewater Operator – Class 1

STRATEGIC PLAN PRIORITY: PLANNING AND INFRASTRUCTURE

2024 Bond Issue

The Authority closed on the 2024 Bond Issue on August 7. The bonds were issued through the Virginia Resources Authority on July 23, 2024, receiving a low bid True-Interest cost of 3.92% of the total proceeds received which was $93.6 million. These funds will support our community water supply and other CIP projects.

Congressionally Directed Spending Grant

Senators Warner and Kaine included our Congressionally Directed Spending grant request of $880,000 in the draft Senate spending Bill. Final grant approval will occur upon passing of the federal budget by Congress and the President. Grant funding will be used to replace Powder Activated Carbon (PAC) equipment at the South Rivanna Water Plant. PAC is used to remove organic materials while also controlling taste and odor in the drinking water.

STRATEGIC PLAN PRIORITY: OPTIMIZATION AND RESILICIENCY

Corrosion Control Adjustment in the Urban Water System

We have been assisting the ACSA with an investigation of sediment issues in the hot water systems of a number of homes in the Urban drinking water system, especially in the Glenmore and Farmington neighborhoods. Staff provided a presentation to the Board on this issue in March 2024. After extensive laboratory

analysis, we plan to make a small adjustment in the level of corrosion control product used for water treatment to eliminate the sediment. The corrosion control product prevents metals from pipes and plumbing fixtures from leaching into the drinking water. Pending final approval from the Va Dept of Health, this adjustment will begin in September. Water quality monitoring will be conducted in the Urban system for any unintended impacts of this change.

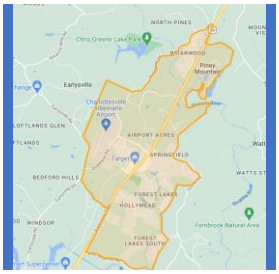
STRATEGIC PLAN PRIORITY: COMMUNICATION AND COLLABORATION

Scottsville Town Council

Jennifer Whitaker, Director of Engineering and Maintenance and Austin Marrs, Senior Civil Engineer, gave a presentation to the Scottsville Town Council on August 19th. Jennifer and Austin provided information on the history of RWSA, Scottsville's water and wastewater Systems and RWSA's upcoming Capital Improvement Projects.

Places 29 - North Community Advisory Committee

Jennifer Whitaker, Director of Engineering and Maintenance attended the Places 29 - North Community Advisory Committee meeting on August 8th and presented information about RWSA, the Community Water Supply Plan, Capital Improvement Planning, and information about upcoming projects in the northern area of the County.



STRATEGIC PLAN PRIORITY: ENVIRONMENTAL STEWARDSHIP

National Water Quality Awareness Month

Only about 2.5% of the water on Earth is fresh water. We recognize August as National Water Quality Awareness Month, founded in 2005 by the Environmental Protection Agency (EPA), to recognize the importance of our water resources, promote awareness and start conversations about what households and communities can do to conserve our natural water sources and ensure that we all have access to safe, clean drinking water for generations to come. The Clean Water Act in 1972 and the Safe Drinking Water Act in 1974, set federal regulations and standards for making sure our drinking water was clean and safe with regulations protecting the quality of groundwater and public water systems.

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MEMORANDUM

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

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

REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

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

DATE: **AUGUST 27, 2024**

Financial Snapshot

The Authority had an overall net surplus of $693,900 for fiscal year ending June 30, 2024. Total revenues (operating and debt service) are $1,970,900 over budget estimates, which is offsetting the $1,277,000 overrun in total expenses. Urban Water flows and operations rate revenue are 1.8% above budget estimates, and Urban Wastewater flows and operations rate revenue are 6.9% over budget.

In June, the Board approved a new capital project for the Rivanna Pump Station restoration. This moved $3.6 million in expenses relative to the pump station emergency to the capital project account and out of the operating budget. This effectively adjusts the prior deficit by the same amount. Revenues and expenses are summarized in the table below:

	Urban Water	Urban Wastewater	Total Other Rate Centers	Total Authority
Operations				
Revenues	$ 10,482,005	$ 11,408,071	$ 2,856,459	$ 24,746,535
Expenses	(10,540,757)	(10,828,846)	(2,882,474)	(24,252,077)
Surplus (deficit)	$ (58,752)	$ 579,225	$ (26,015)	$ 494,458
Debt Service				
Revenues	$ 11,093,162	$ 10,331,298	$ 2,697,610	$ 24,122,070
Expenses	(11,000,478)	(10,240,758)	(2,681,388)	(23,922,624)
Surplus (deficit)	$ 92,684	$ 90,540	$ 16,222	$ 199,446
Total				
Revenues	$ 21,575,167	$ 21,739,369	$ 5,554,069	$ 48,868,605
Expenses	(21,541,235)	(21,069,604)	(5,563,862)	(48,174,701)
Surplus (deficit)	$ 33,932	$ 669,765	$ (9,793)	$ 693,904

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 for FY 2024 are $1,138,700 over budget estimates, and operating expenses are over budget by $644,200, resulting in a net operating surplus of $494,500. The following comments explain most of the other budget vs. actual variances.

A. Annual and Quarterly Transactions – During the year, 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 ($175,000) was made in September 2024. Insurance premiums are paid at the beginning of each quarter.
B. Personnel Costs (Urban Water, Urban Wastewater, Maintenance – pages 2,5,9) – Some department's salaries are higher than budgeted due to increases for plant operators who achieved higher licenses. Urban Water also had some large final leave payouts this fiscal year as two senior employees retired. The Maintenance department has exceeded the annual budget for overtime and holiday pay due to emergency maintenance needs of the Rivanna Pump Station.
C. Other Services & Charges (Urban Water, Crozet Water, Scottsville Water, Urban Wastewater, Glenmore Wastewater – pages 2 to 6) – Utility costs were higher than originally estimated for Urban Wastewater and Glenmore and all Water departments. Urban Water incurred $55,400 in unbudgeted watershed management expenses, and Scottsville Water's laboratory analysis fees were high due to testing for PFAS. Urban Water, Crozet Water, and Urban Wastewater paid unbudgeted annual DEQ permit application fees of $25,000, $15,000, and $10,650, respectively.
D. Equipment Purchases (Urban Water – page 2) Urban Water incurred $12,700 unbudgeted equipment rental costs related to the water line break on Rt. 29N.
E. Communications (Scottsville Water, Glenmore Wastewater, and Administration – pages 4,6,8) – Telephone and data service costs were higher than originally estimated for some departments.
F. Professional Services (Urban Water, Urban Wastewater, Administration – pages 2,5,8) – Urban Water and Urban Wastewater have exceeded the annual budget for legal fees by $32,400 and 22,000, respectively. Urban Wastewater spent $41,200 more than the annual budget on engineering and technical services costs, related to a BOD wastewater sampling study and Rivanna Pump Station permitting. The Administration department incurred $23,200 in unbudgeted subcontract SCADA services in this category.

G. Operations & Maintenance (Wastewater – page 5) – Urban Wastewater incurred unbudgeted emergency pipelines and appurtenances costs related to the mitigation and bypass pump installation and operations for the Rivanna Pump Station incident totaling $3.6 million through May. Those expenses were moved to a capital project account in June. Chemical costs ran high for Urban Water and Urban Wastewater. Urban Water was under budget for repair costs, so its total O&M costs were under budget.

H. Information Technology (Scottsville Water, Glenmore Wastewater – pages 4,6) - Scottsville Water went over budget on SCADA costs related to upgrading PLC and communication hardware at the "795" water storage tank previously owned by ACSA. Glenmore went over budget for SCADA on-call services.

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024
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	$ 22,727,003	$ 23,587,731	$ 860,728	3.79%
Lease Revenue		124,000	124,000	140,414	16,414	13.24%
Admin., Maint. & Engineering Revenue		781,000	781,000	798,668	17,668	2.26%
Other Revenues		647,267	647,267	723,581	76,314	11.79%
Use of Reserves (Water Resources Fund)		80,000	80,000	80,000	-	0.00%
Interest Allocation		47,250	47,250	214,808	167,558	354.62%
Total Operating Revenues		**$ 24,406,520**	**$ 24,406,520**	**$ 25,545,202**	**$ 1,138,682**	**4.67%**
Expenses						
Personnel Cost	**B**	$ 11,625,091	$ 11,625,091	$ 11,599,327	$ 25,765	0.22%
Professional Services	**F**	467,850	467,850	524,211	(56,361)	-12.05%
Other Services & Charges	**C**	3,479,955	3,479,955	4,265,772	(785,817)	-22.58%
Communications	**E**	221,440	221,440	276,609	(55,169)	-24.91%
Information Technology	**H**	1,269,575	1,269,575	1,208,442	61,133	4.82%
Supplies		46,300	46,300	53,282	(6,982)	-15.08%
Operations & Maintenance	**G**	6,035,808	6,035,808	5,915,692	120,116	1.99%
Equipment Purchases	**D**	345,500	345,500	292,410	53,090	15.37%
Depreciation		915,000	915,000	915,000	-	0.00%
Total Operating Expenses		**$ 24,406,519**	**$ 24,406,519**	**$ 25,050,744**	**$ (644,225)**	**-2.64%**
Operating Surplus/(Deficit)		**$ 1**	**$ 1**	**$ 494,458**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 22,119,060	$ 22,119,060	$ 22,119,072	$ 12	0.00%
Septage Receiving Support - County		109,440	109,440	109,440	-	0.00%
Buck Mountain Lease Revenue		1,600	1,600	13,523	11,923	745.17%
Trust Fund Interest		179,830	179,830	367,355	187,525	104.28%
Reserve Fund Interest		879,900	879,900	1,512,681	632,781	71.92%
Total Debt Service Revenues		**$ 23,289,830**	**$ 23,289,830**	**$ 24,122,070**	**$ 832,240**	**3.57%**
Debt Service Costs						
Total Principal & Interest		$ 16,168,944	$ 16,168,944	$ 16,168,944	$ -	0.00%
Reserve Additions-Interest		879,900	879,900	1,512,681	(632,781)	-71.92%
Debt Service Ratio Charge		725,000	725,000	725,000	-	0.00%
Reserve Additions-CIP Growth		5,516,000	5,516,000	5,516,000	-	0.00%
Total Debt Service Costs		**$ 23,289,844**	**$ 23,289,844**	**$ 23,922,625**	**$ (632,781)**	**-2.72%**
Debt Service Surplus/(Deficit)		**$ (14)**	**$ (14)**	**$ 199,445**		

Summary

Total Revenues	$ 47,696,350	$ 47,696,350	$ 49,667,273	$ 1,970,923	4.13%
Total Expenses	47,696,363	47,696,363	48,973,369	(1,277,005)	-2.68%
Surplus/(Deficit)	**$ (13)**	**$ (13)**	**$ 693,904**		

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

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	$ 10,021,362	$ 10,201,971	$ 180,609	1.80%
Lease Revenue		94,000	94,000	107,482	13,482	14.34%
Miscellaneous		-	-	829	829	
Use of Reserves (Water Resources Fund)		80,000	80,000	80,000	-	0.00%
Interest Allocation		34,200	34,200	91,723	57,523	168.20%
Total Operating Revenues		**$ 10,229,562**	**$ 10,229,562**	**$ 10,482,005**	**$ 252,443**	**2.47%**
Expenses						
Personnel Cost	**B**	$ 2,384,332	$ 2,384,332	$ 2,465,242	$ (80,910)	-3.39%
Professional Services	**F**	178,500	178,500	235,802	(57,302)	-32.10%
Other Services & Charges	**C**	769,233	769,233	1,219,507	(450,274)	-58.54%
Communications		103,200	103,200	91,832	11,368	11.02%
Information Technology		127,650	127,650	103,681	23,969	18.78%
Supplies		7,000	7,000	16,472	(9,472)	-135.32%
Operations & Maintenance		2,905,068	2,905,068	2,827,624	77,444	2.67%
Equipment Purchases	**D**	20,100	20,100	32,807	(12,707)	-63.22%
Depreciation		300,000	300,000	300,000	-	0.00%
Subtotal Before Allocations		$ 6,795,083	$ 6,795,083	$ 7,292,968	$ (497,885)	-7.33%
Allocation of Support Departments		3,434,478	3,434,478	3,247,789	186,690	5.44%
Total Operating Expenses		**$ 10,229,561**	**$ 10,229,561**	**$ 10,540,757**	**$ (311,196)**	**-3.04%**
Operating Surplus/(Deficit)		**$ 1**	**$ 1**	**$ (58,752)**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 10,193,779	$ 10,193,779	$ 10,193,784	$ 5	0.00%
Trust Fund Interest		77,500	77,500	158,256	80,756	104.20%
Reserve Fund Interest		423,100	423,100	727,599	304,499	71.97%
Lease Revenue		1,600	1,600	13,523	11,923	745.17%
Total Debt Service Revenues		**$ 10,695,979**	**$ 10,695,979**	**$ 11,093,162**	**$ 397,183**	**3.71%**
Debt Service Costs						
Total Principal & Interest		$ 6,964,779	$ 6,964,779	$ 6,964,779	$ -	0.00%
Reserve Additions-Interest		423,100	423,100	727,599	(304,499)	-71.97%
Debt Service Ratio Charge		400,000	400,000	400,000	-	0.00%
Est. New Debt Service - CIP Growth		2,908,100	2,908,100	2,908,100	-	0.00%
Total Debt Service Costs		**$ 10,695,979**	**$ 10,695,979**	**$ 11,000,478**	**$ (304,499)**	**-2.85%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 92,684**		

Rate Center Summary

Total Revenues	$ 20,925,541	$ 20,925,541	$ 21,575,168	$ 649,627	3.10%
Total Expenses	20,925,540	20,925,540	21,541,235	(615,695)	-2.94%
Surplus/(Deficit)	**$ 1**	**$ 1**	**$ 33,932**		
Costs per 1000 Gallons	$ 3.01		$ 3.05		
Operating and DS	$ 6.16		$ 6.23		
Thousand Gallons Treated	3,397,700	3,397,700	3,459,468	61,768	1.82%
or					
Flow (MGD)	9.309		9.452		

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

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	$ 1,234,752	$ 1,234,752	$ -	0.00%
Lease Revenues		30,000	30,000	32,932	2,932	9.77%
Interest Allocation		4,600	4,600	12,244	7,644	166.18%
Total Operating Revenues		**$ 1,269,352**	**$ 1,269,352**	**$ 1,279,928**	**$ 10,576**	**0.83%**
Expenses						
Personnel Cost		$ 341,691	$ 341,691	$ 345,108	$ (3,418)	-1.00%
Professional Services		22,900	22,900	199	22,701	99.13%
Other Services & Charges	**C**	133,426	133,426	173,381	(39,955)	-29.95%
Communications		17,600	17,600	15,226	2,374	13.49%
Information Technology		32,400	32,400	16,078	16,322	50.38%
Supplies		1,500	1,500	1,582	(82)	-5.44%
Operations & Maintenance		335,700	335,700	328,108	7,592	2.26%
Equipment Purchases		3,200	3,200	3,930	(730)	-22.81%
Depreciation		60,000	60,000	60,000	-	0.00%
Subtotal Before Allocations		$ 948,417	$ 948,417	$ 943,612	$ 4,804	0.51%
Allocation of Support Departments		320,940	320,940	303,939	17,001	5.30%
Total Operating Expenses		**$ 1,269,357**	**$ 1,269,357**	**$ 1,247,551**	**$ 21,806**	**1.72%**
Operating Surplus/(Deficit)		**$ (5)**	**$ (5)**	**$ 32,377**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 2,385,720	$ 2,385,720	$ 2,385,720	$ -	0.00%
Trust Fund Interest		13,500	13,500	27,662	14,162	104.90%
Reserve Fund Interest		34,500	34,500	58,995	24,495	71.00%
Total Debt Service Revenues		**$ 2,433,720**	**$ 2,433,720**	**$ 2,472,376**	**$ 38,656**	**1.59%**
Debt Service Costs						
Total Principal & Interest		$ 1,216,725	$ 1,216,725	$ 1,216,725	$ -	0.00%
Reserve Additions-Interest		34,500	34,500	58,995	(24,495)	-71.00%
Estimated New Principal & Interest		1,182,500	1,182,500	1,182,500	-	0.00%
Total Debt Service Costs		**$ 2,433,725**	**$ 2,433,725**	**$ 2,458,220**	**$ (24,495)**	**-1.01%**
Debt Service Surplus/(Deficit)		**$ (5)**	**$ (5)**	**$ 14,157**		

Rate Center Summary

Total Revenues	$ 3,703,072	$ 3,703,072	$ 3,752,305	$ 49,233	1.33%
Total Expenses	3,703,082	3,703,082	3,705,770	(2,689)	-0.07%
Surplus/(Deficit)	**$ (10)**	**$ (10)**	**$ 46,534**		
Costs per 1000 Gallons	$ 6.26		$ 5.42		
Operating and DS	$ 18.27		$ 16.09		
Thousand Gallons Treated	202,697	202,697	230,310	27,613	13.62%
Flow (MGD)	0.555		0.629		

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

Scottsville 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		$ 656,460	$ 656,460	$ 656,460	$ -	0.00%
Interest Allocation		2,150	2,150	5,800	3,650	169.76%
Total Operating Revenues		**$ 658,610**	**$ 658,610**	**$ 662,260**	**$ 3,650**	**0.55%**
Expenses						
Personnel Cost		$ 223,641	$ 223,641	$ 229,172	$ (5,531)	-2.47%
Professional Services		5,000	5,000	3,515	1,485	29.71%
Other Services & Charges	C	31,800	31,800	54,588	(22,788)	-71.66%
Communications	E	6,750	6,750	18,716	(11,966)	-177.28%
Information Technology	H	19,700	19,700	55,726	(36,026)	-182.87%
Supplies		100	100	749	(649)	-648.73%
Operations & Maintenance		134,800	134,800	129,083	5,717	4.24%
Equipment Purchases		2,000	2,000	3,115	(1,115)	-55.77%
Depreciation		40,000	40,000	40,000	0	0.00%
Subtotal Before Allocations		$ 463,791	$ 463,791	$ 534,664	$ (70,873)	-15.28%
Allocation of Support Departments		194,815	194,815	185,025	9,789	5.03%
Total Operating Expenses		**$ 658,606**	**$ 658,606**	**$ 719,690**	**$ (61,084)**	**-9.27%**
Operating Surplus/(Deficit)		**$ 4**	**$ 4**	**$ (57,430)**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 158,736	$ 158,736	$ 158,736	$ -	0.00%
Trust Fund Interest		1,650	1,650	3,380	1,730	104.83%
Reserve Fund Interest		10,300	10,300	18,152	7,852	76.23%
Total Debt Service Revenues		**$ 170,686**	**$ 170,686**	**$ 180,268**	**$ 9,582**	**5.61%**
Debt Service Costs						
Total Principal & Interest		$ 148,991	$ 148,991	$ 148,991	$ -	0.00%
Reserve Additions-Interest		10,300	10,300	18,152	(7,852)	-76.23%
Estimated New Principal & Interest		11,400	11,400	11,400	-	0.00%
Total Debt Service Costs		**$ 170,691**	**$ 170,691**	**$ 178,543**	**$ (7,852)**	**-4.60%**
Debt Service Surplus/(Deficit)		**$ (5)**	**$ (5)**	**$ 1,725**		
Rate Center Summary						
Total Revenues		$ 829,296	$ 829,296	$ 842,528	$ 13,232	1.60%
Total Expenses		829,297	829,297	898,233	(68,936)	-8.31%
Surplus/(Deficit)		**$ (1)**	**$ (1)**	**$ (55,705)**		
Costs per 1000 Gallons		$ 38.22		$ 40.96		
Operating and DS		$ 48.13		$ 51.12		
Thousand Gallons Treated		17,230	17,230	17,570	340	1.97%
or						
Flow (MGD)		0.047		0.048		

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

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	$ 9,908,321	$ 10,588,440	$ 680,119	6.86%
Stone Robinson WWTP		17,267	17,267	31,947	14,680	85.02%
Septage Acceptance		550,000	550,000	636,530	86,530	15.73%
Nutrient Credits		80,000	80,000	49,915	(30,085)	-37.61%
Miscellaneous Revenue		-	-	4,360	4,360	
Interest Allocation		3,300	3,300	96,879	93,579	2835.72%
Total Operating Revenues		**$ 10,558,888**	**$ 10,558,888**	**$ 11,408,071**	**$ 849,183**	**8.04%**
Expenses						
Personnel Cost	**B**	$ 1,458,300	$ 1,458,300	$ 1,519,958	$ (61,657)	-4.23%
Professional Services	**F**	40,000	40,000	103,616	(63,616)	-159.04%
Other Services & Charges	**C**	2,271,556	2,271,556	2,571,704	(300,148)	-13.21%
Communications		11,600	11,600	14,741	(3,141)	-27.08%
Information Technology		110,600	110,600	96,953	13,647	12.34%
Supplies		1,200	1,200	3,544	(2,344)	-195.31%
Operations & Maintenance	**G**	2,086,800	2,086,800	2,142,697	(55,897)	-2.68%
Equipment Purchases		73,500	73,500	76,661	(3,161)	-4.30%
Depreciation		470,000	470,000	470,000	(0)	0.00%
Subtotal Before Allocations		$ 6,523,556	$ 6,523,556	$ 6,999,875	$ (476,319)	-7.30%
Allocation of Support Departments		4,035,331	4,035,331	3,828,971	206,360	5.11%
Total Operating Expenses		**$ 10,558,887**	**$ 10,558,887**	**$ 10,828,846**	**$ (269,959)**	**-2.56%**
Operating Surplus/(Deficit)		**$ 1**	**$ 1**	**$ 579,224**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 9,339,509	$ 9,339,509	$ 9,339,516	$ 7	0.00%
Septage Receiving Support - County	**A**	109,440	109,440	109,440	-	0.00%
Trust Fund Interest		86,900	86,900	177,432	90,532	104.18%
Reserve Fund Interest		410,200	410,200	704,909	294,709	71.85%
Total Debt Service Revenues		**$ 9,946,049**	**$ 9,946,049**	**$ 10,331,298**	**$ 385,249**	**3.87%**
Debt Service Costs						
Total Principal & Interest		$ 7,812,249	$ 7,812,249	$ 7,812,249	$ -	0.00%
Reserve Additions-Interest		410,200	410,200	704,909	(294,709)	-71.85%
Debt Service Ratio Charge		325,000	325,000	325,000	-	0.00%
Est. New Debt Service - CIP Growth		1,398,600	1,398,600	1,398,600	-	0.00%
Total Debt Service Costs		**$ 9,946,049**	**$ 9,946,049**	**$ 10,240,758**	**$ (294,709)**	**-2.96%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 90,539**		
Rate Center Summary						
Total Revenues		$ 20,504,937	$ 20,504,937	$ 21,739,368	$ 1,234,431	6.02%
Total Expenses		20,504,936	20,504,936	21,069,605	(564,668)	-2.75%
Surplus/(Deficit)		**$ 1**	**$ 1**	**$ 669,764**		
Costs per 1000 Gallons		$ 3.11		$ 2.99		
Operating and DS		$ 6.05		$ 5.81		
Thousand Gallons Treated		3,390,400	3,390,400	3,623,696	233,296	6.88%
or						
Flow (MGD)		9.289		9.901		

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

Glenmore Wastewater 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		$ 521,916	$ 521,916	$ 521,916	$ -	0.00%
Interest Allocation		1,700	1,700	4,511	2,811	165.35%
Total Operating Revenues		**$ 523,616**	**$ 523,616**	**$ 526,427**	**$ 2,811**	**0.54%**
Expenses						
Personnel Cost		$ 127,879	$ 127,879	$ 134,049	$ (6,170)	-4.83%
Professional Services		25,000	25,000	14,849	10,151	40.60%
Other Services & Charges	**C**	35,400	35,400	45,447	(10,047)	-28.38%
Communications	**E**	3,450	3,450	14,330	(10,880)	-315.37%
Information Technology	**H**	13,000	13,000	25,583	(12,583)	-96.79%
Supplies		-	-	37	(37)	
Operations & Maintenance		143,550	143,550	131,807	11,743	8.18%
Equipment Purchases		3,800	3,800	3,800	(0)	0.00%
Depreciation		25,000	25,000	25,000	0	0.00%
Subtotal Before Allocations		$ 377,079	$ 377,079	$ 394,902	$ (17,823)	-4.73%
Allocation of Support Departments		146,534	146,534	139,149	7,385	5.04%
Total Operating Expenses		**$ 523,613**	**$ 523,613**	**$ 534,051**	**$ (10,438)**	**-1.99%**
Operating Surplus/(Deficit)		**$ 3**	**$ 3**	**$ (7,624)**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 22,680	$ 22,680	$ 22,680	$ -	0.00%
Trust Fund Interest		200	200	441	241	120.41%
Reserve Fund Interest		-	-	-	-	
Total Debt Service Revenues		**$ 22,880**	**$ 22,880**	**$ 23,121**	**$ 241**	**1.05%**
Debt Service Costs						
Total Principal & Interest		$ 18,729	$ 18,729	$ 18,729	$ -	0.00%
Estimated New Principal & Interest		4,150	4,150	4,150	-	0.00%
Reserve Additions-Interest		-	-	-	-	
Total Debt Service Costs		**$ 22,879**	**$ 22,879**	**$ 22,879**	**$ -**	**0.00%**
Debt Service Surplus/(Deficit)		**$ 1**	**$ 1**	**$ 242**		

Rate Center Summary

Total Revenues	$ 546,496	$ 546,496	$ 549,548	$ 3,052	0.56%
Total Expenses	546,492	546,492	556,930	(10,438)	-1.91%
Surplus/(Deficit)	**$ 4**	**$ 4**	**$ (7,382)**		
Costs per 1000 Gallons	$ 12.65		$ 10.98		
Operating and DS	$ 13.20		$ 11.45		
Thousand Gallons Treated	41,401	41,401	48,629	7,228	**17.46%**
or					
Flow (MGD)	0.113		0.133		

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

Scottsville 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	$ 384,192	$ 384,192	$ 384,192	$ -	0.00%
Interest Allocation	1,300	1,300	3,652	2,352	180.90%
Total Operating Revenues	**$ 385,492**	**$ 385,492**	**$ 387,844**	**$ 2,352**	**0.61%**
Expenses					
Personnel Cost	$ 127,949	$ 127,949	$ 134,049	$ (6,101)	-4.77%
Professional Services	5,000	5,000	55	4,945	98.90%
Other Services & Charges	24,800	24,800	33,546	(8,746)	-35.27%
Communications	3,800	3,800	6,074	(2,274)	-59.84%
Information Technology	14,025	14,025	13,036	989	7.05%
Supplies	-	-	616	(616)	
Operations & Maintenance	49,500	49,500	40,400	9,100	18.38%
Equipment Purchases	3,700	3,700	3,700	0	0.00%
Depreciation	20,000	20,000	20,000	(0)	0.00%
Subtotal Before Allocations	$ 248,774	$ 248,774	$ 251,477	$ (2,704)	-1.09%
Allocation of Support Departments	136,722	136,722	129,704	7,017	5.13%
Total Operating Expenses	**$ 385,495**	**$ 385,495**	**$ 381,182**	**$ 4,313**	**1.12%**
Operating Surplus/(Deficit)	**$ (3)**	**$ (3)**	**$ 6,662**		

Operating Budget vs. Actual

Debt Service Budget vs. Actual

Revenues					
Debt Service Rate Revenue	$ 18,636	$ 18,636	$ 18,636	$ -	0.00%
Trust Fund Interest	80	80	184	104	129.58%
Reserve Fund Interest	1,800	1,800	3,025	1,225	68.08%
Total Debt Service Revenues	**$ 20,516**	**$ 20,516**	**$ 21,845**	**$ 1,329**	**6.48%**
Debt Service Costs					
Total Principal & Interest	$ 7,471	$ 7,471	$ 7,471	$ -	0.00%
Reserve Additions-Interest	1,800	1,800	3,025	(1,225)	-68.08%
Estimated New Principal & Interest	11,250	11,250	11,250	-	0.00%
Total Debt Service Costs	**$ 20,521**	**$ 20,521**	**$ 21,746**	**$ (1,225)**	**-5.97%**
Debt Service Surplus/(Deficit)	**$ (5)**	**$ (5)**	**$ 99**		

Rate Center Summary					
Total Revenues	$ 406,008	$ 406,008	$ 409,689	$ 3,681	0.91%
Total Expenses	406,016	406,016	402,928	3,088	0.76%
Surplus/(Deficit)	**$ (8)**	**$ (8)**	**$ 6,761**		
Costs per 1000 Gallons	$ 16.30		$ 15.99		
Operating and DS	$ 17.17		$ 16.90		
Thousand Gallons Treated	23,643	23,643	23,844	201	**0.85%**
or					
Flow (MGD)	0.065		0.065		

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

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	$ 781,000	$ 781,000	$ -	0.00%
Bond Proceeeds Funding Bond Issuance Costs		-	-	-	-	
Miscellaneous Revenue		-	-	7,024	7,024	
Total Operating Revenues		**$ 781,000**	**$ 781,000**	**$ 788,024**	**$ 7,024**	**0.90%**
Expenses						
Personnel Cost		$ 2,930,008	$ 2,930,008	$ 2,818,179	$ 111,829	3.82%
Professional Services	**F**	136,450	136,450	157,518	(21,068)	-15.44%
Other Services & Charges		140,760	140,760	120,319	20,441	14.52%
Communications	**E**	42,800	42,800	79,771	(36,971)	-86.38%
Information Technology		778,800	778,800	744,979	33,821	4.34%
Supplies		22,800	22,800	22,587	213	0.93%
Operations & Maintenance		64,200	64,200	59,183	5,017	7.81%
Equipment Purchases		15,000	15,000	15,089	(89)	-0.60%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 4,130,818**	**$ 4,130,818**	**$ 4,017,627**	**$ 113,191**	**2.74%**

Department Summary

Net Costs Allocable to Rate Centers	**$ (3,349,818)**	**$ (3,349,818)**	**$ (3,229,603)**	**$ (120,215)**	**3.59%**
Allocations to the Rate Centers					
Urban Water	44.00% **$ 1,473,920**	**1,473,920**	**1,421,025**	**52,895**	
Crozet Water	4.00% **$ 133,993**	**133,993**	**129,184**	**4,809**	
Scottsville Water	2.00% **$ 66,996**	**66,996**	**64,592**	**2,404**	
Urban Wastewater	48.00% **$ 1,607,913**	**1,607,913**	**1,550,209**	**57,703**	
Glenmore Wastewater	1.00% **$ 33,498**	**33,498**	**32,296**	**1,202**	
Scottsville Wastewater	1.00% **$ 33,498**	**33,498**	**32,296**	**1,202**	
	100.00% **$ 3,349,818**	**$ 3,349,818**	**$ 3,229,603**	**$ 120,215**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

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		-	-	1,949	1,949	
Total Operating Revenues		**$ -**	**$ -**	**$ 1,949**	**$ 1,949**	
Expenses						
Personnel Cost	**B**	$ 1,553,212	$ 1,553,212	$ 1,596,589	$ (43,377)	-2.79%
Professional Services		25,000	25,000	-	25,000	100.00%
Other Services & Charges		36,400	36,400	19,983	16,417	45.10%
Communications		11,300	11,300	20,530	(9,230)	-81.68%
Information Technology		17,500	17,500	9,551	7,949	45.42%
Supplies		4,000	4,000	22	3,978	99.44%
Operations & Maintenance		114,150	114,150	114,195	(45)	-0.04%
Equipment Purchases		201,000	201,000	130,000	71,000	35.32%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 1,962,562**	**$ 1,962,562**	**$ 1,890,870**	**$ 71,692**	**3.65%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (1,962,562)**	**$ (1,962,562)**	**$ (1,888,921)**	**$ (69,743)**	**3.55%**
Allocations to the Rate Centers						
Urban Water	30.00%	**$ 588,768**	**$ 588,768**	**$ 566,676**	**$ 22,092**	
Crozet Water	3.50%	**68,690**	**68,690**	**66,112**	**2,577**	
Scottsville Water	3.50%	**68,690**	**68,690**	**66,112**	**2,577**	
Urban Wastewater	56.50%	**1,108,847**	**1,108,847**	**1,067,240**	**41,607**	
Glenmore Wastewater	3.50%	**68,690**	**68,690**	**66,112**	**2,577**	
Scottsville Wastewater	3.00%	**58,877**	**58,877**	**56,668**	**2,209**	
	100.00%	**$ 1,962,562**	**$ 1,962,562**	**$ 1,888,921**	**$ 73,640**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

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		$ 456,056	$ 456,056	$ 438,992	$ 17,064	3.74%
Professional Services		-	-	450	(450)	
Other Services & Charges		14,580	14,580	10,051	4,529	31.07%
Communications		1,400	1,400	702	698	49.86%
Information Technology		1,000	1,000	6,475	(5,475)	-547.50%
Supplies		1,200	1,200	2,428	(1,228)	-102.32%
Operations & Maintenance		115,300	115,300	87,694	27,606	23.94%
Equipment Purchases		1,700	1,700	1,808	(108)	-6.32%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 591,236**	**$ 591,236**	**$ 548,598**	**$ 42,638**	**7.21%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (591,236)**	**$ (591,236)**	**$ (548,598)**	**$ (42,638)**	**7.21%**
Allocations to the Rate Centers						
Urban Water	44.00%	**$ 260,144**	**$ 260,144**	**$ 241,383**	**$ 18,761**	
Crozet Water	4.00%	**23,649**	**23,649**	**21,944**	**1,706**	
Scottsville Water	2.00%	**11,825**	**11,825**	**10,972**	**853**	
Urban Wastewater	47.00%	**277,881**	**277,881**	**257,841**	**20,040**	
Glenmore Wastewater	1.50%	**8,869**	**8,869**	**8,229**	**640**	
Scottsville Wastewater	1.50%	**8,869**	**8,869**	**8,229**	**640**	
	100.00%	**$ 591,236**	**$ 591,236**	**$ 548,598**	**$ 42,638**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - June 2024

Engineering

Operating Budget vs. Actual

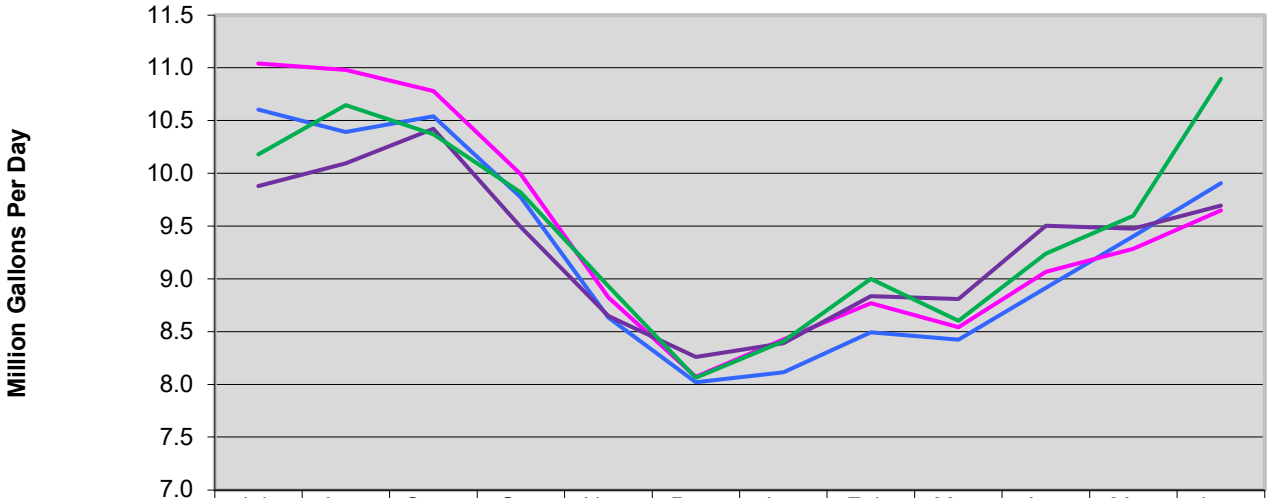
	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ 8,695	$ 8,695	
Total Operating Revenues		**$ -**	**$ -**	**$ 8,695**	**$ 8,695**	
Expenses						
Personnel Cost		$ 2,022,024	$ 2,022,024	$ 1,917,988	$ 104,036	5.15%
Professional Services		30,000	30,000	8,206	21,794	72.65%
Other Services & Charges		22,000	22,000	17,245	4,755	21.61%
Communications		19,540	19,540	14,685	4,855	24.84%
Information Technology		154,900	154,900	136,379	18,521	11.96%
Supplies		8,500	8,500	5,246	3,254	38.28%
Operations & Maintenance		86,740	86,740	54,900	31,840	36.71%
Equipment Purchases		21,500	21,500	21,500	0	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 2,365,204**	**$ 2,365,204**	**$ 2,176,150**	**$ 189,054**	**7.99%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (2,365,204)**	**$ (2,365,204)**	**$ (2,167,455)**	**$ (180,359)**	**7.63%**
Allocations to the Rate Centers						
Urban Water	47.00%	**$ 1,111,646**	**$ 1,111,646**	**$ 1,018,704**	**$ 92,942**	
Crozet Water	4.00%	**94,608**	**94,608**	**86,698**	**7,910**	
Scottsville Water	2.00%	**47,304**	**47,304**	**43,349**	**3,955**	
Urban Wastewater	44.00%	**1,040,690**	**1,040,690**	**953,680**	**87,010**	
Glenmore Wastewater	1.50%	**35,478**	**35,478**	**32,512**	**2,966**	
Scottsville Wastewater	1.50%	**35,478**	**35,478**	**32,512**	**2,966**	
	100.00%	**$ 2,365,204**	**$ 2,365,204**	**$ 2,167,455**	**$ 197,749**	

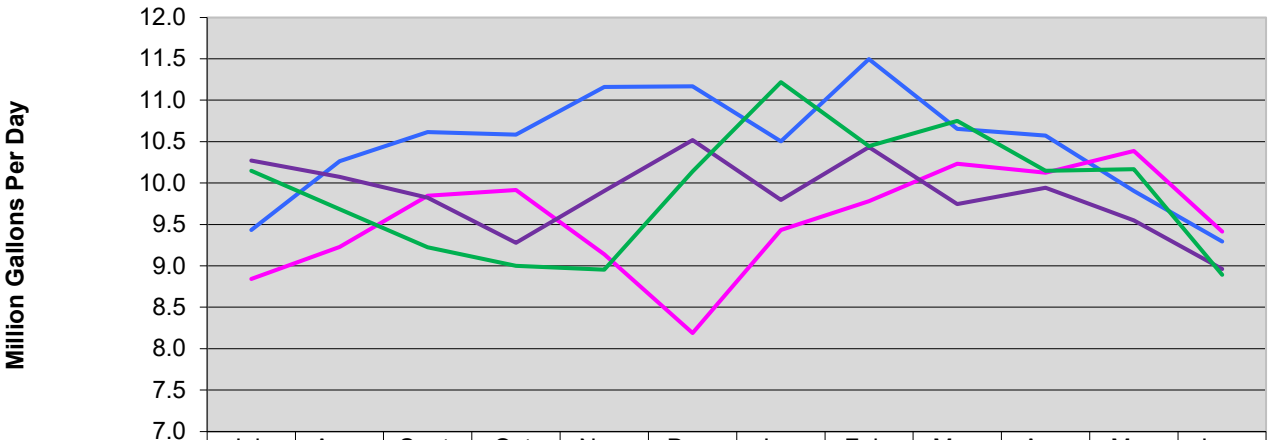
Rivanna Water and Sewer Authority
Flow Graphs

Urban Water Flows



	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	8.93	8.06	8.41	9.00	8.60	9.24	9.60	10.90

Urban Wastewater Flows



	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	8.95	10.14	11.22	10.45	10.75	10.15	10.17	8.89

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 JULY 2024**

DATE: **AUGUST 27, 2024**

WATER OPERATIONS:

The average and maximum daily water volumes produced in July 2024 were as follows:

Water Treatment Plant	***Average Daily Production (MGD)***	***Maximum Daily Production in the Month (MGD)***
South Rivanna	7.67	11.03 (7/8/2024)
Observatory	2.54	4.01 (7/22/2024)
North Rivanna	0.58	0.78 (7/29/2024)
Urban Total	10.79	12.76 (7/9/2024)
Crozet	0.75	0.90 (7/3/2024)
Scottsville	0.06	0.079 (7/3/2024)
Red Hill	0.0016	0.003 (7/1/2024)
RWSA Total	11.60	-

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

Status of Reservoirs (as of August 20, 2024):

- Urban Reservoirs are 96% of Total Useable Capacity
  - South Rivanna Reservoir is 100% full
  - Ragged Mountain Reservoir is 92% full
  - Sugar Hollow Reservoir is 100% full
- Beaver Creek Reservoir (Crozet) is 100% 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 July 2024. Performance of the WRRFs in July 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	8.5	<QL	9	<QL	22	0.067	2.2
Glenmore	0.113	2.0	15	5.2	30	NR	NL
Scottsville	0.04	<QL	25	3.9	30	NR	NL
Stone Robinson	0.0002	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 July 2024.

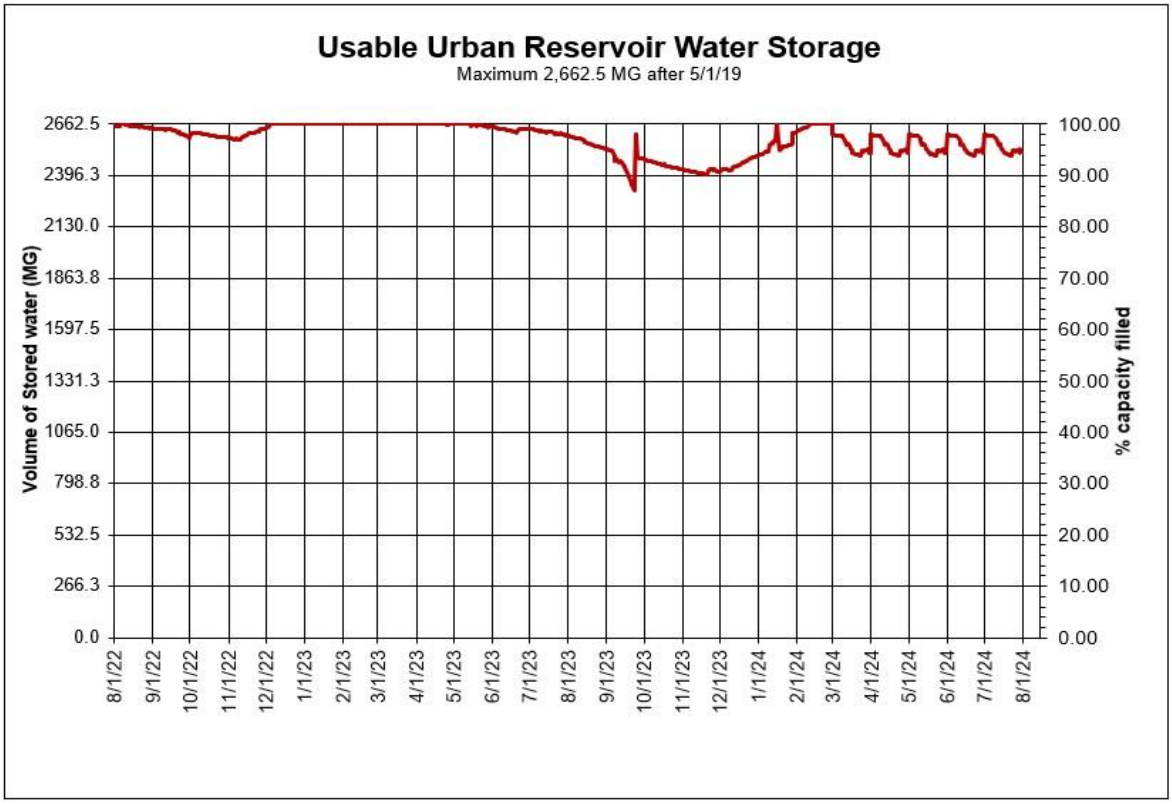
State Annual Allocation (lb./yr.) Permit		*Average Monthly Allocation (lb./mo.) **	*Moores Creek Discharge July (lb./mo.)*	*Performance as % of monthly average Allocation**	*Year to Date Performance as % of annual allocation*
Nitrogen	282,994	23,583	7,593	32%	23%
Phosphorous	18,525	1,636	565	35%	12%

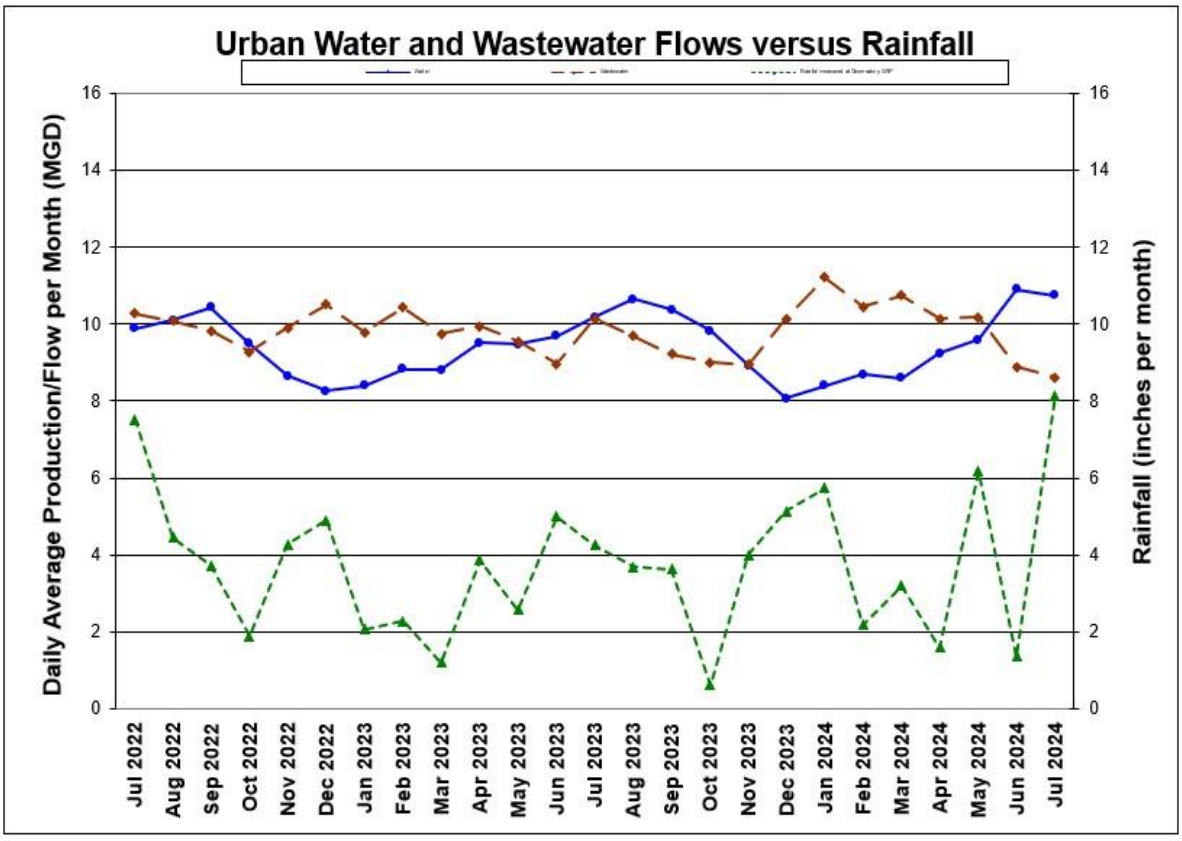
*State allocations are expressed as annual amounts. One-twelfth of that allocation is an internal monthly benchmark for comparative purposes only.

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
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
1/1/24
2/1/24
3/1/24
4/1/24
5/1/24
6/1/24
7/1/24
8/1/24


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
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
Dec 2023
Jan 2024
Feb 2024
Mar 2024
Apr 2024
May 2024
Jun 2024
Jul 2024

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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: **AUGUST 27, 2024**

This memorandum reports on the status of the following major 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/2024/06/2025-2029-CIP-Final-Draft.pdf

Summary

	Project	Construction Start Date	Construction Completion Date
1	MC 5kV Electrical System Upgrades	May 2022	December 2024
2	Rivanna Pump Station Restoration	July 2024	May 2025
3	Red Hill Water Treatment Plant Upgrades	September 2024	March 2026
4	RMR to OBWTP Raw Water Line and Pump Station	January 2025	June 2029
5	MC Building Upfits and Gravity Thickener Improvements	February 2025	December 2026
6	MC Structural and Concrete Rehabilitation	February 2025	May 2027
7	Crozet Pump Stations Rehabilitation	April 2025	September 2027
8	South Fork Rivanna River Crossing	January 2025	January 2027
9	MC Administration Building Renovation and Addition	June 2025	December 2027
10	Central Water Line	May 2025	March 2029
11	Crozet WTP GAC Expansion – Phase I	August 2025	March 2027
12	SRWTP – PAC Upgrades	August 2025	December 2026
13	RMR Pool Raise	September 2025	September 2026
14	SFRR to RMR Pipeline, Intake, and Facilities	February 2026	December 2030
15	Beaver Creek Dam, Pump Station, and Piping	May 2026	January 2030
16	Upper Schenks Branch Interceptor, Phase II	TBD	TBD
17	MC Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades	June 2025	September 2026

Under Construction

1. MC 5kV Electrical System Upgrades
2. Rivanna Pump Station Restoration
3. Red Hill Water Treatment Plant Upgrades

Design and Bidding

4. RMR to OBWTP Raw Water Line and Pump Station
5. MC Building Upfits and Gravity Thickener Improvements
6. MC Structural and Concrete Rehabilitation
7. Crozet Pump Stations Rehabilitation
8. South Fork Rivanna River Crossing
9. MC Administration Building Renovation and Addition
10. Central Water Line
11. Crozet WTP GAC Expansion – Phase I
12. SRWTP – PAC Upgrades
13. RMR Pool Raise
14. SFRR to RMR Pipeline, Intake, and Facilities
15. Beaver Creek Dam, Pump Station, and Piping
16. Upper Schenks Branch Interceptor, Phase II
17. MC Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades

Planning and Studies

18. MCAWRRF Biogas Upgrades
19. Flood Protection Resiliency Study

Other Significant Projects

20. Urgent and Emergency Repairs
21. Security Enhancements

Under Construction

1. MCAWRRF 5kV Electrical System Upgrades

Design Engineer:	Hazen and Sawyer (Hazen)
Construction Contractor:	Pyramid Electrical Contractors (Richmond, VA)
Construction Start:	May 2022
Percent Complete:	65%
Base Construction Contract + Change Order to Date = Current Value:	$5,180,000 - $800,127 = $4,379,873
Completion:	December 2024
Budget:	$5,635,000

Current Status: The fourth (of 5) motor control center replacements is underway. Contractor is pulling new 5kV cable to designated areas of the facility, wiring the new switchgear facility, and beginning the final testing process.

2. Rivanna Pump Station Restoration

Design Engineer:	Hazen/SEH
Construction Contractor:	MEB
Construction Start:	July 2024
Project Status:	Design & Material Acquisition
Completion:	May 2025
Budget:	$22,000,000

Current Status: Instrumentation and controls workshops were completed to review and make modifications to the station programming. A site visit will be conducted in August with the Contractor and electrical subcontractor to review demolition, cleaning and re-installation of conduit and wire inundated by water during the event. Rebuilt pumps will be installed and bypass pumping system removed by March 2025 with full restoration complete in May 2025.

3. Red Hill Water Treatment Plant Upgrades

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	Anderson Construction (Lynchburg)
Construction Start:	September 2024
Percent Complete:	0%
Base Construction Contract + Change Order to Date = Current Value:	$1,742,375
Completion:	March 2026
Budget:	$2,050,000

Current Status: A pre-construction conference and notice-to-proceed will be completed in August. This project received partial grant funding from Albemarle County.

Design and Bidding

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

Design Engineer:	Kimley-Horn
Project Start:	August 2018
Project Status:	Bidding
Construction Start:	January 2025
Completion:	June 2029
Budget:	$45,850,000

Current Status: Advertised for bidding on August 24th. Staff continue to work with UVA on the final easement.

5. MCAWRRF Building Upfits and Gravity Thickener Improvements

Design Engineer:	Short Elliot Hendrickson (SEH)
Project Start:	March 2023
Project Status:	60% Design
Construction Start:	February 2025
Completion:	December 2026
Budget:	$7,500,000

Current Status: 90% design documents will be completed in September.

6. MCAWRRF Structural and Concrete Rehabilitation

Design Engineer:	Hazen and Sawyer (Hazen)
Project Start:	April 2023
Project Status:	90% Design
Construction Start:	February 2025
Completion:	May 2027
Budget:	$11,300,000

Current Status: 100% design documents are being completed.

7. Crozet Pump Stations Rehabilitation

Design Engineer:	Wiley | Wilson
Project Start:	July 2023
Project Status:	90% Design
Construction Start:	April 2025
Completion:	September 2027
Budget:	$10,950,000

Current Status: 100% design documents are being completed. The construction completion date was updated to reflect recent anticipated lead time information for electrical components to be installed.

8. South Fork Rivanna River Crossing

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2020
Project Status:	Bidding
Construction Start:	January 2025
Completion:	January 2027
Budget:	$7,300,000

Current Status: Construction bids are due on September 12, 2024 with an anticipated contract award at the September Board Meeting.

9. Moores Creek Administration Building Renovation and Addition

Design Engineer:	SEH
Project Start:	October 2022

Project Status:	60% Design
Construction Start:	June 2025
Completion:	December 2027
Budget:	$25,000,000

Current Status: 90% design is underway. Selections have been made by the furnishings & finishes committee for color palettes on interior elements. Revised exterior and interior renderings submissions are anticipated by the end of September.

10. Central Water Line

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	90% Design
Construction Start:	May 2025
Completion:	March 2029
Budget:	$47,000,000

Current Status: The acquisition process for two private easements continues. RWSA is negotiating the third easement with UVA along Hereford Drive. Railroad permits were submitted in February 2024. The Norfolk Southern Agreement has been executed and the CSX Agreement is being reviewed. Additional design work associated with a partial reroute of the water line in the East High Street area was necessary as there was not enough subsurface space to install this large 24" water pipe in the intended E. High St. location. Redesign efforts are in process and public outreach efforts to the impacted neighborhoods (Woolen Mills, Martha Jefferson, Belmont-Carlton, and Little High) have been made. An additional private easement will be required with the redesign as well as new easements on two City parcels.

11. Crozet GAC Expansion – Phase I

Design Engineer:	SEH
Project Start:	July 2023
Project Status:	30% Design
Construction Start:	August 2025
Completion:	March 2027
Budget:	$6,550,000

Current Status: The Preliminary Engineering Report has been approved by VDH. A 30% design was submitted and reviewed in July. A 60% design is anticipated in September. $6.24 M in grant funds from VDH have been awarded for this project.

12. SRWTP – PAC Upgrades

Design Engineer:	SEH
Project Start:	November 2023
Project Status:	95% Design
Construction Start:	August 2025
Completion:	December 2026
Budget:	$1,100,000

Current Status: Staff has reviewed 95% design documents, and the project is progressing to 100% and advertisement for bids later this fall. We applied for a Congressionally Directed Spending grant from Senators Kaine and Warner for this project in the amount of $880,000 and have received approval of the grant by the Senate committee. Final grant approval will occur upon approval of the federal budget by Congress and the President.

13. RMR Pool Raise

Design Engineer:	Schnabel
Project Start:	April 2024
Project Status:	20% Design
Construction Start:	September 2025
Completion:	September 2026
Budget:	$5,000,000

Current Status: Geotechnical investigation of the dam has been completed.

14. SFRR to RMR Pipeline, Intake, and Facilities

Design Engineer:	Kimley Horn/SEH
Project Start:	July 2023
Project Status:	40% Design
Construction Start:	February 2026
Completion:	December 2030
Budget:	$79,000,000

Current Status: The Design Engineer continues to work on both the new reservoir intake and the pipe between SFRR and RMR. Installation of a nutrient analyzer at SFRR has been completed and was successfully started up. This is the last step of the water quality study, and a final report is anticipated by September.

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:	45% Design
Construction Start:	May 2026
Completion:	January 2030
Budget:	$47,100,000

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. Geological, survey, and other field investigative work for the dam design are underway. Documents are being developed for acquisition or lease of property for the Pump Station from the County.

16. 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.

17. MC Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades

Design Engineer:	Hazen and Sawyer (Hazen)
Project Start:	June 2023
Project Status:	50% Design
Construction Start:	June 2025
Completion:	September 2026
Budget:	$3,600,000

Current Status: The 50% design workshop was completed in July. As approved at the Board Meeting last month, additional improvements to the current septage receiving equipment and billing software, and an additional flood resiliency evaluation were approved in a new work authorization and those design efforts are moving forward.

Planning and Studies

18. 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 biogas.

19. Flood Protection Resiliency Study

Design Engineer:	TBD
Project Start:	August 2024
Project Status:	Preliminary Engineering/Study
Completion:	July 2025
Budget:	$278,500

Current Status: This project will identify individualized flood mitigation measures of six facilities to increase their resiliency from a 1% flooding event to a 0.2% flooding event. Facilities include: Mechums River Raw Water PS, Glenmore WW PS, Moores Creek AWRRF, Scottsville WWRRF, Crozet FET, and Crozet WW PS #2. This project received $198,930 in grant funding from FEMA and VDEM.

Other Significant Projects

20. 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
2024-03	MCAWRRF Secondary Clarifier #4 Equipment Failure	$150,000

- 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 seven (7) sites, all along the South Rivanna Waterline. Three replacements have been completed at this time. The Contractor is working with VDOT on permits to continue the work.
- MCAWRRF Secondary Clarifier #4 Equipment Failure: On Sunday Evening, March 3rd, RWSA Wastewater Department staff identified that Secondary Clarifier #4 at MCAWRRF appeared to have a significant mechanical malfunction. Upon further review by staff, the rotating arm of the clarifier mechanism caught the stationary arm, wrapping it around the center of the clarifier. Staff mobilized MEB General Contractors under its On-Call Maintenance Construction Services Contract with Faulconer, and the clarifier was back up and operational with just one stationary arm on Friday, March 8th. Staff are waiting on the necessary parts to complete repairs to the clarifier arms, but in the meantime, the clarifier is operational should it be needed for wet weather events. The remaining repairs will be completed by the RWSA Maintenance Department.

21. Security Enhancements

Design Engineer:	Hazen & Sawyer
Construction Contractor:	Security 101 (Richmond, VA)
Construction Start:	March 2020
Percent Complete:	90% (WA9), 95% (WA10)
Based Construction Contract + Change Orders to Date = Current Value:	$718,428 (WA1) + $834,742 (WA2-10)
Completion:	June 2024 (WA9), August 2024 (WA10)
Budget:	$2,810,000

Current Status: WA9 will include installation of card access on all exterior doors at the South Rivanna WTP. WA10 will include installation of card access on the exterior doors of the finished water pump station and "795" tank buildings in Scottsville. Device installation is complete here as well, with programming and startup ongoing. Design of MCAWRRF entrance modifications with Hazen & Sawyer 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 have submitted appropriate permitting documents to Albemarle County.

RIVANNA WATER & SEWER AUTHORITY
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MEMORANDUM

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

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

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

SUBJECT: **ADMINISTRATION AND COMMUNICATIONS REPORT**

DATE: **AUGUST 27, 2024**

Human Resources

There has been no employee turnover for the Rivanna Water & Sewer Authority from July 1 through August 9, 2024.

Polihire, the recruiting firm we are using for the Deputy Executive Director position, has begun recruiting for that job. You can see the announcement on their website at https://polihire.com/searches/rivanna-deputy-executive-director/.

We have chosen PRM Consulting Group, Inc. out of Washington, D.C. to complete a Classification and Compensation Study.

We are currently working with Mauricio Velaquez for the Diversity Training Group to set up a training session about Diversity, Equity, and Inclusion for our leadership team.

Safety

Our Safety Manager submitted grants for safety equipment to our insurance company, VRSA.

We are currently testing an incident reporting system through Paychex, our payroll processing provider. We will begin doing live testing by October 1, 2024, with a planned go-live date of January 1, 2025.

Community Outreach

We are continuing work on our new website, rivannawater.org with RedOrange Studios.

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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 JULY 2024**

DATE: **AUGUST 27, 2024**

The monthly and average daily Urban water system usages by the City and the ACSA for July 2024 were as follows:

		Month	***Daily Average***	
City Usage (gal)		163,431,699	5,271,990	**49.0%**
ACSA Usage (gal)		169,833,859	5,478,512	**51.0%**
Total (gal)		**333,265,558**	**10,750,502**	

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 August 2023), 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.

All of the wholesale meters received an annual recalibration in July 2024.

Note 1 – During the month of July, Meter 26 was damaged by a road construction contractor. The meter was out of service for most of July. Dominion has since restored the damaged power supply to the meter; however, it is still not working properly. RWSA staff is working with the meter manufacturer to trouble shoot and repair the remaining issues. The totals from meter 26 this month reflect an average of the previous 3 months, which is the missing data procedure stipulated in the metering agreement.

Figure 1: City of Charlottesville Monthly Water Usage and Allocation

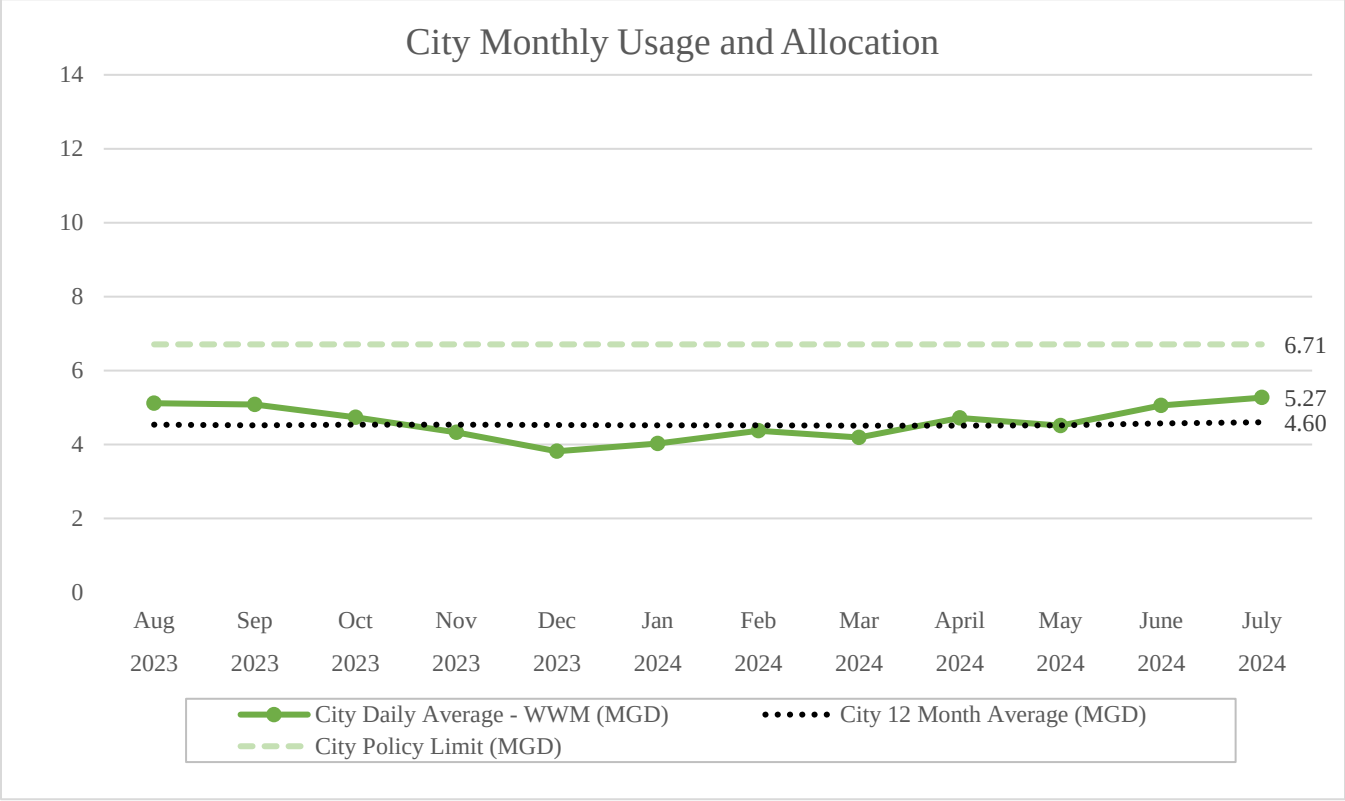
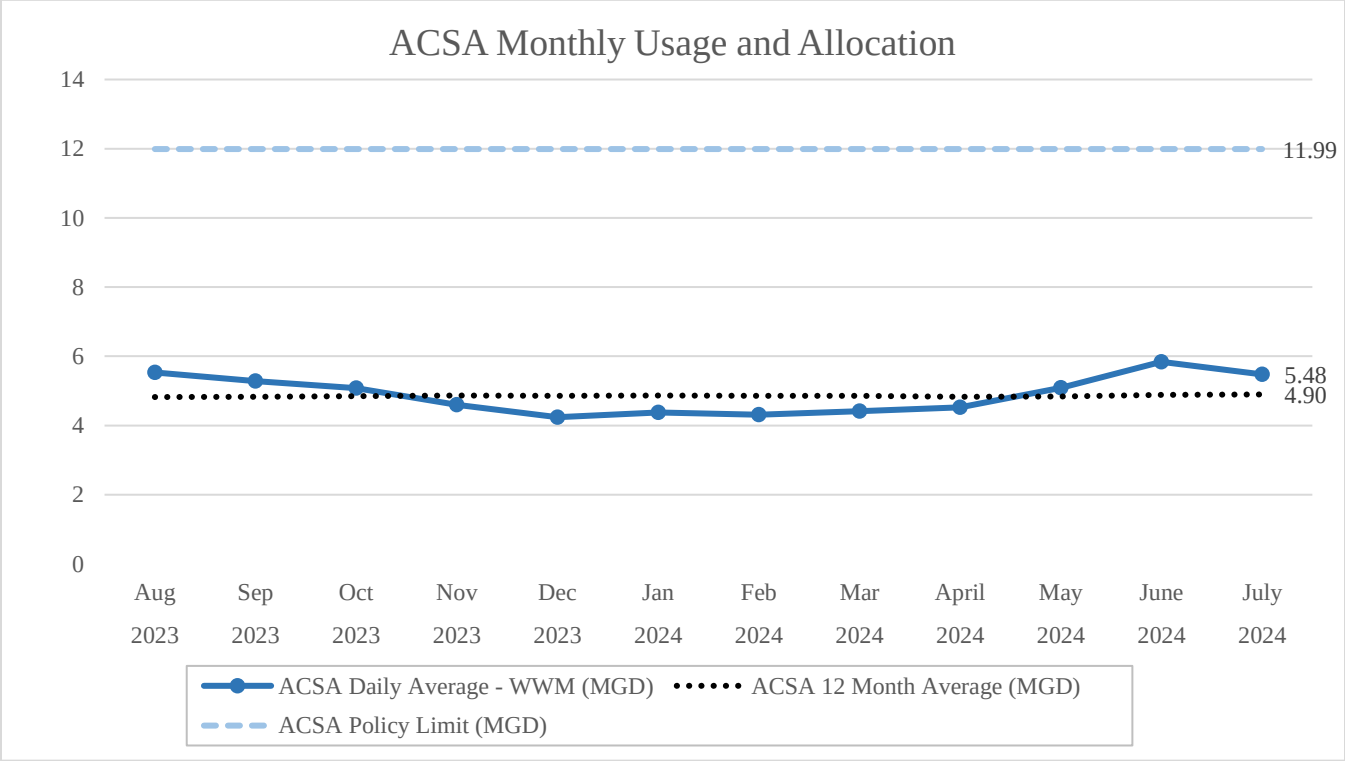


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation



Meter Locations for the Wholesale Water Metering Project

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

FROM: **BETHANY HOUCHENS, WATER RESOURCES COORDINATOR**
DAVE TUNGATE, DIRECTOR OF OPERATIONS & ENVIRONMENTAL SERVICES

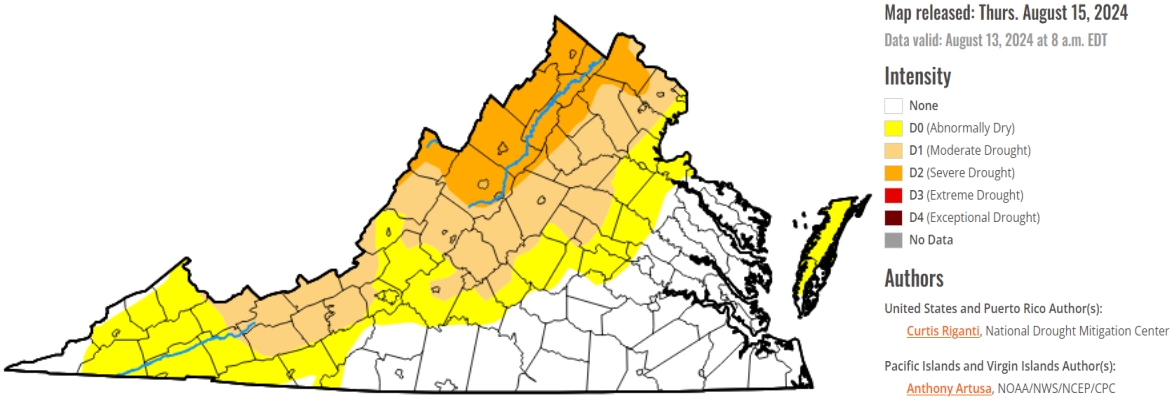
REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **DROUGHT MONITORING REPORT**

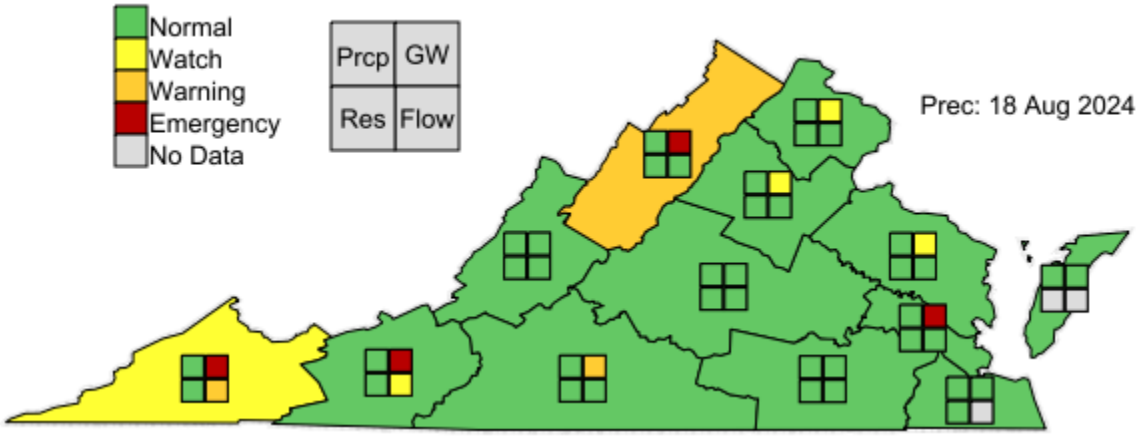
DATE: **August 27, 2024**

State and Federal Drought Monitoring as of August 19, 2024:

- U.S. Drought Monitoring Report: Indicates Charlottesville and most of Albemarle County are experiencing moderate drought conditions. A portion of Northwestern Albemarle is experiencing severe drought.



- VDEQ Drought Status Report: Our region was downgraded from being in a "Watch" status for drought conditions to "Normal".



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 – Dec	26.95	41.61	-14.66	-35
2024	Jan - July	18.19	25.36	-7.17	-28.3

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

USGS Stream Gaging Station Near the Urban Area (August 13–19)				
Gage Name	Rolling 7-day Avg. Stream Flow		Median Daily Streamflow	
	cfs	mgd	cfs	mgd
Mechums River	40	25.7	27	17.5
Moormans River	19.9	12.9	13	8.4
NF Rivanna River	32.4	21	23	14.9
SF Rivanna River	90	58.1	67	43.3

Median daily flow: August 19th for the period of record (approx. 30 - 80 years)

Status of Reservoirs as of August 19, 2024

- Urban Reservoirs are 95.91 % of Total Useable Capacity
- Beaver Creek Reservoir (Crozet) is 100 % of Total Useable Capacity
- Totier Creek Reservoir (Scottsville) is 100% of Total Useable Capacity

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

Annual Reservoir Update

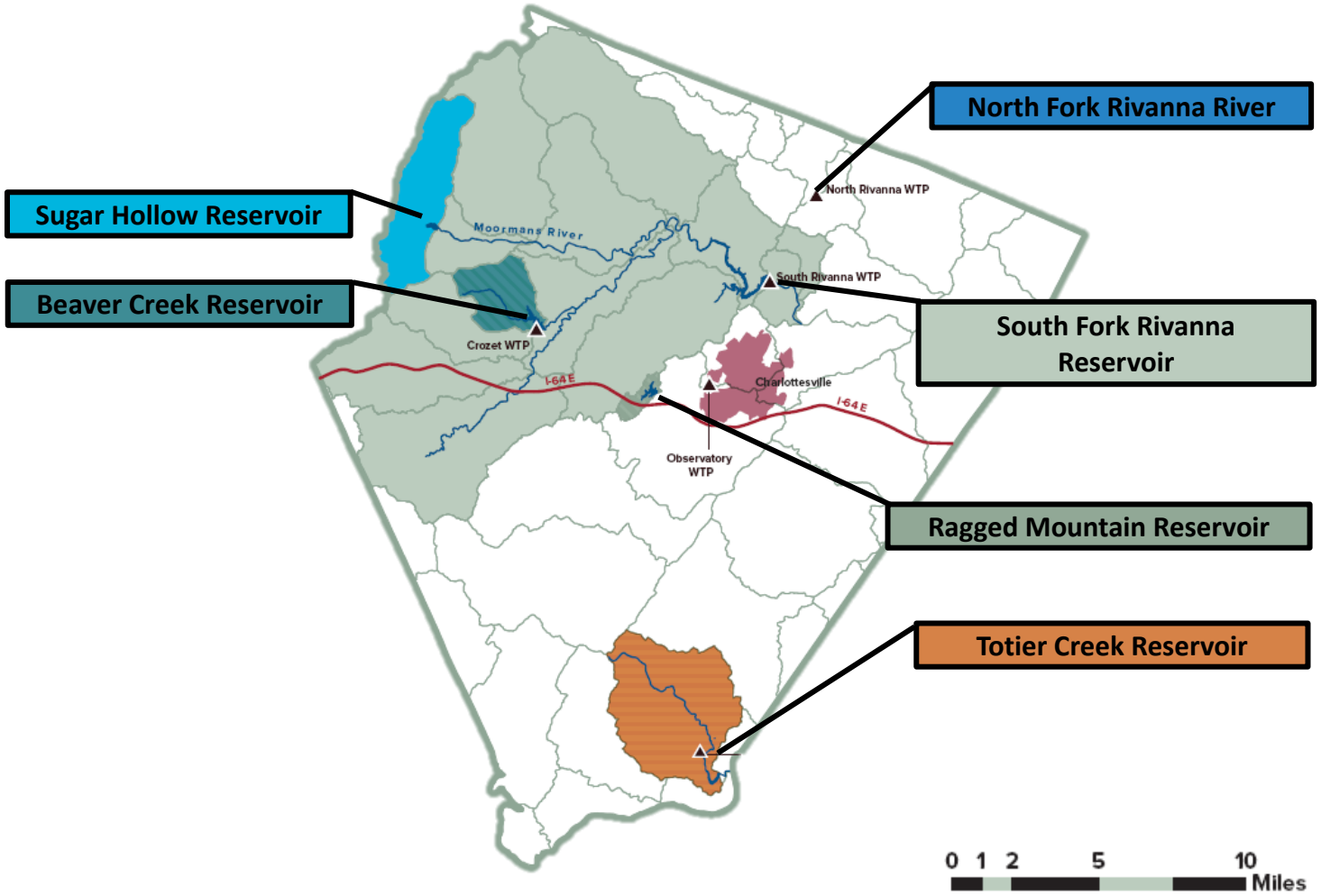
PRESENTED BY: BETHANY HOUCHENS

WATER RESOURCES COORDINATOR

BOARD OF DIRECTORS MEETING

AUGUST 27, 2024

RIVANNA WATER & SEWER AUTHORITY



RWSA's Water Supply Resources

City Reservoirs
South Rivanna
Ragged Mountain
Sugar Hollow
County Reservoirs
Beaver Creek
Totier Creek

Reservoir Statistics

Reservoir	Volume* (MG)	Surface Area (Acres)	Watershed (Sq Miles)	Watershed land use
South Fork Rivanna	885	366	259	Rural, Farmland, Forest
Ragged Mountain	1,438	170	2	Primarily Forested
Sugar Hollow	339	47	18	Forested
Beaver Creek	500	104	10	Rural, Farmland, Forest
Totier Creek	155	66	29	Rural, Farmland, Forest

* Data Sources

- South Rivanna 2018 bathymetry Next survey in 2028
- Ragged Mountain 2018 bathymetry Next survey in 2028
- Sugar Hollow 2015 bathymetry Next survey in 2025
- Beaver Creek 2016 bathymetry Next survey in 2026

Reservoir Monitoring Program

- Goal is to collect data to better understand the biological processes in our reservoirs to make water treatment decisions
  - Established baseline data in 2014
  - Annual review of program data by consultant
  - South Rivanna and Ragged Mountain Reservoirs are sampled twice a month (April-Nov)
  - Totier Creek Reservoir is sampled monthly (June-July)

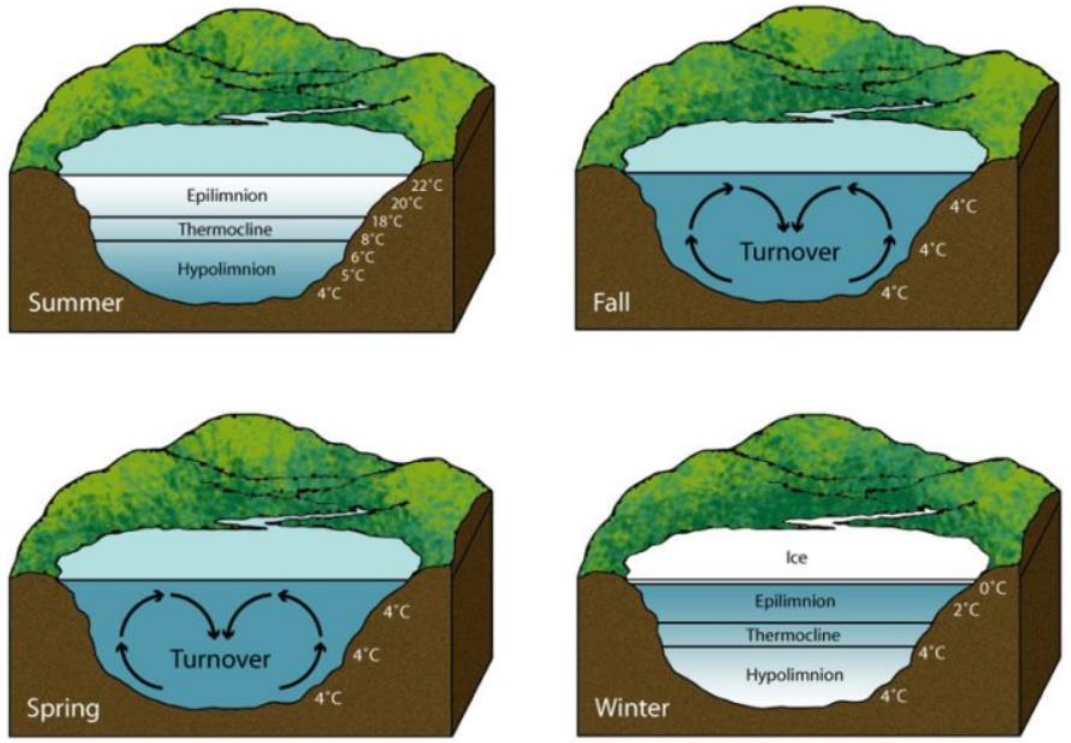
Intern using Kemmerer at South Rivanna Reservoir

Secchi Disk

Reservoir Characteristics

- Stratification - The separation of water in a reservoir into stable layers of differing densitie and temperatures. Most prominent in summer months.

- Turnover – Seasonal mixing of a reservoir that occurs when the outside temperatures cool.



Source National Geographic Society
https://education.nationalgeographic.org/resource/lake/

Reservoir Monitoring Trends

Beaver Creek

- Stratification in early May
- Turnover in mid November
- Reservoir anoxic at depths by late May
- Total phosphorus from sediments and streams lower in 2023-2024 than previous years

South Fork Rivanna

- Run-of-the-River reservoir
- Stratification variable each year ~May
- Turnover in early October

Ragged Mountain

- Stratification in early May
- Turnover in late November


South Rivanna Dam

2023-2024 Algae Applications *

Year	South Rivanna	Beaver Creek	Ragged Mountain	Sugar Hollow	Totier Creek
2023	2	8	1**	0	0
2024	1	4	0	0	0

* January 1, 2023 – August 20, 2024

** Treatment at RMR was for Dinobryon (not a blue green algae) which is a taste and odor producer

Treatment Contractor Boat


Sugar Hollow Reservoir

Land Use Management

Coordinate with City and County on land management around reservoirs

- Recreational access / boat docks
- Law enforcement
- Safety

Working with City and County to incorporate areas of RWSA leased land adjacent to Sugar Hollow into the Forest Legacy Program

Reservoir Surveillance

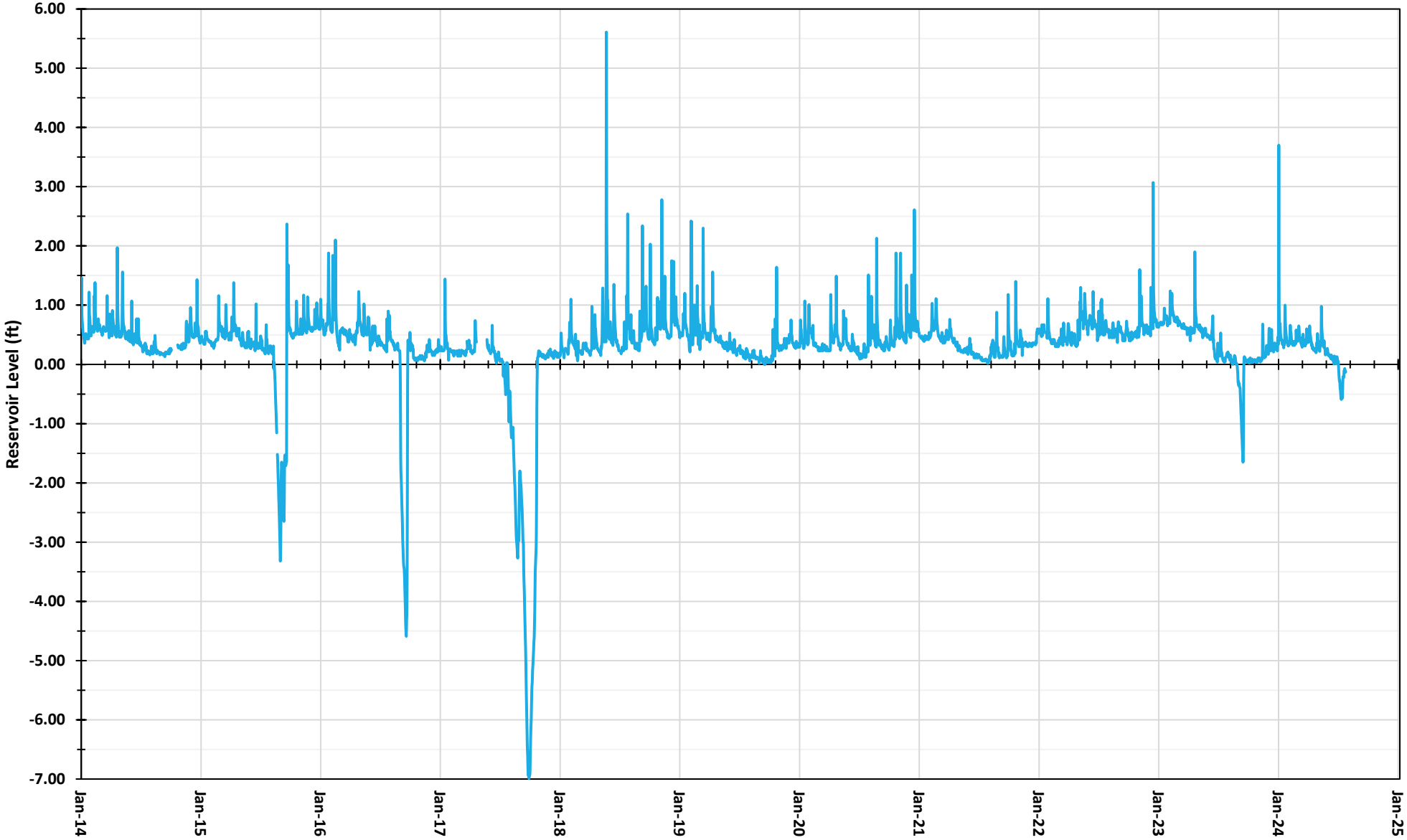
RWSA conducts boat surveys of our reservoirs

- Twice a year at Beaver Creek, South Rivanna, and Ragged Mountain
- Once a year at Sugar Hollow and Totier Creek
- Inspecting for:
  - Trash
  - Dump sites
  - Illicit discharges
  - Unauthorized withdrawals
  - Invasive aquatic weeds (hydrilla)
  - Potential Water Protection Ordinance violations

Source Water Protection Initiatives

- Participate in Rivanna Riverfest with partner organizations
- Participate in Rivanna River Forest Health and Resilience Partnership
- Participate on Rivanna Conservation Alliance Science Advisory Committee
- Participate in the Southeastern Partnership for Forest and Water

South Fork Rivanna Reservoir 2014-Present



South Fork Rivanna Reservoir Level 2014-Present

- Years that never fell below normal pool level:

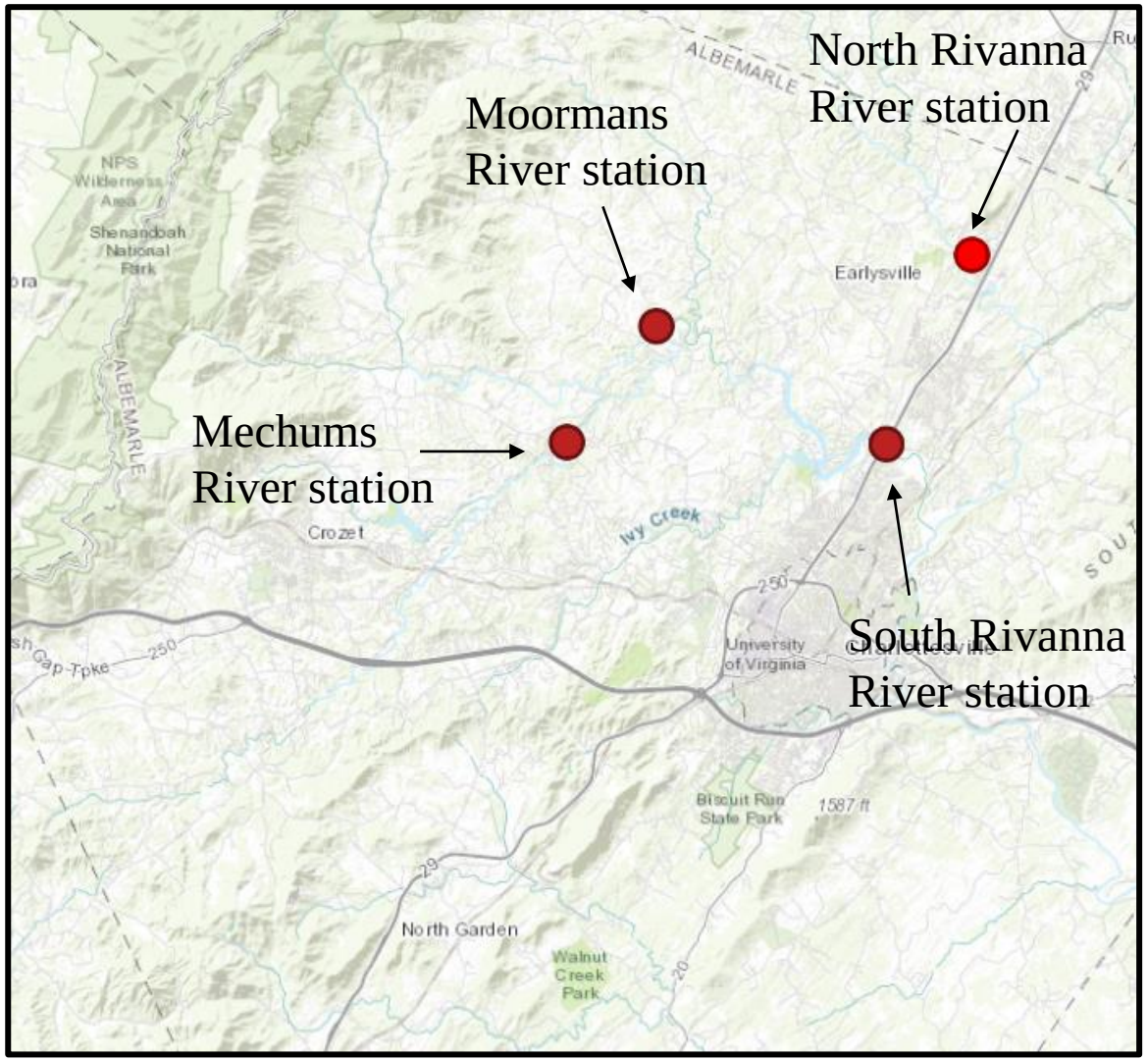
  2014, 2018, 2019, 2020, 2021, 2022

- Years that lost spill: 2015, 2016, 2017, 2023, 2024
  - # Days/year Reservoir below pool level:
    - 2015: 40 days
    - 2016: 22 days
    - 2017: 100 days
    - 2023: 20 days
    - 2024: 30 days

Tropical Depression Debby

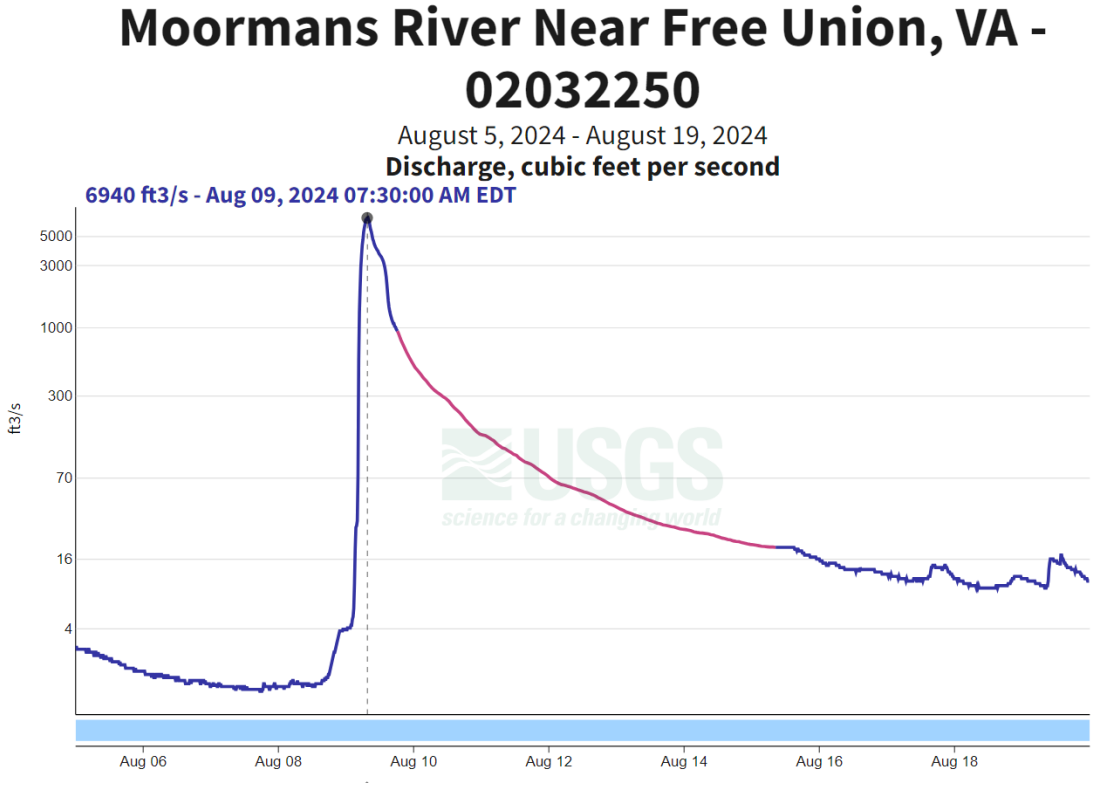
South Rivanna Dam on 8/9

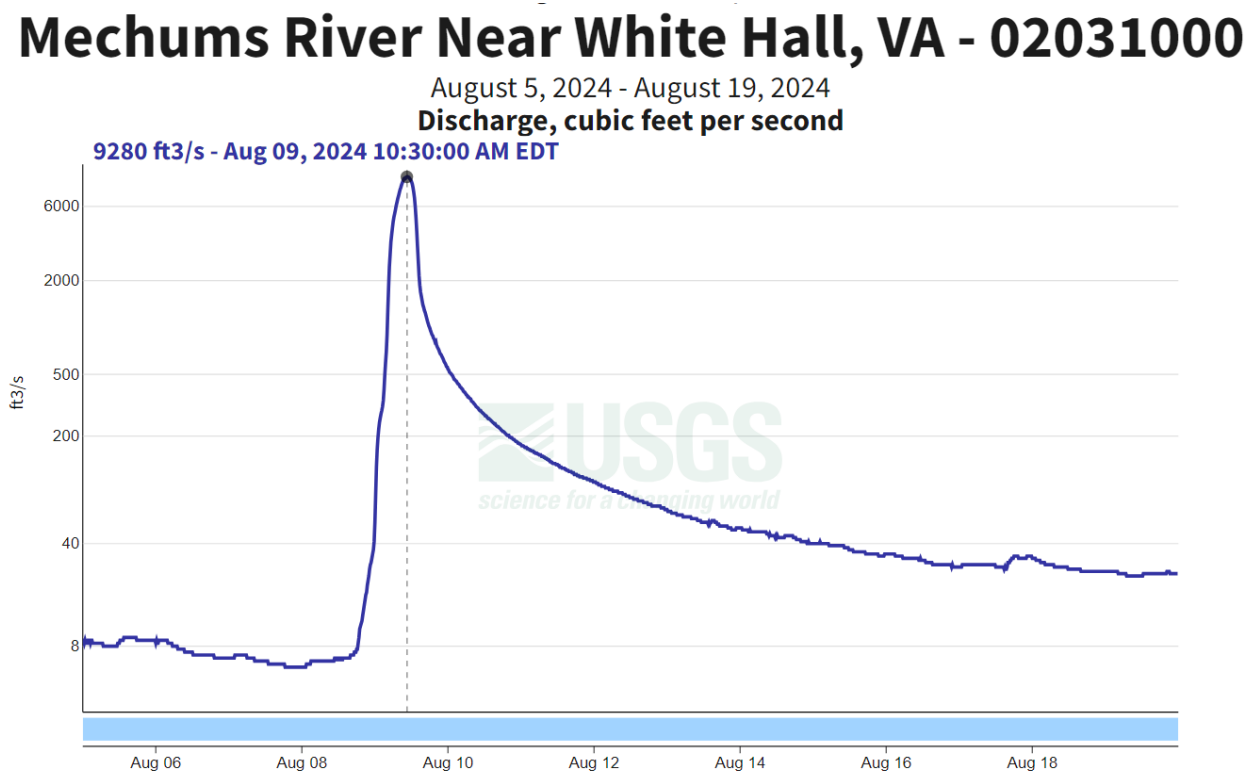
Reservoir Name	48 Hour Rainfall 8/8 to 8/9 (inches)
South Rivanna	3.66
Ragged Mountain	5.2
Sugar Hollow	6.09
Beaver Creek	6.45
Totier Creek	4.31



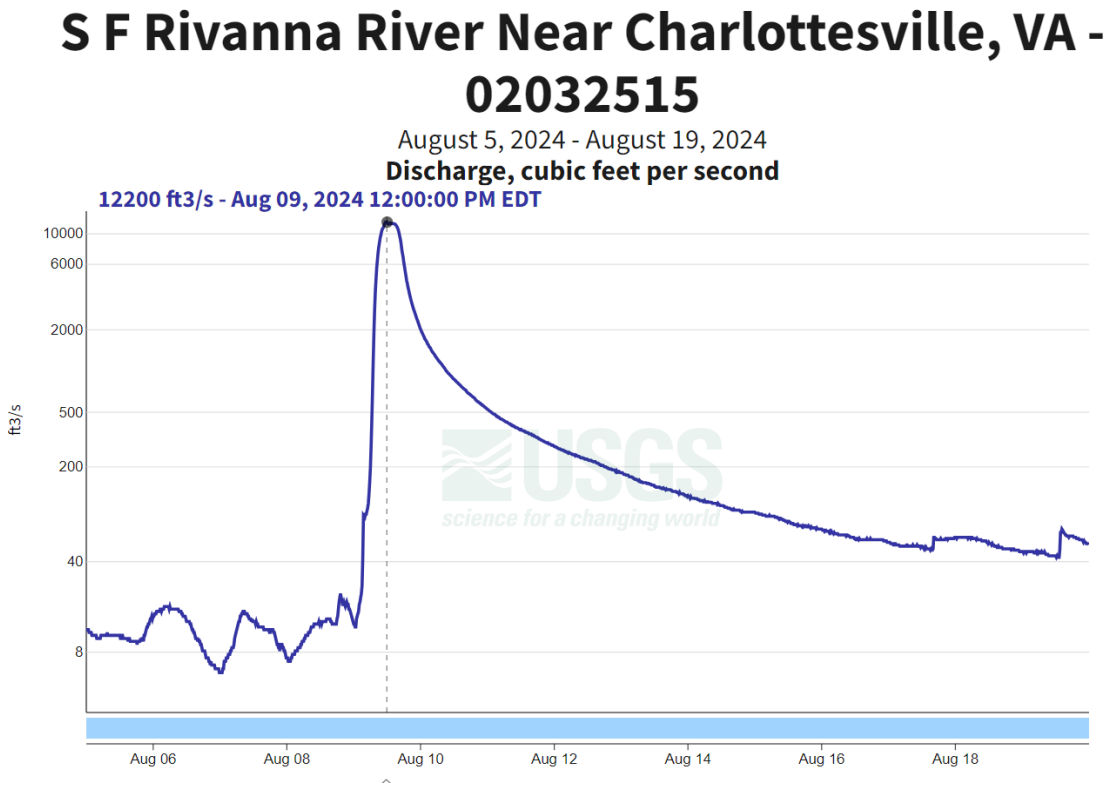
USGS Streamflow Gaging Stations

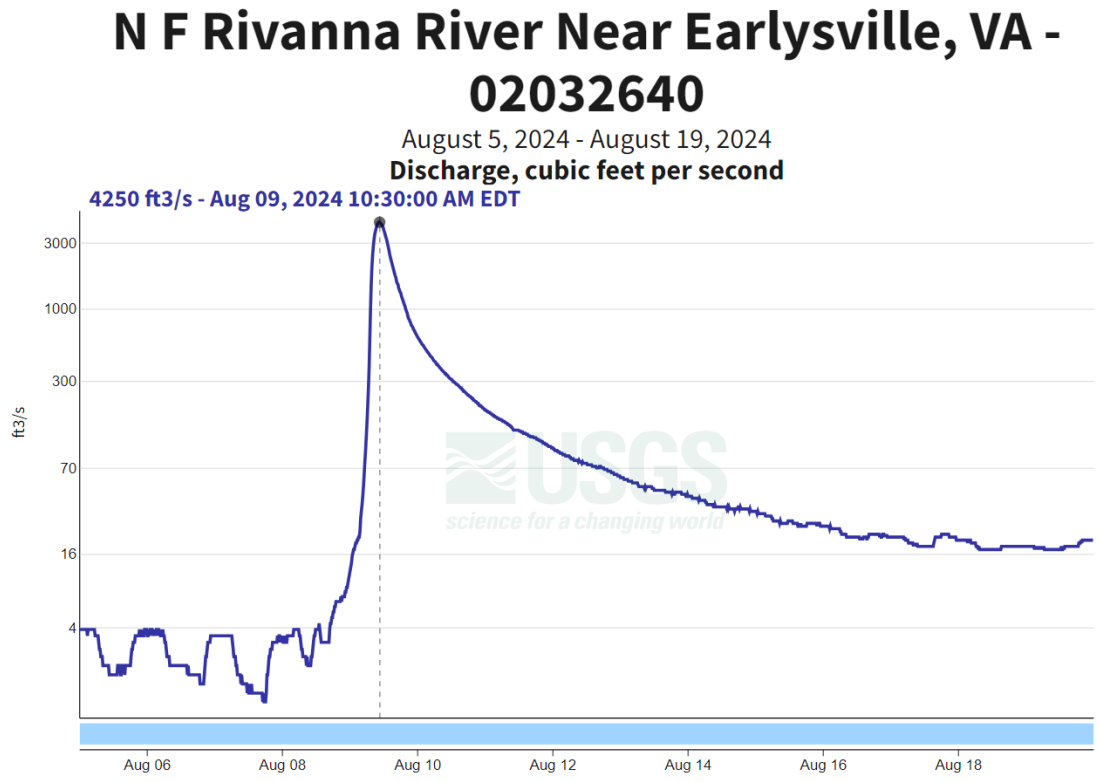
Flow rates at USGS Gaging stations August 5-19





Flow rates at USGS Gaging stations August 5-12





Summary

RWSA has a:

- proactive reservoir monitoring program that informs water treatment decision-making
- active Source Water Protection program
- partnership with the County on Water Protection and land use around reservoirs
- every decade program to monitor reservoir capacities and community water demand forecasts

Questions?

Ragged Mountain Reservoir

Water Treatment Facilities Overview

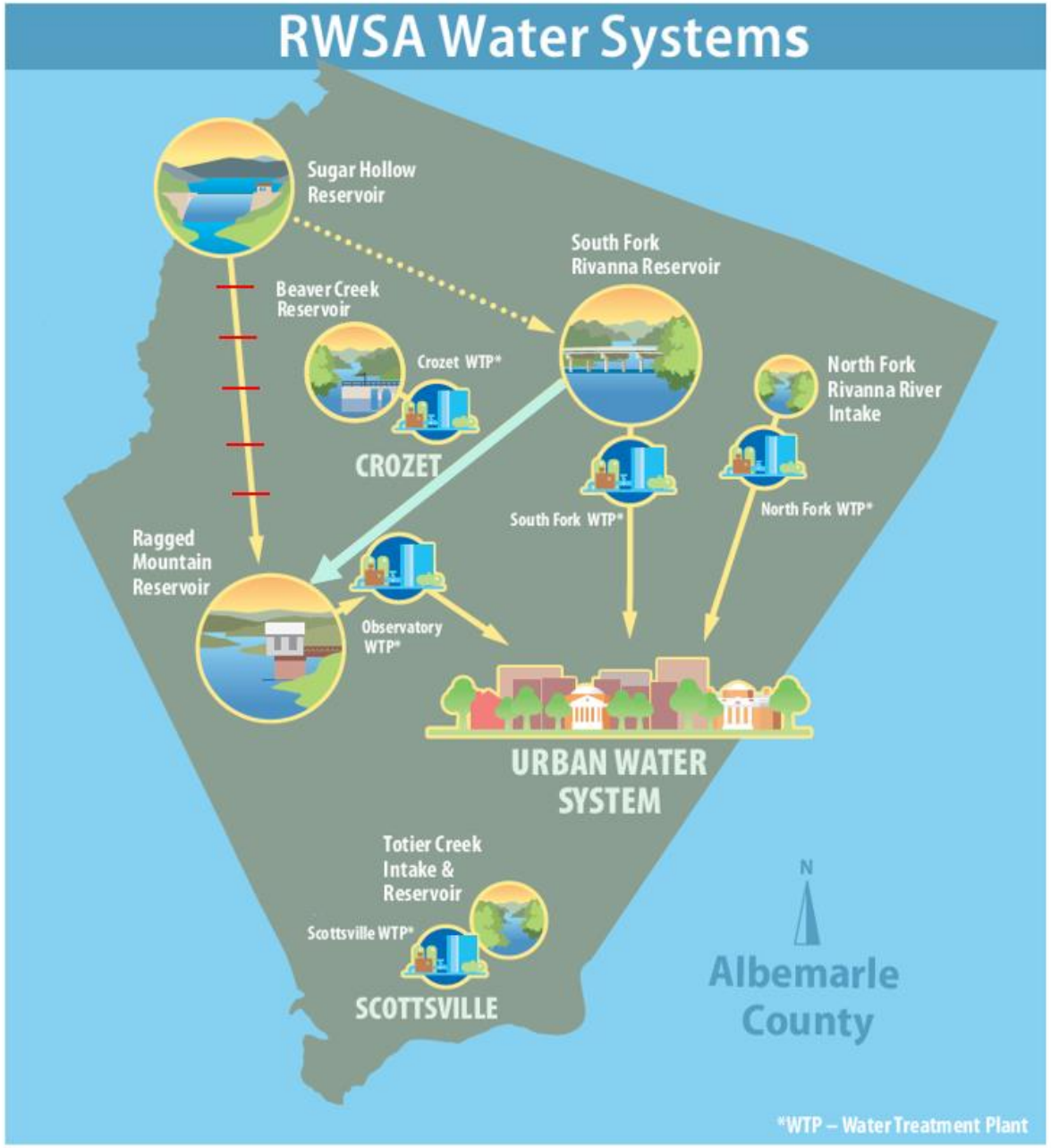
PRESENTED BY:

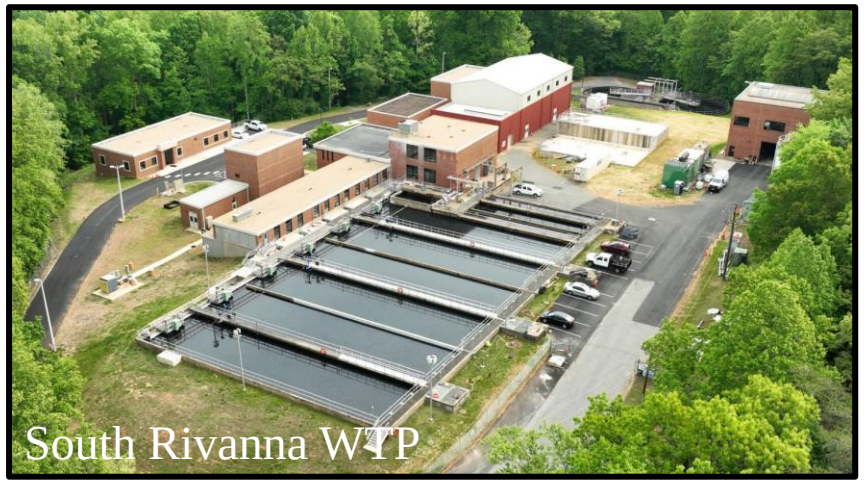
DAVE TUNGATE, DIRECTOR OF OPERATIONS

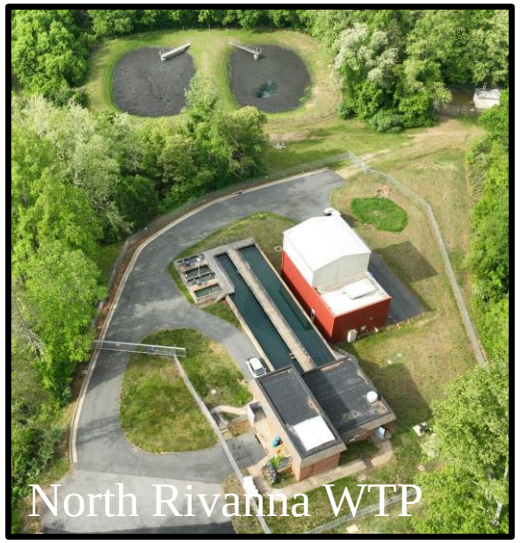
BOARD OF DIRECTORS MEETING

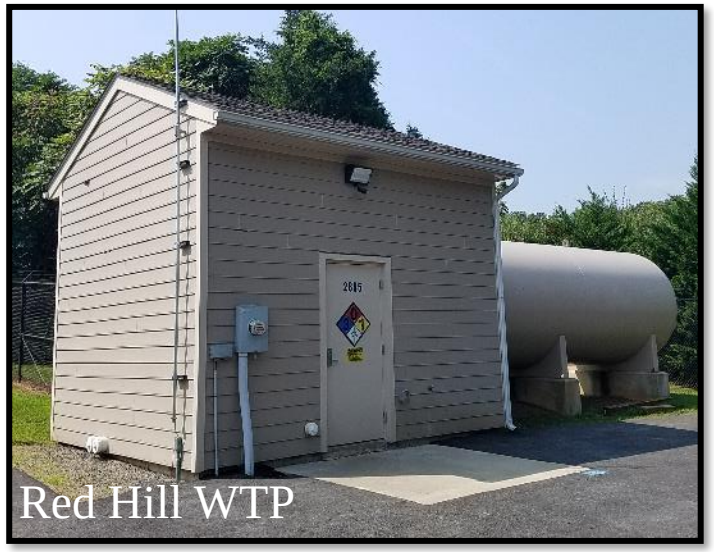
AUGUST 27, 2024

RIVANNA WATER & SEWER AUTHORITY


RWSA Water Systems
Sugar Hollow Reservoir
Beaver Creek Reservoir
Crozet WTP*
CROZET
South Fork Rivanna Reservoir
South Fork WTP*
North Fork Rivanna River Intake
North Fork WTP*
Ragged Mountain Reservoir
Observatory WTP*
URBAN WATER SYSTEM
Totier Creek Intake & Reservoir
Scottsville WTP*
SCOTTSVILLE
N
Albemarle County
*WTP – Water Treatment Plant





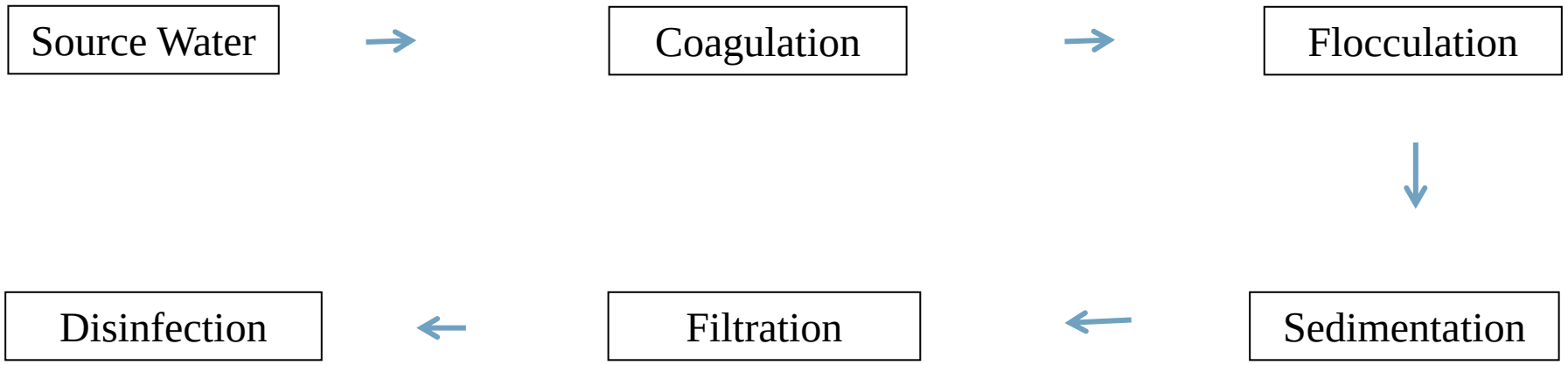


6 Water Treatment Plants

Water Production Capacity

Treatment Plant	Permitted Capacity (MGD)	2023 Average Production (MGD)
South Rivanna	12.0	8.18
Observatory	7.7	0.79
North Rivanna	2.0	0.43
Urban Total	**21.7**	**9.40**
Crozet	1.6	0.62
Scottsville	0.25	0.05
Red Hill	0.0068	0.002
Total	**23.61**	**10.07**

Conventional Surface Water Treatment



Could add pictures here for each step

South Fork Rivanna Reservoir

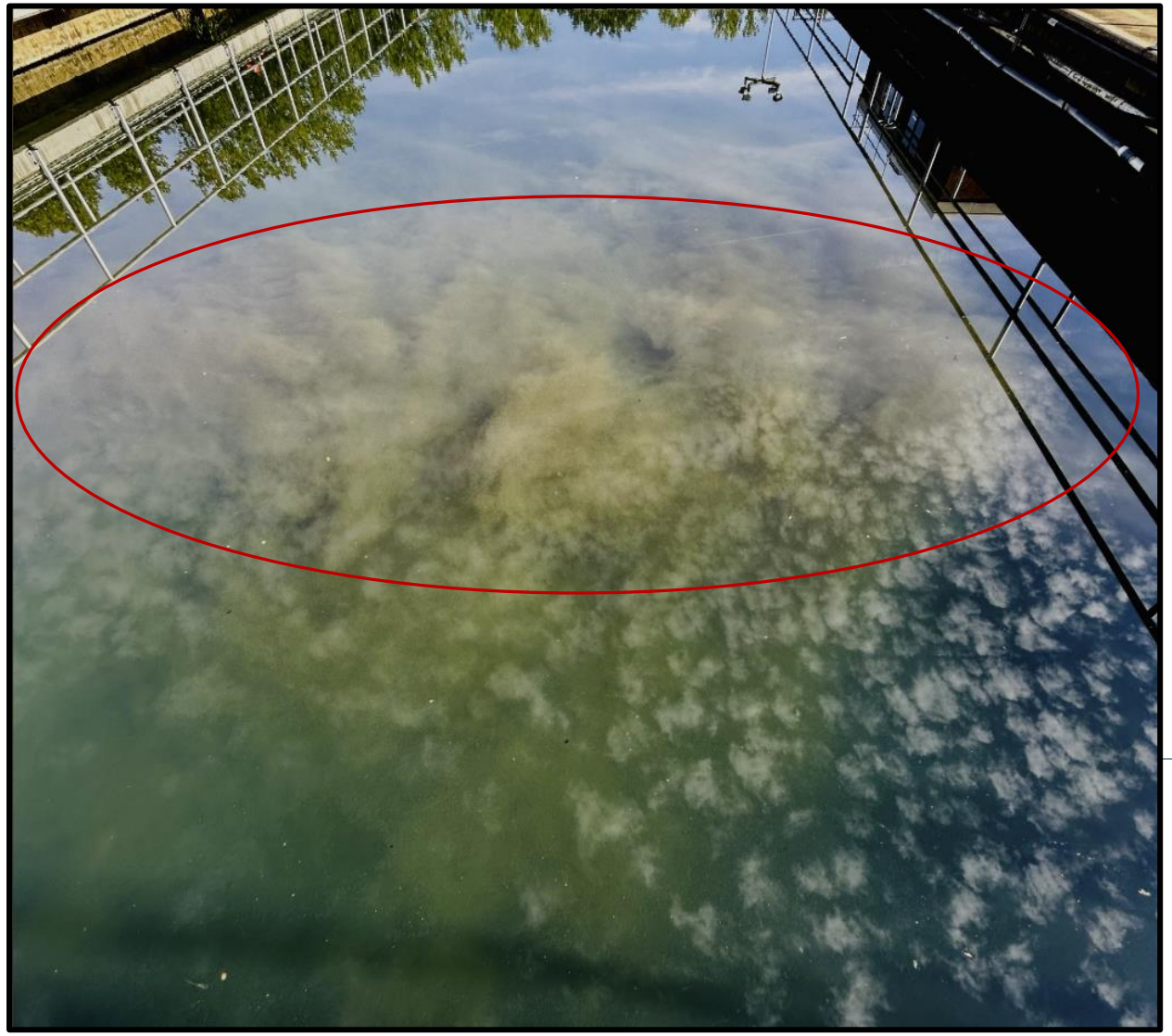
South Fork Rivanna Reservoir

Typical water treatment additives

- Aluminum Sulfate – Coagulant to improve particle settling
- Liquid Lime – pH adjustment
- Sodium Hypochlorite – Disinfection and oxidation
- Orthophosphate – Corrosion control in the piping system
- Hydrofluorosilicic Acid (Fluoride) – Dental health

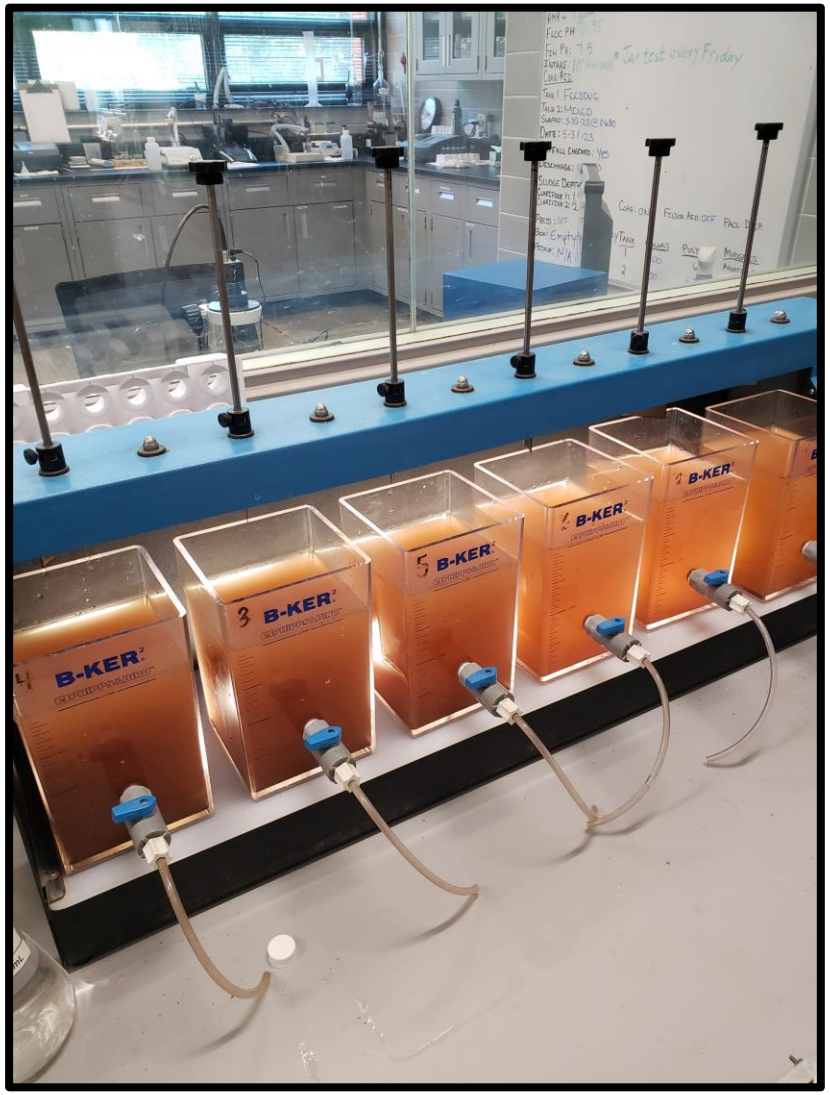
South Rivanna Raw Water Pump Station

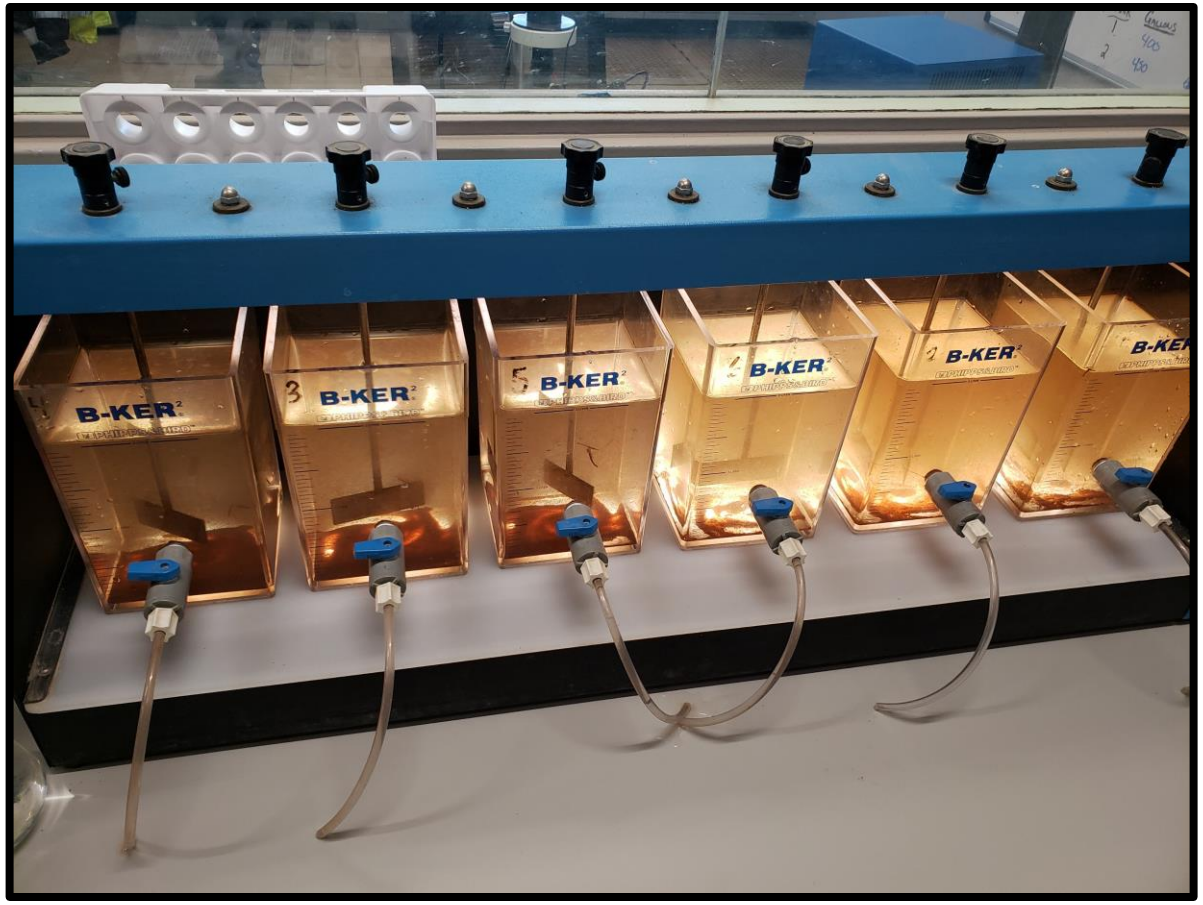
South Rivanna flocculators and sedimentation basins

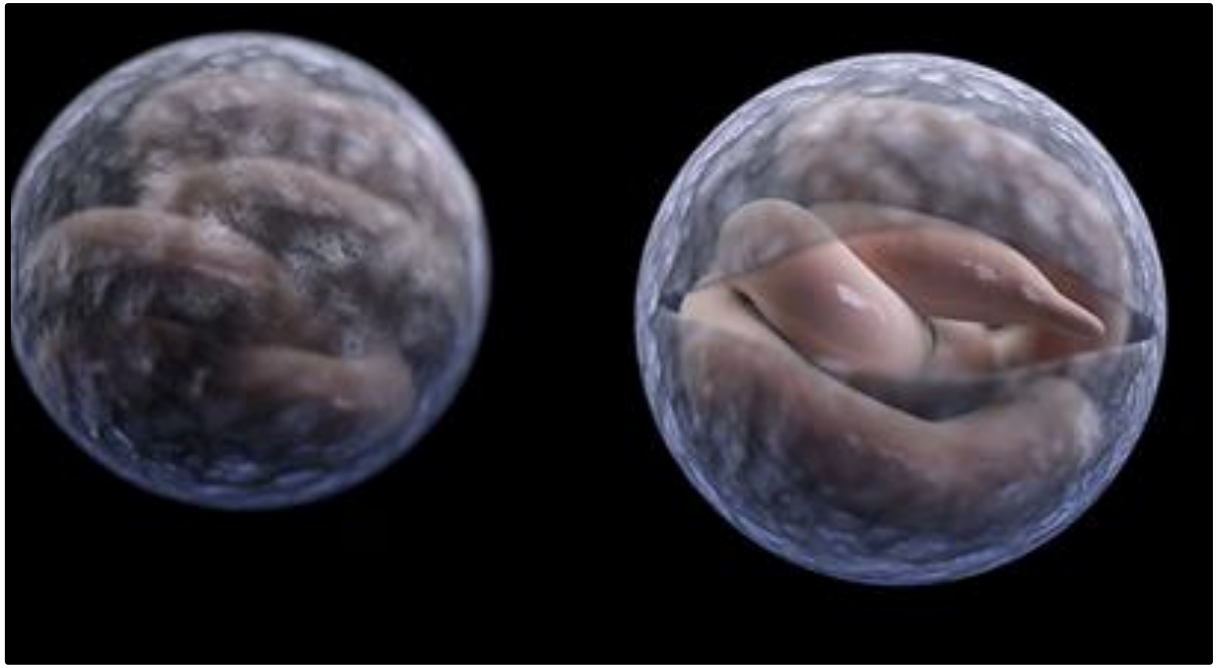


Flocculated particles entering sedimentation basins

Water treatment jar test







Giardia & Cryptosporidium

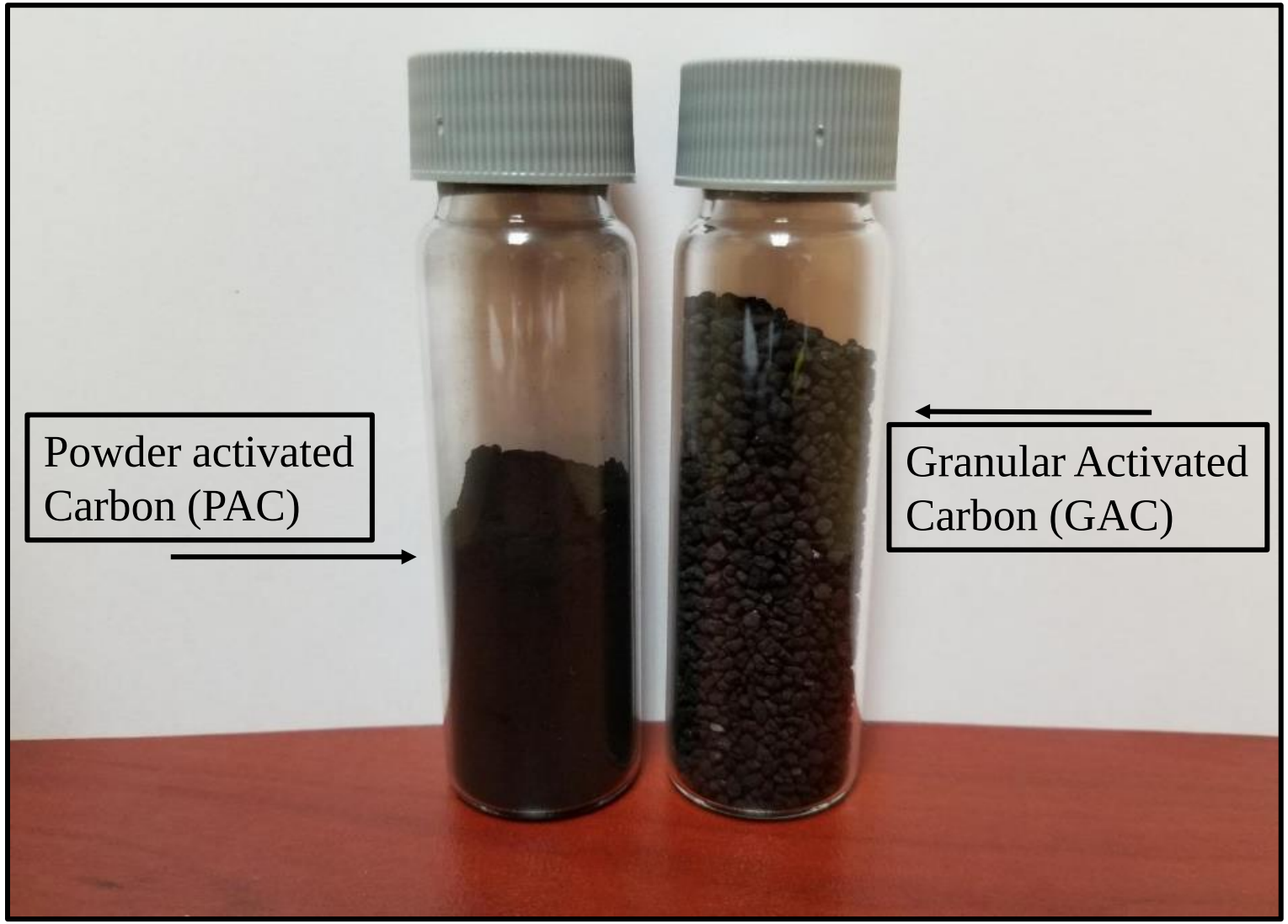
Filters at Observatory Water Treatment Plant

Filter Turbidimeter

Benchtop Turbidimeter

Finished Water Pumps

Activated Carbon



South Rivanna PAC slurry application point

Granular Activated Carbon Contactors

South Rivanna WTP
8 Contactors
320,000 pounds of GAC
8 MGD Capacity

Observatory WTP
6 Contactors
240,000 pounds of GAC
6 MGD Capacity

North Rivanna WTP
1 Contactor
40,000 pounds of GAC
1 MGD Capacity

Crozet WTP
2 Contactors
40,000 pounds of GAC
1 MGD Capacity

Scottsville WTP
2 Contactors
12,000 pounds of GAC
0.25 MGD Capacity

Drinking Water testing and reporting requirements

Monthly reports submitted to Virginia Department of Health include the following:

- Daily volume of water pumped in and out of each water plant
- Daily chemical dosage at each water plant (coagulant, lime, powder activated carbon, polymer, corrosion inhibitor, chlorine, and fluoride)
- Filter turbidity, water temperatures, and pH are reported
- Finished water chlorine residuals and disinfection calculations
- Total Coliform sample results for all 4 water systems
- Safe Drinking Water Act data is posted to EPA central data exchange website. RWSA confirms the data.

FY 2025 Water Operating budget

FY 2025 Operating budget highlights:

- $3.10 Million for employee salaries
- $2.51 Million for water treatment chemicals
- $900,000 for utilities (electricity, natural gas, LP)

FY 2024

- Produced 3.45 Billion Gallons of drinking water
- Production costs are $3.81 per 1,000 gallons

Water Treatment Plants

South Rivanna

Class I Facility
Serves Urban System
12 MGD Capacity
Staffed 24 hours/365
2 Operators per shift
4 shifts per week

- Class 1 Operator
- Class 1 Operator
- Class 1 Operator
- Class 1 Operator
- Class 1 or Less Operator
- Class 1 or Less Operator
- Class 1 or Less Operator
- Class 1 or Less Operator
- Class 1 or Less Operator
- WQ Specialist

10 Total Operators

Observatory

Class I Facility
Serves Urban System
10 MGD Capacity
Staffed 12 hours/365
2 Operators per shift
2 shifts per week

- Class 1 Operator
- Class 1 Operator
- Class 1 or Less Operator
- Class 1 or Less Operator

4 Total Operators

North Rivanna

Class II Facility
Serves Urban System
2 MGD Capacity
Staffed 8 hours/365
1 Operator per shift
2 shifts per week

- Class 1 Operator
- Class 2 Operator

2 Total Operators

Crozet

Class II Facility
Serves Crozet System
2 MGD Capacity
Staffed 12 hours/365
1 Operator per shift
2 shifts per week

- Class 1 Operator
- Class 1 Operator

2 Total Operators

Scottsville

Class III Facility
Serves Scottsville System
0.25 MGD Capacity
Staffed 8 hours/365
1 Operator per shift
2 shifts per week

- Class 2 Operator
- Class 2 Operator

2 Total Operators

Red Hill

Class IV Facility
Serves Red Hill System
0.006 MGD Capacity
Visited Daily/365
Monitored 24/7
Operates as needed

- Visited Daily

Total Water Operators: 22
Total Staff: 27

Relief Operators

- Class 1 Operator
- Class 1 Operator
- Class 1 Operator

3 Total Operators

Management Staff

- Water Manager
- Assist. Manager
- Supervisor
- Supervisor

4 Total

Questions?

Ragged Mountain Reservoir

Virginia Water Protection Program Overview

Presented to the Board of Directors

By Jennifer Whitaker, PE

Director of Engineering & Maintenance

August 27, 2024

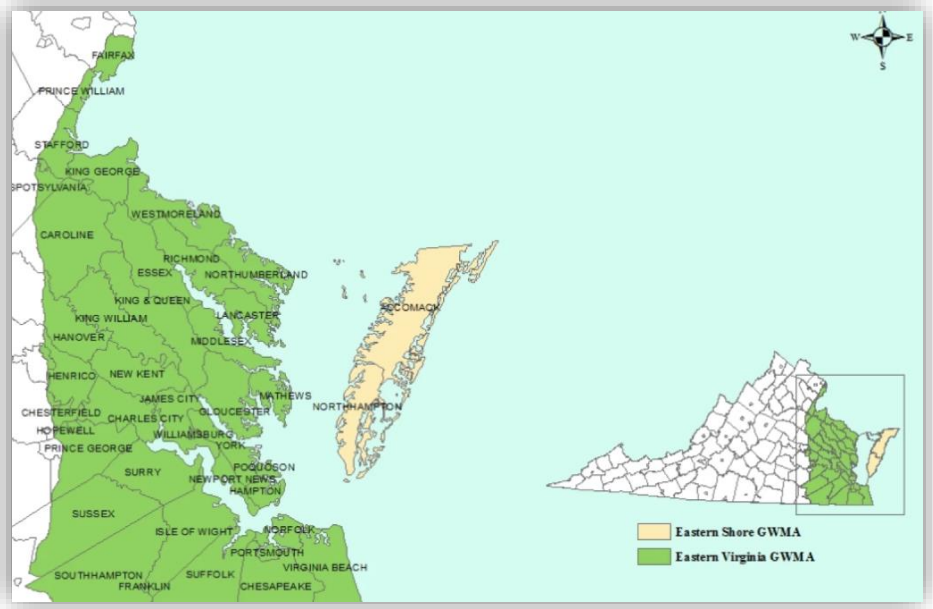
RIVANNA WATER & SEWER AUTHORITY

Raw Water Withdrawal in Virginia

Raw Water Use in Virginia is governed and permitted through the Department of Environmental Quality - Office of Water Supply

Two Key Program Areas:

- *Ground Water*
  - Two Formal Ground Water Management Areas: The Eastern Virginia GWMA and the Eastern Shore GWMA
  - Regulated under the 1992 Ground Water Management Act and the Ground Water Withdrawal Regulations
  - Issues Ground Water Withdrawal (GWW) Permits
  - Generally, regulate withdraws over 300,000 gpm
  - The Virginia Department of Health oversees the development of private wells and well systems outside the GWMAs.



Surface Raw Water Withdrawal in Virginia

- *Surface Water*
  - Surface Water is defined as all waters, which are not ground waters, which wholly or partially are within or bordering the Commonwealth. Wetlands, stream channels, lakes, springs, and ponds are all considered surface waters.

  - DEQ Administers the Virginia Water Protection (VWP) permit program to regulate:
    1. Impacts to surface waters such as land clearing, dredging, filling, excavating, draining, or ditching in open water, streams, and wetlands, and
    2. Surface water withdrawals and non-agricultural impoundments

  - Issues Surface Water Withdrawal (SWW) Permits or Individual VWP Permits depending on the project details
  - Generally, in non-tidal areas, regulates withdrawals over 10,000 gpd

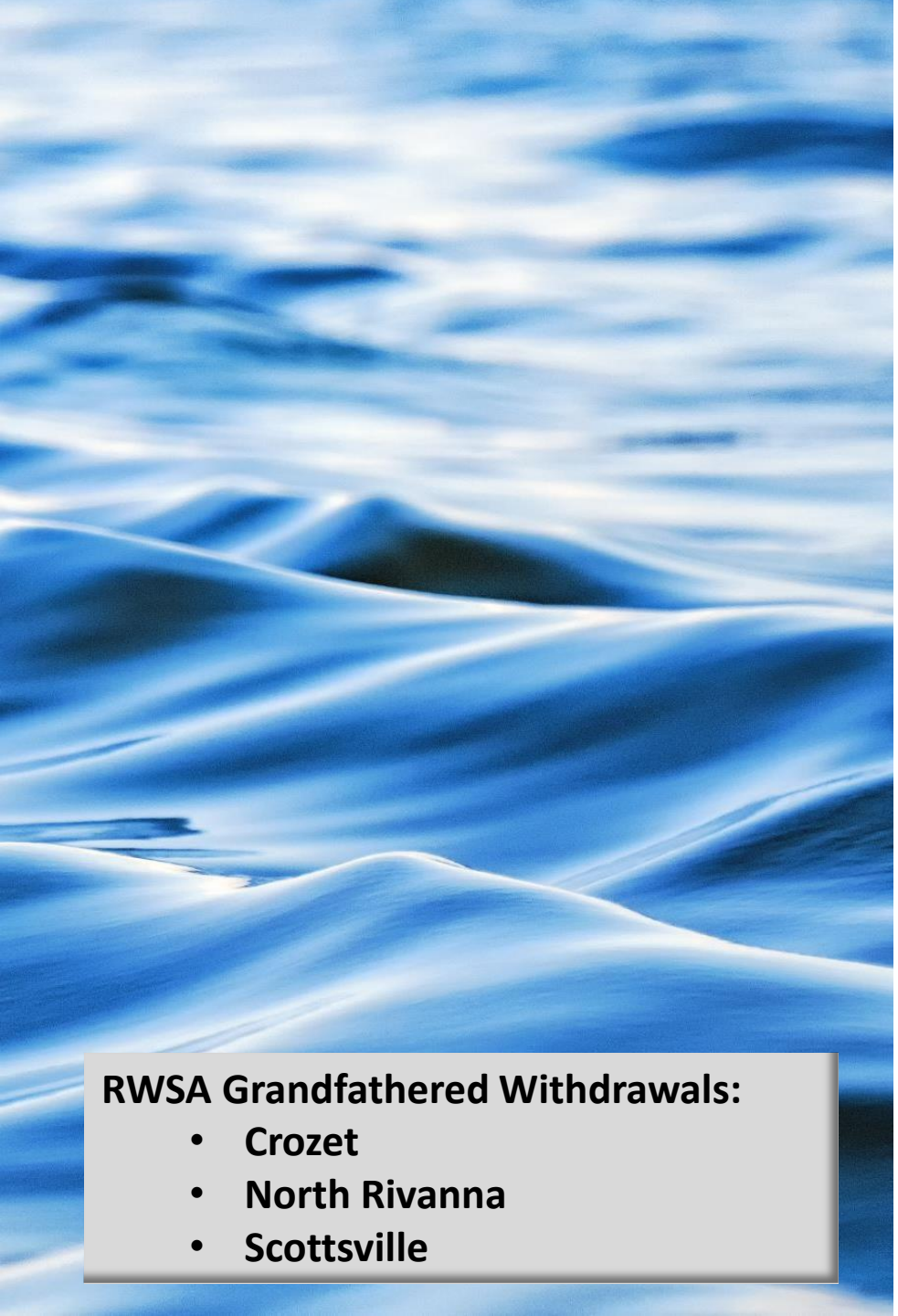
DEQ
Virginia Department of Environmental Quality

Virginia Water Protection Permits

- There are five (5) types of VWP Permits
  - General Permits (4 types based on amount of disturbance) and an
  - Individual permit

- Applications are administered through the Joint Permit Application (JPA) process which serves as a clearinghouse for State and Federal Agency review
  - State – VMRC, DEQ, VDH, DWR, DHR
  - Federal – Army Corp of Engineers, EPA, USFW

- Induvial Permits have a 15-year term, and then must be applied for again



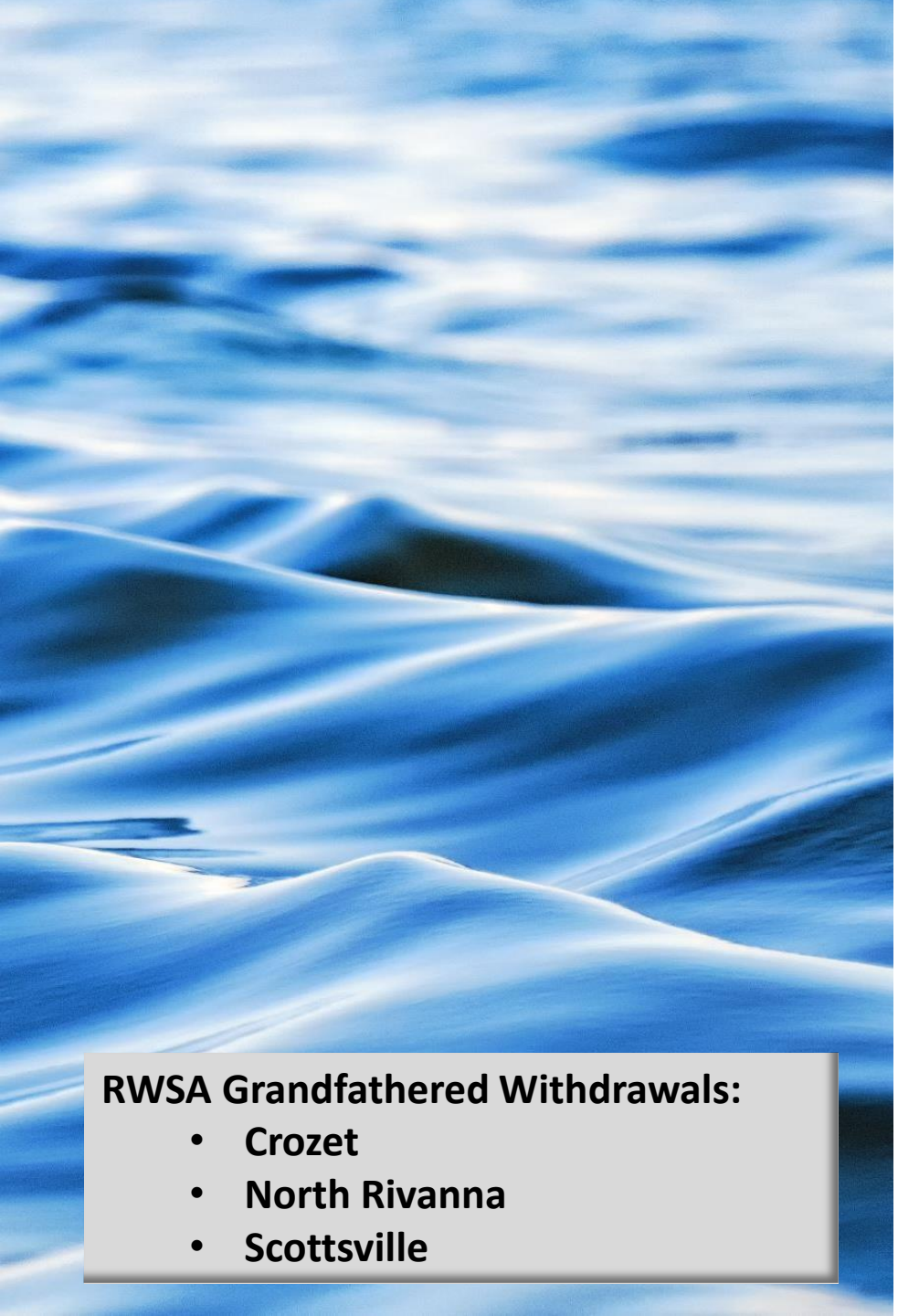
RWSA Grandfathered Withdrawals:

- **Crozet**
- **North Rivanna**
- **Scottsville**

Grandfathered Surface Water Withdrawals

- Virginia Water Protection Permit Program Regulation *exclusion* under 9VAC25-210-310 A
  - *"Any surface water withdrawal in existence on July 1, 1989; however, a permit shall be required if a new § 401 certification is required to increase a withdrawal. To qualify for this exclusion, the surface water withdrawal shall be deemed to be in existence on July 1, 1989, if there was an actual withdrawal on or before that date and the withdrawal has not been abandoned."*
- Regulated under the VDH - Waterworks Permits
- DEQ recently formed an Informal Workgroup to discuss grandfathered withdrawals

  RWSA/Bill Mawyer, member



RWSA Grandfathered Withdrawals:

- **Crozet**
- **North Rivanna**
- **Scottsville**

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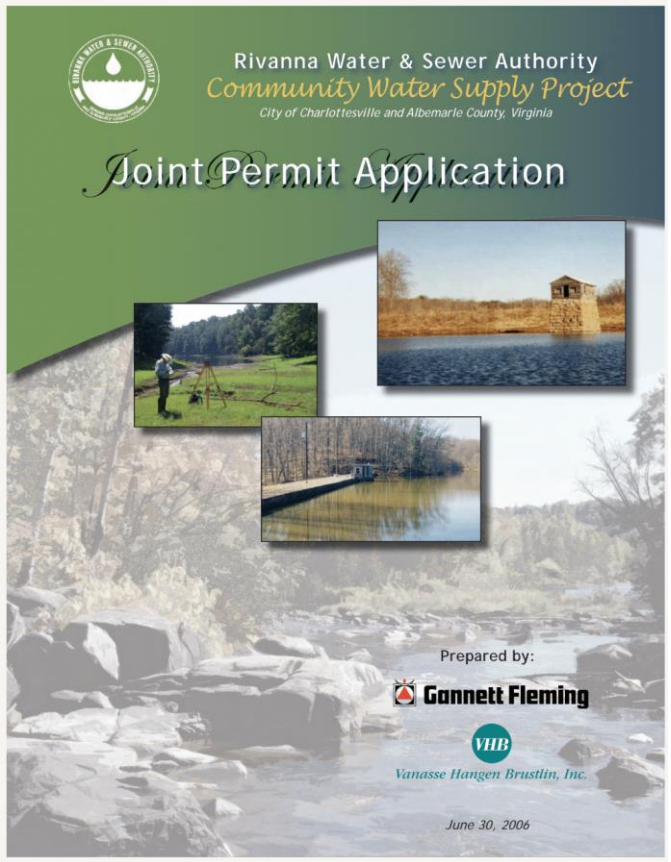
- Regulated under the VDH - Waterworks Permits
- DEQ recently formed an Informal Workgroup to discuss grandfathered withdrawals

  RWSA/Bill Mawyer, member

Urban System - VWP Permit No. 06-1574

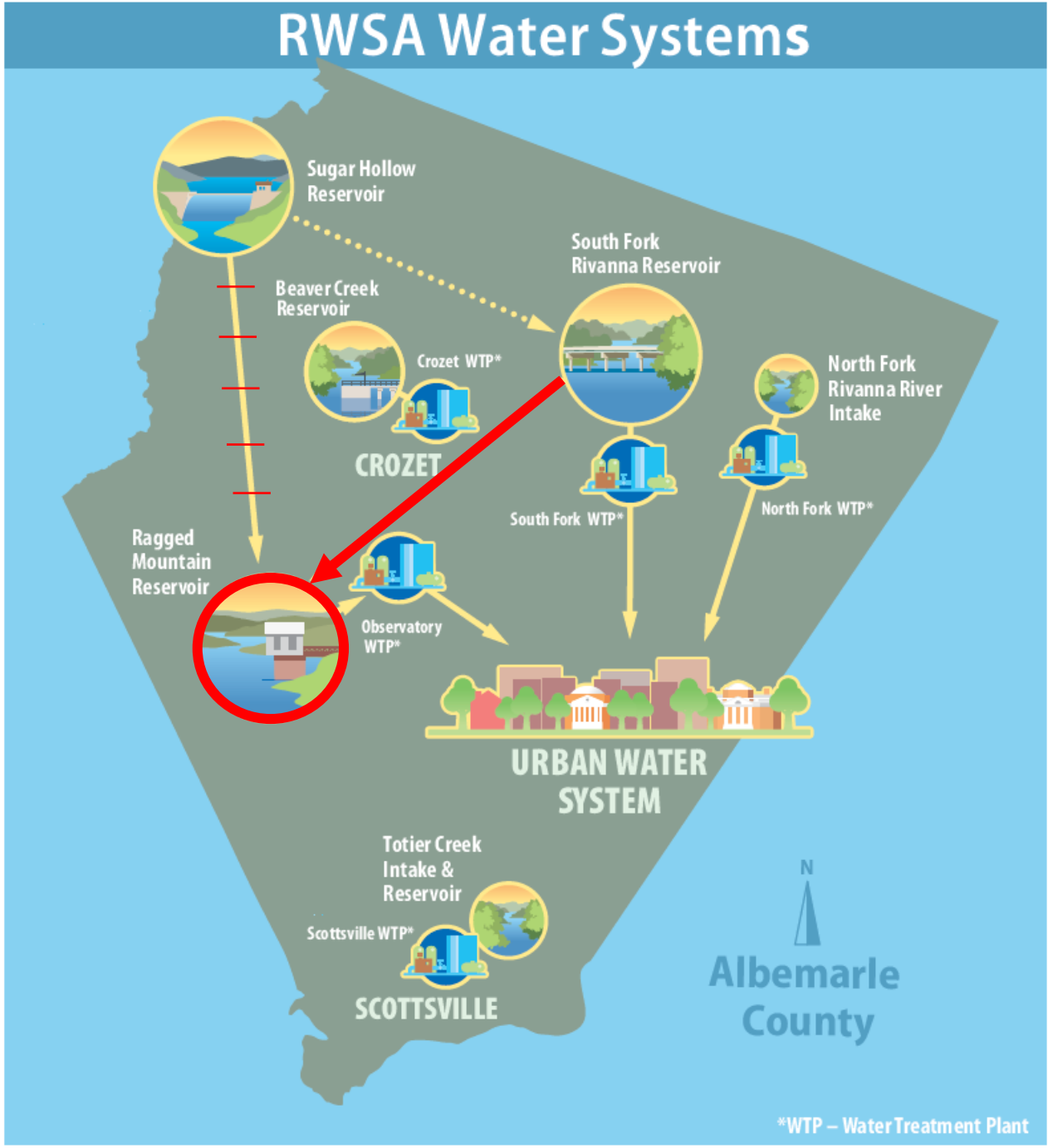


- 2002 - Regional Drought of Record
- 2003 - Staff began development of the Community Water Supply Plan
- 2006 - RWSA Applied via Joint Permit Application for a VWP permit
- 2008 - DEQ Issued VWP Permit
- 2011 - Major Modification No. 1 granted, based on the Ragged Mountain Dam Project Agreement
- Permit expired February 2023

- 2021 – Application submitted for Permit Renewal
- 2022 – Continuance while DEQ reviews Application
- 2024 – Expecting Draft permit Fall 2024

VWP Permit Allows for the Construction and Operation of:

- A new, higher dam at RMR to increase storage from 0.5 to 1.4 Billion Gallons
- A new 36” pipe and Intake from SRR to RMR to fill RMR
- An additional Raise of RMR 12-feet to increase storage from 1.4 to 2.1 Billion Gallons
- Closing the existing pipe from SHR
- Reservoir Withdrawal Limits
- Minimum In Stream Flow Releases
- Stream and Wetlands Impacts and Mitigation



Crozet System - VWP Permit No. 22-2318

- 1963 – Beaver Creek Dam Constructed for Crozet Water Supply
- 2011 – BCD upgraded to a “High Hazard Dam” and requires upgrade
- 2017 – RWSA began VWP pre-application discussions with DEQ
- 2019 – Completed the Crozet Drinking Water Infrastructure Plan
- 2022 – Applied via Joint Permit Application for a VWP permit
- 2024 – Received Draft Permit Language
  - RWSA sent comments on Draft to DEQ
  - Awaiting reply / revision from DEQ

DEQ staff have indicated :

- Permit will only consider first 15 years of demand
- Minimum Instream Flows (releases) will likely be higher than previously discussed
- Crozet will likely need an additional source of water beyond 2045

Summary

- Surface Water Withdrawals are regulated by DEQ under the Virginia Water Protection (VWP) permit program.
- Currently Crozet, Scottsville and North Rivanna are grandfathered and do not require a VWP permit.
- The Urban System has a VWP permit to construct and operate components of the Community Water Supply Plan.
- Staff is awaiting an Urban VWP permit reissuance from DEQ.
- Due to the need to increase withdrawal from Beaver Creek Reservoir, the Crozet System now requires a VWP permit.
- Staff are awaiting a revised draft permit from DEQ.


Questions?


Sugar Hollow Reservoir

Water Supply Planning Regulations

Presented to the Board of Directors

By Bill Mawyer, Executive Director

August 27, 2024

RIVANNA WATER & SEWER AUTHORITY

Va Administrative Code, Chpt 780
"Local and Regional Water Supply Planning"

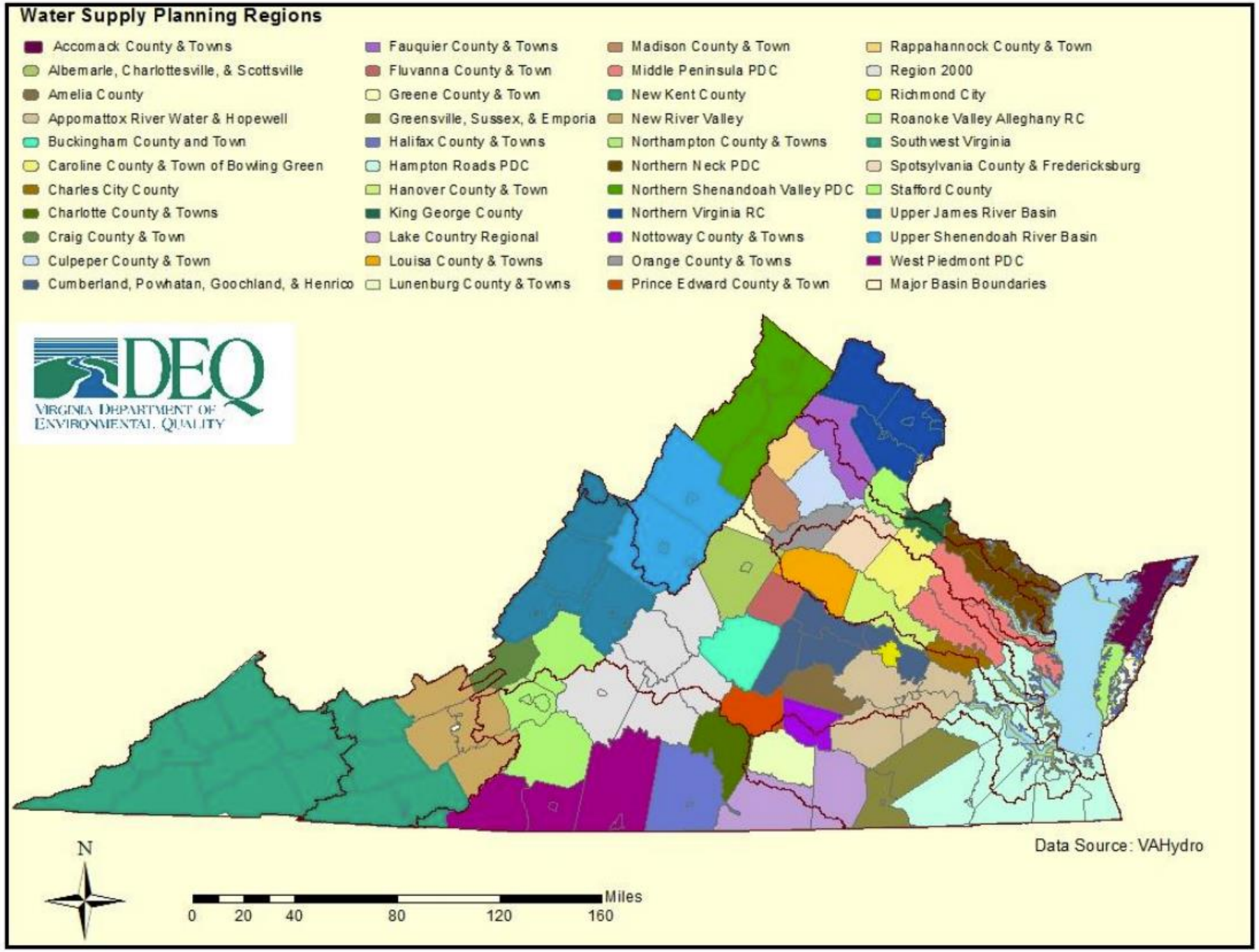
- Approved in 2005 in response to the 2001-2002 drought when many water supplies in VA were not adequate to meet demands.

- Required localities to submit a Water Supply Plan (WSP) individually or as part of a regional planning unit. Planning regions were not specifically determined based on river basin or shared sources of water supply.

- 48 WSPs were submitted by 2008. 10 were local plans and 38 were regional plans. Most of the regional plans consisted of one county and one or more cities or towns located within the boundaries of the county.

- RWSA submitted a WSP on behalf of our local regional planning unit: Albemarle, Charlottesville, and the Town of Scottsville.

Current Planning Regions



What is a Water Supply Plan?

Requires localities to:

- provide key information on what water sources a locality uses
- evaluate the adequacy of current water supplies
- identify where they can obtain more water where current supplies become inadequate
- develop Drought Response and Contingency Plans with ways to reduce overall water use during drought conditions

Water Supply Planning Regulations Amendment

HB542 (approved in 2020)

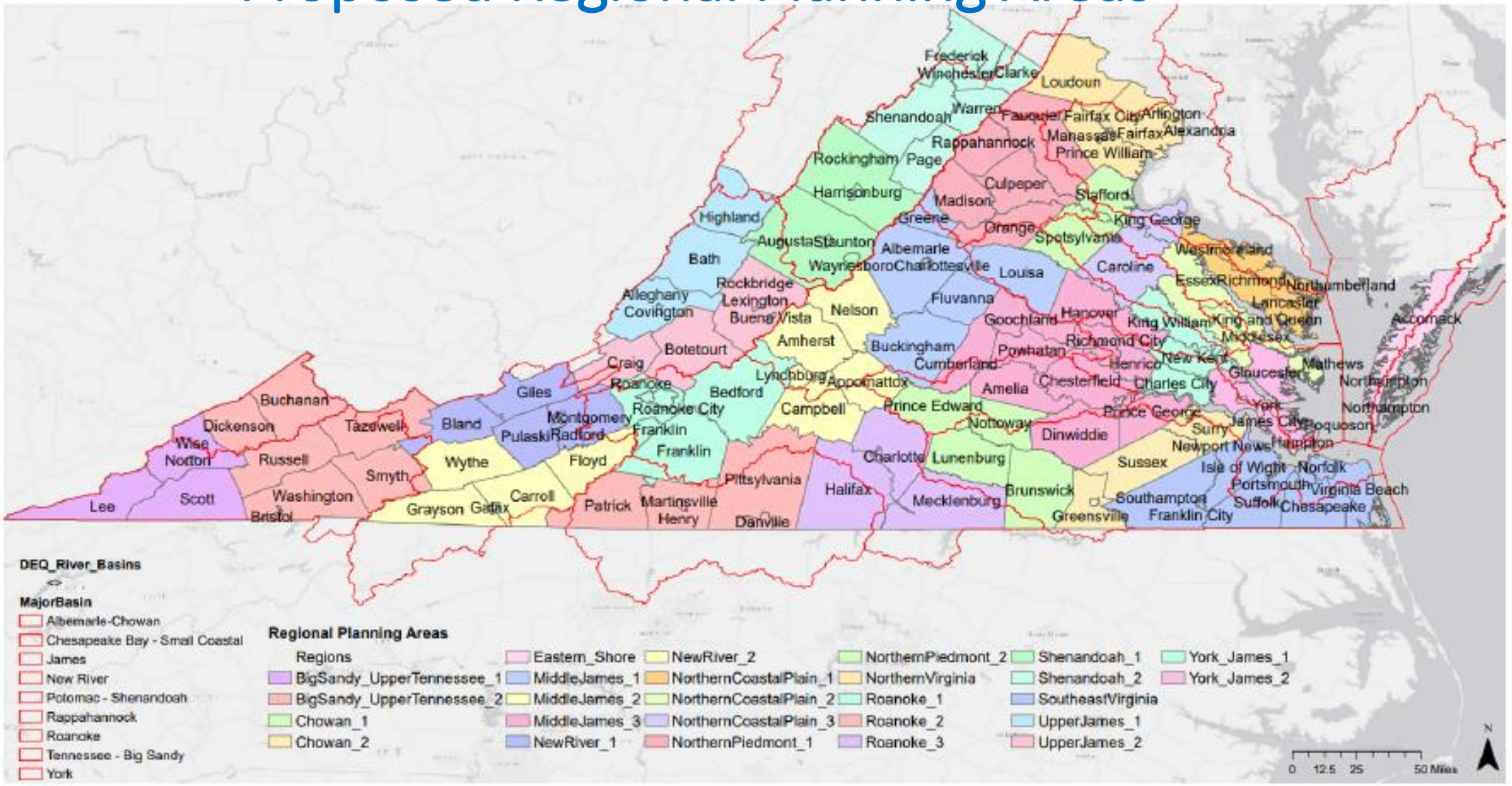
- Directs the State Water Control Board to encourage the development of cross-jurisdictional water supply projects and to adopt regulations designating regional planning areas based primarily on river basin and to assess risk to water supply.

- Proposed regulation mandates that each locality in a particular regional planning area shall participate in cross-jurisdictional, coordinated water resource planning, and all localities in each area shall together develop and submit a single regional plan.

- Directs the VDEQ to facilitate the creation of regional water plans by ensuring sufficient coordination among localities, providing planning and other assistance, and ensuring that each regional plan identifies risks and proposes cost-effective strategies to address those risks.

- Goal: “Ensure that adequate and safe drinking water is available to all citizens of the Commonwealth”.

Proposed Regional Planning Areas



Proposed Water Supply Planning Process

- Each local government, town, water authority, and “participating stakeholder” in the Regional Planning Area shall designate a representative for the Regional Planning Unit.

- Regional water supply plans shall reflect the consensus of the Regional Planning Unit after:
  - a public participation process has been completed
  - each local government in the RPU adopts a resolution authorizing submission of the WSP
    (if a local government fails to adopt a resolution, the WSP will reflect the consensus of the RPU)

- The WSP must be submitted within 5 years, and every 10 years thereafter

- Enforcement authority to implement the plan is not included in the regulation

- <u>Next Steps for Regulatory Approval</u>
  - Complete Executive review
  - Advertise in the State Register for public comments

Reshaping the Nation's Water Systems: EPA's Water System Restructuring Rule

- The United States hosts over 150,000 public water systems, with nearly 90% serving communities of fewer than 10,000 people and over half serving populations of fewer than 500.

- These smaller utilities face inherent challenges due to their limited user base to deal with issues such as inadequate funding and insufficient resources for extensive infrastructure upgrades. As a result, they are at a heightened risk of water quality violations.

- Recognizing this issue, Congress has empowered the EPA with authority to restructure struggling water systems. Under the 2018 "America's Water Infrastructure Act" amendments to the "Safe Drinking Water Act" of 1974, the EPA is now responsible for developing and enforcing the "Water System Restructuring Assessment Rule", which gives States greater authority to facilitate consolidation by localities.

EPA's "Water System Restructuring Assessment Rule" May 2024

- What is water system restructuring?

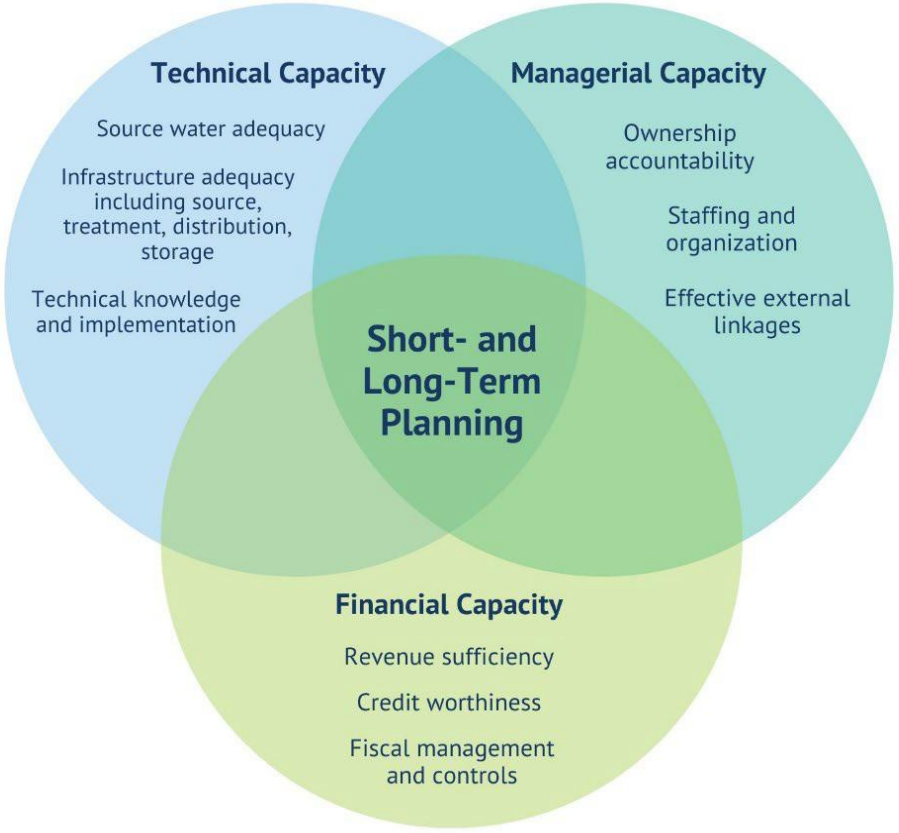
  Restructuring is a *change in the management, ownership, operations, or infrastructure* of a water system intended to improve the water system's capacity to provide safe drinking water. The restructuring can involve actions such as:

  - *Establishing a physical connection with another system*
  - *Jointly managing a system with another system*
  - *Selling or transferring ownership to another system*
  - *Entering into a management contract with a third party*

- Is water system restructuring mandatory under the rule?

  No. The rule provides States the authority to mandate assessments but does not authorize States to mandate any form of restructuring.

Long-Term Goal is Technical, Managerial and Financial Capacity to Sustainably Provide Safe, Affordable Drinking Water



Expected Benefits:

- ***Increased likelihood that assessed water systems will sustainably restructure*** to provide safe, affordable drinking water.
- ***Reduced state and EPA administrative costs*** of enforcement against persistently noncompliant water systems.

Summary

- VA and Federal regulations are being implemented to ensure all citizens have safe drinking water.
- VA will require regional water supply plans within 5 years.
- Albemarle and Charlottesville will plan with Greene, Louisa, Fluvanna, Buckingham, Towns, Authorities who manage water supplies, and “participating stakeholders”.

Questions?