RIVANNA
WATER & SEWER AUTHORITY

Board of Directors Meeting

November 14, 2023

2:15pm

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

BOARD OF DIRECTORS

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

DATE: **NOVEMBER 14, 2023**

LOCATION: **Conference Room, Administration Building**
695 Moores Creek Lane, Charlottesville, VA

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

AGENDA

1. ***CALL TO ORDER***
2. ***AGENDA APPROVAL***
3. ***MINUTES OF PREVIOUS BOARD MEETING ON OCTOBER 24, 2023***
4. ***RECOGNITION***
5. ***EXECUTIVE DIRECTOR'S REPORT***
6. ***ITEMS FROM THE PUBLIC***
   Matters Not Listed for Public Hearing on the Agenda
7. ***RESPONSES TO PUBLIC COMMENTS***
8. ***CONSENT AGENDA***

   a. *Staff Report on Finance*

   b. *Staff Report on Operations*

   c. *Staff Report on CIP Projects*

   d. *Staff Report on Administration and Communications*

   e. *Staff Report on Wholesale Metering*

   f. *Staff Report on Drought Monitoring*

   g. *Approval of Board Meeting Schedule for Calendar Year 2024*

h. *Approval of the Rivanna Holidays for Calendar Year 2024*

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

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

9. OTHER BUSINESS

a. *Presentation: Class Action Litigation & Proposed PFAS Settlements*
David Tungate, Director of Operations and Environmental Services

(Joint Session with the RSWA)

b. *Presentation: Paychex Payroll and Human Resources Information System (HRIS) Review*
Betsy Nemeth, Director of Administration and Communications

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
October 24, 2023

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, October 24, 2023 at 2:15 p.m. at the 2nd Floor Conference Room, Moores Creek Advanced Water Resource Recovery Facility, 695 Moores Creek Lane, Charlottesville, VA.

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

Board Members Absent: None

Rivanna Staff Present: Bill Mawyer, Lonnie Wood, Jennifer Whitaker, David Tungate, Betsy Nemeth, Scott Schiller, Andrea Bowles, Jacob Woodson, and Deborah Anama.

Attorney(s) Present: Valerie Long

1. *CALL TO ORDER*
Mr. Gaffney convened the October 24, 2023 regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:15 p.m.

2. *AGENDA APPROVAL*
There were no comments on or questions for the agenda.

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

3. *MINUTES OF PREVIOUS BOARD MEETING ON SEPTEMBER 26, 2023*
There were no comments on or questions regarding the minutes for the meeting held on September 26, 2023.

Mr. Pinkston moved to approve the Minutes of the September 26, 2023 Board Meeting. Ms. Mallek seconded the motion, which carried unanimously (7-0).

4. *RECOGNITIONS*
There were none.

5. *EXECUTIVE DIRECTOR'S REPORT*
Mr. Mawyer stated that he would like to recognize two staff members, Mark Charron and Drew Prothero, who passed their state wastewater licensing exams. He stated that Mr. Charron passed the Class 1exam, which is the highest license, and had been with the Authority since 2013. He stated that Mr. Prothero passed his Class 2 exam, and had worked for Rivanna about a year and was a graduate of James Madison University.

Mr. Mawyer stated that this month, as part of their strategic plan priority of Workforce Development, staff participated in fire safety training. He stated that they appreciated Albemarle County Assistant Fire Marshall, Sean Maddox, coming over and giving them hands-on training on how to operate a fire extinguisher using the PASS acronym (Pull, Aim, Squeeze, and Sweep). He stated Assistant Fire Marshal Maddox used an electronic fire device and allowed staff to train by putting out the fire with an electronic fire extinguisher.

Mr. Mawyer stated that under their Communication and Collaboration strategic plan priority, Jennifer Whittaker, Director of Engineering and Maintenance, continued her involvement with the UVA civil engineering class. He stated she made a presentation to the fourth year students about public sector engineering careers. He stated that they attended the Resilient Together, One Climate, One Community kickoff held at City Space. He stated that City Manager, Sam Sanders kicked off the meeting, which was a joint effort between the City, the County, and UVA working toward a more resilient community. He stated that Trevor Henry, Deputy County Executive, also had opening comments. The presentation was well attended, and many good ideas were shared. Rivanna was involved with the program since water was at the root of drought, flooding and extreme heat issues.

He stated that another event that occurred in the community in which they participated was Mr. Tungate's presentation at the Rivanna River Basin Commission. He stated that the commission held an event in September, and Ms. Mallek was the chair of that event. Mr. Mawyer stated that the topic was PFAS compounds and their potential impact on the environment. He stated that Mr. Tungate presented Rivanna's perspective on water treatment and biosolids application, emphasizing how PFAS was a major component of these processes.

He stated that in addition to planning a renovation of the Administration building next year, it had been suggested that they should incorporate an education component into the plans of the building. He stated they were aware that Loudoun Water Authority had an education component in their administration building. Mr. Mawyer stated that he had worked with some of the Loudoun managers through professional associations and committees, and they were invited to visit the Loudoun education center and "Aquiary". He stated it featured a 3,500 square foot interactive display off their public entrance lobby. He stated that the public could come into this large lobby where the public could pay a bill, as well as view interactive displays for water and wastewater treatment. He stated that there was also a secured part of the building with administrative offices.

Mr. Mawyer stated that there was an "Aquiary", which featured a one-mile path where visitors could learn about wastewater treatment. He stated that the group took the tour of the outside walking path which included a pond containing treated wastewater from their adjacent wastewater plant, which had large koi fish to demonstrate its cleanliness. He stated that they also had bioretention basins and other outdoor facilities that were open to the public. He stated that the administration building and education center were constructed 15 years ago and had maintained their value to both the community and the Authority. He stated that they were typically fully booked with school classes visiting the displays, and over 700 students came through each year.

Mr. Mawyer stated that he had completed the City and County quarterly reports to the City Council and the Board of Supervisors this month. He stated that they were collaborating with the ACSA and the City for the Imagine a Day Without Water program, which included the annual youth art contest. He stated that this year's theme was "Tell us your action to save water." He stated a group would judge the submissions, and they would have an award ceremony in December.

He stated that last month at the Board meeting, they discussed drought concerns with some apprehension, but fortunately, there had been rainfall since then. He stated that Albemarle and central Virginia area remained under a watch status for groundwater and reservoir levels. Mr. Mawyer stated they were currently 13 inches below the average rainfall this year, which equated to 41% in their region, and at an approximately 16% low over the past 33 months. He stated that the South Rivanna Reservoir was currently 100% full; Beaver Creek was 92% full; Totier Creek at Scottsville was 100% full; Ragged Mountain had no water source and was about four feet down, and they had not transferred any water to Ragged Mountain because of the dry weather and low flows from Sugar Hollow. He stated that Sugar Hollow was currently 0.3 feet below the top of the dam. He stated that Beaver Creek Reservoir, which served Crozet, was a little over a foot down. He stated that the urban area reservoirs were collectively 92% full.

Mr. Mawyer stated that they were watching the South Rivanna Reservoir, and as long as it continued to overflow, they maximized the use of that water at the South Rivanna Treatment Plant and tried to hold water in Ragged Mountain reservoir. He stated that if South Rivanna ceased to flow over the dam, they would shift the usage distribution more toward Observatory treatment plant and the Ragged Mountain Reservoir, attempting to save water in Sugar Hollow and South Rivanna Reservoirs. He stated that they hoped for a wet fall and winter, which would put them in good shape for the following spring and summer.

Mr. Mawyer stated that they had recently received notice from the Virginia Department of Health (VDH) about a cyber-attack affecting one of their colleagues and neighboring utilities, the Western Virginia Water Authority, which served the Roanoke area. He stated that VDH had issued a warning to all utilities to remain vigilant. He stated that Mr. Wood and the IT staff were working diligently to ensure they did not experience any cyber-attack issues. He stated that this situation was ongoing.

Mr. Mawyer stated that the November meeting would be held on November 14, which meant there was a quick turnaround due to the Thanksgiving holiday. He stated that at the November meeting, they would offer a presentation discussing the ongoing PFAS class action litigation. He stated they needed to decide whether to stay in the class action program or opt out by December 4 for the DuPont cases and December 11 for the 3M cases. He stated that if they chose to opt out, they must do so; otherwise, they would remain in the program as a class action participant.

Mr. Mawyer stated they were gathering facts and cost estimates for this litigation. Attorneys from the class action group had created a spreadsheet to estimate potential awards based on flow rate volume and PFAS contamination extent in water sources. He stated that they were working through this calculation to determine possible compensation. He stated he attended two National

Association of Clean Water Agency webinars recently and received valuable advice from their attorneys.

Ms. Mallek asked if they only tested at the water input or if they tested at other stages.

Mr. Mawyer stated that they tested the raw water and the finished water.

Ms. Mallek clarified that they would be able to gather the data easily.

Mr. Mawyer stated that they had been testing for up to nine years at some locations. He stated that they had test data back to 2014. He stated that fortunately, they did not have high PFAS levels, so they were not expecting that the matrix estimate would result in very high compensation for damages. He stated that they would run through the numbers and see how it worked out for them.

Mr. Gaffney asked if they would know in November whether they were giving away any rights by remaining in the litigation. He stated he wanted to know if they would be relinquishing their ability to sue 3M and DuPont in the future.

Mr. Mawyer stated he believed they were going to verify this information, but they would be giving up future rights for water contamination, although he understood not for wastewater contamination. He stated that some of the commentary from the NACWA websites mentioned that the initial litigation with the class action suit was going to try to take these two companies to the brink of their financial viability. He stated that there were billions of dollars included in the class action suit. He stated that they would discuss next month whether it was worth staying in or getting out of the litigation. He stated that a component would be that if you did not stay in now, there may be very little, if funds remaining after the class action process.

Mr. Gaffney stated that he could not imagine that DuPont or 3M would disappear. He stated that it was still early in their understanding of PFAS and its effects. He stated that it remained legal to use these chemicals. He stated that this issue could persist for up to two decades. He stated he trusted that they would provide him with a wealth of information within the next month.

Mr. Mawyer stated they would be gathering information by reading and listening to various sources. He stated that their goal was to provide this information to others as soon as possible. He stated the lawsuit involved two companies: 3M and DuPont, and they had different dates for their deadlines, so it was essential to keep track of both schedules.

Ms. Mallek stated that 3M stopped production many years ago.

Mr. Mawyer stated that they had read or heard about it, but they had not found it in writing yet. He stated that they were looking for that information. He stated that NACWA had been advocating with Congress to pass laws to relieve utilities of the cost and let the cost be transferred back to the people who manufactured the product and try to take it away from the water and wastewater agencies.

Mr. Richardson stated that during the week of November 13, he had been summoned for jury duty. He stated that he would know on Monday, November 13, whether he was serving or not.

Ms. Mallek stated that she would start on the phone because she would be leaving a VACO meeting. She stated that she intended to begin on the phone and arrive later.

Mr. Mawyer stated that the meeting date was different due to holidays; it would take place during the third week of November instead of the fourth. He stated that the same applied for December.

Mr. Gaffney asked whether the Board would require an action to allow Ms. Mallek to participate remotely.

Mr. Mawyer stated the Board will require a motion to permit Ms. Mallek to participate if she is remote.

Mr. Gaffney stated that he would like to make two comments, one on precipitation and stream flows. He stated that when they had the drought in 2002, one of the main reasons was that it occurred over a number of years and the groundwater was so low that every rain just soaked into the ground and did not make it into the stream. He stated that when looking at 2021 and 2023, within another year or two, they could be back to where they were.

Mr. Gaffney stated that the education center was a great idea and he would love to go up and see Loudoun's education center as well. He stated that the Rivanna board had first started talking about them having an education center. He stated that Mr. O'Connell had discussed an education center 15 years ago.

Mr. O'Connell stated there were a number of utilities with something similar or as part of an administration complex. He stated he complimented Mr. Mawyer on trying to take a look at an education center for the Rivanna project. He noted that it was not a huge amount of space when considering the size of the complex.

Mr. Gaffney noted that funding was still a matter to consider.

Mr. Mawyer stated that Mr. O'Connell had brought up the idea of the education center during his recent comments.

Mr. O'Connell stated that while he had mentioned the drought, he wanted to remind everyone that the Ragged Mountain Reservoir had been expanded since then. He stated that the way to move forward was expanding their current projects and the reservoir capacity.

Mr. Pinkston stated that he wanted to know if they were going to discuss that during the capital project discussion. He asked about the specific projects about raising the water and any legal matters that would need to be addressed in order for it to happen.

Mr. Mawyer stated that they could discuss it now if he preferred. He stated that Ms. Long had

been meeting with Jacob Stroman, the City attorney, and Mike Derdeyn, the ACSA attorney. He stated they had drafted an amendment to allow additional water to be added to the Ragged Mountain Reservoir. He stated the hope was that the amendment would be presented to City Council in the near future, possibly in November or December.

Mr. Mawyer stated that the 2012 Ragged Mountain Dam Project Agreement had certain limitations on when Rivanna could raise the water level by an additional 12 feet. He stated that although the dam was constructed to accommodate this increase, there was a restriction in the agreement based on community demand that it must be no sooner than 10 years before the community's water demand equaled 85% of the water supply. He stated that he understood the concern for some people in 2012 was that inundating more property around Ragged Mountain should not be done until it became absolutely necessary.

Mr. Mawyer stated that the amendment suggested addressing climate change uncertainties and drought by maximizing infrastructure and water supply by adding the 12 feet of water as soon as possible was the best alternate for our community now. He stated that increase in water supply would be completed in about two years if the amendment was approved by City Council, the ACSA, and the Authority. He stated it would allow for grading modifications around the reservoir, removal of vegetation, and adjustment of gates on the intake tower. He stated it permitted transferring water from Sugar Hollow Reservoir to fill Ragged Mountain Dam.

Mr. Mawyer stated they agreed with the Mormon River group that they would limit the transfer from Sugar Hollow to times of high flow, meaning when there were over 30 million gallons a day coming across the dam at Sugar Hollow. He stated that they were meeting at the Sugar Hollow dam in May, and it was evident that about 14 million gallons a day were coming over the dam, which looked like a huge amount of water. He stated they decided to double it to 30 million gallons as their threshold.

Mr. Mawyer stated that there had been approximately 50 days in the last three years where the flow exceeded 30 million gallons a day. He stated the concept was that they did not expect to take all of the 700 million gallons for Ragged Mountain from Sugar Hollow. He stated that when the raw water system was full of water and flowing over the South Rivanna Dam, they were not effectively using this natural resource as a water supply for the community.

He stated that since the excess water was going to the Chesapeake Bay, but they may as well transfer it in Ragged Mountain reservoir. He stated that the amendment contained a caveat that they would not transfer water unless there was more than 30 million gallons per day flowing over the dam for the purpose of adding the 12 feet and an additional 700 million gallons at Ragged Mountain. He stated that if the water level fell below the current water level, they could transfer from Sugar Hollow without any consideration of the 30 million gallon per day threshold.

Mr. Pinkston stated that they could still proceed with moving water from South Rivanna to Ragged Mountain, regardless of the events at Sugar Hollow.

Mr. Mawyer stated that once the pipeline was completed, the South Rivanna reservoir would be the source of water for Ragged Mountain reservoir. He stated that at that point, they would stop

all transfers from Sugar Hollow and take all the transfers from South Rivanna Reservoir.

Mr. Pinkston stated that this was not really changing anything; it was just basically speeding up the community water supply plan, which had been agreed to 15 or 20 years ago. He stated that this was simply allowing them to speed up a portion of it.

Mr. Mawyer stated that was correct. They may not complete the pipeline from South Rivanna for approximately seven years. He stated they had to consider whether they should take a risk and not increase the community's water supply during this period by adding as much as possible, understanding that they could only transfer about 3 million gallons per day from Sugar Hollow. He stated they would transfer 25 million gallons per day from South Rivanna once the pipe and pump station were built. He stated that if they only added 100 million gallons over the 7 year period while the new pipe was constructed, it would be 100 MG more than the community would have if they were in a drought.

Ms. Mallek stated that one overarching philosophy of thought to consider was if everyone consistently discussed conservation. She stated that rural area residents, who had no public water system to purchase from, were entirely on their own all the time. She stated that streams had disappeared, and wells were now in crisis. She stated that whatever they could do to reduce the divide between urban and rural areas and ensure that everyone understood that they were all in this together was essential. She stated that if you were taking away rural water for urban people, everyone needed to be doing their part in the urban area and not waste resources. She stated that when she received pictures of businesses hosing down their sides of buildings or sidewalks instead of using a broom, it raised everyone's concerns when discussing drought.

6. *ITEMS FROM THE PUBLIC*
For matters not listed on the agenda for public hearing

Mr. Gaffney stated the rules for public comment.

Peggy Gilges, Jack Jouett district of Albemarle County, stated that she had property in Sugar Hollow along the Moormans River. She stated there were concerns about the low flow of the Moorman's River for the past year. She stated that the reservoir had been maintained at a high level. She stated that she wanted to talk about AC44 and the concern she had with groundwater. She stated that the County and the City needed to do a study of their groundwater capacity, as they did not have a good idea of where the aquifers were located or what the capacity was.

Ms. Gilges stated that she noticed in her community people who had ACSA water service installing wells in their backyards so they could freely water their green lawns. She stated she observed people with their sprinklers on during rainfall, which distressed her as it seemed that the Authority were not doing the job of monitoring wells and knowing where wells were being used in the urban ring when service was provided with treated water. She stated she was concerned that people felt groundwater was a free resource, but nature also needed water.

Mr. Gaffney closed the items from the public.

7. *RESPONSES TO PUBLIC COMMENTS*

There were no responses to items from the public.

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*

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

9. *OTHER BUSINESS*

a. *Presentation: Rivanna Conservation Alliance's Water Quality Monitoring and Related Activities*

Claire Sanderson, Monitoring Program Manager at RCA, stated that she would be co-presenting with Lisa Wittenborn, Executive Director of RCA. She stated that they had their new stream health report available, which they published annually. She stated the Rivanna Conservation Alliance was established in 2016 as a merger between the Rivanna Conservation Society, which focused on advocacy, outreach, and education related to water quality, and StreamWatch, which concentrated on collecting high-quality water data. She stated that upon merging, their mission became working with the community to conserve the Rivanna River and its tributaries through monitoring, restoration, education, and advocacy.

Ms. Sanderson stated that the bacteria monitoring sites focused on urban and recreational streams and rivers, primarily in Charlottesville, with some in Albemarle County and Fluvanna County. She stated that they had 21 bacterial monitoring sites. She stated that they also had 50 long-term benthic monitoring sites scattered throughout the watershed, providing valuable information on long-term stream health. She stated that their bacteria and benthic monitoring programs were certified by the DEQ as Level Three, meaning that the data collected by their volunteers and themselves was of high quality and comparable to that collected by DEQ.

Ms. Sanderson stated the data could be used to inform various environmental decisions without requiring additional data collection. She stated that while they collaborated closely with DEQ in developing their monitoring programs and protocols, they also had their own scientific advisory committee comprising of local professionals in water and water quality. She stated one of its members was RWSA's Water Resources Manager, Andrea Bowles.

Ms. Sanderson stated that for the bacteria monitoring program, volunteers collected water samples, and they tested them for E.coli using IDEX's Colilert and measured turbidity. She stated that they sampled 19 urban sites monthly from March to November, which gave them a monthly checkup to ensure that nothing was going wrong. She stated that they had a weekly spring monitoring program where they sampled nine sites with potential recreational use. She stated this helped them determine if these sites met the revised Virginia recreational water quality standard, which required at least 10 samples to be collected over 90 days.

Ms. Sanderson stated their summer weekly bacteria monitoring program sampled bacteria at three high recreational sites along the Rivanna River: Darden Towe, Riverview Park, and Palmyra Boat Launch. She stated that this was in conjunction with the James River Association's James River Watch program. She stated they posted their data onto their site and also the swim guide app going into the weekend so recreational users could make informed decisions about whether or not they wanted to jump in the Rivanna.

Ms. Sanderson stated that they had started a bacteria source tracking program in conjunction with the City of Charlottesville, with lots of input from the SAC. She stated they now conducted extra monitoring at sites that had continued elevated E. coli levels that were unexplainable. She stated that they were employing environmental DNA sequencing technology to determine the host or most likely host species of E. coli bacteria entering the streams, whether it was humans, deer, or other species.

Ms. Sanderson stated their biological monitoring programs sampled benthic macroinvertebrates. She stated that different families had different levels of tolerance to pollution. She stated that depending on who they found and how many they found, it gave them a really nice indication of water quality in their streams. She stated that volunteers went out twice a year in the spring and fall to monitor 50 long-term sites. She stated they had a couple of contract sites with Albemarle County. She stated that due to low precipitation and stream flows, they had not been able to sample some smaller streams this season.

Ms. Sanderson stated that volunteers also assisted in the laboratory. She stated they brought back any unknown benthic macroinvertebrates that they could not identify at the family level in the field and identified them under the microscopes. She stated that both their bacterial and benthic data were shared on their website, as well as with their local partners, including RWSA. She stated the information could be used to inform and educate the public. She stated they utilized their monitoring data and protocols in many of their educational programs. She stated that they identified pollution hotspots and aimed to help rectify the issues using their bacteria source tracking program.

Ms. Sanderson stated that the data could guide local water resource planning and protection efforts, assist DEQ and EPA with assessing water quality and identifying impaired waters. She stated that their data, in conjunction with DEQ's data, had led to 175 miles of streams and rivers within the Rivanna watershed being identified as impaired. She stated that this also guided the cleanup actions that were necessary, such as the TMDLs. She stated that their data could be used to evaluate the impact of water quality improvement efforts, such as the Biscuit Run restoration efforts by Albemarle County. She stated that they were collecting data either side of that area,

benthic and bacteria data.

Lisa Wittenborn, Executive Director of RCA stated that she would like to discuss their educational programs because they had experienced some wonderful synergy with RWSA staff in their education work. She stated that they were able to expand the sixth-grade field trip program, which they had been working on with Burley Middle School for approximately six years. She stated that thanks to funding from the County and grants, they extended that program to all middle schools in the County. She stated that as a result, 1,000 sixth graders had the opportunity to test their streams, get their hands wet, and explore areas around their schools.

Ms. Wittenborn stated that they had been working with Buford Middle School for the past three years. She stated that this week, they were out with all of the seventh graders, and they were able to bring them to Camp Albemarle, where they could participate in water sampling for macroinvertebrates, nature hikes, games, and other activities. She stated that in the spring, due to the significant expansion of the program, they issued a major call for volunteers. She stated that both RWSA and RSWA encouraged their employees to join them. She stated they had numerous staff members assisting in the field, which was beneficial to have additional personnel but also to provide context to their work.

Ms. Wittenborn stated when they were at Henley Middle School in Crozet, they were standing on the sewer line connecting Crozet. She stated that as a result, they could discuss where their wastewater went and what was happening. She stated they conducted some of the chemical testing that took place in the lab. She stated that this year, they started working with the UVA Star Hill Pathways Program, which was a new program with the Equity Center. She stated that part of their involvement was showing different career pathways in their area. She stated they were looking at water quality and water resource management.

Ms. Wittenborn stated one of the field trips that they took them on was to the drinking water treatment plant in Crozet. She stated they were not able to go to the big plant because it was under construction. She stated they went to the treatment plant and met with a bunch of different staff who showed them the lab and how it worked. She stated they also went down to the reservoir to show them where the source water was coming from.

Ms. Wittenborn stated they also did a lot of education programs at events like River Fest, which is an event that RWSA helped sponsor. She stated she had led a group of middle schoolers from Tandem on a hike down the Rivanna Trail, and it was the first time she had ever seen the treated effluent outfall. She stated it was a teachable moment. She stated that she told the students that the water coming into the stream was cleaner than what was in the stream. She clarified that this was correct.

Mr. Mawyer stated sure.

Ms. Wittenborn stated that another project that they were likely to be partnering with RWSA on to some extent was the Rivanna Restoration at Riverview Park Project. She stated they were still waiting to hear about funding from the National Fish and Wildlife Foundation. She stated they had some issues on their end, so they were waiting to hear back. She stated this project would

basically involve restoring 600 linear feet of the riverbank and a stormwater outfall. She stated that there was an area where stormwater from the Woolen Mills neighborhood met the river, causing significant erosion. She stated that there was currently a 12-foot deep crevasse, which was eating into the park and located near the Albemarle County Service Authority line.

Ms. Wittenborn stated that they had been working with them on this issue, and it continued to get closer to the RWSA wastewater line that ran through the park. She stated that as part of their project, they would collaborate with the City to stabilize the area by installing what were called step pools. She stated it would help treat the stormwater as it entered the river, prevent erosion from both directions, and serve as an attractive feature in the park. She stated that there was a proposal to move the Rivanna Trail above the sewer line, which they had already discussed with local stakeholders. She stated that keeping that area open and free of trees would allow them to plant trees inside the banks to help stabilize and restore them.

Ms. Wittenborn stated the Rivanna River Resilience Partnership focused on protecting the forest in the urban river corridor. She stated the project extended from the confluence of the north and south forks down to Moors Creek. She stated that there was a strong emphasis on planting new trees, but it was crucial to protect what they already had for various reasons, not just water quality. She stated that the grant had been secured to bring together local governments, nonprofits, and volunteer organizations to conduct assessments of invasive vines, trees, and shrubs that threatened their forest health and resilience in parks such as Penn Park, Riverview Park, and Darden Towe Park. She stated many of the lines went through these parks.

Ms. Wittenborn stated that they would be conducting invasive assessments, native canopy assessments, and prioritizing areas for invasive management. She stated the grant included funding to hire a contractor for the first round of management in many of these areas. She stated volunteer groups would then adopt areas to maintain over time, providing long-term benefits. She stated there was funding available for replanting trees in any areas requiring more canopy coverage.

Ms. Wittenborn stated that regarding the North Fork Dam, she understood there may be discussions about its removal at some point in the future. She stated that they received a grant from the U.S. Fish and Wildlife Service to assess road stream crossings, which were often culverts or bridges. She stated that the goal of this assessment was to identify fish passage issues that could impact the survival of fish during times of low water levels and increasing water temperatures. She stated that fish needed access to habitat and pools for their survival. She stated that this was also important for freshwater mussels, which attached themselves to the fish as they moved up and down streams. She stated that they went out and assessed almost 250 different culverts according to a protocol called NAC.

Ms. Wittenborn stated that the protocol spit out a value in terms of how much of a barrier that particular crossing was. She stated that a culvert perched high above the stream could be an example where fish were swimming up but could not get into it to reach the other side. She stated that there were various types of barriers, but this issue was growing in importance. She stated that they focused their assessments on areas with potential or actual trout habitat because they were a cold-water fish species, so this was also important for them, as well as areas where

migratory fish had been found. She stated that this was done partially through a fish survey they conducted in 2019. She stated that the migratory species in their watershed included eels, which were a threatened species not federally listed but considered a species of concern.

Ms. Wittenborn stated that sea lamprey were a menace in the Great Lakes with large mouths that ate all the fish, but when they lived there, they were very small and did not feed on other fish. She stated that they spawned there and then swam out into the ocean as their adult stage. She stated that eels and sea lamprey needed free passage into their watershed all the way out to the ocean. She stated that these species were good indicators of where there were barriers, where they were finding them. She expressed her gratitude for the ongoing support of their programs, stating that financial and staff support made a huge difference in allowing them to do all of the monitoring work and other tasks currently undertaken.

Ms. Mallek asked if Ms. Sanderson was referring to the North Fork Dam located in Advance Mills or some other dam.

Ms. Wittenborn stated that her understanding was that if the North Fork Water Treatment Plant went offline, there might be some discussion about potential consequences.

Ms. Mallek asked if there was another closer to 29.

Mr. Mawyer stated that he believed so. He stated that there was a small dam near the North Rivanna Water Treatment Plant. He stated that when they decommissioned that plant, they were planning to remove what was called the low head dam.

Ms. Mallek asked if the green and purple colors on the map displayed were referring to the North Fork TMDL process the DEQ was doing.

Ms. Wittenborn stated yes.

b. Presentation: Value Engineering Program Review
Jennifer Whitaker, P.E., Director of Engineering and Maintenance

Ms. Jennifer Whitaker stated that she would like to provide a brief review of the Value Engineering program at Rivanna. She stated that she would begin by discussing what value engineering was and what it was not. She stated that it was easy to think of it as cost cutting, but it was actually more complex than that. She explained that value engineering was a process to review project elements, such as key components, people involved, and other aspects during the design phase in an effort to reduce costs or increase functionality, ideally achieving both. She defined value as the most cost-effective way of producing a project without compromising its purpose. She stated that it was about optimization. She stated that value engineering was not just reducing costs at all costs or sacrificing quality. She stated that instead, it focused on gaining value for the dollars spent.

Ms. Whitaker stated that the value engineering process was developed during World War II by engineers and managers at the General Electric Company while manufacturing airplane engines.

She stated that there were extensive nationwide material shortages which really drove up the cost of products and reduced their availability. She stated that to some degree, it was similar to what we are seeing now with some supply chain shortages. She stated that they were working to identify substitutes. She stated that they did not have a lot of time to do substitutions during the war when they were trying to meet production quotas. She stated that they developed a very systematic process where they could balance function and cost, make a determination, and then move quickly through the process.

Ms. Whitaker stated that RWSA had a value engineering program with key dates listed from its more recent history. She stated that one was a Board-adopted policy in 2014, a staff presentation to the Board in 2019, and a general administrative procedure in 2022. She stated that it was also worth noting that RWSA first employed value engineering during the Ragged Mountain Dam project from 2008 to 2010. She stated that they hired an independent technical review team (ITRT), which was made up of world-class experts on roller-compacted concrete dam design and foundation design. She stated that it took them almost a year to hire the team itself because the key with value engineering is having the right people in the room at the right time. She stated that they brought these experts in, evaluated everything they had gone through for the previous five years on design.

Ms. Whitaker stated that at the time, they were looking at a roller-compacted concrete dam cost that was slowly creeping up towards the $85 million. She stated that they could no longer afford to do the project, so they brought in technical experts to walk through all the design details. She stated that the ITRT ultimately recommended that RWSA go with an earthen dam, which saved 50% to 75% of the cost of the project. She stated that the current VE process was not something completely foreign to them; they had been using it for a while. She stated that over the years, staff had refined a unique formalized process to do efficient value engineering reviews. She stated that this approach had been employed at RWSA since about 2008.

Ms. Whitaker explained that there was a six-step methodology. She stated the first step was to gather information, which involved obtaining a clear understanding of the project, including data, drawings, facts, figures, the purpose of the project, its scope, and all related aspects. She stated that the next step was functional analysis. She stated that in this stage, they worked with a specialized team to examine why the project was being undertaken, identify the key components of the project, pinpoint cost drivers, and determine how to meet primary functions while also considering secondary functions that may emerge from the project.

Ms. Whitaker stated that the third item was creative speculation. She stated that although it might seem counterintuitive to associate engineers with creativity, she stated that this stage involved brainstorming and exploring various ways to achieve the intended process and function of the project while potentially using different materials or methods for installation or construction. She stated that the objective was to be creative and think globally, considering a broader perspective. She stated that this was where the value engineering process was particularly helpful in identifying weaknesses or missing elements that needed to be incorporated.

Ms. Whitaker stated that the fourth step involved evaluating all alternatives and highlighting those most likely to bring functional improvements and cost savings. She stated that cost analysis

was the fifth step, focusing on capital costs, ease of operations, and operating expenses. She stated that finally, the development step entailed identifying what would work, creating a roadmap, and developing schematic designs for implementation into the project. She stated that this process typically took anywhere from one day to three or four days, as demonstrated by Ragged Mountain Dam's multiple workshops over several weeks. She stated that sometimes hiring the right technical expertise could take longer.

Ms. Whitaker stated with that in mind, she would explain key Value Engineering criteria for Rivanna. She stated that value engineering was automatically considered for all projects over $5 million. She stated that if it was a smaller project but they thought value engineering would be useful, they would use it as well. She stated that the flip side was true in that if they had a larger project where value engineering was not likely to produce results because the project was so constrained, they sometimes granted a waiver to the value engineering process. She stated that they incorporated independent technical expertise along with the design team and staff.

Ms. Whitaker stated that even on the smallest of projects, they tried to bring in at least one person from outside of any of the design firms involved. She stated that they would sometimes bring in someone from the design firm who had not been involved in a project at all, such as from a different office or part of the company. She stated that they also tried to also bring in technical experts who were specialists in the topics they thought might be most problematic, like pipe experts or excavators or construction experts. She stated that they typically conducted VE study work at the 30 to 60% design phase, and left themselves open to bring the VE team back a second or third time should it be necessary.

Ms. Whitaker stated that they tried to conduct workshops offsite and if they could not get offsite, then out of the workaday environment. She stated that it was similar to a retreat, where they were bringing a lot of people together to do some heavy-duty thinking in a short period of time and they really did not want too many interruptions. She stated that they wanted an informal, collegial atmosphere with people coming up with ideas. She stated that they found that this worked fairly well. She stated that they were focusing on key ideas with a high likelihood of success, as they did not have time to tackle every possible bolt and nut on their project. They focused on the things that either cost a lot of money or brought the most value. She stated that in the end, the team documented all outcomes, including cost savings and value brought to the project.

Ms. Whitaker indicated on the slide the results from their VE study for the South Rivanna Water Treatment Plant. She stated that each bullet represented a different area on the plant. She stated that this was a large project located across a geographic area, and they highlighted various ways to optimize or bring value throughout the process. She stated that they added two items to the project, which were numbers seven and eight. She stated that a balance sheet at the end of a VE study included negatives and positives, with the goal of achieving cost reduction or cost equivalency. She stated that they managed to reduce the project's cost by $800,000, which was approximately a 5.5% reduction. She stated that embedded in that number were some key things they added to the project for safety and reliability in their generators.

Ms. Whitaker stated that she would discuss a few recent VE studies and then the projects that

they anticipated having VE studies done in the coming years. She stated that they had just completed the Ragged Mountain Reservoir to Observatory, Pipeline, and Pump Station VE study, which was an interesting exercise. She stated that everyone thought their focus would be on the pump station, but they actually had some interesting conversations about pipe construction because right now in their business, the cost drivers were getting pipe and electrical. She stated that they were conducting the administrative and engineering building expansion VE study in early November, and the remaining projects were TBD but were all slated to include a VE component in their design.

Ms. Mallek stated that one of her neighbors in Earlysville owned property in West Virginia where the MVP was going through, and they were having to dig up pipe that had been sitting above ground for like six years. She stated that it was all corroded and everything like that, which was a horrifying prospect when thinking about putting in a pipeline. She asked if their suppliers had to stipulate how long it had been since it was coated.

Ms. Whitaker stated that they had several different layers built into how they specified pipe to protect what ultimately ended up in the ground. She confirmed that one of the things the industry was doing right now was not agreeing to sell large lengths of pipe, for example a contractor could not put in an order for five miles of pipe. She stated that they would only sell short batches of pipe as needed. She stated that it did keep from having a lot of aging pipe sitting on a work site. She stated that they required the contractor to protect the pipe and inspected it when it came off the truck. She stated that their pipe was large diameter and very expensive on a per unit basis.

Ms. Whitaker stated that they typically specified outside coatings, protective coatings, as well as interior coatings. She stated that they inspected it as it came off the truck and before it went into the ground. She stated that the other thing she would mention was gaskets. She stated that although it may sound crazy, if they had a rubber gasket that sat for five years, they must be stored in a certain way and kept out of the sun. She stated that they did have a pretty tight quality control program before they put the pipe itself into the project. She stated that for them, ductile iron pipe could sit for a long period of time and still be safe to go into the ground, however, they did a fair amount of checking as it went through the process.

Mr. Pinkston stated that it seemed similar to conducting a peer review halfway through a complex project, which allowed for an additional perspective on the project.

Ms. Whitaker agreed that it was, and she may have failed to mention that they have adopted a value engineering mentality in their own internal reviews as well. She stated that they hope that by the time they get to VE, a lot of the obvious things have already been taken care of by the project managers.

Mr. Pinkston asked if there were typical firms they went to in order to do this.

Ms. Whitaker stated that they tried hiring VE firms. She stated that historically, 10 to 15 years ago, VE had been conducted exclusively by companies that specialized in VE. She stated that it may still be done that way, however, they discovered that when contracting with a firm, the team and office on the East Coast often collapsed. She stated that this process could be quite

cumbersome if every checkbox was followed. She stated that consequently, they had developed a more streamlined approach, which they believed provided the value of bringing in outside resources without spending money on peripheral aspects of the process. She stated that as a result, they had reduced this process to just a few days with very specific requirements.

Mr. Pinkston asked if they had one engineering firm doing the design, whether they would bring in another firm.

Ms. Whitaker stated that they always brought in at least one person from the outside. She stated that this person might be another company working for them, or they could be independent technical experts.

Mr. Pinkston asked if the teams got along when they did that.

Ms. Whitaker stated that it was quite remarkable how everyone seemed to be pulling in the same direction. She stated that they had set some ground rules upfront, stating that their goal was to bring the best product to Rivanna and the ratepayers, and everyone was there for this purpose. She stated that the design engineer had an hour to present their design, showcasing their project. She stated that this provided them with an opportunity to be proud of the work they had done and explain how they made their decisions.

Ms. Whitaker stated that other participants were actively engaged in understanding these choices, asking questions such as the reasoning behind decisions and contemplating alternative ideas added to the list for further discussion later. She stated that the collaborative approach quickly emerged as everyone worked together toward a common goal.

Mr. Pinkston asked if they also verified constructability, looking for options to speed up the process or sequence work, or if that came later when they had a contract.

Ms. Whitaker stated that it was a bit of both. She stated that constructability, particularly for these projects, was really hard. She stated that constructability was huge for these plants because they had to keep them operating the entire time, so that was how they came up with the Observatory shutdown, followed by the sequential steps. She stated that other projects included a separate constructability review that they would do with a construction firm, or there were several firms that did large projects that would give help in cost estimating or sequencing.

Mr. Gaffney asked when the photograph of the Observatory Water Treatment Plant was taken.

Ms. Whitaker replied that it was within the last two or three months.

10. *Presentation: Major Capital Projects Update*
Scott Schiller, P.E., Engineering Manager

Mr. Schiller stated that Ms. Whitaker's image was a good juxtaposition to his cover slide, which showed the Observatory Water Treatment Plant before construction. He noted that it was slightly greener and had more available space than what they currently had. He stated that he would be

doing the major capital projects update and wanted to show that because they would see the Observatory Water Treatment Plant under construction later on, similar to Ms. Whitaker's provided image but from different vantage points. He stated that he planned to start with projects already under construction. The Observatory and South Rivanna Water Treatment Plants Rehabilitation and Expansion Project, which aimed to increase the treatment capacity at the Observatory Water Treatment Plant from 7.7 MGD to 10 MGD and improve South Rivanna's ability to treat up to 12 MGD.

Mr. Schiller stated that this project included plate settlers, a new chemical building, as well as an expansion to the GAC facility at Observatory, and then a new alum and fluoride building, administration building, and a couple of new filters at South Rivanna. He indicated the new administration building on the slide. He indicated the liquid lime, which they actually enclosed in a structure. He stated that they had added two new filters to the filter building and the plant, which now included an alum and fluoride building as well. He mentioned that there were numerous other improvements throughout the facility in addition to that. He stated the next slide showed the Observatory plant from a different view, displaying how they had expanded the filter building for the new backwash pumps.

Mr. Schiller stated that the new chemical building was adjacent to the old pretreatment building. He stated that they had also demolished two sedimentation basins and that with the addition of plate settlers in the remaining two basins, they effectively doubled their capacity, eliminating the need for the two sedimentation basins on the other side. He stated that they were installing a loop road, and the retaining wall was to help support that loop road. He explained that this retaining wall was around the location where the two sedimentation bases that were demoed had been. He noted the old wall from the slow sand filter, dating back to the 1940s and 1950s, was still present at the facility. He stated that it was a thorn in their side, no matter where they dug, they found it as it was a massive structure. He stated that they were looking for this project to be complete in March of 2024 with a budget of $43 million dollars.

Mr. Schiller stated that he would next discuss the Airport Road pump station project. He stated that this would reliably connect the Piney Mountain pressure zone to the Urban pressure zone. He indicated the two pumps and stated that that this would take the lower pressure from the urban system, boost it up, and send it into the Piney Mountain tank, supplying the Piney Mountain pressure zone. He stated that this would take the place of what they called the Kohl's pump right now, which was a temporary pump at the entrance of the Kohl's shopping center. And stated that this would also be part of the future airport water pressure zone when it was created. He stated that currently, they were looking at this project being complete in September of 2024, with a budget of $10 million.

Mr. Schiller stated that next was the Moores Creek 5kV electrical system upgrade project. He stated that the intent of this project was the replacement of several major electrical components at this plant. He stated that the plant was constructed in the 1980s, so there was some infrastructure that was over 40 years old out there that had reached the end of its serviceable life. He stated that this included motor control centers, transformers, switch gear, and other electrical improvements.

Mr. Schiller stated that the problem, as Ms. Whitaker mentioned, was that they were experiencing a lot of equipment delivery time issues with those types of products, which had unfortunately caused significant delays to this project. He stated that fortunately, the contractor had spent plenty of time getting a lot of the conduit in and some concrete pads and prep essentially for when that equipment was delivered, so they would have no excuses when they arrived on site. He stated that they were now looking for the project to be complete in December of 2024 based on those delivery schedules and a budget of $5.6 million.

Mr. Schiller stated that the next project was Red Hill Water Treatment Plant Upgrades, which was a well facility but operated more as a treatment plant. He showed an image of the inside of the existing well building, located with numerous chemical equipment. He stated that the intent of the project would be to expand the facility and provide additional chemical storage space, allowing for some automation and monitoring. He stated that they also planned to add GAC or granular activated carbon treatment at this facility. He stated that a pre-bid for this project was scheduled for Thursday, and they would accept bids by the end of November. He stated that construction was expected to run from February 2024 to February 2025. He stated that the total budget for the project was $800,000, and they had received $400,000 in funding from the County.

Mr. Gaffney asked Mr. Schiller to let the Board know what Red Hill fed.

Mr. Schiller stated that it fed the school there and a small residential development. He noted that it was a very small system.

Ms. Mallek asked if the reason for the GAC was due to deficiencies in the well water.

Mr. Schiller stated that it was more or less to ensure that they provided uniformly treated water for the entire community. He stated that next, he would move into design phase projects. He stated that the first project was the South Fork Rivanna River crossing, which would cross the south fork of the river, and the first line was over on the east side of 29. He stated that a 24-inch line on the west side would be installed. He stated that the full alignment of this project was represented by the yellow line on the aerial photograph displayed, and the water line under the river would be installed using horizontal directional drilling methods.

Mr. Schiller stated that this involved a high-density polyethylene pipe that curved under the river and then connected to ductile iron piping on either side as it linked to a stub-out at the treatment plant. He stated that additionally, there was ductile iron piping on the west side of 29 that had been placed during the 29 widening process. He stated that they were approximately 90% complete with the design phase and were currently working through final easement acquisitions. He stated that construction was expected to begin in spring around May and continue until December 2025, with a budget of $7 million.

Mr. Pinkston asked what the diameter was for the new pipe.

Mr. Schiller stated that it was 24 inches.

Mr. Pinkston stated that he had never seen directional boring.

Mr. Schiller indicated on the slide the dotted line that represented the easement. He stated that there would be a long drawback section, so they would assemble and fuse HDPE pipe sections together, and that the installation process was similar to companies we've seen installing fiberoptic cables on the side of the road, but much larger.

Ms. Mallek asked what made the hole in the rock for this pipe to go through.

Mr. Schiller stated that it was a drilling machine.

Ms. Mallek asked if it was a small version of what they did for the Rivanna Pump Station tunnel.

Mr. Schiller stated that that was a tunneling machine. He stated that he would next discuss the Ragged Mountain Reservoir to Observatory Water Treatment Plant water line and pump station. He stated that he mentioned earlier about Observatory being upgraded to 10 MGD. He stated that the intent of this project was to provide a more reliable 10 MGD source of raw water to the treatment plant. He stated that this would replace outdated infrastructure, as they had a 40-year-old and a 70-year-old pump station and 70 to 110-year-old water lines coming from Ragged Mountain to Observatory. He indicated on the slide that the alignment would connect into the Ragged Mountain Reservoir over on the west side. He stated that they planned to have a new pump station located at the Fox Haven Farm property. He stated that the line would extend north to connect into the line already installed on the Birdwood Golf Course and then head east, drilling under 29 before connecting in up at the Observatory Water Treatment Plant. He stated that all easements and property acquisitions in the red areas were complete, including those with the UVA Foundation. He stated that the yellow line was through the UVA property, and that had been finalized, but they were still working on filing paperwork.

Mr. Schiller stated yes, the primary objective of the west-to-east pipeline was to supply water to the Observatory Water Treatment Plant.

Mr. Pinkston asked if where it was going north was part of the larger transfer.

Mr. Schiller stated yes, that was part of the larger transfer between the two reservoirs.

Mr. Pinkston asked if there was some sort of valving as they approached the area.

Mr. Schiller stated that there was quite a bit involved, and that was actually what the image on the slide somewhat was intended to show. He stated all of the various valves were going to be in the yard at this pump station. He stated that not only would they be feeding water from Ragged Mountain to Observatory, but there would also be times when they had to accept water from South Rivanna and send it through to the reservoir. He stated that there would be other times when they would be sending Ragged Mountain water up to the South Rivanna Water Treatment Plant, and then also other times when they could potentially be sending South Rivanna water to the Observatory Water Treatment Plant. He stated that there were numerous options available, and a very complicated valving setup would be necessary.

Mr. Gaffney asked if it was the same pipe from the Ragged Mountain pump station would be used for going to the Observatory.

Mr. Schiller stated yes.

Mr. Mawyer stated that the pump station building would be large enough to house pumps to transfer water from Ragged to Observatory, and also to transfer water from Ragged back to South Rivanna. He stated that initially, they would install only the pumps for the Ragged to Observatory water transfer, and then with the Rivanna to Ragged pipeline project, they would add the additional pumps needed to transfer water from Ragged to the South Rivanna WTP.

Mr. O'Connell asked if staff would come back at a later date.

Mr. Schiller stated yes, there would be some refinements at this station between programming and pumps. He stated that also, there would be another pump station installed at the South Fork Reservoir, which would serve as the main pumps and wet well. He stated that one of the things they enjoyed discussing with consultants on this project was that they frequently informed them about the 4,900 control points associated with all the various pumping scenarios that the station would have to manage. He stated that he did not know if they were complaining to him or just letting him know how important they were, but it was a fairly complicated design. He stated that they were looking forward to some good Water Jam presentations about this project as well.

Ms. Mallek asked if there was any chance to run these pumps off of solar power in order to reduce energy consumption.

Mr. Schiller stated yes, they were planning for solar panels to supplement the power needed to run the pumps. He stated that they had acquired all easements and were working with UVA on the final components of the Observatory property. He stated that as Ms. Whitaker mentioned, they had performed a VE workshop on this project, and they were going through a number of the recommendations that came out of that. He stated that they were moving forward with a 60% design. He stated that they could look for this project to go into construction in September of 2024 and continue until December of 2028, with a budget of $44 million.

Mr. Schiller stated that the Central Water Line would increase capacity to the Observatory and enhance water conveyance by getting water into the distribution system. He stated that right now, the Observatory was locked hydraulically essentially, so even if they wanted to treat more water, they could not. He stated that it was about the hydraulics of the system. He stated that this would improve water flow and pressure redundancy in the urban system and then hydraulically connect the Observatory Water Treatment Plant to some of the larger lines out in the central and eastern part of the distribution system. He stated that they were at 60% design on this particular project at the moment, and they were working with the City on some additional design work for waterline replacements on Lewis Street and Cleveland Street. He also stated that they were working with them on the Belmont Bridge area and some refinements to the waterline there as well.

Mr. Pinkston asked if they had identified all of their alignments and where they would run the pipe.

Mr. Schiller stated yes. He stated that displayed on the slide was a 60% design document where they had located the line and designed the pipe profiles. He stated that they were focusing more on the utility interaction and conflicts and how to address them effectively before moving forward with final waterline relocations.

Mr. Pinkston stated this appeared to be quite similar to what they had initially planned to accomplish.

Mr. Schiller asked if Mr. Pinkston was referring to the location.

Mr. Pinkston stated yes.

Mr. Mawyer confirmed there were no changes to the pipe locations, except with the area under the railroad tracks near East High Street. He stated that they had a path in mind, but they were going to have to detour a bit. He stated that there was a developer who had some property there, and he had development plans they were trying to accommodate.

Mr. O'Connell asked if they had figured that out or if it was still being studied.

Mr. Schiller stated that it was still being reviewed by the consultant. He stated that they had several options and were working to refine them in order to present them for evaluation by the City. He stated that they were looking to start construction on this project in December 2024 and continue until December 2028, with a budget of $41M. He stated that the next project was the Emmett Street Water Line Betterment project. He stated that the Urban Finished Water Master Plan had identified the benefit of having an upgraded and extended waterline along Emmett Street, recognizing that this was a busy corridor.

Mr. Schiller stated that they wanted to try to work with other projects in the area so that they could get the pipe in at a smaller cost and less disturbance, and as a result, the map displayed on the slide showed the corridor and identified other projects that they could cooperate with them from a betterment perspective. He stated that this had been done with the UVA, the City, and VDOT, and two of those projects had already been completed. He stated that those were Contemplative Commons at the Dell Pond, and the Ivy Corridor Public Realm project by the intersection. He stated that they were currently working with the City on the first phase of the Emmett Street Streetscape project, and had also been discussing with VDOT regarding some enhancements at the 29 interchange.

Mr. Schiller stated that it appeared that there would be no betterment opportunities there, however, they were still working to ensure minor details were followed. He stated that additionally, they had infill projects that would need to be carried out as other projects progress. He stated that they were collaborating with the City on the streetscape design and a betterment agreement with them, and that they were anticipating construction to begin in 2024 and be completed in 2026, with a budget of $2.9M. He stated that next he would review the

administration building at Morris Creek. He stated that the building was constructed in 1980 and was now in need of an interior upgrade and additional space to accommodate the growing Authority.

Mr. Schiller stated that this new or upgraded building would include a new boardroom and education centers, similar to what Loudoun County did, but tailored to their needs, as well as an updated lab space. He stated that they were currently at 60% design for this project, and they had scheduled a VE workshop for the first week in November. He stated that they would then move forward with the design process. He stated that the slide depicted an exterior rendering of the building, with the existing building visible in the background. He stated that he would provide another image later that would showcase both buildings together more effectively. He stated that their goal was to match the aesthetic of the existing building with the new one, making it appear more modern. He stated that construction was expected to begin in July 2024 and continue through December 2026, with an approximate budget of $20 million.

Mr. Schiller stated that at Moores Creek, they had a structural and concrete rehabilitation project underway. He stated that last year's presentation featured a slide listing 20 projects for the area. He stated that they had since condensed these into three or four larger projects, including one that focused on various aspects of development at the plant, which would account for a number of repairs at the holding pond, including some concrete repair there, the equalization basins, which was closer to just over here on the west side of the administration building, where some concrete repair was also needed. He stated that the primary clarifiers required some repair work as well as the digester, with interim repairs before they built the new digestion complex, then the compost shed or the equipment shed, and they would be doing some repairs to that roof as well as the drainage system.

Mr. Schiller stated that they would also provide better access to valves in the Rivanna pump station and find a more efficient way to remove pumps from the aeration basins than their current method. He stated that they were currently working on preliminary design for this project, with plans to start construction on September 2024 and continue through June 2026, with a budget of $13.5M. He stated that again at Moores Creek, they had a building upfits and gravity thickener improvements project, which was similar to the administration building update. He stated that their operation staff and maintenance staff had been working in buildings existing since 1980, and they had long outgrown those locations.

Mr. Schiller stated that the slide showed a view of their existing maintenance shop, which was fairly congested, then the control room for their operators, which was actually an electrical room that they had converted into a control room. He stated that there were some definite upgrades required for their workspaces. He stated that improvements to the gravity thickeners would be made by improving the chemical feed system and providing cleanouts on the sludge lines, which they had had some problems with on the suction side of the sludge pumps. He stated that currently, they were going through a needs assessment or space needs assessment and developing concept plans.

Mr. Schiller stated that on the slide was just an example of a bubble layout, where they looked at the use of space and how much space they had, and then that could feed into basic conceptual

design and be used to move it to actual development design objectives. He stated that they were looking for the construction of this project to begin in August 2024 and continue until December 2025 with a budget of $5 million. He stated that he would then move on to the Crozet pump station rehabilitation project. He stated that this project involved improvements to four wastewater pump stations constructed in the 1980s. He stated that it was a theme of replacing 1980s infrastructure.

Mr. Schiller stated that these were four pump stations that conveyed wastewater from the town of Crozet into the urban wastewater collection system. He stated that the improvements would include replacement pumps, valves, roofs in need of replacement, motor control centers, generators, automatic transfer switches, and some other architectural features. He stated that their third pump station had an interesting design due to property owner requirements so they had siding to replace at that pump station as well. He stated that they were at a 30% design phase on this project with construction anticipated for January 2025 through December 2026 with a budget of $10.4 million.

Mr. Schiller stated that there were plans for a granular activated carbon expansion project at the Crozet water treatment plant, which would treat up to two million gallons per day after completion. He stated that the existing GAC facility was located near the filter building, and a new building would be constructed in the ACSA maintenance yard or storage yard. He stated that they were working closely with ACSA to coordinate demolition of the old building and access to the site. He stated that some items would be transferred to a new storage yard on Avon Street. He stated that they were going through a granular activated carbon media evaluation, and preliminary design was underway. He stated that construction was expected to begin in April 2025 and through October 2026, with a total budget of $6.6 million. He stated that they had received a $3.17 million grant from VDH for the project.

Mr. Schiller stated that next was the Beaver Creek Dam Pump Station and Piping Modifications project, which they had been discussing for some time. He stated that fortunately, they were moving into design and surveying, which he considered great. He stated that this was to upgrade the spillway at the dam to meet current DCR dam safety standards. He stated that the intended design was a labyrinth spillway, but unfortunately, as a result of that design, they would need to relocate the raw water pump station and improve the intake as well.

Mr. Schiller stated that this was part of a siting evaluation for where the pump station should go, so site one was selected for that pump station and the intake. He stated that they would also be installing a new raw water line, which would replace the current raw water line made of asbestos cement. He stated that survey work and design were beginning on this project in the fall, with construction expected to begin on April 2026 and continue until January 2029. He stated that the budget was $43 million, but they anticipated significant grant funds from NRCS.

Mr. Schiller stated that finally, he would mention the South Fork Rivanna Reservoir to Ragged Mountain Reservoir Pipeline Intake and Facilities project. He stated that they were discussing the next part of the raw water transfer project. He stated that there would be a new intake and pump station at South Fork Rivanna Reservoir, with a waterline connecting into the north side of the Birdwood waterline previously installed, which would interconnect with the Ragged Mountain

pump station. He noted that a 36-inch waterline would run through the entire corridor.

Mr. Schiller stated that all easements along the stretch had been acquired, and they were completing preliminary design work on the pump station and intake, trying to determine the best arrangement. He stated that on the slide was an actual aerial image, with the dam visible in the background, the road cutting around could be seen, as well as the new pump station and intake location adjacent to the existing intake pump station. He stated that construction for this project would with modifications to the Ragged Mountain reservoir in June of 2025 and continue through December of 2030, with a budget of $80 million.

Mr. O'Connell asked if all the pump stations and intake were located on Rivanna property.

Mr. Mawyer stated that the pump station near the Rivanna reservoir was on City property that they leased.

Mr. O'Connell asked what the legal status was.

Mr. Mawyer stated that they were free to move forward with the project. He stated that it was included in the Ragged Mountain Dam project agreement that they leased the five acres necessary for the intake and the pump station from the City, so they had a right to utilize the area.

Mr. Schiller displayed an image of the existing Administration building with the rendering of the addition to better depict what the future renovation would look like.

10. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

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

11. CLOSED MEETING

There was no reason for a closed meeting.

12. ADJOURNMENT

At 3:43 p.m., Mr. Pinkston moved to adjourn the meeting of the Rivanna Water and Sewer Authority. Ms. Mallek seconded the motion, which passed unanimously (7-0).

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

MEMORANDUM

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

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **EXECUTIVE DIRECTOR'S REPORT**

DATE: **NOVEMBER 14, 2023**

STRATEGIC PLAN PRIORITY: OPTIMIZATION AND RESILIENCY

Chemical Release

A chemical release (liquid lime) occurred at the South Rivanna WTP in the early morning of November 2 due to several operational noncompliances. Approximately 1200 gallons of liquid lime exited the lime storage building, entered the storm sewer system, and discharged into the South Fork Rivanna River below the dam. Staff immediately contacted and coordinated with the Virginia Department of Environmental Quality and the Albemarle Fire Rescue Department to minimize any environmental impacts from the release, which did not extend beyond the Rt 29 bridge. Testing indicates pH levels in the river returned to normal by November 6. There was no impact on our drinking water treatment process.

Lime Tanks

Lime Release

Outfall from SRWTP

STRATEGIC PLAN PRIORITY: EMPLOYEE DEVELOPMENT

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

- Schuyler Deal, Wastewater Operator - Class 4
- Kyle Neilson, Wastewater Operator – Class 2

Employee Appreciation

The management teams of our Authorities passed on our thanks to staff for their dedicated support of our services with a picnic and Service Awards program in the Administration Building parking lot.

STRATEGIC PLAN PRIORITY: PLANNING AND INFRASTRUCTURE

Grant Award

We received a grant award of $260,000 for removal of Emerging Contaminants from the Virginia Department of Health as part of the federal Bipartisan Infrastructure Law. These grant funds will be applied to the Crozet WTP GAC Upgrade project.

STRATEGIC PLAN PRIORITY: COMMUNICATION AND COLLABORATION

Virginia Water and Waste Authorities Association

As First Vice-President, I attended the Virginia Water and Waste Authorities Board of Director's Meeting in Staunton to develop an agenda for the 2024 annual membership meeting.

Calendar 2024 Board Meetings

Monthly Board of Director meetings will be held in-person next year on the 4th Tuesday of the month (except November and December, which will be the 3rd Tuesday) at 2:15 pm. While the meetings may be viewed virtually, persons wishing to speak during the "Items From the Public" period must

be present at the meeting. Written comments received before the meeting will be presented by staff during this period. Video recordings of the meeting will continue to be posted to our website.

STRATEGIC PLAN PRIORITY: ENVIRONMENTAL STEWARDSHIP

Drought Monitoring

Albemarle County and Charlottesville are experiencing Moderate drought conditions, according to U. S. Drought Monitoring report. South Rivanna Reservoir is currently 100% full, Beaver Creek Reservoir (Crozet) is 89% full, and Totier Creek Reservoir (Scottsville) is 100% full. However, area precipitation is 16 inches, or 45%, below normal for the year to date, and about 22 inches, or 18%, below normal for the past 34 months.

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MEMORANDUM

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

FROM: **LONNIE WOOD, DIRECTOR OF FINANCE AND ADMINISTRATION**

REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

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

DATE: **NOVEMBER 14, 2023**

Financial Snapshot

The Authority has an overall net surplus of $250,900 for the first quarter of this fiscal year due to operating rate revenue being above average and receipt of the annual septage receiving support from the County. Total revenues are $872,100 over budget estimates and total expenses are $621,200 over budget. Urban Water flows and operations rate revenue are 13% above budget estimates, and Urban Wastewater flows and operations rate revenue are 5% over budget. Revenues and expenses are summarized in the table below:

	Urban Water	Urban Wastewater	Total Other Rate Centers	Total Authority
Operations				
Revenues	$ 2,913,773	$ 2,815,090	$ 712,269	$ 6,441,132
Expenses	(2,799,324)	(2,796,069)	(749,861)	(6,345,254)
Surplus (deficit)	$ 114,449	$ 19,021	$ (37,592)	$ 95,878
Debt Service				
Revenues	$ 2,792,837	$ 2,687,401	$ 677,743	$ 6,157,981
Expenses	(2,760,861)	(2,570,596)	(671,531)	(6,002,988)
Surplus (deficit)	$ 31,976	$ 116,805	$ 6,212	$ 154,993
Total				
Revenues	$ 5,706,610	$ 5,502,491	$ 1,390,012	$ 12,599,113
Expenses	(5,560,185)	(5,366,665)	(1,421,392)	(12,348,242)
Surplus (deficit)	$ 146,425	$ 135,826	$ (31,380)	$ 250,871

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

Detailed Financials

The Authority's total operating revenues through August are $536,500 over the prorated annual budget estimates, and operating expenses are over budget by $440,700. The following comments explain most of the other budget vs. actual variances.

A. Annual and Quarterly Transactions - Some revenues and expenses are over the prorated year-to-date budget due to one-time receipts of revenues for the year and quarterly or annual payments of expenses. These transactions appear to have significant impacts on the budget vs. actual monthly comparisons but usually even out as the year progresses. Septage receiving support revenue of $109,440 is billed to the County annually in July. Annual payments are made in the first quarter for certain maintenance agreements and for employer contributions to employees' health savings accounts. The annual payment to UVA for the Observatory lease is made in September. Insurance premiums are paid at the beginning of each quarter.
B. Personnel Costs (all departments) –The prorated budget amounts through September are calculated as 3/12 (or 25%) of the annual budget on these financial statements. However, actual payroll is paid biweekly, and there have been 7 out of 26 total pay periods thus far this fiscal year (or 26.9%). This affects the comparison of budget vs. actual payroll costs over all departments/rate centers. Urban Water salaries are also higher than budgeted due to pay increases for plant operators who achieved higher licenses.
C. Other Services & Charges (Urban Water, Crozet Water, Urban Wastewater – pages 2, 3, 5) – Utility costs are running higher than originally estimated for Urban Water and Urban Wastewater. Urban Water, Crozet Water, and Urban Wastewater paid unbudgeted annual DEQ permit application fees this quarter of $25,000, $15,000, and $10,650, respectively.
D. Information Technology (Urban Water, Crozet Water, Administration – pages 2, 3, 8) – Urban Water and Crozet Water are over the prorated budget for SCADA Standard Graphics Rollout costs and on-call SCADA services. The Administration department is currently over the prorated budget on some annual and monthly IT maintenance and support costs.
E. Communications (Administration – page 8) – Telephone and data service costs for the Administration department are currently over budget.
F. Professional Services (Administration – page 8) The Administration Department is over the prorated budget for engineering and technical services for an Information Technology strategic assessment and improvement plan update.
G. Equipment Purchases (Urban Water – page 2) Urban Water incurred $10,500 unbudgeted equipment rental costs.

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

Consolidated Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Operations Rate Revenue		$ 22,727,003	$ 5,681,751	$ 6,125,298	$ 443,547	7.81%
Lease Revenue		124,000	31,000	35,089	4,089	13.19%
Admin., Maint. & Engineering Revenue		781,000	195,250	197,034	1,784	0.91%
Other Revenues		647,267	161,817	192,553	30,737	18.99%
Use of Reserves (Water Resources Fund)		80,000	20,000	49,200	29,200	146.00%
Interest Allocation		47,250	11,813	38,991	27,179	230.09%
Total Operating Revenues		**$ 24,406,520**	**$ 6,101,630**	**$ 6,638,166**	**$ 536,536**	**8.79%**
Expenses						
Personnel Cost	**B**	$ 11,625,091	$ 2,906,273	$ 3,144,478	$ (238,205)	-8.20%
Professional Services	**F**	467,850	116,963	93,059	23,904	20.44%
Other Services & Charges	**C**	3,479,955	869,989	1,081,510	(211,522)	-24.31%
Communications	**E**	221,440	55,360	75,066	(19,706)	-35.60%
Information Technology	**A, D**	1,269,575	317,394	314,723	2,671	0.84%
Supplies		46,300	11,575	12,936	(1,361)	-11.76%
Operations & Maintenance	**A**	6,035,808	1,508,952	1,512,317	(3,365)	-0.22%
Equipment Purchases	**G**	345,500	86,375	79,449	6,926	8.02%
Depreciation		915,000	228,750	228,750	-	0.00%
Total Operating Expenses		**$ 24,406,519**	**$ 6,101,630**	**$ 6,542,289**	**$ (440,659)**	**-7.22%**
Operating Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 95,877**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 22,119,060	$ 5,529,765	$ 5,529,768	$ 3	0.00%
Septage Receiving Support - County		109,440	27,360	109,440	82,080	300.00%
Buck Mountain Lease Revenue		1,600	400	1,403	1,003	250.64%
Trust Fund Interest		179,830	44,958	116,871	71,913	159.96%
Reserve Fund Interest		879,900	219,975	400,501	180,526	82.07%
Total Debt Service Revenues		**$ 23,289,830**	**$ 5,822,458**	**$ 6,157,982**	**$ 335,524**	**5.76%**
Debt Service Costs						
Total Principal & Interest		$ 16,168,944	$ 4,042,236	$ 4,042,236	$ -	0.00%
Reserve Additions-Interest		879,900	219,975	400,501	(180,526)	-82.07%
Debt Service Ratio Charge		725,000	181,250	181,250	-	0.00%
Reserve Additions-CIP Growth		5,516,000	1,379,000	1,379,000	-	0.00%
Total Debt Service Costs		**$ 23,289,844**	**$ 5,822,461**	**$ 6,002,987**	**$ (180,526)**	**-3.10%**
Debt Service Surplus/(Deficit)		**$ (14)**	**$ (4)**	**$ 154,995**		

Summary

Total Revenues	$ 47,696,350	$ 11,924,088	$ 12,796,147	$ 872,060	7.31%
Total Expenses	47,696,363	11,924,091	12,545,275	(621,184)	-5.21%
Surplus/(Deficit)	**$ (13)**	**$ (3)**	**$ 250,872**		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Urban Water Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 10,021,362	$ 2,505,341	$ 2,821,016	$ 315,676	12.60%
Lease Revenue		94,000	23,500	26,907	3,407	14.50%
Miscellaneous		-	-	-	-	
Use of Reserves (Water Resources Fund)		80,000	20,000	49,200	29,200	146.00%
Interest Allocation		34,200	8,550	16,649	8,099	94.73%
Total Operating Revenues		**$ 10,229,562**	**$ 2,557,391**	**$ 2,913,773**	**$ 356,382**	**13.94%**
Expenses						
Personnel Cost	**B**	$ 2,384,332	$ 596,083	$ 679,360	$ (83,277)	-13.97%
Professional Services		178,500	44,625	12,707	31,918	71.53%
Other Services & Charges	**C**	769,233	192,308	282,522	(90,214)	-46.91%
Communications		103,200	25,800	25,708	92	0.36%
Information Technology	**A, D**	127,650	31,913	60,031	(28,118)	-88.11%
Supplies		7,000	1,750	5,211	(3,461)	-197.75%
Operations & Maintenance	**A**	2,905,068	726,267	781,713	(55,446)	-7.63%
Equipment Purchases	**G**	20,100	5,025	15,506	(10,481)	-208.57%
Depreciation		300,000	75,000	75,000	-	0.00%
Subtotal Before Allocations		$ 6,795,083	$ 1,698,771	$ 1,937,757	$ (238,986)	-14.07%
Allocation of Support Departments		3,434,478	858,620	861,568	(2,948)	-0.34%
Total Operating Expenses		**$ 10,229,561**	**$ 2,557,390**	**$ 2,799,324**	**$ (241,934)**	**-9.46%**
Operating Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 114,448**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 10,193,779	$ 2,548,445	$ 2,548,446	$ 1	0.00%
Trust Fund Interest		77,500	19,375	50,348	30,973	159.86%
Reserve Fund Interest		423,100	105,775	192,641	86,866	82.12%
Lease Revenue		1,600	400	1,403	1,003	250.64%
Total Debt Service Revenues		**$ 10,695,979**	**$ 2,673,995**	**$ 2,792,837**	**$ 118,842**	**4.44%**
Debt Service Costs						
Total Principal & Interest		$ 6,964,779	$ 1,741,195	$ 1,741,195	$ -	0.00%
Reserve Additions-Interest		423,100	105,775	192,641	(86,866)	-82.12%
Debt Service Ratio Charge		400,000	100,000	100,000	-	0.00%
Est. New Debt Service - CIP Growth		2,908,100	727,025	727,025	-	0.00%
Total Debt Service Costs		**$ 10,695,979**	**$ 2,673,995**	**$ 2,760,861**	**$ (86,866)**	**-3.25%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 31,977**		
Rate Center Summary						
Total Revenues		$ 20,925,541	$ 5,231,385	$ 5,706,610	$ 475,224	9.08%
Total Expenses		20,925,540	5,231,385	5,560,185	(328,800)	-6.29%
Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 146,425**		
Costs per 1000 Gallons		$ 3.01		$ 2.93		
Operating and DS		$ 6.16		$ 5.81		
Thousand Gallons Treated		3,397,700	849,425	956,602	107,177	12.62%
or						
Flow (MGD)		9.309		10.398		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Crozet 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		$ 1,234,752	$ 308,688	$ 308,688	$ -	0.00%
Lease Revenues		30,000	7,500	8,182	682	9.09%
Interest Allocation		4,600	1,150	2,223	1,073	93.26%
Total Operating Revenues		**$ 1,269,352**	**$ 317,338**	**$ 319,092**	**$ 1,754**	**0.55%**
Expenses						
Personnel Cost		$ 341,691	$ 85,423	$ 95,167	$ (9,745)	-11.41%
Professional Services		22,900	5,725	-	5,725	100.00%
Other Services & Charges	C	133,426	33,357	58,039	(24,683)	-74.00%
Communications		17,600	4,400	4,526	(126)	-2.86%
Information Technology	D	32,400	8,100	21,468	(13,368)	-165.03%
Supplies		1,500	375	629	(254)	-67.83%
Operations & Maintenance		335,700	83,925	82,599	1,326	1.58%
Equipment Purchases		3,200	800	800	(0)	0.00%
Depreciation		60,000	15,000	15,000	-	0.00%
Subtotal Before Allocations		$ 948,417	$ 237,104	$ 278,229	$ (41,124)	-17.34%
Allocation of Support Departments		320,940	80,235	80,409	(174)	-0.22%
Total Operating Expenses		**$ 1,269,357**	**$ 317,339**	**$ 358,638**	**$ (41,299)**	**-13.01%**
Operating Surplus/(Deficit)		**$ (5)**	**$ (1)**	**$ (39,546)**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 2,385,720	$ 596,430	$ 596,430	$ -	0.00%
Trust Fund Interest		13,500	3,375	8,800	5,425	160.75%
Reserve Fund Interest		34,500	8,625	15,620	6,995	81.10%
Total Debt Service Revenues		**$ 2,433,720**	**$ 608,430**	**$ 620,850**	**$ 12,420**	**2.04%**
Debt Service Costs						
Total Principal & Interest		$ 1,216,725	$ 304,181	$ 304,181	$ -	0.00%
Reserve Additions-Interest		34,500	8,625	15,620	(6,995)	-81.10%
Estimated New Principal & Interest		1,182,500	295,625	295,625	-	0.00%
Total Debt Service Costs		**$ 2,433,725**	**$ 608,431**	**$ 615,426**	**$ (6,995)**	**-1.15%**
Debt Service Surplus/(Deficit)		**$ (5)**	**$ (1)**	**$ 5,424**		
Rate Center Summary						
Total Revenues		$ 3,703,072	$ 925,768	$ 939,942	$ 14,174	1.53%
Total Expenses		3,703,082	925,770	974,064	(48,293)	-5.22%
Surplus/(Deficit)		**$ (10)**	**$ (2)**	**$ (34,122)**		
Costs per 1000 Gallons		$ 6.26		$ 5.61		
Operating and DS		$ 18.27		$ 15.25		
Thousand Gallons Treated		202,697	50,674	63,882	13,208	26.06%
Flow (MGD)		0.555		0.694		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Scottsville Water Rate Center
Revenues and Expenses Summary

	Budget FY 2024	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual					
Notes					
Revenues					
Operations Rate Revenue	$ 656,460	$ 164,115	$ 164,115	$ -	0.00%
Interest Allocation	2,150	538	1,053	515	95.86%
Total Operating Revenues	**$ 658,610**	**$ 164,653**	**$ 165,168**	**$ 515**	**0.31%**
Expenses					
Personnel Cost	$ 223,641	$ 55,910	$ 63,104	$ (7,194)	-12.87%
Professional Services	5,000	1,250	412	838	67.04%
Other Services & Charges	31,800	7,950	10,779	(2,829)	-35.58%
Communications	6,750	1,688	2,296	(608)	-36.04%
Information Technology	19,700	4,925	5,852	(927)	-18.83%
Supplies	100	25	85	(60)	-240.32%
Operations & Maintenance	134,800	33,700	21,152	12,548	37.23%
Equipment Purchases	2,000	500	843	(343)	-68.64%
Depreciation	40,000	10,000	10,000	0	0.00%
Subtotal Before Allocations	$ 463,791	$ 115,948	$ 114,523	$ 1,424	1.23%
Allocation of Support Departments	194,815	48,704	48,555	149	0.31%
Total Operating Expenses	**$ 658,606**	**$ 164,652**	**$ 163,078**	**$ 1,573**	**0.96%**
Operating Surplus/(Deficit)	**$ 4**	**$ 1**	**$ 2,089**		
Debt Service Budget vs. Actual					
Revenues					
Debt Service Rate Revenue	$ 158,736	$ 39,684	$ 39,684	$ -	0.00%
Trust Fund Interest	1,650	413	1,075	663	160.66%
Reserve Fund Interest	10,300	2,575	4,806	2,231	86.64%
Total Debt Service Revenues	**$ 170,686**	**$ 42,672**	**$ 45,565**	**$ 2,894**	**6.78%**
Debt Service Costs					
Total Principal & Interest	$ 148,991	$ 37,248	$ 37,248	$ -	0.00%
Reserve Additions-Interest	10,300	2,575	4,806	(2,231)	-86.64%
Estimated New Principal & Interest	11,400	2,850	2,850	-	0.00%
Total Debt Service Costs	**$ 170,691**	**$ 42,673**	**$ 44,904**	**$ (2,231)**	**-5.23%**
Debt Service Surplus/(Deficit)	**$ (5)**	**$ (1)**	**$ 661**		
Rate Center Summary					
Total Revenues	$ 829,296	$ 207,324	$ 210,733	$ 3,409	1.64%
Total Expenses	829,297	207,324	207,982	(658)	-0.32%
Surplus/(Deficit)	**$ (1)**	**$ (0)**	**$ 2,751**		
Costs per 1000 Gallons	$ 38.22		$ 29.85		
Operating and DS	$ 48.13		$ 38.06		
Thousand Gallons Treated	17,230	4,308	5,464	1,157	26.85%
or					
Flow (MGD)	0.047		0.059		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Urban Wastewater Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 9,908,321	$ 2,477,080	$ 2,604,951	$ 127,871	5.16%
Stone Robinson WWTP		17,267	4,317	3,800	(517)	-11.97%
Septage Acceptance		550,000	137,500	138,838	1,338	0.97%
Nutrient Credits		80,000	20,000	49,915	29,915	149.58%
Miscellaneous Revenue		-	-	-	-	
Interest Allocation		3,300	825	17,585	16,760	2031.53%
Total Operating Revenues		**$ 10,558,888**	**$ 2,639,722**	**$ 2,815,090**	**$ 175,368**	**6.64%**
Expenses						
Personnel Cost	**B**	$ 1,458,300	$ 364,575	$ 418,498	$ (53,922)	-14.79%
Professional Services		40,000	10,000	17,399	(7,399)	-73.99%
Other Services & Charges	**C**	2,271,556	567,889	661,469	(93,580)	-16.48%
Communications		11,600	2,900	5,365	(2,465)	-84.99%
Information Technology		110,600	27,650	22,688	4,962	17.95%
Supplies		1,200	300	1,016	(716)	-238.63%
Operations & Maintenance		2,086,800	521,700	524,610	(2,910)	-0.56%
Equipment Purchases		73,500	18,375	18,375	-	0.00%
Depreciation		470,000	117,500	117,500	(0)	0.00%
Subtotal Before Allocations		$ 6,523,556	$ 1,630,889	$ 1,786,918	$ (156,029)	-9.57%
Allocation of Support Departments		4,035,331	1,008,833	1,009,150	(318)	-0.03%
Total Operating Expenses		**$ 10,558,887**	**$ 2,639,722**	**$ 2,796,069**	**$ (156,347)**	**-5.92%**
Operating Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 19,021**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 9,339,509	$ 2,334,877	$ 2,334,879	$ 2	0.00%
Septage Receiving Support - County	**A**	109,440	27,360	109,440	82,080	300.00%
Trust Fund Interest		86,900	21,725	56,448	34,723	159.83%
Reserve Fund Interest		410,200	102,550	186,633	84,083	81.99%
Total Debt Service Revenues		**$ 9,946,049**	**$ 2,486,512**	**$ 2,687,401**	**$ 200,889**	**8.08%**
Debt Service Costs						
Total Principal & Interest		$ 7,812,249	$ 1,953,062	$ 1,953,062	$ -	0.00%
Reserve Additions-Interest		410,200	102,550	186,633	(84,083)	-81.99%
Debt Service Ratio Charge		325,000	81,250	81,250	-	0.00%
Est. New Debt Service - CIP Growth		1,398,600	349,650	349,650	-	0.00%
Total Debt Service Costs		**$ 9,946,049**	**$ 2,486,512**	**$ 2,570,596**	**$ (84,083)**	**-3.38%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 116,805**		
Rate Center Summary						
Total Revenues		$ 20,504,937	$ 5,126,234	$ 5,502,491	$ 376,256	7.34%
Total Expenses		20,504,936	5,126,234	5,366,664	(240,430)	-4.69%
Surplus/(Deficit)		**$ 1**	**$ 0**	**$ 135,826**		
Costs per 1000 Gallons		$ 3.11		$ 3.14		
Operating and DS		$ 6.05		$ 6.02		
Thousand Gallons Treated		3,390,400	847,600	891,496	43,896	5.18%
or						
Flow (MGD)		9.289		9.690		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Glenmore Wastewater Rate Center
Revenues and Expenses Summary

	Budget FY 2024	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual					
Notes					
Revenues					
Operations Rate Revenue	$ 521,916	$ 130,479	$ 130,479	$ -	0.00%
Interest Allocation	1,700	425	819	394	92.66%
Total Operating Revenues	**$ 523,616**	**$ 130,904**	**$ 131,298**	**$ 394**	**0.30%**
Expenses					
Personnel Cost	$ 127,879	$ 31,970	$ 36,781	$ (4,811)	-15.05%
Professional Services	25,000	6,250	6,943	(693)	-11.09%
Other Services & Charges	35,400	8,850	15,225	(6,375)	-72.03%
Communications	3,450	863	797	66	7.61%
Information Technology	13,000	3,250	413	2,837	87.30%
Supplies	-	-	-	-	
Operations & Maintenance	143,550	35,888	30,295	5,592	15.58%
Equipment Purchases	3,800	950	950	(0)	0.00%
Depreciation	25,000	6,250	6,250	0	0.00%
Subtotal Before Allocations	$ 377,079	$ 94,270	$ 97,654	$ (3,385)	-3.59%
Allocation of Support Departments	146,534	36,634	36,291	343	0.94%
Total Operating Expenses	**$ 523,613**	**$ 130,903**	**$ 133,945**	**$ (3,042)**	**-2.32%**
Operating Surplus/(Deficit)	**$ 3**	**$ 1**	**$ (2,647)**		
Debt Service Budget vs. Actual					
Revenues					
Debt Service Rate Revenue	$ 22,680	$ 5,670	$ 5,670	$ -	0.00%
Trust Fund Interest	200	50	140	90	180.48%
Reserve Fund Interest	-	-	-	-	
Total Debt Service Revenues	**$ 22,880**	**$ 5,720**	**$ 5,810**	**$ 90**	**1.58%**
Debt Service Costs					
Total Principal & Interest	$ 18,729	$ 4,682	$ 4,682	$ -	0.00%
Estimated New Principal & Interest	4,150	1,038	1,038	-	0.00%
Reserve Additions-Interest	-	-	-	-	
Total Debt Service Costs	**$ 22,879**	**$ 5,720**	**$ 5,720**	**$ -**	**0.00%**
Debt Service Surplus/(Deficit)	**$ 1**	**$ 0**	**$ 90**		

Rate Center Summary

Total Revenues	$ 546,496	$ 136,624	$ 137,108	$ 484	0.35%
Total Expenses	546,492	136,623	139,665	(3,042)	-2.23%
Surplus/(Deficit)	**$ 4**	**$ 1**	**$ (2,557)**		
Costs per 1000 Gallons	$ 12.65		$ 11.73		
Operating and DS	$ 13.20		$ 12.23		
Thousand Gallons Treated	41,401	10,350	11,423	1,073	**10.36%**
or					
Flow (MGD)	0.113		0.124		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Scottsville Wastewater Rate Center
Revenues and Expenses Summary

	Budget FY 2024	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Notes					
Revenues					
Operations Rate Revenue	$ 384,192	$ 96,048	$ 96,048	$ -	0.00%
Interest Allocation	1,300	325	663	338	103.96%
Total Operating Revenues	**$ 385,492**	**$ 96,373**	**$ 96,711**	**$ 338**	**0.35%**
Expenses					
Personnel Cost	$ 127,949	$ 31,987	$ 36,781	$ (4,794)	-14.99%
Professional Services	5,000	1,250	-	1,250	100.00%
Other Services & Charges	24,800	6,200	10,193	(3,993)	-64.40%
Communications	3,800	950	1,185	(235)	-24.74%
Information Technology	14,025	3,506	413	3,093	88.23%
Supplies	-	-	475	(475)	
Operations & Maintenance	49,500	12,375	5,324	7,051	56.98%
Equipment Purchases	3,700	925	925	0	0.00%
Depreciation	20,000	5,000	5,000	(0)	0.00%
Subtotal Before Allocations	$ 248,774	$ 62,193	$ 60,295	$ 1,898	3.05%
Allocation of Support Departments	136,722	34,180	33,905	276	0.81%
Total Operating Expenses	**$ 385,495**	**$ 96,374**	**$ 94,200**	**$ 2,174**	**2.26%**
Operating Surplus/(Deficit)	**$ (3)**	**$ (1)**	**$ 2,511**		

Operating Budget vs. Actual

Debt Service Budget vs. Actual

Revenues					
Debt Service Rate Revenue	$ 18,636	$ 4,659	$ 4,659	$ -	0.00%
Trust Fund Interest	80	20	58	38	192.10%
Reserve Fund Interest	1,800	450	801	351	78.00%
Total Debt Service Revenues	**$ 20,516**	**$ 5,129**	**$ 5,518**	**$ 389**	**7.59%**
Debt Service Costs					
Total Principal & Interest	$ 7,471	$ 1,868	$ 1,868	$ -	0.00%
Reserve Additions-Interest	1,800	450	801	(351)	-78.00%
Estimated New Principal & Interest	11,250	2,813	2,813	-	0.00%
Total Debt Service Costs	**$ 20,521**	**$ 5,130**	**$ 5,481**	**$ (351)**	**-6.84%**
Debt Service Surplus/(Deficit)	**$ (5)**	**$ (1)**	**$ 37**		

Rate Center Summary					
Total Revenues	$ 406,008	$ 101,502	$ 102,229	$ 727	0.72%
Total Expenses	406,016	101,504	99,681	1,823	1.80%
Surplus/(Deficit)	**$ (8)**	**$ (2)**	**$ 2,548**		
Costs per 1000 Gallons	$ 16.30		$ 18.00		
Operating and DS	$ 17.17		$ 19.05		
Thousand Gallons Treated	23,643	5,911	5,233	(678)	**-11.47%**
or					
Flow (MGD)	0.065		0.057		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Administration

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ 781,000	$ 195,250	$ 195,250	$ 0	0.00%
Bond Proceeeds Funding Bond Issuance Costs		-	-	-	-	
Miscellaneous Revenue		-	-	717	717	
Total Operating Revenues		**$ 781,000**	**$ 195,250**	**$ 195,967**	**$ 717**	**0.37%**
Expenses						
Personnel Cost		$ 2,930,008	$ 732,502	$ 740,287	$ (7,785)	-1.06%
Professional Services	**F**	136,450	34,113	53,723	(19,610)	-57.49%
Other Services & Charges		140,760	35,190	34,698	492	1.40%
Communications	**E**	42,800	10,700	21,385	(10,685)	-99.86%
Information Technology		778,800	194,700	189,640	5,060	2.60%
Supplies		22,800	5,700	4,330	1,370	24.04%
Operations & Maintenance		64,200	16,050	8,284	7,766	48.39%
Equipment Purchases		15,000	3,750	3,750	-	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 4,130,818**	**$ 1,032,705**	**$ 1,056,095**	**$ (23,390)**	**-2.26%**

Department Summary

Net Costs Allocable to Rate Centers	**$ (3,349,818)**	**$ (837,455)**	**$ (860,128)**	**$ 22,673**	**-2.71%**
Allocations to the Rate Centers					
Urban Water	44.00% **$ 1,473,920**	**$ 368,480**	**$ 378,456**	**$ (9,976)**	
Crozet Water	4.00% **$ 133,993**	**33,498**	**34,405**	**(907)**	
Scottsville Water	2.00% **$ 66,996**	**16,749**	**17,203**	**(453)**	
Urban Wastewater	48.00% **$ 1,607,913**	**401,978**	**412,861**	**(10,883)**	
Glenmore Wastewater	1.00% **$ 33,498**	**8,375**	**8,601**	**(227)**	
Scottsville Wastewater	1.00% **$ 33,498**	**8,375**	**8,601**	**(227)**	
	100.00% **$ 3,349,818**	**$ 837,455**	**$ 860,128**	**$ (22,673)**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Maintenance

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ -	$ -	
Miscellaneous Revenue		-	-	1,067	1,067	
Total Operating Revenues		**$ -**	**$ -**	**$ 1,067**	**$ 1,067**	
Expenses						
Personnel Cost	**B**	$ 1,553,212	$ 388,303	$ 399,764	$ (11,461)	-2.95%
Professional Services		25,000	6,250	-	6,250	100.00%
Other Services & Charges		36,400	9,100	4,902	4,198	46.13%
Communications		11,300	2,825	8,126	(5,301)	-187.63%
Information Technology		17,500	4,375	305	4,070	93.04%
Supplies		4,000	1,000	-	1,000	100.00%
Operations & Maintenance		114,150	28,538	32,627	(4,089)	-14.33%
Equipment Purchases		201,000	50,250	32,500	17,750	35.32%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 1,962,562**	**$ 490,640**	**$ 478,223**	**$ 12,417**	**2.53%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (1,962,562)**	**$ (490,640)**	**$ (477,156)**	**$ (11,350)**	**2.31%**
Allocations to the Rate Centers						
Urban Water	30.00%	**$ 588,768**	**$ 147,192**	**$ 143,147**	**$ 4,045**	
Crozet Water	3.50%	**68,690**	**17,172**	**16,700**	**472**	
Scottsville Water	3.50%	**68,690**	**17,172**	**16,700**	**472**	
Urban Wastewater	56.50%	**1,108,847**	**277,212**	**269,593**	**7,619**	
Glenmore Wastewater	3.50%	**68,690**	**17,172**	**16,700**	**472**	
Scottsville Wastewater	3.00%	**58,877**	**14,719**	**14,315**	**405**	
	100.00%	**$ 1,962,562**	**$ 490,640**	**$ 477,156**	**$ 13,485**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Laboratory

Operating Budget vs. Actual

	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
N/A						
Expenses						
Personnel Cost	**B**	$ 456,056	$ 114,014	$ 128,062	$ (14,048)	-12.32%
Professional Services		-	-	-	-	
Other Services & Charges		14,580	3,645	339	3,306	90.70%
Communications		1,400	350	175	175	49.91%
Information Technology		1,000	250	-	250	100.00%
Supplies		1,200	300	47	253	84.44%
Operations & Maintenance		115,300	28,825	16,105	12,720	44.13%
Equipment Purchases		1,700	425	425	(0)	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 591,236**	**$ 147,809**	**$ 145,152**	**$ 2,657**	**1.80%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (591,236)**	**$ (147,809)**	**$ (145,152)**	**$ (2,657)**	**1.80%**
Allocations to the Rate Centers						
Urban Water	44.00%	**$ 260,144**	**$ 65,036**	**$ 63,867**	**$ 1,169**	
Crozet Water	4.00%	**23,649**	**5,912**	**5,806**	**106**	
Scottsville Water	2.00%	**11,825**	**2,956**	**2,903**	**53**	
Urban Wastewater	47.00%	**277,881**	**69,470**	**68,222**	**1,249**	
Glenmore Wastewater	1.50%	**8,869**	**2,217**	**2,177**	**40**	
Scottsville Wastewater	1.50%	**8,869**	**2,217**	**2,177**	**40**	
	100.00%	**$ 591,236**	**$ 147,809**	**$ 145,152**	**$ 2,657**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2023

Engineering

Operating Budget vs. Actual

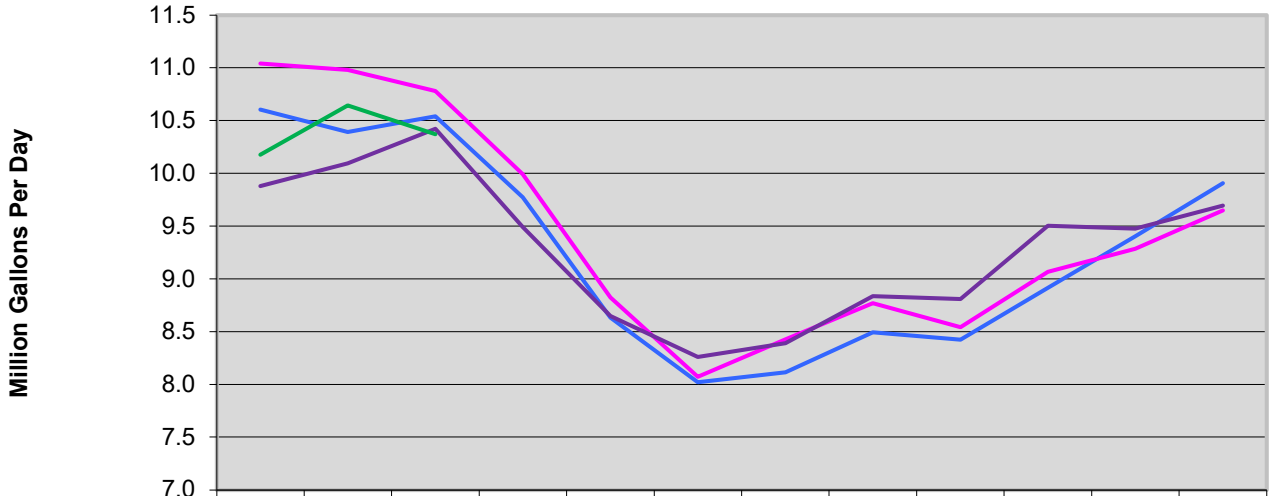
	Notes	*Budget FY 2024*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ -	$ -	
Total Operating Revenues		**$ -**	**$ -**	**$ -**	**$ -**	
Expenses						
Personnel Cost	**B**	$ 2,022,024	$ 505,506	$ 546,676	$ (41,170)	-8.14%
Professional Services		30,000	7,500	1,875	5,625	75.00%
Other Services & Charges		22,000	5,500	3,344	2,156	39.20%
Communications		19,540	4,885	5,504	(619)	-12.67%
Information Technology		154,900	38,725	13,915	24,810	64.07%
Supplies		8,500	2,125	1,144	981	46.16%
Operations & Maintenance		86,740	21,685	9,609	12,076	55.69%
Equipment Purchases		21,500	5,375	5,375	0	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 2,365,204**	**$ 591,301**	**$ 587,442**	**$ 3,859**	**0.65%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (2,365,204)**	**$ (591,301)**	**$ (587,442)**	**$ (3,859)**	**0.65%**
Allocations to the Rate Centers						
Urban Water	47.00%	**$ 1,111,646**	**$ 277,911**	**$ 276,098**	**$ 1,814**	
Crozet Water	4.00%	**94,608**	**23,652**	**23,498**	**154**	
Scottsville Water	2.00%	**47,304**	**11,826**	**11,749**	**77**	
Urban Wastewater	44.00%	**1,040,690**	**260,172**	**258,474**	**1,698**	
Glenmore Wastewater	1.50%	**35,478**	**8,870**	**8,812**	**58**	
Scottsville Wastewater	1.50%	**35,478**	**8,870**	**8,812**	**58**	
	100.00%	**$ 2,365,204**	**$ 591,301**	**$ 587,442**	**$ 3,859**	

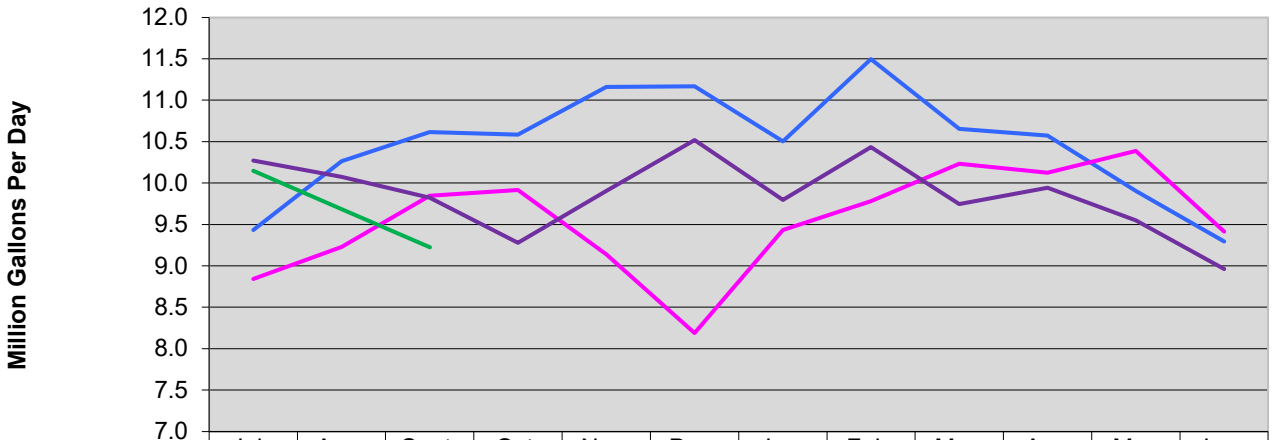
Rivanna Water and Sewer Authority
Flow Graphs

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									

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									

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

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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 OCTOBER 2023**

DATE: **NOVEMBER 14, 2023**

WATER OPERATIONS:

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

Water Treatment Plant	***Average Daily Production (MGD)***	***Maximum Daily Production in the Month (MGD)***
South Rivanna	8.02	8.73 (10/15/2023)
Observatory	1.31	1.90 (10/4/2023)
North Rivanna	0.52	0.65 (10/12/2023)
Urban Total	9.85	10.78 (10/4/2023)
Crozet	0.70	0.86 (10/2/2023)
Scottsville	0.05	0.068 (10/9/2023)
Red Hill	0.0023	0.003 (10/9/2023)
RWSA Total	10.60	-

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

Status of Reservoirs (as of November 8, 2023):

- Urban Reservoirs are 91% of Total Useable Capacity
  - South Rivanna Reservoir is full
  - Ragged Mountain Reservoir is 83% full
  - Sugar Hollow Reservoir is 98% full
- Beaver Creek Reservoir (Crozet) is 90% 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 October 2023. Performance of the WRRFs in October 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	9.00	2.0	9	<QL	22	0.65	2.2
Glenmore	0.124	2.8	15	2.3	30	NR	NL
Scottsville	0.038	1.5	25	7.2	30	NR	NL
Stone Robinson	0.003	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 October 2023.

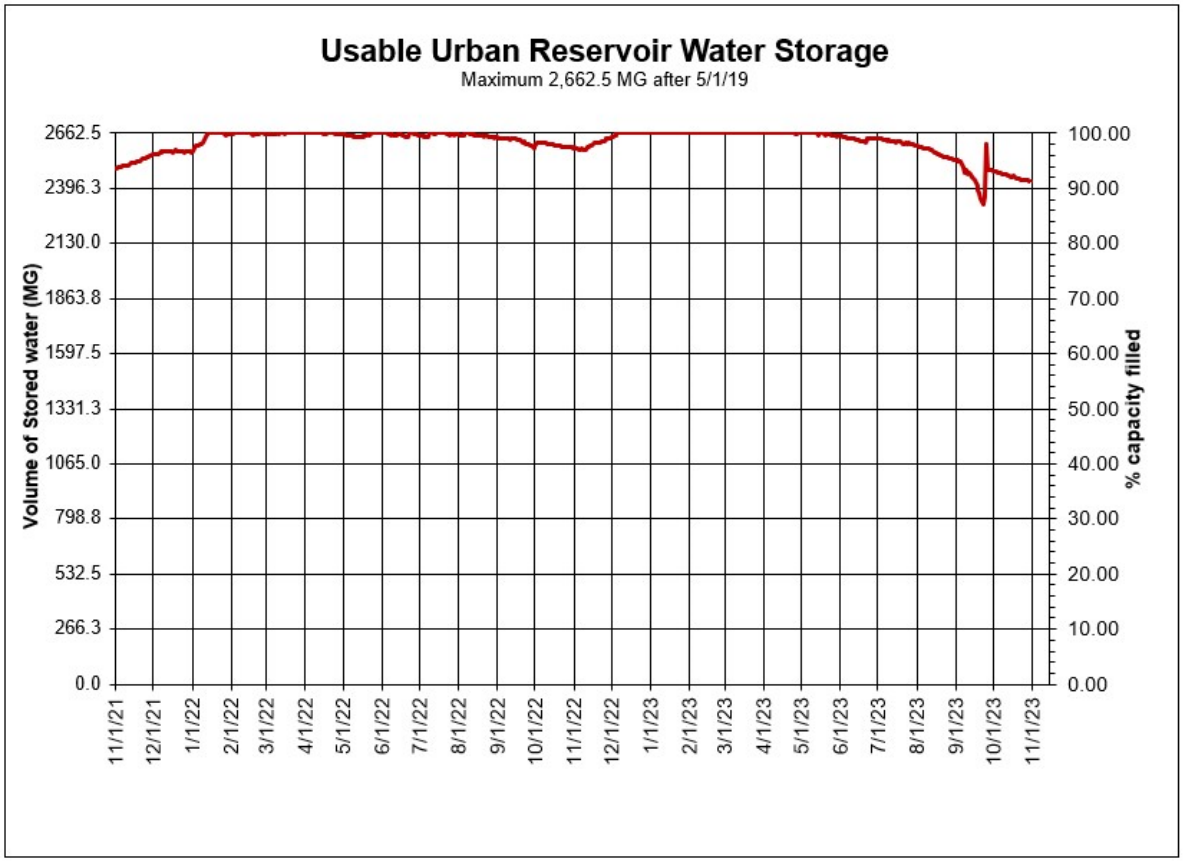
State Annual Allocation (lb./yr.) Permit		*Average Monthly Allocation (lb./mo.) **	*Moores Creek Discharge October (lb./mo.)*	*Performance as % of monthly average Allocation**	*Year to Date Performance as % of annual allocation*
Nitrogen	282,994	23,583	11,124	47%	35%
Phosphorous	18,525	1,636	458	30%	24%

*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)
% capacity filled
2662.5
2396.3
2130.0
1863.8
1597.5
1331.3
1065.0
798.8
532.5
266.3
0.0
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
11/1/21
12/1/21
1/1/22
2/1/22
3/1/22
4/1/22
5/1/22
6/1/22
7/1/22
8/1/22
9/1/22
10/1/22
11/1/22
12/1/22
1/1/23
2/1/23
3/1/23
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7/1/23
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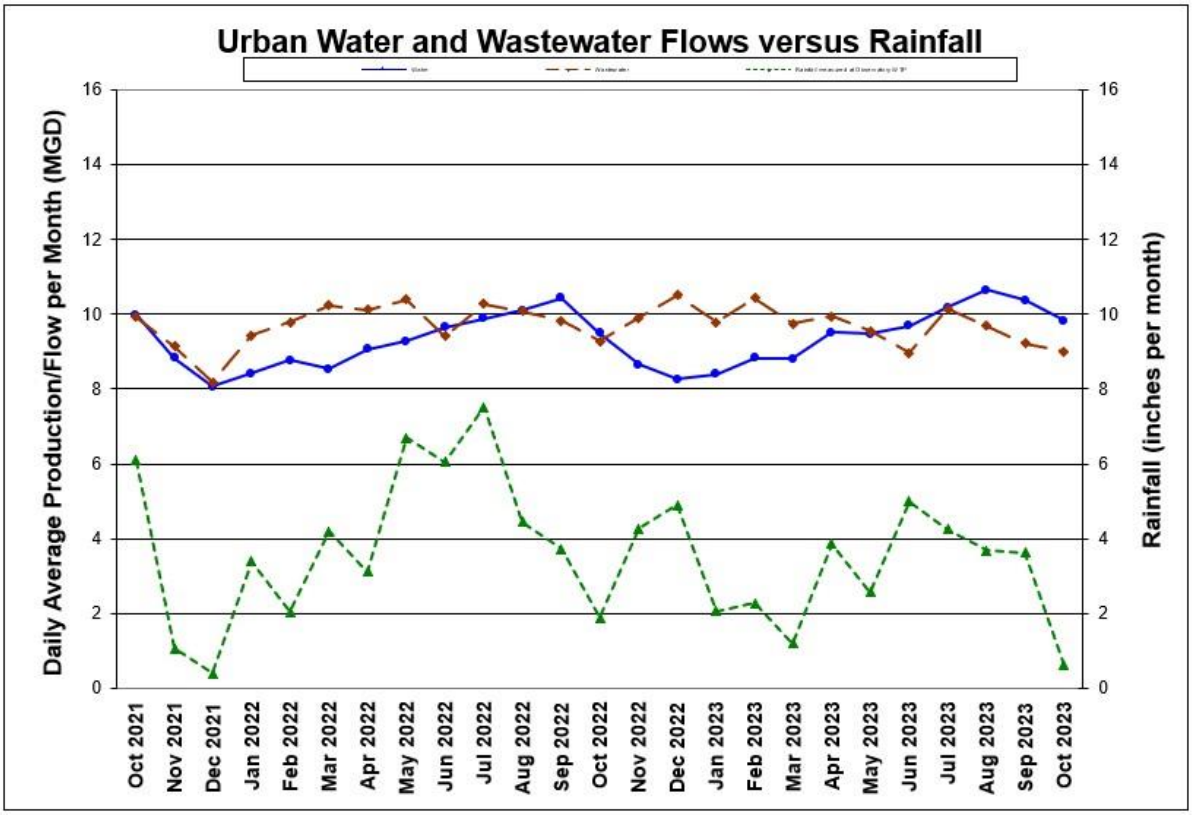
10/1/23
11/1/23


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

RIVANNA WATER & SEWER AUTHORITY
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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: **NOVEMBER 14, 2023**

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

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

Summary

	Project	Bid Advertise Date	Construction Completion Date
1	SRWTP and OBWTP Renovations	November 2019	March 2024
2	Airport Rd. Water Pump Station and Piping	September 2021	September 2024
3	MC 5kV Electrical System Upgrades	December 2021	December 2024
4	South Fork Rivanna River Crossing	December 2023	December 2025
5	Red Hill Water Treatment Plant Upgrades	October 2023	February 2025
6	Central Water Line	March 2024	December 2028
7	Scottsville WRRF Whole Plant Generator and ATS	TBD	TBD
8	MC Administration Building Renovation and Addition	March 2024	December 2026
9	RMR to OBWTP Raw Water Line and Pump Station	April 2024	December 2028
10	MC Building Upfits and Gravity Thickener Improvements	April 2024	December 2025
11	Emmet Street Water Line Betterment	January 2024	July 2026
12	MC Structural and Concrete Rehabilitation	September 2024	June 2026
13	Crozet Pump Stations Rehabilitation	November 2024	December 2026
14	Crozet WTP GAC Expansion – Phase I	December 2024	May 2026
15	Beaver Creek Dam, Pump Station and Piping	December 2025	January 2029
16	SFRR to RMR Pipeline, Intake, and Facilities	December 2025	December 2030
17	Upper Schenks Branch Interceptor, Phase II	TBD	TBD

Under Construction

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

Design and Bidding

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

Planning and Studies

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

Other Significant Projects

21. Urgent and Emergency Repairs
22. Security Enhancements

Under Construction

1. South Rivanna and Observatory Water Treatment Plant Renovations

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

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

improvements and final instrumentation programming work continues.

2. Airport Road Water Pump Station and Piping

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	Anderson Construction, Inc. (ACI) (Lynchburg, VA)
Construction Start:	December 2021
Percent Complete:	70%
Base Construction Contract + Change Order to Date = Current Value:	$8,520,312 + $205,908 = $8,726,221
Completion:	September 2024
Budget:	$10,000,000

Current Status: Water line installation is approximately 90% complete and on-going between the Town Center and Timberwood Blvd. traffic circles. Water line testing and disinfection is on-going in segments and then paving of Berkmar Drive will begin following completion of the water line testing. The pump station is dried-in and the electrical and plumbing work is underway. Dominion is scheduled to run underground electric to the site before the end of the year.

3. MCAWRRF 5kV Electrical System Upgrades

Design Engineer:	Hazen and Sawyer (Hazen)
Construction Contractor:	Pyramid Electrical Contractors (Richmond, VA)
Construction Start:	May 2022
Percent Complete:	20%
Base Construction Contract + Change Order to Date = Current Value:	$5,180,000 - $863,247 = $4,316,753
Completion:	December 2024
Budget:	$5,635,000

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

Design and Bidding

4. South Fork Rivanna River Crossing

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2020
Project Status:	90% Design
Construction Start:	May 2024
Completion:	December 2025
Budget:	$7,000,000

Current Status: Easement acquisition work is on-going. A required easement on the south side of the river is on a remnant property from the VDOT Berkmar Bridge project, and we cannot finalize that easement until the property transfer back to the original property owner is complete. Another outstanding easement is on a Virginia Dominion Power parcel for which we completed a Phase 1

Environmental Survey because Virginia Dominion Power prefers that we purchase the small parcel instead of acquiring an easement. The final outstanding easement is with Albemarle County for an easement across the Brookhill Park property along Rio Mills Rd for which a final draft is pending. Water Protection Ordinance (WPO) plans were submitted to the County for review in May and comments were received on July 10th. The County cannot approve the WPO until all easements have been finalized.

5. Red Hill Water Treatment Plant Upgrades

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

Current Status: Pre-bid meeting was held in October. Bids are due on November 28, 2023. This project received ARPA grant funding from Albemarle County.

6. Central Water Line

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

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

7. Scottsville WRRF Whole Plant Generator and ATS

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

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

8. Moores Creek Administration Building Renovation and Addition

Design Engineer:	SEH
Project Start:	October 2022

Project Status:	60% Design
Construction Start:	September 2024
Completion:	December 2026
Budget:	$20,000,000

Current Status: Review workshops of the 60% design are being completed. A Value Engineering workshop has been coordinated for November 7-9th. The Furnishings & Finishes team has visited other buildings and is reviewing color palettes and selections. The kickoff is being scheduled for the education center concept design.

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

Design Engineer:	Kimley-Horn
Project Start:	August 2018
Project Status:	82% Design
Construction Start:	September 2024
Completion:	December 2028
Budget:	$44,000,000

Current Status: The Design Engineer is proceeding towards 75% design of the pump station. Waterline design has reached 90% completion between the Ragged Mountain Reservoir and Fontaine Avenue. Staff are working with UVA on the alignment between Fontaine Avenue and the Observatory WTP, as well as with VDOT on the alignment crossing Fontaine Avenue. Staff and the Design Engineer are finalizing and submitting the applicable Albemarle County VSMP/WPO permit.

10. MCAWRRF Building Upfits and Gravity Thickener Improvements

Design Engineer:	Short Elliot Hendrickson (SEH)
Project Start:	March 2023
Project Status:	Preliminary Engineering
Construction Start:	August 2024
Completion:	December 2025
Budget:	$5,000,000

Current Status: Detailed design will begin in November.

11. Emmet Street Water Line Betterment

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

Current Status: RWSA is coordinating with the City for design of a 24-30" water main in Emmet Street from Ivy Road to Arlington Boulevard as part of the City's Emmet Streetscape Phase I project.

A Betterment Agreement is under review with the City for the additional design work by its consultant, Clark-Nexsen, and the cost of the betterment construction for the Streetscape Project. WRA has begun work on the final design and permitting of the water main.

RWSA is reviewing possible water main alignments along the Emmet Street Corridor between Morton Drive and Hydraulic Road.

12. MCAWRRF Structural and Concrete Rehabilitation

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

Current Status: Preliminary engineering work is continuing. CCTV work was completed for the stormwater system at the compost yard.

13. Crozet Pump Stations Rehabilitation

Design Engineer:	Wiley | Wilson
Project Start:	July 2023
Project Status:	30% Design
Construction Start:	January 2025
Completion:	December 2026
Budget:	$10,350,000

Current Status: A 30% design workshop was held on October 25th. Development of 60% design documents has begun.

14. Crozet GAC Expansion – Phase I

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

Current Status: SEH is continuing the preliminary engineering evaluations and coordination with regulatory authorities.

15. Beaver Creek Dam, Pump Station and Piping Improvements

Design Engineer:	Schnabel Engineering (Dam)
Design Engineer:	Hazen & Sawyer (Pump Station)
Project Start:	February 2018

Project Status:	5% Design
Construction Start:	April 2026
Completion:	January 2029
Budget:	$43,000,000

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

16. SFRR to RMR Pipeline, Intake, and Facilities

Design Engineer:	Kimley Horn/SEH
Project Start:	July 2023
Project Status:	7% Design
Construction Start:	June 2025
Completion:	December 2030
Budget:	$79,700,000

Current Status: CSX Railroad permitting documents for the Old Garth Road crossing have been finalized and executed. Topographic survey and subsurface utility designations have been completed, with boundary survey of the project areas in VDOT right-of-way underway. A geotechnical investigation along the alignment will be completed this Fall/Winter. Staff are working on the final phases of the SFRR-RMR Nutrient Analysis, with the necessary equipment needed to complete study efforts scheduled to arrive in the Fall, and a final report published in the Winter. The SFRR Intake and Pump Station Project will require closure of the public boat ramp at the site once construction begins. Modifications to the Ragged Mtn Reservoir intake tower and perimeter grading will be included in this project.

17. Upper Schenks Branch Interceptor, Phase II

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

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

Planning and Studies

18. Asset Management Plan

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

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

19. MCAWRRF Biogas Upgrades

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

Current Status: This project now includes the Methane Sphere Rehabilitation, in addition to the Cogeneration Upgrades. RWSA and City staff continue to discuss all available options to reuse the biogas, with further investigation and analysis ongoing.

20. North Rivanna Water Treatment Plant Decommissioning

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

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

Other Significant Projects

21. Urgent and Emergency Repairs

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

Project No.	Project Description	Approx. Cost
2022-02/05/12	Miscellaneous MCI/PCI/RVI MH Repairs	$70,000
2023-01	Finished Water System ARV Repairs	$150,000
2022-03	RVI Erosion	TBD

- Miscellaneous MCI/PCI/RVI MH Repairs: Over the past several months, staff have identified issues with various manholes on the Moores Creek, Powell Creek, and Rivanna Interceptors (MCI, PCI, and RVI, respectively). These include one manhole on MCI that needs to be raised, as it was historically buried but found in Summer 2021 by the RWSA Maintenance & Engineering Departments, one manhole on RVI that needs a failing HDPE liner to be removed and cementitious mortar to be installed, and one manhole each on PCI and MCI that need to be coated with

cementitious mortar due to root intrusion and groundwater infiltration. This work will be performed through the On-Call Maintenance contract with Digs, and staff visited the site with the Contractor on July 15th. The appropriate MH on MCI was raised on November 1st, 2022. The remaining coating efforts were completed during the week of January 30th. One additional manhole was raised on October 3rd, leaving just one manhole left to be coated.

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

- RVI Erosion: RWSA's Rivanna Interceptor (RVI) traverses a large river bottom in the Still Meadow Community. As this river bottom is down slope of a large development, excess drainage has caused a small washout area over the interceptor. Staff is investigating the area with its On-Call Maintenance Contractor, Faulconer Construction, and intends to install armament in the area to protect the sewer line. Work is anticipated to be completed later this Fall/Winter, as site conditions allow.

22. Security Enhancements

Design Engineer:	Hazen & Sawyer
Construction Contractor:	Security 101 (Richmond, VA)
Construction Start:	March 2020
Percent Complete:	80% (WA6), 75% (WA7), 5% (WA9)
Based Construction Contract + Change Orders to Date = Current Value:	$718,428 (WA1) + $814,420 (WA2-9)
Completion:	December 2023 (WA6), October 2023 (WA7)
Budget:	$2,810,000

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

RIVANNA WATER & SEWER AUTHORITY
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MEMORANDUM

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

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

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

SUBJECT: **ADMINISTRATION AND COMMUNICATIONS REPORT FOR NOVEMBER 2023**

DATE: **NOVEMBER 14, 2023**

Human Resources

Implementation of a Learning Management System (LMS) through the Paychex system has started. The LMS will provide training content for our team, and we will be able to add training that has been developed by RWSA, such as our safety training. This is a big step forward for our workforce development.

Safety

Our Maintenance team continues to work with our Safety Manager to complete additional Lock Out Tag Out procedures for our equipment.

Our Safety Manager, Liz Coleman, coordinated with the Charlottesville-UVA-Albemarle County Emergency Communications Center for us to utilize the new Rave Alert System for CUA911 Alerts. The Rave notification system is used by the Emergency Communication Center to send out alerts to the community.

Community Outreach

The Imagine a Day Without Water Art Contest, which is sponsored by RWSA, the City of Charlottesville, and the Albemarle County Service Authority is accepting entries from children in grades K through 12 until November 13, 2023. The community will be able to vote for their favorites from November 27 through December 6, 2023. The winners will be announced on December 13, 2023.

On Friday, October 27, 2023, we had a group of 6th graders tour the Moores Creek Advanced Water Resource Recovery Facility. Students are doing research on Edwin Chadwick who was an early leader in reforming urban sanitation in the 1800's. The tour gave the kids a chance to see how far wastewater treatment has advanced.

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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 OCTOBER 2023**

DATE: **NOVEMBER 14, 2023**

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

	Month	***Daily Average***	
City Usage (gal)	146,938,341	4,739,946	**48.3%**
ACSA Usage (gal)	157,445,637	5,078,892	**51.7%**
Total (gal)	**304,383,978**	**9,818,838**	

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 November 2022), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA). Completed in 2019 for a cost of about $3.2 M, our Wholesale Metering Program consists of 25 remote meter locations around the City boundary and 3 finished water flow meters at treatment plants.

Figure 1: City of Charlottesville Monthly Water Usage and Allocation

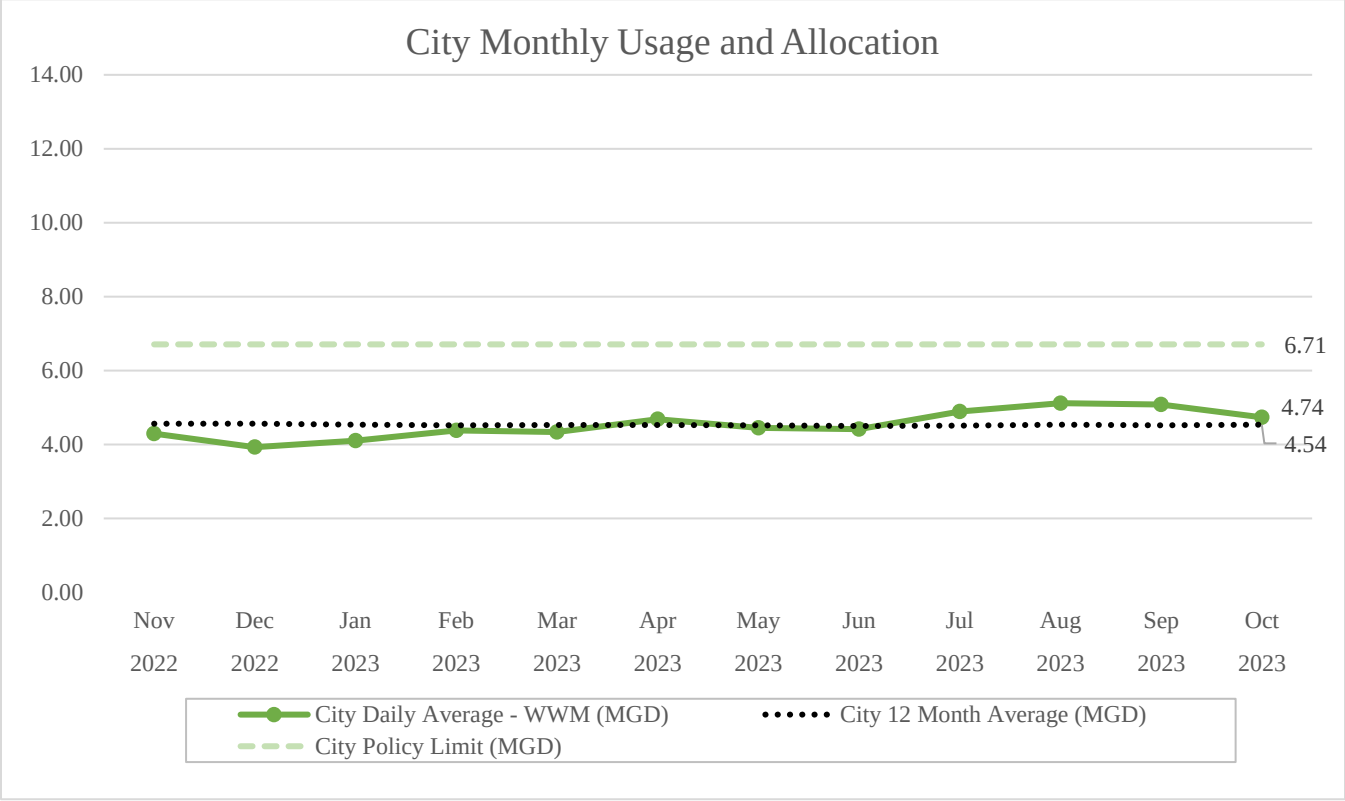
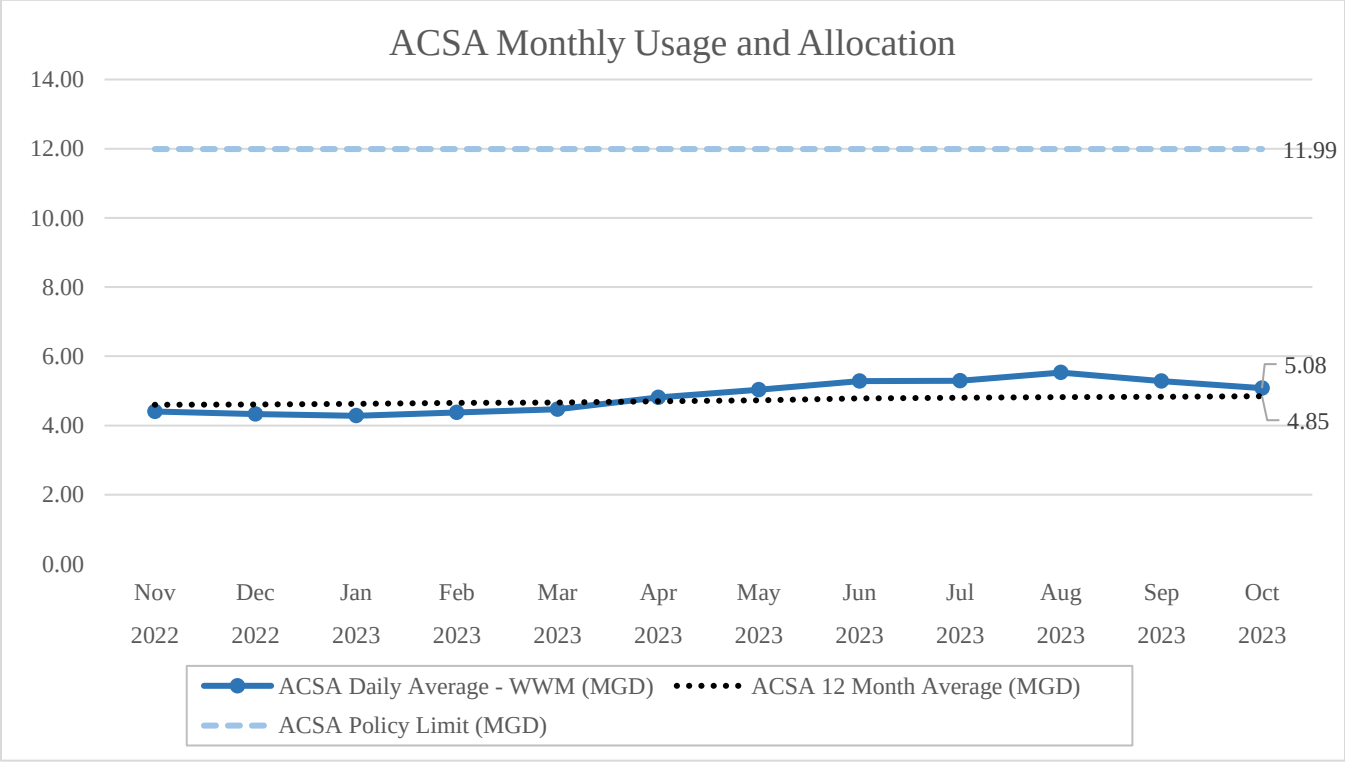


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation



Meter Locations for the Wholesale Water Metering Project

695 Moores Creek Lane | Charlottesville, Virginia 22902
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TO: **RIVANNA WATER & SEWER AUTHORITY BOARD OF DIRECTORS**

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

REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **DROUGHT MONITORING REPORT**

DATE: **NOVEMBER 14, 2023**

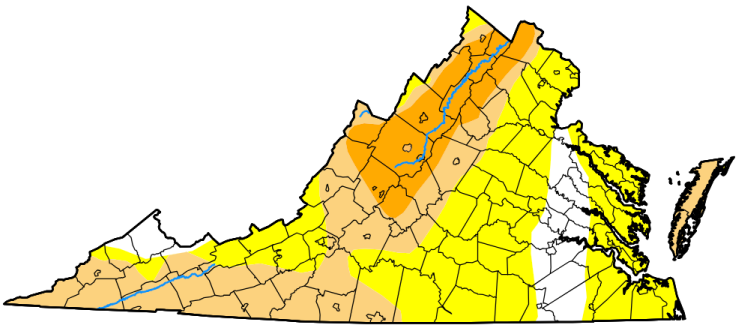
State and Federal Drought Monitoring, as of November 2, 2023:

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

U.S. Drought Monitor

Current | Maps | Data | Summary | About | Conditions & Outlooks | Ag in Drought | En Español | NADM

Virginia

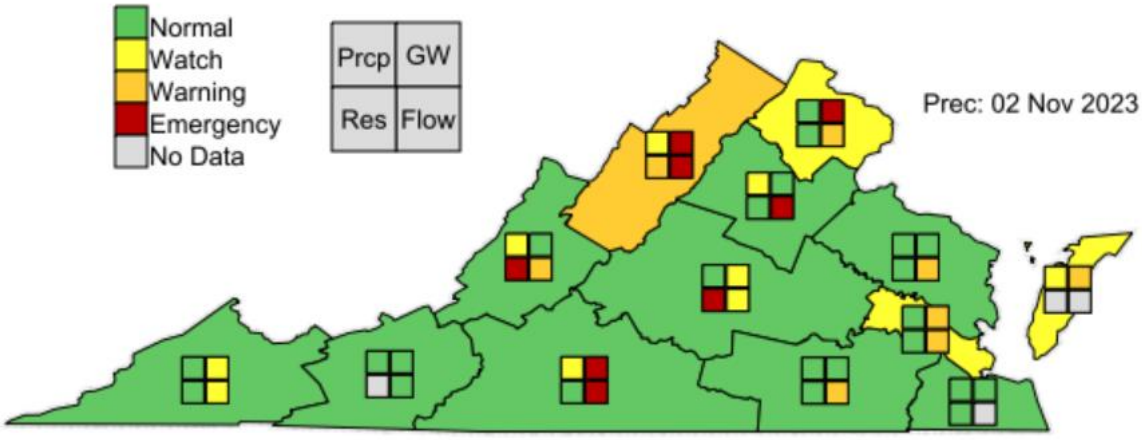


Map released: Thurs. November 2, 2023
Data valid: October 31, 2023 at 8 a.m. EDT

Intensity
- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Authors
United States and Puerto Rico Author(s):
Brian Fuchs, National Drought Mitigation Center
Pacific Islands and Virgin Islands Author(s):
Brad Rippey, U.S. Department of Agriculture

- VDEQ Drought Status Report: Our region is listed as being in a "Watch" level for groundwater and stream flows as well as an "Emergency" level for reservoirs. The remaining indicator, precipitation, is listed as "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 – Oct	19.41	35.32	-15.91	-45
Precipitation over past 34 months is 18% below normal					

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

USGS Stream Gaging Station Near the Urban Area (October 20-26)				
Gage Name	Rolling 7-day Avg. Stream Flow		Median Daily Streamflow	
	cfs	mgd	cfs	mgd
Mechums River	11.0	7.1	45	29.1
Moormans River	2.7	1.7	29	18.7
NF Rivanna River	6.6	4.2	43	27.8
SF Rivanna River	11.8	7.6	118	76.3

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

Status of Reservoirs (as of November 8, 2023)

- Urban Reservoirs are 92% of Total Useable Capacity
  - South Rivanna Reservoir is 100%
  - Ragged Mountain Reservoir is 83%
  - Sugar Hollow Reservoir is 98%
- Beaver Creek Reservoir (Crozet) is 89%
- Totier Creek Reservoir (Scottsville) is 100%

Drought History in Central Virginia

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

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Board Meeting Schedule

Listed below are the proposed RWSA Board of Directors meeting dates for calendar year 2024:

Tuesday, January 23, 2024

Tuesday, February 27, 2024

Tuesday, March 26, 2024

Tuesday, April 23, 2024

Tuesday, May 28, 2024

Tuesday, June 25, 2024

Tuesday, July 23, 2024

Tuesday, August 27, 2024

Tuesday, September 24, 2024

Tuesday, October 22, 2024

Tuesday, November 19, 2024 *

Tuesday, December 17, 2024 *

* The November and December meetings are advanced to avoid conflicts with the weeks of Thanksgiving and Christmas.

RWSA meetings will start following the RSWA Board Meetings but not earlier than 2:15 p.m. RWSA meetings will be held in the large conference room on the second floor of the Moores Creek Wastewater Treatment Plant Administration Building, 695 Moores Creek Lane, Charlottesville, VA.

While the meetings may be viewed virtually, persons wishing to speak during the "Items From the Public" period must be present at the meeting. Written comments received before the meeting will be presented by staff during this period. Video recordings of the meetings will continue to be posted to our website.

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

MEMORANDUM

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

FROM: **BETSY NEMETH, DIRECTOR OF ADMINISTRATION & COMMNICATIONS**

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

SUBJECT: **APPROVAL OF THE RIVANNA WATER & SEWER AUTHORITY HOLIDAY SCHEDULE FOR CALENDAR YEAR 2024**

DATE: **NOVEMBER 14, 2023**

This memo is to propose a schedule for 13.5 paid holidays to be observed during calendar year 2024, as indicated by the attachment.

This schedule has been determined in accordance with our Personnel Management Plan Holiday Leave Policy. In addition to the 12.5 observed holidays listed in our Personnel Management Plan, this schedule includes Friday, July 5, 2024.

Board Action Requested

Approval of the attached Holiday Schedule for Calendar Year 2024.

Attachment

2024 Holiday Schedule

New Year's Day – Monday, January 1st

Martin Luther King, Jr Day (Floating) – Monday, January 15th

President's Day (Floating) – Monday, February 19th

Memorial Day – Monday, May 27th

Juneteenth (Floating) – Wednesday, June 19th

Independence Day – Thursday & Friday, July 4th & 5th

Labor Day – Monday, September 2nd

Veteran's Day (Floating) – Monday, November 11th

1/2 Day Before Thanksgiving – Wednesday, November 27th

Thanksgiving Day – Thursday, November 28th

Day After Thanksgiving – Friday, November 29th

Christmas Eve – Tuesday, December 24th

Christmas Day – Wednesday, December 25th

- Schedule subject to change, and notice will be provided as soon as possible.
- RWSA Operators and RSWA will be paid for all holidays on the actual holiday and not on the observed holiday.

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MEMORANDUM

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

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

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

SUBJECT: **APPROVAL TO INCREASE DESIGN CONTINGENCY – MCAWRRF 5KV ELECTRICAL SYSTEM UPGRADE – HAZEN & SAWYER**

DATE: **NOVEMBER 14, 2023**

This request is to authorize an increase in the Hazen & Sawyer engineering contingency from 10% to 25% (from $64,197 to $160,493 = an increase of $96,296) based on the original work authorization amount ($641,971). This increase in contingency is requested to account for additional construction administration services associated with changed conditions and the extended construction schedule resulting from significant material delivery delays. With this increase, the project remains within the total approved CIP project budget of $5.635 M.

Background

Through the Moores Creek Facilities Master Plan, it was identified that several areas of the Moores Creek Advanced Water Resource Recovery Facility, including the Blower Building, Sludge Pumping Building, Grit Removal Building, Moores Creek Pumping Station, the Duty Station, and the Administration Building, are all still connected to the original 5kV switchgear in the Blower Building. This cabling, switchgear, and several Motor Control Centers around the facility were installed around 1980. Electrical equipment of this nature has a useful life expectancy of 20-30 years; thus, prompt replacement of the equipment was recommended.

Given the safety, reliability, and resiliency concerns associated with the aging electrical infrastructure, staff negotiated a scope, fee and schedule with Hazen & Sawyer under the firm's term contract to perform final design, permitting, bidding, construction administration, and construction inspection services following board approval in August 2020. Since the project began, substantial material delivery delays have hampered the project as a result of the COVID-19 pandemic. The Contractor has continued to perform work on the site, including installation of the necessary underground electrical ductbank, concrete equipment pad for the new electrical building, interior conduit work for future electrical equipment and cabling installation, as well as several other smaller work efforts. As the duration of the project has increased by approximately one year from what was initially anticipated, the periodic services required by the Engineer have increased by some measure as well.

Board Action Requested:

Authorize an increase in Hazen & Sawyer's total engineering work authorization contingency from 10% to 25% of the original contract amount of $641,971 for the MCAWRRF 5kV Electrical System Upgrade Project.

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MEMORANDUM

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

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

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

SUBJECT: **REIMBURSEMENT RESOLUTION – CIP FUNDING**

DATE: **NOVEMBER 14, 2023**

Adoption of the Capital Improvement Plan (CIP) at the regular May meeting allowed the Authority to move forward into a period of significant financing activity to fund many of the construction projects identified in the plan. We are currently using the latest bond issue from the Series 2021 Bond to finance several projects. However, as detailed in the approved CIP document, additional debt funding not covered in the current bonds for several projects is required over the next five years.

The attached Resolution of Official Intent (reimbursement resolution) and Exhibit A provide an estimate that as much as $232.1 million in new debt funding may be needed to finance project costs, which can be implemented in multiple issuances over several years as needed. After adding issuance cost requirements, a total of up to $244 million is estimated. As projects begin, we typically use 100% cash from the capital fund to pay project costs. Occasionally, we use temporary financing before bond sales to fund the projects. Then, after permanent financing is in place, bond proceeds are used to partially pay back cash to the capital fund (or pay off temporary financing) - in essence pay "ourselves" back. This capability to pay ourselves back as each debt issuance takes place is very important to provide the financial flexibility and continuity as projects are implemented while also complying with debt covenants and regulations (e.g. arbitrage requirements).

To perform this reimbursement with tax exempt borrowings, the Authority needs to have a "Reimbursement Resolution" in place each year after the new CIP is adopted. The attached resolution does this and does not specifically authorize the issuance of debt at this time. This resolution does not fix the exact amount of the future debt we will issue, although it is important that we not issue debt in amounts larger than the amount stated in this resolution. The attached resolution states the official intention of the Board to fund projects with debt, and additionally states that some proceeds of this debt, when issued for the purposes of funding projects in the CIP, will be used to pay for costs incurred prior to the date of the debt being issued.

The Authority has routinely adopted similar reimbursement resolutions annually in the past

following the last several updates of the CIP that were approved by the Board. The reimbursement resolution included with the Board agenda item is required for tax-exempt bond issues.

Board Action Requested:

Approve the attached *Resolution of Official Intent to Reimburse Expenditures with Proceeds of a Borrowing*.

Attachment

RESOLUTION OF OFFICIAL INTENT TO REIMBURSE EXPENDITURES WITH PROCEEDS OF A BORROWING

WHEREAS, Rivanna Water and Sewer Authority (the "Borrower") intends to acquire, construct and equip improvements to its water and sewer system, including without limitation the capital improvement projects described in Exhibit A attached hereto (collectively, the "Project"); and

WHEREAS, plans for the Project have advanced and the Borrower expects to advance its own funds to pay expenditures related to the Project (the "Expenditures") prior to incurring indebtedness and to receive reimbursement for all or a portion of such Expenditures from proceeds of tax-exempt bonds or taxable debt, or both;

BE IT RESOLVED BY THE RIVANNA WATER AND SEWER AUTHORITY:

1. The Borrower intends to utilize the proceeds of tax-exempt bonds (the "Bonds") or to incur other debt, in an amount not currently expected to exceed $244,000,000 to pay all or a portion of the costs of the Project.

2. The Borrower intends that the proceeds of the Bonds be used to reimburse the Borrower for Expenditures with respect to the Project made on or after the date that is no more than 60 days prior to the date hereof. The Borrower reasonably expects on the date hereof that it will reimburse the Expenditures with the proceeds of the Bonds or other debt.

3. Each Expenditure was or will be, unless otherwise approved by bond counsel, either (a) of a type properly chargeable to a capital account under general federal income tax principles (determined in each case as of the date of the Expenditure), (b) a cost of issuance with respect to the Bonds, (c) a nonrecurring item that is not customarily payable from current revenues, or (d) a grant to a party that is not related to or an agent of the Borrower so long as such grant does not impose any obligation or condition (directly or indirectly) to repay any amount to or for the benefit of the Borrower.

4. The Borrower intends to make a reimbursement allocation, which is a written allocation by the Borrower that evidences the Borrower's use of proceeds of the Bonds to reimburse an Expenditure, no later than 18 months after the later of the date on which the Expenditure is paid or the Project is placed in service or abandoned, but in no event more than three years after the date on which the Expenditure is paid. The Borrower recognizes that exceptions are available for certain "preliminary expenditures," costs of issuance, certain de minimis amounts, expenditures by "small issuers" (based on the year of issuance and not the year of expenditure) and expenditures for construction of at least five years.

5. The Borrower intends that the adoption of this resolution confirms the "official intent" within the meaning of Treasury Regulations Section 1.150-2 promulgated under the Internal Revenue Code of 1986, as amended.

6. This resolution shall take effect immediately upon its passage.

EXHIBIT A

Summary of the Capital Improvement Plan and financing plan as adopted on May 25, 2023:

	2024 - 2028 *Proposed* CIP	2023 - 2027 Adopted CIP	Change $
Project Cost			
Urban Water Projects	$ 209,590,000	$ 122,465,000	$ 87,125,000
Urban Wastewater Projects	58,220,000	44,370,000	13,850,000
Non-Urban Projects & Shared	58,315,000	38,285,000	20,030,000
Total Project Cost Estimates	**$ 326,125,000**	**$ 205,120,000**	**$ 121,005,000**
Funding in place			
Work-in-Progress (paid for)	$ 35,570,900	$ 23,146,700	12,424,200
Debt Proceeds Available	25,472,300	46,355,250	(20,882,950)
Cash-Capital Available	2,000,000	4,000,000	(2,000,000)
	$ 63,043,200	$ 73,501,950	$ (10,458,750)
Financing Needs			
Possible Future Reserves	$ 10,435,000	$ 9,950,000	485,000
Grants	20,560,000	-	20,560,000
New Debt	232,086,800	121,668,050	110,418,750
	$ 263,081,800	$ 131,618,050	$ 131,463,750
Total Funding	**$ 326,125,000**	**$ 205,120,000**	**$ 121,005,000**

The undersigned Secretary of the Rivanna Water and Sewer Authority hereby certifies that the foregoing is a true and correct copy of the resolutions adopted by the Board of Directors of the Authority at the regular meeting of the Board of Directors held on ***November 14, 2023****.*

_____

Name: Jeff Richardson

Title: Secretary, Rivanna Water and Sewer Authority

Class Action Litigation & Proposed PFAS Settlements

PRESENTED BY:

DAVE TUNGATE, DIRECTOR OF OPERATIONS & ENVIRONMENTAL SERVICES

BOARD OF DIRECTORS MEETING

NOVEMBER 14, 2023

RIVANNA WATER & SEWER AUTHORITY

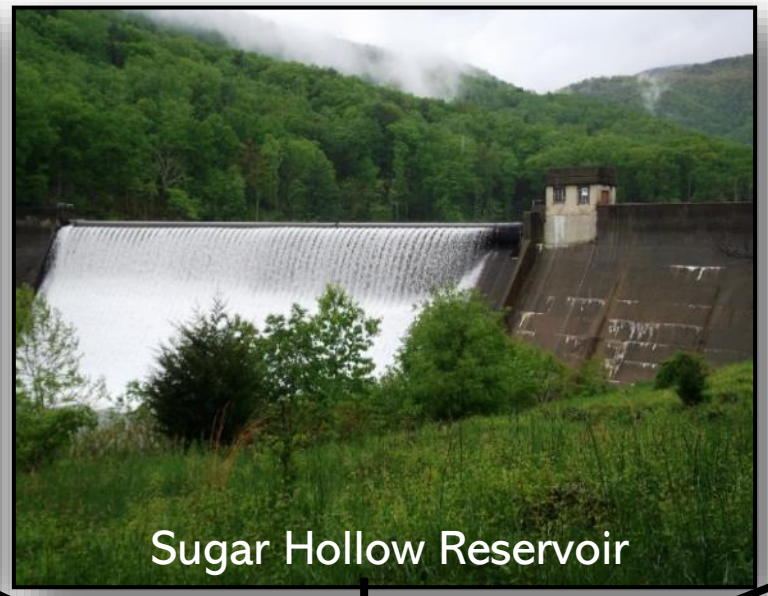
What Is Class Action Litigation?

- A class action is a legal proceeding in which one or more plaintiffs bring a lawsuit on behalf of a larger group, known as the class. Any proceeds from a class-action suit after legal fees, whether through a judgment or a settlement, are shared among all members of the class.

Who is part of the Settlement Class?

- Water Utilities that have suffered harm resulting from the presence of PFAS in drinking water and/or are required to monitor for the presence of PFAS in drinking water. These Utilities allege that Settling Defendants are liable for damages and other forms of relief to compensate for such harm and costs.


South Fork Rivanna Reservoir

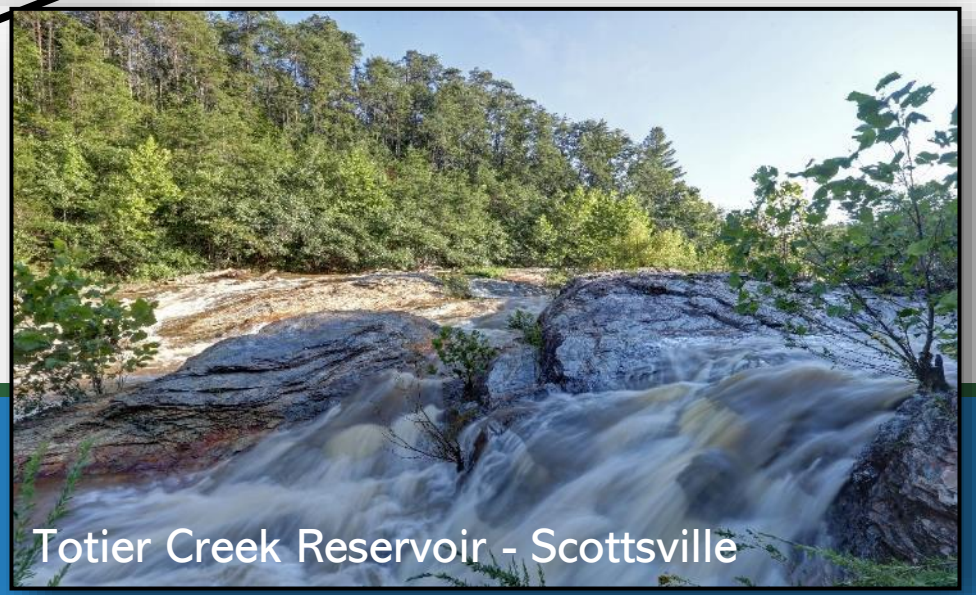

Sugar Hollow Reservoir


Ragged Mountain Reservoir

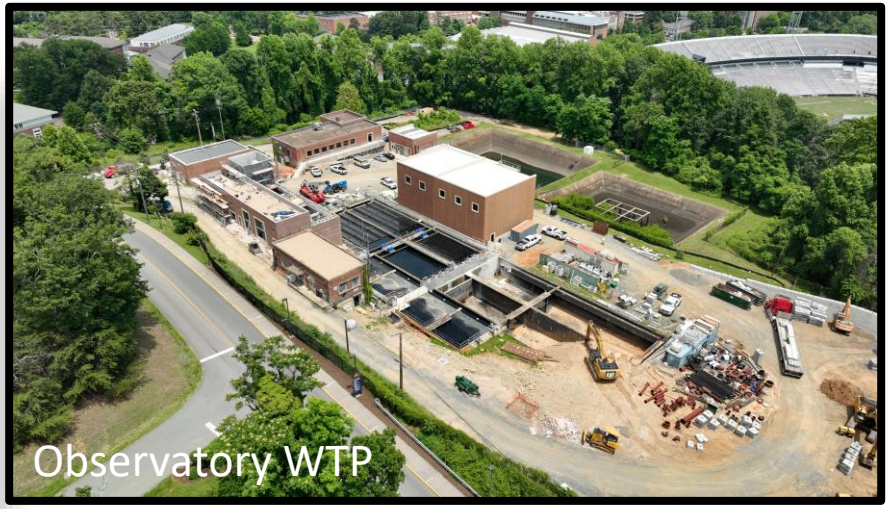
Urban
Area

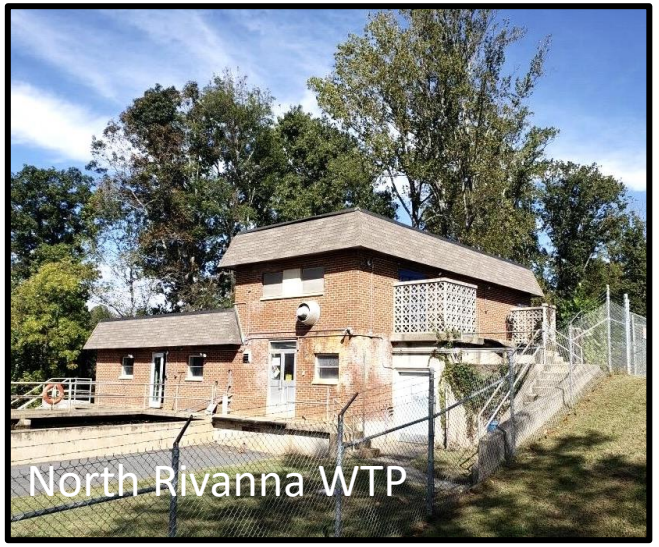
3.3 Billion Gallons


Beaver Creek Reservoir - Crozet


Totier Creek Reservoir - Scottsville

5 Water Supply Reservoirs





6 Water Treatment Plants

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

Litigation Timeline

- June 2023: Settlements were reached with defendants Dupont and 3M
- August 2023: US District Court in South Carolina granted preliminary approval of the settlement
- September 2023: Notice program and settlement administration process began

Settlement Amounts

$1.185 billion

- The Chemours Company, The Chemours Company FC, LLC, DuPont de Nemours, Inc., Corteva, Inc., and E.I. DuPont de Nemours and Company n/k/a EIDP, Inc. (each, a "Settling Defendant" and collectively, "Settling Defendants")

$10.5 - $12.5 billion

DuPont Settlement Class Definition

- *All Public Water Systems in the United States of America that draw or otherwise collect from any Water Source that, on or before June 30, 2023, was tested or otherwise analyzed for PFAS and found to contain any PFAS at any level;*

AND

- *All Public Water Systems in the United States of America that, as of June 30, 2023, are (i) subject to the monitoring rules set forth in the U.S. EPA's Fifth Unregulated Contaminant Monitoring Rule ("UCMR 5") (i.e., "large" systems serving more than 10,000 people and "small" systems serving between 3,300 and 10,000 people), or (ii) required under applicable state or federal law to test or otherwise analyze any of their Water Sources or the water they provide for PFAS before the deadline of sample collection under UCMR 5.*

3M Settlement Class Definition

- *All Active Public Water Systems in the United States of America that have one or more Impacted Water Sources as of June 22, 2023;*

AND

- *All Active Public Water Systems that do not have one or more Impacted Water Sources as of June 22, 2023 and (i) are required to test for certain PFAS under U.S. EPA's UCMR-5, or (ii) serve more than 3,300 people, according to U.S. EPA's SDWIS data system.*

Settlement Benefits

- **Payments:** Made to each Class Member based on Allocation Procedures detailed in the *Estimated Allocation Range Tables*

- **Allocation Procedures:** Reflects factors used in designing a water treatment system in connection with contamination levels
  - Key Factors: Volume of impacted water (Flow Rate) and Degree of impact (Contamination Levels)
  - Formulaic approach applied pro-rata to eligible Claimants

Class Member Legal Rights and Options

1. Participate in the Settlements

- *Release. All Settlement Class Members will release certain Claims against 3M and Dupont as set forth in the Settlement Agreements. The Release will prevent any Settlement Class Member from bringing any lawsuit against 3M or Dupont and making any Claims resolved by the Settlement Agreements including punitive damages. The Release will be effective as to every Settlement Class Member regardless of whether that Settlement Class Member files a Claims Form or receives any distribution from the Settlement.*

2. Opt-Out of the Settlements

Allocation Calculations

- Volume of impacted water (Flow Rate)
- Degree of impact (Contamination Levels)
  - Highest historical concentration of PFOA, PFOS, and Other PFAS
- PFAS Score based on
  - max PFOA level + max PFOS level, OR
  - max PFOA + max PFOS averaged with √max of any other PFAS listed in the Claims form

North Rivanna WTP

	North Rivanna WTP	Sampling Location		
	Sampling Date	Raw Total PFAS (ng/L)	Finished Total PFAS (ng/L)	Lab Method
	12/20/2018	BDL	BDL	537
	12/11/2019	BDL	BDL	537.1
	7/30/2020	2.1/4.0	BDL/3.6	537.1
	3/10/2021	BDL	BDL	537.1
	9/22/2021	2.8	BDL	533
	3/9/2022	BDL	BDL	537.1
	7/12/2022	2.00	BDL	537.1
	8/23/2022	BDL	4.9/2.1	1633
	2/22/2023	BDL	BDL	537.1
UCMR 5	5/24/2023	N/S	70.7	533/537.1
	7/7/2023	BDL	BDL	533/537.1
	7/10/2023	11.9	BDL	533/537.1
UCMR 5	8/9/2023	14.9	BDL	533/537.1

*- BDL is Below lab Detection Level

N/S - No sample

North Rivanna WTP	Sampling Location				
Sampling Date	Raw PFAS (ng/L)	Finished PFAS (ng/L)	PFAS detected (ng/L)	Concentration (ng/L)	Lab Method
7/30/2020	2.1	BDL	Perfluorooctanoic Acid (PFOA)	2.1	537.1
7/30/2020	4.0	3.6	Perfluorohexanoic Acid (PFHxA)	4.0	537.1
			Perfluorohexanoic Acid (PFHxA)	3.6	537.1
9/21/2021	2.8	BDL	Perfluoropentanoic acid (PFPeA)	2.8	537.1
7/12/2022	2.0	BDL	Perfluorohexanoic acid(PFHxA)	2.0	537.1
8/23/2022	BDL	4.9	Perfluoropentanoic acid (PFPeA)	4.9	537.1
8/23/2022	BDL	2.1	Perfluorohexanoic Acid (PFHxA)	2.1	537.1
5/24/2023	N/S	3.8	Perfluorobutanoic acid (PFBA)	3.8	533
5/24/2023	N/S	6.0	Perfluoropentanoic acid (PFPeA)	6	533
5/24/2023	N/S	8.9	Perfluorohexanoic Acid (PFHxA)	8.9	533
5/24/2023	N/S	8.2	Perfluoroheptanoic Acid (PFHpA)	8.2	533
5/24/2023	N/S	25	Perfluorooctanoic Acid (PFOA)	25	533
5/24/2023	N/S	4.6	Perfluorobutanesulfonic Acid (PFBS)	4.6	533
5/24/2023	N/S	2.5	Perfluorpentanesulfonic Acid (PFPeS)	2.5	533
5/24/2023	N/S	5.2	Perfluorohexanesulfonic Acid (PFHxS)	5.2	533
5/24/2023	N/S	6.5	Perfluorooctanesulfonic Acid (PFOS)	6.5	533
7/10/2023	3.1	BDL	Perfluorobutanoic acid (PFBA)	3.1	533
7/10/2023	3.5	BDL	Perfluoropentanoic acid (PFPeA)	3.5	533
7/10/2023	2.9	BDL	Perfluorohexanoic Acid (PFHxA)	2.9	533
7/10/2023	2.4	BDL	Perfluorooctanoic Acid (PFOA)	2.4	533
8/9/2023	3.6	BDL	Perfluorobutanoic acid (PFBA)	3.6	533
8/9/2023	6.0	BDL	Perfluoropentanoic acid (PFPeA)	6.0	533
8/9/2023	3.0	BDL	Perfluorohexanoic Acid (PFHxA)	3.0	533
8/9/2023	2.3	BDL	Perfluorooctanoic Acid (PFOA)	2.3	533

PFAS score and Flow rates

Water Treatment Plant	PFAS score	Flow rate (gpm)
North Rivanna	31.5	299
Scottsville	1.03	41
Crozet	0.74	524
South Rivanna	0.65	5,000
Observatory	0.65	1,324
Red Hill	0	1.29

Example of a PFAS score sheet

North Rivanna WTP

3M

Date	PFOA Used	Concentration (ng/L)
5/24/2023	PFOA	25

Date	PFAS Used	Concentration (ng/L)
5/24/2023	PFOS	6.5

Select the higher of:

(max PFOA level + max PFOS level)

OR

(max PFOA + max PFOS) averaged with

(√ max any other PFAS listed on the Claims Form)

PFAS Score
31.5
Flow rate GPM
299

		Adjusted Flow Rate (gpm)										
	0	100	250	500	1,000	1,500	5,000	10,000	25,000	50,000	100,000	300,000
	2	$36,240	$70,013	$115,244	$189,694	$253,898	$603,369	$993,106	$1,918,881	$3,157,910	$5,196,296	$11,436,561
PFAS SCORE	4	$145,785	$281,723	$463,713	$763,253	$1,021,550	$2,427,216	$3,994,261	$7,714,149	$12,687,352	$20,855,641	$45,758,953
	10	$148,252	$286,489	$471,559	$776,166	$1,038,832	$2,468,269	$4,061,800	$7,844,507	$12,901,569	$21,207,290	$46,527,259
	50	$164,724	$318,320	$523,950	$862,394	$1,154,236	$2,742,397	$4,512,775	$8,714,863	$14,331,681	$23,554,481	$51,652,815
	100	$185,313	$358,108	$589,437	$970,176	$1,298,484	$3,085,022	$5,076,399	$9,802,456	$16,118,368	$26,485,901	$58,047,466
	250	$247,082	$477,467	$785,890	$1,293,499	$1,731,188	$4,112,663	$6,766,639	$13,062,886	$21,472,088	$35,263,074	$77,149,868
	500	$350,027	$676,390	$1,113,285	$1,832,294	$2,452,225	$5,824,623	$9,581,606	$18,489,120	$30,373,873	$49,834,987	$108,717,963*
	750	$452,968	$875,299	$1,440,643	$2,370,993	$3,173,089	$7,535,613	$12,393,952	$23,905,608	$39,249,406	$64,336,461*	$139,954,105*
	1000	$555,906	$1,074,195	$1,767,967	$2,909,596	$3,893,781	$9,245,635	$15,203,680	$29,312,376	$48,098,804*	$78,768,005*	$170,863,503*

Estimated Settlement Amounts

(may be reduced by Attorney Fees)

Water Treatment Plant	3 M	Dupont
North Rivanna	$300,000	$40,000
South Rivanna	$300,000	$30,000
Observatory	$200,000	$20,000
Scottsville	$20,000	$1,000
Crozet	$50,000	$1,000
Red Hill	$0	$0
Total	**$870,000**	**$92,000**

Additional costs to treat for PFAS

- CIP - $30-40 M
  - 4 additional GAC vessels at South Rivanna
  - 4 additional GAC vessels at Observatory

- Annual operating expenses could be an additional $1M per year

Key Dates and Deadlines

Deadline Description	DuPont Deadline Date	3M Deadline Date
Deadline to Submit Objections	11/4/2023	11/11/2023
Deadline to Submit Requests for Exclusion	12/4/2023	12/11/2023
Court's Final Fairness Hearing	12/14/2023 at 10:00 AM EST	2/2/2024 at 10:00 AM EST
Phase One Public Water System Settlement Claims Form	60 Days After the Effective Date	60 Days After the Effective Date

Questions to Consider

- Current laboratory technology can detect 29 of approximately 12,000 PFAS derivatives
  - As laboratory technology improves, will additional PFAS compounds be detected in drinking water?
  - Will we get more money in the future?

    Our PFAS scores are low (except North Rivanna WTP, which will be decommissioned in 2026).
  - Will there be money remaining from responsible parties if we opt out now in anticipation of future litigation?

Summary

- Testing indicates our community has low concentrations of PFAS in our source water and even lower concentrations in the treated drinking water we produce.

- RWSA has granular activated carbon filters to reduce the levels of Organic Compounds and PFAS in our water treatment plants.

- Remaining in the class action litigation may result in an estimated award of $500 – $1M. Rights to future litigation with these 2 defendants will be waived. The outcome of future litigation, if any, is uncertain.


South Rivanna Dam 11/2/2023

Questions?

Alternatives

1. Remain a member of the class action litigation and accept any settlement while giving up rights to future litigation against Dupont and 3M for PFAS damages to water system .

2. Opt-out of the class action litigation, thereby reserving all rights, and pursue separate litigation, if any, in the future.

Request from the Board

Authorize the Executive Director to register for a PFAS Settlement Agreement Claims Form / Account and remain a member of the class action litigation.

Paychex Payroll and Human Resources Information System

PRESENTED TO THE BOARDS OF DIRECTORS

BY: BETSY NEMETH, DIRECTOR OF ADMINISTRATION & COMMUNICATIONS

NOVEMBER 14, 2023

Human Resources Information Systems - PAYCHEX

Purpose

To enhance the Rivanna Authorities' employee experience while being more efficient and cost effective.

Why Paychex?

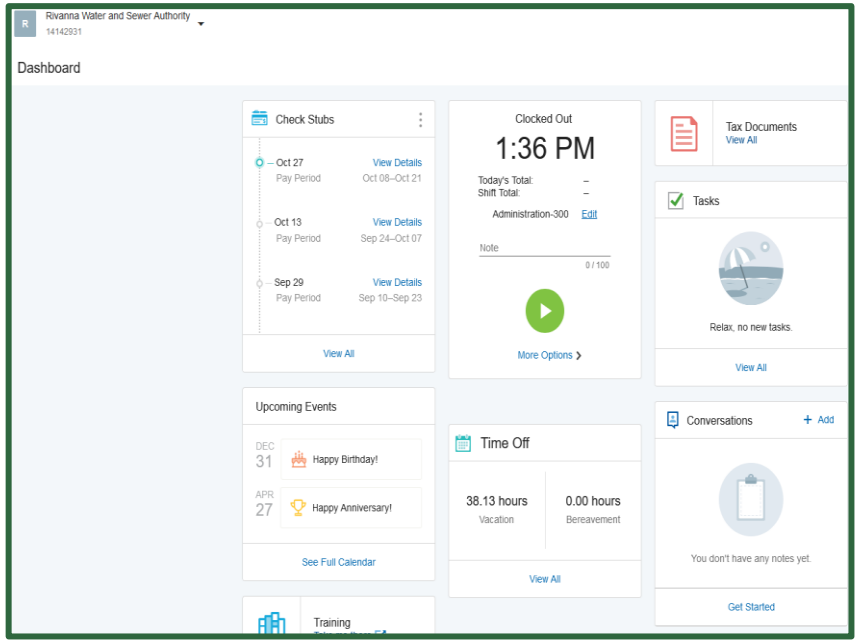
- Customized payroll processing to our specifications.
- Online job postings to multiple recruiting websites.
- Electronic application system.
- Onboarding with I-9 E-Verify employment eligibility system.
- Learning Management System.

Paychex Payroll Changes

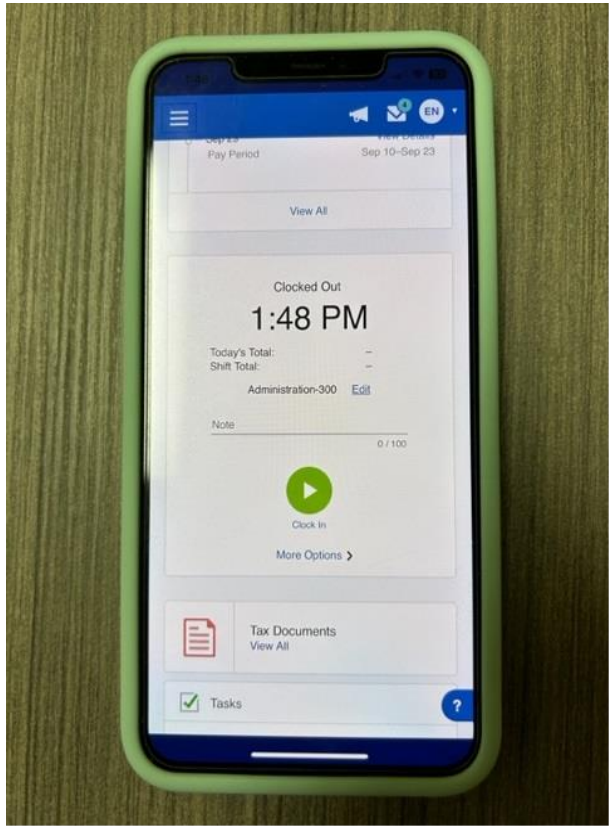
- Time & Attendance system for timekeeping.
- Multiple ways to punch in and out: cell phone, computer, time clock.
- All pay stubs and tax forms available to employees electronically.
- State and federal employer payroll taxes filed by Paychex.
- Employees can make changes to their personal information.
- Employees can request leave time through the system.

Paychex Employee Dashboard

Computer

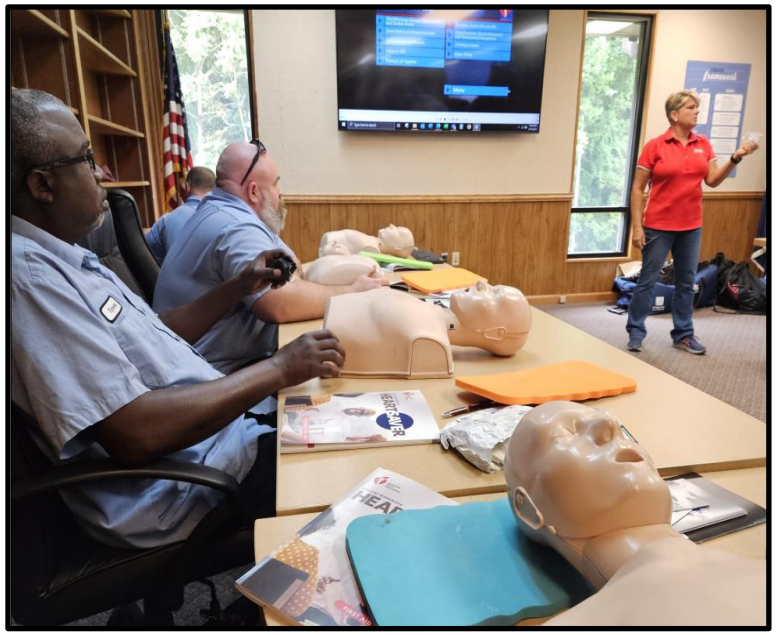


Cell Phone



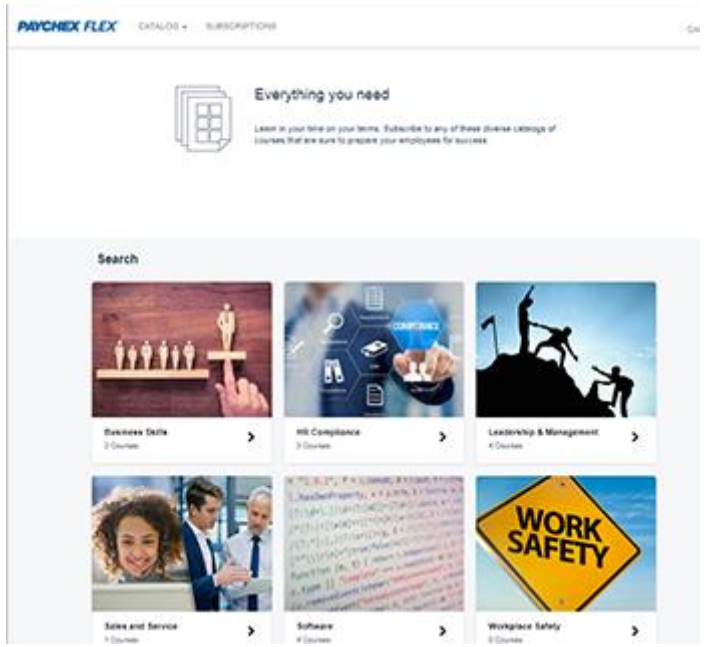
Ivy Time Clock

Paychex Application System



- Automatic posting of jobs to numerous job boards and our website.
- Tracking of the entire hiring process electronically.
- Job description library.
- Job applications and questions can be designed by position.
- Onboarding email sent to candidates for completion of required documents.
- E-Verify for I-9 Employment Eligibility Form completion.

Paychex Learning Management System



- Learning library with safety, human resources, information technology, and developmental courses.
- Ability to put together a learning journey for individual employees.
- Reporting available for training hours and individual employee training transcripts.
- Employees can add to their own training transcript.
- Capability to upload job specific training modules.
- Paychex can help us write training modules.

Questions?