RIVANNA
WATER & SEWER AUTHORITY

Board of Directors Meeting

January 28, 2025

2:15pm

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

BOARD OF DIRECTORS

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

DATE: **JANUARY 28, 2025**

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

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

AGENDA

1. ***CALL TO ORDER***
2. ***AGENDA APPROVAL***
3. ***MINUTES OF PREVIOUS BOARD MEETING ON DECEMBER 17, 2024***
4. ***RECOGNITION***
5. ***EXECUTIVE DIRECTOR'S REPORT***
6. ***ITEMS FROM THE PUBLIC***
   Matters Not Listed for Public Hearing on the Agenda
7. ***RESPONSES TO PUBLIC COMMENTS***
8. ***CONSENT AGENDA***
   a. *Staff Report on Finance*
   b. *Staff Report on Operations*
   c. *Staff Report on CIP Projects*
   d. *Staff Report on Administration and Communications*
   e. *Staff Report on Wholesale Metering*
   f. *Staff Report on Drought Monitoring*
   g. *Approval to Amend Professional Engineering Services Contingency - Central Water Line Project - Michael Baker International*

h. *Approval of Engineering Services — Dam Concrete and Steel Repairs Design, Bidding, and Construction Phase Services – GAI Consultants*

i. *Approval of Waiver Extension for University of Virginia Rowing Programs and Rivanna Rowing Club*

9. OTHER BUSINESS

(Combined Session with RSWA)

a. *Presentation: Strategic Plan Update*
Betsy Nemeth, Director of Administration and Communications

b. *Presentation: Asset Management Update*
Katie McIlwee, Asset Management Coordinator

c. *Presentation: Grant Applications Update*
Annie West, Sustainability and Grants Coordinator

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

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
December 17, 2024

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, December 17, 2024, at 2:15 p.m. at the Rivanna Administration Building, (2nd Floor Conference Room), 695 Moores Creek Lane, Charlottesville, VA 22902.

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

Board Members Absent: None

Rivanna Staff Present: Bill Mawyer, David Tungate, Lonnie Wood, Jennifer Whitaker, Betsy Nemeth, Scott Schiller, Austin Marrs, Victoria Fort, Dyon Vega, Leah Beard, Annie West, Deborah Anama, Jacob Woodson.

Attorney(s) Present: Micah Schwartz.

1. *CALL TO ORDER*
Mr. Gaffney convened the December 17, 2024, 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 or questions on the agenda.

Ms. Mallek moved the Board to adopt the agenda. Mr. Sanders seconded the motion, which carried unanimously (7-0).

3. *MINUTES OF PREVIOUS BOARD MEETING*
a. *Minutes of Regular Board Meeting on November 19, 2024*
AS AMENDED: Line 620 - Change "State Water Control Board" to "State Water Commission"

Mr. Gaffney stated that Ms. Mallek had requested one change. He stated that in the new agenda, line 620 should be changed from "State Water Control Board" to "State Water Commission".

Ms. Mallek moved the Board to adopt the minutes from the meeting held on November 19, 2024, as amended. Mr. Pinkston seconded the motion, which passed unanimously (7-0).

4. *RECOGNITIONS*
There were none.

5. *EXECUTIVE DIRECTOR'S REPORT*
Mr. Mawyer stated that they were pleased to wrap up a successful year and looked forward to 2025. He stated that they had faced several challenges early in 2024, including submergence of

the Rivanna Pump Station and deflation at the Sugar Hollow Reservoir bladder. He stated that staff, along with their contractors and consultants, had worked hard to overcome these issues.

Mr. Mawyer stated that they were now about to begin a new project at Sugar Hollow, which Ms. Fort would likely discuss in more detail next month. He stated that the goal of this project was to install new connections to improve the piping system for the pneumatic system. He stated that previously, they had used a rubber sleeve, which separated in January when temperatures were very low. He stated that to prevent this, they would be installing welded flange connections that were bolted together, ensuring a more reliable system.

Mr. Mawyer stated that they had a good year in 2024 and appreciated the support they received from the Board. He stated that he would also like to take a moment to acknowledge the reappointment by the County and the City of Mike Gaffney, who would serve another two-year term.

Mr. Gaffney stated that he believed it would be his 23rd and 24th year.

Mr. Mawyer stated that as part of the strategic plan priority of employee development, he would like to recognize several staff members who have obtained training certifications. He stated that in the mechanical and electrical trades, David Heintges, Richard McElfresh, Perry Herring, Tyrone Hughes, Garrett Carver, and Matt Walker all completed training at ValleyVoTech. He stated that they would like to recognize their efforts.

Mr. Mawyer stated that the entire management team participated in a diversity awareness workshop last week, led by a facilitator from the Diversity Training Group. He stated that the three-hour session was informative and effective, and he believed they all learned a great deal. He stated that he attended the Virginia Biosolids Council annual meeting in Richmond last week, where they shared concerns about proposed regulations on PFAS and their impact on the land application of biosolids.

Mr. Mawyer stated that they shipped their biosolids to Waverly, Virginia, where they were made into compost and were not land applied. He stated that the Biosolids Council was closely monitoring legislation at both the federal and local levels due to the ongoing PFAS issue in drinking water, wastewater, and biosolids.

Mr. Mawyer stated that Brian Haney, Wastewater Manager, gave a tour of the plant to students from Monticello High School, and Betsy Nemeth, Director of Administration and Communications, had been coordinating and presenting topics to the UVA School of Public Health. He stated that they were interested in seeing the work the students would produce in this regard.

Mr. Mawyer stated the “Imagine a Day Without Water Art Contest” was wrapping up with ACSA and the City. He stated the winning submissions included work from students in various grades and schools throughout the area. He stated that the students demonstrated exceptional skill and artistry in their descriptions of the topic related to water. He stated that the theme was, "What’s your drop in the bucket?"

Mr. Mawyer stated that they continued to monitor drought conditions, and this map shown was the latest update from the state on December 15. He stated that the red boxes caught his attention, indicating an emergency warning for precipitation. He stated that although they had had received some recent precipitation, they were hoping it would continue in the coming weeks. He stated that groundwater levels were at normal levels, and the state reported that stream flows were also within normal ranges.

Mr. Mawyer stated that reservoir levels were under a watch status, but the Authority's reservoirs were in good shape. He stated that Ragged Mountain was down about a foot and a half and Sugar Hollow was intentionally lowered by five feet to facilitate a piping project inside the dam. He stated that they deflated the bladder to access the pneumatic controls in the gatehouse. He stated that the reservoir water quantity and quality were otherwise in good shape.

Mr. Mawyer stated that they had a productive meeting with Ann Wall, Deputy County Executive, to discuss the Upper Schenks Branch sewer pipe project. He stated they discussed whether the County would grant an easement for the pipeline or if they would have to install the pipeline in McIntire Road. He stated that they updated Ms. Wall on the project's status and provided her with the data about the project.

Mr. Mawyer stated that they lowered the water level at Sugar Hollow by five feet. He stated they met with the informal subcommittee to review the FY2026-2030 Capital Improvement Plan, which proposed 76 projects worth approximately $523 million over the next five years. He stated that they could imagine that most of those dollars were related to the water supply projects, including piping from Ragged Mountain to Observatory, Observatory to Free Bridge through the Central Water Line, and then from Rivanna to Ragged Mountain, as the larger of the projects. He stated that they were implementing some of the changes suggested by the committee and planned to introduce it to the Board in February.

Mr. Mawyer stated that as of yesterday, they were notified by the Virginia Department of Health that they would receive an additional $1 million for emerging contaminants removal, thanks to the Bipartisan Infrastructure Law funding. He stated that this funding supported the Crozet Water Treatment Plant GAC additions project, and over the last several years, they had received a total of $7.24 million through this program.

Mr. Mawyer stated that they were excited to receive these funds this year, designated as FY25 by the state, and they were also applying for more funds next year. He stated that this program dedicated a portion of the funds to disadvantaged communities and the other portion to non-disadvantaged communities, and they had been successful in the latter category.

Ms. Mallek asked if staff would brief the Board or send them an email with a brief update on the status of the Mechums Pump Station prior to the February CIP discussion. She stated that she had previously assumed it was included in the CIP, but she may be incorrect. She stated that she would appreciate an update on the recent activity at the pump station, particularly the high velocity coming through the small gap in the dam, which appeared to be causing erosion along the banks downstream.

Mr. Mawyer stated that it was in the CIP for demolition, but they had removed it because they had the potential to use it for water supplies benefiting Crozet. He stated that they were currently exploring this option.

Ms. Mallek stated that if the timeline was 2060, then something needed to be done in the meantime to get the obstructions out. She stated that it was also helping to fill up South Fork.

Mr. Mawyer stated that they had coordinated with Dr. Palmer this week and provided her with the necessary information regarding that topic. He stated that she had also raised the same question.

6. *ITEMS FROM THE PUBLIC*

Matters Not Listed for Public Hearing on the Agenda

There were none.

7. *RESPONSES TO PUBLIC COMMENTS*

There were no comments from the public, therefore, there were no responses.

8. *CONSENT AGENDA*

a. Staff Report on Finance

b. Staff Report on Operations

c. Staff Report on CIP Projects

d. Staff Report on Administration and Communications

e. Staff Report on Wholesale Metering

f. Staff Report on Drought Monitoring

g. Approval of Engineering Services – South Rivanna Reservoir Intake and Pump Station: Design, Bidding, And Construction Phase Services – Kimley-Horn Engineers

h. Amendment of the Capital Improvement Plan FY 25-29 – South Rivanna Water Treatment Plant – Sodium Permanganate System Improvement

Ms. Mallek moved the Board to adopt the consent agenda. Mr. Sanders seconded the motion, which carried unanimously (7-0).

9. *OTHER BUSINESS*

a. *Presentation and Vote on Acceptance: FY 24 Audit Report*
Matthew McLearen, CPA, CFE, Managing Director, Robinson, Farmer, Cox Associates

Matt McLearen, Managing Director of Robinson, Farmer, Cox Associates, stated that he would present the results of the FY24 audit and answer any questions the Board may have about the audit or the audit process. He stated that before he reviewed the Annual Financial Report, he would like to briefly review a separately issued letter that addressed communication with those charged with governance. He stated that this letter highlighted key responsibilities under the audit, including testing documents, controls, and financial statements.

Mr. McLearen stated that the auditee, the Authority, also had a responsibility to present records sufficient for the audit and maintain internal controls sufficient for audit purposes. He stated that the next item discussed in this letter was accounting estimates. He stated that these were a normal part of an audited financial report and included estimates such as the depreciable lives of long-term assets, infrastructure, buildings, vehicles, and other items. He stated that these estimates were used in computed depreciation expense.

Mr. McLearen stated that the second most significant estimate was related to pension and OPEB liabilities, which were measured annually, and the actuaries provided a document included in the annual financial report. He stated that the next item discussed was any difficulties encountered during the audit process. He stated that he was pleased to report that they encountered no difficulties in forming the audit.

Mr. McLearen stated that corrected and uncorrected misstatements were a normal part of the audit process, and they were required to disclose any uncorrected misstatements. He stated that those were audit adjustments proposed to the finance staff and management. He stated that they reported that there were no uncorrected misstatements. He stated that finally, they were required to disclose that management had sought a second opinion, such as a consultation with other auditors. He stated that they had no knowledge of management seeking a second opinion regarding the FY24 audit.

Mr. McLearen stated that the document contained two reports with the CPA firm's letterhead. He stated that the first was the independent auditors' report. He stated that the independent auditors' report was the official opinion on the accuracy and material accuracy of the financial statements. He stated that it was issued with an unmodified or clean opinion, without modification, for the FY24 audit.

Mr. McLearen stated the statement of net position was Exhibit 1, and it spanned two pages and listed the equity or net position for the Authority, which was $183 million as of June 30, 2024. He stated that the second statement was the statement of revenues, expenses, and changes in the net position, similar to an income statement. He stated that it reported the increase or decrease in the net position number, which was $10.2 million for the Authority for the year ending June 30, 2024.

Mc. McLearen stated that the third and final financial statement was the statement of cash flows. He stated that while there was a lot of information on this page, he would

like them to focus on the $46.9 million figure, which was the ending net cash position for the Authority as of June 30, 2024.

Mr. Mawyer asked if that included the cash that was borrowed.

Mr. McLearen stated that was correct. He stated that upon closer inspection, one would see that there was actually a decrease in cash. He stated that this was a normal occurrence when borrowing cash to fund capital expenditures. He stated that the decrease in cash of $14.1 million was largely driven by the increase in capital additions, which included the capital projects. He stated that the number was $23.7 million for the year ending of June 30, 2024, representing the expenditure of that cash, including the bond proceeds that were accumulated for that purpose, as reported on the statement.

Mr. McLearen stated that the second and final report was the independent auditor's report on internal controls. He stated that this report documented and disclosed significant deficiencies or material weaknesses that were discovered during the audit process. He stated that as part of the audit process, they were required to test those controls to report any significant deficiencies or failures in the internal control structure. He stated that they had not identified any significant deficiencies or material weaknesses during the FY24 audit.

Mr. Pinkston asked how many years the firm had been in operation and how long Mr. McLearen had been an auditor.

Mr. McLearen stated that he had been an auditor for maybe 12 years.

Mr. Gaffney stated that the firm had been in operation for at least 75 years.

Mr. McLearen stated that the firm had been in operation since the early 1950s.

Mr. Gaffney asked if there was a motion to accept the financial report.

Ms. Mallek moved the Board to adopt the Annual Comprehensive Financial Report for FY 2024. Mr. Pinkston seconded the motion, which carried unanimously (7-0).

b. *Presentation: Rivanna Conservation Alliance's Rivanna Restoration Projects and Water Quality Monitoring*
Lisa Wittenborn, Ph.D., Executive Director
Claire Sanderson, Ph.D., Monitoring Program Manager

Lisa Wittenborn, Executive Director of Rivanna Conservation Alliance (RCA), stated that RCA was formed in 2016 through the merger of Streamwatch and Rivanna Conservation Society. She stated that their mission was to work with the community to conserve the Rivanna River and its tributaries through monitoring, restoration, education, and advocacy. She stated that as a relatively small staff of five, they were able to accomplish a lot due to their strong partnerships in the community, including

with the Authority. She stated they also had a large and engaged group of volunteers who helped them in all of their program areas.

Ms. Wittenborn stated that they focused on six main areas, and one highlight was their education program, which took every sixth grader in the County and every seventh grader in the City on watershed field trips. She stated that these trips not only taught students about the importance of the Rivanna River, but also introduced them to various career paths in the field. She stated that they also organized stream cleanups. She stated that these events allowed people to explore and appreciate the river as an important part of their community.

Ms. Wittenborn stated that they also hosted various community events, such as the Rivanna River Fest, and engaged in advocacy. She stated that before she dove into their current restoration projects, she would like to highlight some of the significant benefits that came from these initiatives. She stated that the removal of the dam at the North Fork Water Treatment Plant was currently being considered or in conversation. She stated she wanted to show them what happened when the Woolen Mills Dam was removed.

Ms. Wittenborn stated that in 2006, a graduate student at UVA and other state officials conducted a fish survey. She stated that this study used a series of dots shown on the map, with the size of the dot representing the number of fish of a particular species. She stated that the results showed six species and 67 fish when the dam was still in place. She stated that a follow-up survey in 2019 revealed a significant difference, with 32 species of fish and over 1,000 individual fish. She stated that the removal of the dam made a substantial impact on water quality and habitat in the river.

Ms. Wittenborn stated that her conversation with a colleague in 2019, while standing in Darden Towe Park, sparked an idea. She stated that they noticed the exposed sewer line and the severe erosion on the riverbank. She stated that the RWSA team quickly stabilized the area, but they did not want the entire riverbank to resemble riprap. She stated that they decided to conduct a study to determine the worst areas of erosion in the river corridor, so they could address potential problems proactively.

Ms. Wittenborn stated that the study's results, funded by a grant from the National Fish and Wildlife Foundation, showed five miles of the river with relative erosion rates along those stretches. She stated that as part of the grant, they proposed an area for restoration. She stated that they examined various factors that could impact the success and benefits of the restoration project, and they decided that Riverview Park would be the best location for them to propose a project.

Ms. Wittenborn stated that Riverview Park was facing significant erosion. She stated that the restoration of this area would provide numerous benefits for water quality and habitat stabilization. She stated that they chose Riverview Park for its community benefits, as it was the most used park in the City and a beloved destination with many amenities, including a playground and the Rivanna trail. She stated that the park was also the City's only public access point to the river, making it a crucial location for their

community. She stated that they decided to propose a restoration project there and were able to secure a planning grant to explore the feasibility of the project.

Ms. Wittenborn stated they worked with Ecosystem Services, a firm that conducted hydrology, hydraulic analysis, and surveys to determine the most effective type of restoration that would be stable in the long term. She stated that they wanted to ensure that their proposed restoration would be effective and stable. She stated that while Ecosystem Services focused on the technical aspects, RCA handled community engagement, as this project was their initiative and not mandated by the City.

Ms. Wittenborn stated that they conducted public meetings, distributed forms for community input, and engaged with hundreds of people through online forums and in-person events. She stated that the overwhelming response was positive, with the community expressing a strong desire to see the project move forward. She stated they incorporated the community's input and the engineering work to create a proposed design for the restoration project.

Ms. Wittenborn stated that they were fortunate to receive a $500,000 grant from National Fish and Wildlife Foundation for implementation. She stated that when they submitted the proposal, the total project cost was slightly over $800,000, but since then, the costs had increased significantly due to the rising construction costs. She stated they had already secured private foundation funding, and they had a large grant proposal pending with the state's local stormwater assistance fund, a CIP request submitted to the City through the Parks Department, and they were also seeking contributions from ACSA and RWSA.

Ms. Wittenborn stated that one of the reasons this project would be of interest to RWSA is that it involved stormwater outfall restoration. She stated that the erosion was dramatic. She stated that the channel was very deep and wide, and every time the river came up, it ate away another chunk of it. She stated that this was quickly moving towards the ACSA line and then the RWSA sewer line. She stated that as part of their project, they aimed to fill this channel and stabilize it with step pools to protect the existing infrastructure.

Ms. Wittenborn stated another aspect of the project was to improve access for the community. She stated that currently, there was only one set of stairs that everyone had to use to get in and out of the river, which could be quite hazardous, especially during the summer with boats and children. She stated that to address this, they planned to create a low slope access area with a nice path down, which would serve as a floodplain bench. She stated this area would allow the river to expand while also providing a safe access point for the community. She stated that the boat ramp would be relocated further downstream, and they would also install more informal access points upstream.

Ms. Wittenborn stated that a significant part of the project would be replanting native vegetation, which would help regrade the banks and hold them in place long-term. She stated that they were excited about the plan, and construction was expected to start about

a year from now. She stated that she would briefly summarize their current project focused on forest health in the Rivanna River Corridor. She stated that despite efforts to plant new trees, they were allowing existing trees to be taken down by invasive vines.

Ms. Wittenborn stated that to address this, they had formed a partnership with various organizations and conducted assessments of 134 acres of forest in three parks: Riverview, Darden Towe, and Pen Park. She stated that they had identified areas with high levels of invasive cover and native trees, with the goal of preserving the canopy. She stated that they had compiled data, prioritized these areas, and hired a contractor to begin invasive management in January.

Ms. Wittenborn stated that they would be backfilling with new trees where necessary. She stated that this project involved significant volunteer engagement and was expected to have a long-term impact. She stated that for reference, she included some invasive cover maps, which showed the extent of vine coverage in Riverview Park. She stated that these images demonstrated the prevalence of invasive species, with nearly all trees in certain areas covered in vines.

Ms. Mallek stated that she was wondering, for plants like native grapevines, if it was possible to simply cut the root and stem off at the ground, allowing the plant to die, or if the roots needed to be completely ripped out. She stated that that was probably a considerable amount of what was in those trees.

Ms. Wittenborn stated that they were attempting to minimize the impact on the native species as much as possible. She stated that their focus was on eradicating the invasive species, and many of these would return if herbicide was not applied to the cut end of the stump. She stated that this required a precise application of herbicide on the cut stem, and this work was not done by volunteers. She stated that they were working with Parks Department staff to ensure that this treatment was applied correctly.

Mr. Gaffney asked if it worked for Russian olive.

Ms. Wittenborn stated that it did work for autumn olive. She stated that their first volunteer workday in Riverview was focused on autumn olive removal.

Claire Sanderson, Director of Monitoring at RCA, stated that she would like to briefly discuss their water quality monitoring programs. She stated that they had two main volunteer-supported programs: one for bacteria and one for benthic or biological samples. She stated that approximately 80 trained volunteers contributed to collecting data across both programs annually.

Ms. Sanderson stated that both programs had been certified as level three by VDEQ, the highest level of certification for a volunteer-supported program. She stated that this certification ensured that the data collected by their volunteers was of the highest quality, comparable to data collected by VDEQ itself. She stated that as a result, they can utilize this data for essential environmental decision-making purposes, such as

identifying impaired waters, evaluating Total Maximum Daily Loads (TMDLs), and informing local partners and community members.

Ms. Sanderson stated that the bacteria monitoring program has been in operation for the past 12 years, with volunteers collecting water samples at 22 sites in and around Charlottesville. She stated that they test for E. coli and turbidity to determine the recreational water quality for these sites. She stated that to achieve this, they had three different sampling schedules. She stated that first, they collect samples once a month from March to November, providing a general overview of the situation. She stated that they can then conduct additional monitoring if necessary.

Ms. Sanderson stated that in the spring, nine potential recreational sites were sampled weekly for 10 weeks to see if they meet Virginia's water quality standards for recreation. She stated that in the summer, they performed weekly tests at three high recreational sites, Darden Towe Park, Riverview Park, and the Palmyra boat launch. She stated this was done in partnership with the James River Watch. She stated that the data was posted on the James River Watch's website, as well as the swim guide app, allowing the public to make informed decisions about recreation in the water.

Ms. Sanderson stated that they also conducted extra monitoring when needed and source tracking when they saw unusually high levels of E. coli. She stated that in the stream health report, they publish the results every year, and they report on the data from the previous year. She stated that the 2023 bacteria monitoring results were available as shown. She stated that a map of all 22 sites was provided, color-coded according to the percentage of samples with E. coli levels under Virginia's water quality standard for recreation, which was 410 counts of E. coli per 100 ml of water.

Ms. Sanderson stated that for example, the three highly popular sites had high percentages of samples meeting the recreational water quality standard. She stated that the numbers were higher than they were in 2022. She stated that the biological monitoring program had been in operation since 2002, with volunteers collecting benthic macroinvertebrates. She stated that these organisms had different levels of tolerance to pollution, and by collecting and identifying them, they could determine the water quality at each location.

Ms. Sanderson stated that they had 50 long-term monitoring sites throughout the Rivanna River watershed, which were depicted on the map as pink hexagons. She stated that they sampled twice yearly, once in the spring and once in the fall. She stated that due to the variability in benthic scores caused by weather and seasonal fluctuations, when analyzing the results for the report, they considered the last three years of data. She stated that the results focused on the benthic results from 2021 to 2023. She stated that the map displayed all the long-term monitoring sites, which were color-coded according to the stream health score. She stated that sites with scores above 60 were considered to be meeting Virginia's water quality standard for aquatic life.

Mr. Pinkston asked what the major causes for low scores were.

Ms. Sanderson stated that there were numerous factors at play. She stated that increasing sediment could significantly impact the organisms, particularly those with sensitive gills that could become clogged. She stated that pH changes, temperature fluctuations, and exposure to pesticides, herbicides, and other pollutants also contributed to the issue. She stated that variations in weather and rainfall patterns affected them.

Ms. Sanderson stated that in this year's report, 70% of their sites failed to meet Virginia's water quality standard for aquatic life, which may seem alarming, but it represented a 4% improvement from last year. She stated that further information related to the report was available on their website.

Ms. Mallek asked, when in the small percentage where it failed, because 87% passed, what kind of notice was provided to the public to prevent people from using the river for recreation.

Ms. Sanderson stated that they did not typically make public announcements. She stated that the river usually had high E. coli levels after heavy storms. She stated that they instructed people on their website and elsewhere to not use the river after storms and to wait 48 to 72 hours after heavy rain. She stated that when they experienced elevated levels that persisted, they worked closely with the City. She stated that if the site was within the City's jurisdiction, they would issue public notices, and the City would also issue their own notice as well.

Ms. Wittenborn stated that at all river access points, they had a kiosk with a QR code that directed users to their current bacteria results page. She stated that this allowed visitors to view the most recent results.

Ms. Mallek left the meeting at 2:57 p.m.

Mr. Gaffney stated that at Moores Creek, they were proud of the quality of water that came out of the plant. He stated that the readings from the two reports were concerning, and he noticed that Pollock's Branch and Lodge Creek, which were upstream, also had low readings. He stated that he was wondering if the issues contributing to Moores Creek's low readings were related to broader issues in the City and the County.

Ms. Sanderson stated that the Moores Creek site was generally considered good. She stated that it tended to exceed the 410 level during heavy rainfalls. She stated that it may also be affected by rainfall from other locations. She stated that they had been experiencing ongoing issues at Pollock's Branch, which had resulted in elevated E. coli levels. She stated that overall, the site was fairly good, but heavy rainfall could cause it to spike and lead to exceedances.

Mr. Mawyer asked if they sampled on a regular schedule or in relation to the river's quality level. He asked if they would wait if there was heavy rainfall even if it was the sample day.

Ms. Sanderson stated that if that was their sample day, they would still sample if it was safe to do so and if the volunteers felt comfortable doing so. She stated that if not, they would either wait a day or skip the sampling altogether.

Mr. Mawyer asked if they waited until normal water clarity to sample.

Ms. Sanderson stated that they did not.

Ms. Wittenborn stated that the revised Virginia Water Quality Standard required taking a sample on a regular schedule, every week, regardless of the conditions.

Mr. Pinkston asked if they covered the entire Rivanna watershed.

Ms. Sanderson stated that they did. She stated that it was approximately 766 square miles, which was their area of work.

Mr. Pinkston asked if there were any partner agencies in the adjacent areas.

Ms. Sanderson stated that they partnered with several organizations. She stated that there were numerous water quality monitoring groups throughout Virginia. She stated that they stood out, however, as the only group to hold both level three certification for their benthic and bacteria monitoring. She stated that in contrast, many groups that analyzed benthic data typically held level two certification.

Ms. Wittenborn stated that if one examined a map of Virginia, it was possible to identify the Rivanna watershed due to the high concentration of monitoring sites they had. She stated that their partners at the VDEQ informed them that this concentration of sites enabled them to concentrate their efforts in other areas where they did not have similar groups.

Mr. Pinkston stated that they also mentioned the possibility that the Authority might partially fund the work at Riverview Park.

Ms. Wittenborn stated that was the hope. She stated that when they submitted the grant proposal for the implementation grant two years ago, RWSA returned a letter stating it would support the project, but the letter did not include a specific dollar amount.

Mr. Gaffney asked what the Authority's current annual contribution was.

Ms. Wittenborn stated that the Authority contributed $20,000 to support the program work.

Mr. Mawyer stated that he would like to know if they could provide an estimate of the additional contribution they would request.

Ms. Wittenborn stated that she believed they had initially estimated $20,000. She stated that ACSA was also asked to make an in-kind contribution.

Mr. Pinkston asked if the request was enough to cover the project costs.

Ms. Wittenborn stated that it would not be enough if they did not secure additional funding. She stated that it was a complex puzzle of bringing all the pieces together.

Mr. Pinkston stated he thought it would be beneficial to have conversations outside of this meeting about the numbers they were discussing. He stated he believed the numbers seemed relatively low.

Mr. Mawyer stated that they were currently working on the budget, and he would discuss an appropriate amount with Ms. Wittenborn and bring it up for discussion in March.

Mr. Pinkston stated that this project seemed to have the potential to unlock opportunities for many different people. He stated that he believed they could contribute more than the proposed amount.

Ms. Wittenborn stated that she hoped that the City budget would be announced soon.

Mr. Gaffney stated that he believed the City could increase its contribution.

Mr. Pinkston stated that he did not disagree.

Ms. Wittenborn stated that they should hear about the largest remaining pot of money, the Stormwater Local Assistance Fund, which was expected to be announced in February. She stated that if they received CIP funds, they would be in a good financial position, unless construction costs increased significantly this year.

Mr. Sanders asked if the request would come through the Parks Department.

Ms. Wittenborn stated that it was a $250,000 request through the Parks Department.

c. *Presentation and Vote to Consider Award of Construction Contract and Amendment to the CIP for the Crozet Wastewater Pump Stations Repairs Project – Waco, Inc.*
Dyon Vega, P.E., RWSA Civil Engineer

Dyon Vega, Civil Engineer, stated that he was presenting on the Crozet wastewater station repairs project for the construction award and CIP amendment. He stated that the Crozet service area flowed by gravity to Crozet Pump Station 4 and was then pumped to the urban area, where it flowed by gravity and was treated at Moores Creek.

Mr. Vega stated that the pump stations, constructed in the 1980s, had reached their useful life. He stated that along with the pump stations, they would be replacing the

pumps, including 11 new pumps. He stated that at Pump Station 4, they had a flow equalization tank that dampened peak flows to the urban service area during high storm events. He stated that the Crozet flow equalization tank, which was recently constructed, served to trim peak flows to the urban service area. He stated that during a storm event, it filled up and, after the storm, it drained and flushed automatically. He stated that it held 1 million gallons of wastewater, and it was designed to handle a two-year storm event.

Mr. Pinkston asked if the tank was filled by pump or gravity.

Mr. Vega stated that it was filled by pump. He stated that it was equipped with two pumps that could fill the tank and also convey wastewater downstream. He stated that the current budget for the project was $10.9 million. He stated that the engineer's estimated construction cost was $7.8 million, and the only bidder came in at $10.3 million. He stated that they had discussions with the contractor to reduce the price, and they were able to reduce the cost by $760,000.

Mr. Vega stated that the modifications and cost-saving measures they implemented included the unique design of Crozet Pump Station 3, which resembled a chicken coop. He stated that unlike the other pump stations, this pump station was designed differently at the request of the original property owner. He stated that they were able to eliminate the enclosure, saving a significant amount of money by not replacing it. He stated that they were also able to reduce the cost of temporary bypass pumping by modifying the system with the contractor.

Mr. Pinkston stated that the Waco bid included two temporary diesel generators. He stated that it was unclear whether this was temporary during the construction phase.

Mr. Vega stated that one pump would be used as a temporary bypass pump, and one pump would be placed on standby in case the primary bypass pump failed. He stated that these pumps would only be used during the construction process.

Mr. Pinkston stated they would use an electric generator and a diesel generator. He asked what an electric generator was serving.

Mr. Vega stated that it was an electric pump for the bypass process during construction, so they were saving on fuel costs.

Mr. Mawyer asked if the pump would use the pump station’s electric service.

Mr. Vega stated that it would use the pump station service.

Mr. Gaffney stated that he had a question regarding the Lickinghole Creek impoundment. He stated that he did not know if the water level typically got lowered before a significant storm.

Mr. Mawyer stated that the impoundment was substantially full of silt, but they did not lower it before a storm. He stated that they had a project in the long-range CIP to dredge the stormwater impoundment. He stated that the basin was losing capacity, and it was designed and built to protect the Rivanna River from development when Crozet expanded.

Mr. Gaffney asked what they would do with the silt.

Jennifer Whitaker, Director of Engineering & Maintenance, stated they would probably search for a suitable disposal site, similar to some of the investigations they had conducted for South Fork reservoir many years ago.

Mr. Pinkston stated that they received only one bid. He asked if there was consideration given to re-bidding the project.

Mr. Mawyer stated that they wanted to complete the work as soon as possible, but they had conducted a thorough review of the bid totals with the engineer. He stated that they were able to bring the estimate down to within $1.7 million of their original estimate, which seemed reasonable compared to pricing received on other recent projects. He stated that he believed the cost was fair and reasonable.

Mr. Mawyer stated that if a contractor was extremely anxious to be competitive, re-bidding could potentially lead to a lower bid. He stated that there was also a risk that no contractors may bid on the project, resulting in a zero-bid scenario.

Mr. Pinkston stated that this aligned with the engineer's opinion.

Mr. Mawyer stated it did. He stated that they were familiar with Waco Construction, having worked with them previously.

Mr. Pinkston asked if this was only for one pump station.

Mr. Vega stated that it was for all four pump stations in Crozet. He stated that there were eleven total pumps to be replaced.

Mr. Gaffney stated that ACSA was covering 100% of the costs.

Mr. Mawyer stated that wastewater from Crozet was conveyed to Moores Creek for treatment through the 4 pump stations. He stated that in the past, when they experienced odor complaints, the issue was often reported in the valley near the Ivy Store. He stated that they had a turnkey contract in place to address odors, which involved the use of chemicals to minimize them. He stated that the company monitored the sulfides present in the wastewater and adjusted the levels with chemicals, including a bioxide chemical, to reduce odors.

Mr. Richardson moved the Board to authorize the Executive Director to award a construction contract to Waco Construction Company in the total amount of $9,583,350 and to approve any change orders to the construction contract as necessary for the completion of the work, not to exceed 10% of the original construction contract award. Mr. Pinkston seconded the motion, which carried unanimously (6-0). (Ms. Mallek was absent)

Mr. Sanders moved the Board to amend the FY 25 – 29 CIP for the Crozet Wastewater Pump Station Repairs project to increase the budget by $1,450,000. This amendment would bring the total budget for the project to $12,350,000. Mr. Pinkston seconded the motion, which carried unanimously (6-0). (Ms. Mallek was absent)

Mr. Richardson left the meeting at 3:15 p.m.

d. *Presentation: Dam Safety Program Update*
Victoria Fort, P.E., Senior Civil Engineer

Victoria Fort, Senior Civil Engineer, stated that she would provide an overview of the Dam Safety Program and its various components and contributors. She stated that after Hurricane Helene's residual rainfall, the Beaver Creek Reservoir water surface elevation peaked at more than six feet higher than the normal pool. She stated that the dam was designed to handle such flows, but it was the highest she had seen the water.

Mr. Mawyer asked what would happen if the water level continued to rise.

Ms. Fort stated that eventually, the water would reach an elevation where it would activate the auxiliary spillway. She stated that most of the water flowing from the lake into the stream below passed through a pipe, which was visible along the road. She stated that the primary spillway was the pipe, and when the capacity of that spillway was reached and the water continued to rise, the auxiliary spillway came into play to carry the water around the dam, preventing it from overtopping. She stated that an auxiliary spillway structure was a safety feature commonly included in earthen dams, and it was designed to divert water away from the dam.

Ms. Fort stated that looking at the United States as a whole, there were over 92,000 dams, with an average age of more than 60 years, according to a figure from last year. She stated that as dams aged, they became more prone to safety issues. She stated that in Virginia, there were approximately 3,700 known dams, with about 1,700 of those classified as an unknown hazard. She stated this lack of information made it difficult for the state to understand the potential impacts of dam failures downstream.

Ms. Fort stated that Albemarle County had 240 dams, the highest number in any single county in the state. She stated that Bedford County also had several dams. She stated that in Albemarle, there were 20 high-hazard dams, which, if they were to fail, would result in loss of life. She stated that 118 of the dams in the County were classified as an

unknown hazard potential, making it challenging to assess the downstream risks. She stated the state was investing significant time and resources into addressing these concerns, and they hoped to see improvements in these numbers.

Ms. Fort stated that according to the ASDSO Dam Incident Database, there were 31 recorded dam incidents in Virginia since 2019, with 12 of those classified as dam failures. She stated that these incidents highlighted the need for continued vigilance and understanding of the hazards associated with dams, particularly in their community. She stated that dam failures could have catastrophic flooding consequences, including loss of life and significant economic damage.

Ms. Fort stated one of the most common forms of dam failure was overtopping due to extreme rainfall. She stated that as storms continued to intensify and become more frequent, their infrastructure, particularly their dams, became increasingly at risk.

Ms. Fort stated she wanted to discuss dam incidents and the importance of dam safety, particularly in relation to Rivanna. She stated that as they had previously discussed, in January, a malfunction of the rubber bladder at the Sugar Hollow Dam had occurred. She stated that although they were fortunate that there was no major damage downstream, the potential for injury or loss of life was present. She stated that they responded quickly, and Albemarle County Fire Rescue and Police also responded quickly. She stated that to increase the safety of the facility, they were taking several steps.

Ms. Fort stated that although their facility at Sugar Hollow was in compliance with state standards and well-maintained, these types of emergency events could still occur. She stated that being prepared for them was crucial for ensuring public safety. She stated that in response to the recent failure, they were moving forward with air piping modifications. She stated that the rubber dam was currently deflated and out of service until the work was completed in the next few months.

Ms. Fort stated that they were also working on installing additional sensors and had implemented a number of additional alarms at the facility. She stated that they were considering the installation of an audible warning system, or siren system, to alert downstream neighbors who may not have cell service or other means of communication in the event of a dam emergency. She stated that these measures were aimed at protecting public safety, building on the lessons learned from the January incident.

Mr. Pinkston asked for clarification about failures from overtopping.

Ms. Fort stated that this was primarily related to earthen dams. She stated that the Beaver Creek Dam featured an embankment with a pipe through it as its primary spillway. She stated that there was also an auxiliary spillway or emergency spillway located to the side, as the last thing they wanted was for the dam to overtop. She stated that this could lead to erosion and failure. She stated that a rapid increase in water level, which caused overtopping, was one of the most common forms of failure.

Ms. Fort stated that rainfall that exceeded a dam's design was a common failure point. She stated that they had seen this at Clover Dam, for example. She stated that in May 2018, the dam overtopped due to a sudden rise in water level, causing erosion. She stated that another significant event this year was Hurricane Helene, which brought heavy rainfall to the East Coast, including Virginia. She stated the storm caused catastrophic flooding, landslides, and widespread damage, affecting several dams in North Carolina and potentially Tennessee.

Ms. Fort stated that these types of storms did occur in the region, and it was essential for them to anticipate them, maintain their facilities, and be prepared for emergencies. She stated that a recent incident in Greene County involved the Greene Mountain Lake Dam, which was partially breached and was currently under a potential failure watch. She stated the state was closely monitoring the situation.

Ms. Fort stated that in Virginia, dam safety was overseen by the Department of Conservation and Recreation (DCR), which ensured that dams had proper and safe design, construction, operation, and maintenance to protect public safety. She stated that all dams in Virginia were subject to regulations except for certain situations. She stated that dams under a certain size were exempt. She stated that dams owned or licensed by the federal government, such as those regulated by FERC, were exempt from state regulations. She stated that dams operated for mining, agriculture, or canals were exempt from any kind of regulation in Virginia. She stated that mining and canals may fall under different jurisdictions.

Ms. Fort stated she oversaw the dam safety program, but it involved a large team, including senior management, administration, engineering, operations, maintenance, IT, and many others who worked daily to ensure their dams were safe. She stated that this included monitoring them with instrumentation, having professionals inspect them, and maintaining permitting and regulatory compliance. She stated that they also had internal dam safety policies, which they updated regularly. She stated that they updated, trained on, and did exercises for their emergency action plans. She stated that they invested significant funding in maintaining vegetation at all their facilities, which helped protect the dams from rodents and root intrusion and allowed for proper inspections and repairs.

Ms. Fort stated that there was also an aspect of public safety and outreach, as they posted signs at all facilities, ensuring they remained visible and communicated the risks to the public. She stated they participated in Rivanna Riverfest annually, educating the public about dam safety and risks. She stated that they completed studies and reports as needed for regulatory compliance, conducted regular inspections and surveys, and had operators perform daily safety checks at most facilities.

Ms. Fort stated that they inspected all dams monthly and annually with professional engineer inspections as required. She stated that many of their dams were monitored remotely with instrumentation or through site visits on a regular basis. She stated that as

these were drinking water storage facilities, they were an integral part of their daily operations.

Ms. Fort stated that she had included a list of all their facilities, including RWSA and RSWA. She stated that they had four high-hazard dams, including the South Rivanna Dam, currently under the jurisdiction of FERC, the Ragged Mountain Dam, the Sugar Hollow Dam, and the Beaver Creek Dam. She stated that they had three dams classified as low hazard, the Totier Creek Dam, the Lickinghole Creek Dam, and the Buck Mountain Dam.

Ms. Fort stated that they also had three dams that were not subject to state regulation but were still considered impounding structures, the North Fork Rivanna Low Head Dam, the Mechums River Low Head Dam, and the Ivy SWRC Pond Dam. She stated that the South Fork Rivanna Dam was currently regulated by FERC, but they were in the process of transitioning it to state jurisdiction. She stated that they had decommissioned the hydropower facility, which was built in the 1980s, and they were awaiting final approval from FERC before transferring it to the state.

Ms. Fort stated that the original dam, constructed in the 1960s, was a 700-foot-long, 54-foot-tall concrete gravity dam with a full overflow spillway. She stated that it should have at least a lifespan of 100 years or more. She stated that they maintained the facilities regularly and performed concrete and steel repairs to address what were mostly cosmetic issues. She stated that they conducted regular inspections to ensure they remained safe. She stated that as long as this maintenance continued, it was expected to meet safety standards for the foreseeable future.

Mr. Pinkston asked how tall the dam was.

Ms. Fort stated that from the top of the crest to the stilling basin, it was about 30 feet. She stated that when discussing the overall height of a dam, they were referring to the top of the dam, which was the top of the abutment. She stated that the Sugar Hollow Dam was similar in this regard. She stated that when talking about the height of the dam, they were not referring to the spillway, but rather the abutments. She stated that the height of the dam was the point at which the water would need to rise to start eroding the earth on either side.

Ms. Fort stated that the Ragged Mountain Dam, built between 2012 and 2014, was an earth-filled dam that stood 125 feet tall and 785 feet long, making it their largest earthen dam. She stated that this dam would impound an additional 12 feet of water, which it was built to accommodate. She stated that the project would move forward next year, allowing them to store an additional 700 million gallons.

Ms. Fort stated that the Sugar Hollow Dam, built in the 1940s, was upgraded in the late 1990s and early 2000s following significant damage from a 1995 flood. She stated it was a concrete gravity dam with a rubber crest gate, a five-foot-tall rubber tube that spanned the top of the dam, allowing them to control the water level behind it. She

stated that the bladder was originally installed in the early 2000s and replaced in 2021. She stated that the dam was 480 feet long and 96 feet tall.

Ms. Fort stated that the Beaver Creek Dam, the last of their high-hazard dams, was built in 1963. She stated it was an earth-filled dam, 530 feet long and 60 feet tall, and it also served as an Albemarle County Park, offering various recreational activities. She stated that the Browns Gap Turnpike ran along the crest of the dam. She stated that this project was currently in the design phase for upgrades to the spillway.

Ms. Fort stated the auxiliary spillway played a crucial role in managing water levels in the reservoir, particularly during heavy rainfall events. She stated that originally built as a significant hazard dam in the 1960s, the facility had undergone upgrades due to changes in regulations and development downstream, resulting in it being classified as a high-hazard dam. She stated that this classification increased the amount of storm runoff the facility must manage. She stated that the auxiliary spillway was undersized to handle the full capacity, known as the Probable Maximum Flood (PMF).

Ms. Fort stated that to address this, they planned to fill in the auxiliary spillway and install a new spillway through the dam. She stated that the new spillway would feature a labyrinth weir, an accordion-shaped structure that could efficiently manage a large amount of water with a minimal footprint. She stated that this design would enable them to quickly release water from the reservoir during heavy rainfall events.

Ms. Fort stated that the project would also involve relocating the raw water pump station, currently situated at the dam's toe, to a site on the reservoir. She stated that the Natural Resources Conservation Service was funding 100% of the design for eligible components of the project, and they planned to apply for funding for construction next year.

Ms. Fort stated that Totier Creek Dam and Lickinghole Creek Dam were two low-hazard dams. She stated that Totier Creek Dam was an earth-filled dam constructed in the 1970s, measuring 277 feet in length and 35 feet in height, making it a smaller-scale structure compared to some of their other earthen dams. She stated the Lickinghole Creek Dam was built in the 1990s and served as a sediment storage basin within the South Rivanna River watershed. She stated that it prevented sediment from the Crozet area from entering the South Rivanna basin. She stated the dam was 458-foot-long and approximately 32 feet tall.

Mr. Pinkston asked if the whole purpose of the Lickinghole dam was to capture sediment.

Ms. Fort stated that was correct. She stated the dam did not have a water supply storage purpose, instead, it protected the water supply by preventing contamination. She stated that the Buck Mountain Property Dam was classified as a low-hazard dam, built in the early 1980s, and was acquired by Rivanna as part of the Buck Mountain Property

purchase. She stated it did not provide any water supply function, and it was situated on property that will eventually be part of any future Buck Mountain Reservoir.

Ms. Fort stated the dam was an earth-filled structure, measuring 190 feet long and 33.5 feet tall. She stated that recent studies revealed that the primary spillway conduit, a pipe that ran through the dam, had reached the end of its useful life due to significant corrosion. She stated that as a result, the dam will likely require either extensive repairs or removal to address these deficiencies. She stated the issue was being programmed into the CIP, and they will continue to monitor the dam's condition to ensure its integrity. She stated that if they noticed any degradation in the dam's condition, they will likely drain the pond until they can secure funding to address the issue.

Ms. Fort stated that the size of the dam impoundment was substantial enough that they would need to lower the dam height by approximately two-thirds to bring it below regulatory size. She stated that fortunately, it was considered a low-hazard dam, and they would not expect any major damage or loss of life in the event of a failure.

Ms. Fort stated that they had three unregulated dams, including the North Rivanna Low Head Dam, which served as the intake for the North Rivanna Water Treatment Plant. She stated that the plant was slated for decommissioning in the near future, and at the same time, the dam will be removed. She stated that they were collaborating with the U.S. Fish and Wildlife Service on this project, which will take over the design, permitting, and construction of the dam removal. She stated that this partnership was a great asset, and they hoped to secure the necessary funding.

Ms. Fort stated that the Ivy SWRC Pond Dam was being upgraded with a dry hydrant, which provided a fire suppression function. She stated that they had previously lowered the pond a few years ago to bring it below regulatory size and reduce the potential impoundment. She stated that the Mechums River Low Head Dam was currently not in operation for water supply, but it was being kept in place until they determined the longer-range water supply needs.

Ms. Fort stated that their approach to dam emergencies was to design them with a high level of conservatism to minimize the potential for failure in emergency situations. Even though these events were considered low-probability, they could have extremely high and severe impacts on downstream communities. She stated that potential causes of dam emergencies and failure included rainfall in excess of what the dam was designed to handle, material failure, vandalism, or terrorism. She stated that they would also consider an accident or public safety type event at a dam to be a dam-related emergency.

Ms. Fort stated that the dams were categorized by the severity of the consequences from their failure, which did not necessarily reflect the dam's condition. She stated that they used other categories to discuss the condition of a dam.

Ms. Fort stated that a high hazard dam meant a likely loss of life and severe economic damage. She stated that a significant hazard dam meant potential loss of life, possibly

some economic damage. She stated that a low hazard dam meant no expected loss of life, no significant economic damage upon failure. She stated that the hazard potential dictated the design criteria, so the higher the dam's hazard classification, the more water and severe rainstorm the dam must be designed to handle. She stated that the Beaver Creek project was an example of a significant hazard dam. She stated that once they upgraded it, the dam had to be able to handle twice the storm it was originally built for.

Ms. Fort stated she usually included a slide on probable maximum precipitation (PMP), which was the theoretically greatest depth of precipitation for a given duration that was physically possible over a particular drainage area at a certain time of year. She stated that this essentially meant the most rain that an area would ever possibly see if the meteorological conditions aligned for a perfect storm. She stated that dams in Virginia with high hazard potential must be designed to pass at least 90% of the flood runoff that results from the PMP.

Ms. Fort stated that they had internally decided that their dams would pass 100% of the PMP, allowing for more severe storms in the future and providing a cushion in case regulations changed. She stated that to give a sense of what a PMP storm actually looks like, it was tailored to every watershed. She stated that in some watersheds, the PMP might be 25 inches of rain in 24 hours. She stated that in other areas, it may be in excess of 30 or 35 inches for a 24-hour period.

Mr. Lunsford asked if the Ragged Mountain PMP would be higher than the South Rivanna PMP.

Ms. Fort stated that was correct. She stated that South Rivanna was a large watershed, so a storm would be distributed more widely. She stated that in general, larger watersheds tended to have smaller rainfall values, whereas smaller watersheds required a storm to pass directly over them, resulting in higher rainfall amounts.

Ms. Fort stated that for comparison, for the Sugar Hollow watershed, a two-year storm was approximately 3.6 inches of rain in 24 hours, a 100-year storm was 9.12 inches, and the PMP was 34 inches. She stated that in the 1960s, Nelson County received over 27 inches of rain overnight from Hurricane Camille, 81% of the PMP. She stated that Madison County received 25 to 30 inches of rain in 16 hours in 1995, or 86% of the PMP. She stated that there was a history of extreme rainfall events, which emphasized the need for preparedness.

Mr. Gaffney asked if those percentages were based on the current PMP.

Ms. Fort stated that they were.

Mr. Gaffney asked if the PMP in the 1960s and 1990s was lower.

Ms. Fort stated that it was likely slightly higher. She stated that a 2015 state study of the PMP in Virginia found that in some areas, the numbers increased slightly, while in

others, they decreased slightly. She stated that in their area, the trend had been a decrease, which was why their previous design work had been more conservative than it would have been otherwise. She stated that with the new regulations and the new PMP study in Virginia, the requirements for designing their dams did not change significantly. She stated that the study did highlight areas where it increased, such as coastal areas.

Ms. Fort stated that moving on to their dam emergency action plans (EAPs), these were mandatory for all high-hazard dams in Virginia and served as a set of pre-planned actions to minimize or alleviate emergency conditions at a dam. She stated that these plans contained procedures and information on issuing early warning notifications to minimize loss of life and property damage during an emergency event.

Ms. Fort stated that effective coordination among the Virginia Department of Emergency Management, local emergency communications center, police, fire rescue, VDOT, media, local government, and themselves was required. She stated that they currently maintained EAPs for each of their four high-hazard dams. She stated they were working on updating them to a format more similar to their regional partners' dams, with the updated versions expected to be distributed in 2025.

Mr. Sanders asked when the last time they tested the EAPs was.

Ms. Fort stated that they held a tabletop exercise on the Sugar Hollow and Beaver Creek dams in October, bringing together regional emergency managers, police, fire rescue, VDOT, ACSA, the City, and other local communication staff, such as Albemarle County's communication team. She stated that the exercise allowed for a diverse range of perspectives and ideas to be shared. She stated that they also ran through several scenarios during the exercise.

Ms. Fort stated that building on this, they planned to conduct a similar activity next fall for the South Rivanna Dam and the Ragged Mountain Dam. She stated that in addition to these tabletop exercises, they conducted internal drills. She stated they had experienced enough significant rainfall in the area that they typically activated at least one of their EAPs every year. She stated that during Hurricane Helene, they activated two EAPs due to non-failure type emergencies. She stated this heightened awareness, allowing them to notify others of the situation and continue monitoring.

Ms. Fort stated the EAPs assigned responsibilities for various parties, and Rivanna was responsible for assessing and verifying the conditions at the dams. She stated that they would notify participating emergency management agencies and provide status reports to control the flow of information and ensure accurate information reached the public. She stated that if corrective action was needed at the facility, such as building a filter to prevent further erosion, they would take that action. She stated that once the emergency had subsided, they would declare it to the community, informing them that the situation had resolved.

Ms. Fort stated the role of outside agencies in the EAPs included County and City governments, fire rescue, VDOT, and other relevant parties. She stated that they would receive status reports from Rivanna and be responsible for notifying the public. She stated that they were equipped with the necessary tools, training, and resources, and they could quickly respond to the situation. She stated that they would coordinate and conduct evacuations, if necessary, from inundation areas downstream of the dam. She stated they would provide mutual aid and resources, if requested and able to do so.

Ms. Fort stated that in the event of an evacuation, external agencies would be responsible for designating shelter locations for families, arranging transportation, and providing necessary resources. She stated that this would enable Rivanna to focus on the dam facility. She stated that the EAP notification charts outlined various emergency scenarios, from non-failure to failure. She stated that each chart explained the emergency scenario, outlined the necessary steps, and included contact information for key personnel. She stated that it also included written prompts to ensure clear and concise communication during emergency situations.

Ms. Fort stated that all EAPs included Dam Breach Inundation Maps, which provided essential information on what areas would flood, buildings that would be impacted, and the estimated time it would take for water to reach those areas. She stated the maps indicated the water surface elevation, including whether roadways were overtopped and by what amount. She stated this information was particularly valuable for emergency services, as it enabled them to allocate resources efficiently and identify the time available for action to protect people downstream of these facilities.

Ms. Fort stated that the CIP had several ongoing dam projects. She stated that recently completed or underway, they had the hydropower facility decommissioning, which was now complete and awaiting final approval for transfer to the state jurisdiction. She stated that they also had the air piping modifications at Sugar Hollow Dam, which were anticipated to begin next month and were expected to be completed by February or March.

Ms. Fort stated that in the planning and design phase, they were upgrading the spillway at Beaver Creek Dam, for which design was currently underway with NRCS funding and was expected to be completed sometime in the middle of next year. She stated that they were also conducting inspections and concrete and steel repairs at the facilities, primarily cosmetic or surface-level repairs to aging concrete. She stated that they were exploring the implementation of an audible warning system at Sugar Hollow and potentially other facilities, with the goal of rolling it out as needed.

Ms. Fort stated that they were developing public safety plans and signage designs for facilities that did not already have them, primarily for public safety purposes. She stated that the Buck Mountain Property Dam remediation and removal project was scheduled for the later years of the CIP.

Ms. Fort stated that they consistently performed annual maintenance and permitting, including monthly tree and brush clearing, seasonal clearing of brush and stream channels, instrumentation maintenance, calibration, and remote monitoring. She stated that staff dedicated significant time to ensuring these facilities could be monitored remotely. She stated that they had an EAP tabletop exercise planned for 2025 for the Ragged Mountain and South Rivanna dams, which would allow them to practice implementing the EAPs for those facilities.

Mr. Sanders asked if Rivanna would host the EOC during an emergency.

Ms. Fort stated that it would most likely be hosted by the jurisdiction where the emergency was occurring. She stated that depending on the situation, they might want to be stationed close to the dam, which would influence the location of their setup.

Mr. Pinkston asked where the EAPs were kept.

Ms. Fort stated that they had digital copies and physical copies, which they distributed to everyone on the call list.

Mr. Pinkston asked if the University of Virginia was included.

Ms. Fort stated that they were included where appropriate.

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

There were no items to discuss.

11. ***CLOSED MEETING***

There was no reason for a closed meeting.

12. ***ADJOURNMENT***

At 3:51 p.m., Mr. Sanders moved the Board to adjourn the meeting of the Rivanna Water and Sewer Authority. Ms. Hildebrand seconded the motion, which passed unanimously (5-0). (Ms. Mallek and Mr. Richardson were absent)

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MEMORANDUM

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

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **EXECUTIVE DIRECTOR'S REPORT**

DATE: **JANUARY 28, 2025**

STRATEGIC PLAN PRIORITY: EMPLOYEE DEVELOPMENT

Promotions and New Credentials for Team Members

After a competitive recruitment process, Daniel Campbell was selected as our new Director of Operations and Environmental Services.

Daniel began his career with RWSA in 2018 as a Water Department Supervisor and was promoted to Water Manager in 2021, and was responsible for all of our water treatment facilities and staff. Daniel has a B.S in Biochemistry from Ferrum College and a Class 1 Water Operator license in Virginia. Congratulations, Daniel!

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

- Schuyler Deal – Wastewater Operator, Class 2
- Sally Rabun – Water Operator, Class 2

Safety Training

The safety of our staff is always a top priority. In December, George Cheape, Safety Manager, coordinated with a consultant to provide four sessions of Confined Space Training for 75 of our employees. Staff from the Maintenance, Engineering, Water, Wastewater, Administration, and I.T. Departments participated in this all-day classroom and hands-on training. Confined spaces are defined by OSHA as a space with "limited or restricted means for entry and exit and are not designed for continuous occupancy." Examples include tanks, pipelines, tunnels, and manholes. This 8-hour certified training class is provided for our team every other year for any employee who may need to enter a confined space during this course of their work.

STRATEGIC PLAN PRIORITY: COMMUNICATION AND COLLABORATION

Virginia Water and Power Resilience Workshop

On January 14th, Jennifer Whitaker, Director of Engineering and Maintenance, presented with ACSA and the Albemarle County Office of Emergency Management at the Virginia Water and Power Resilience Workshop. This event, hosted by EPA Region 3 and the VDH's Office of Drinking Water,

featured presentations to share strategies for improving preparedness, response, and recovery from power outages.

Construction Project Information Meeting, RMR to OBWTP Pipeline

On January 29th at 6:00 PM, a Project Information Meeting will be held to inform the community about the Ragged Mountain Reservoir to Observatory Water Treatment Plant 36-inch Raw Water Main and Raw Water Pump Station construction project. The meeting will be held in-person at Rivanna's Administration Building, 695 Moores Creek Lane, 2nd floor Conference Room, and a virtual participation option will be available through Zoom at the following link: https://zoom.us/j/98532566954 .

STRATEGIC PLAN PRIORITY: PLANNING AND INFRASTRUCTURE

Sugar Hollow Water Line Repair

Repairs to the Sugar Hollow water line, which was damaged during Hurricane Helene, are underway. Concrete work to support the pipe and beam installation was completed in early December. The steel pipe support beam has been fabricated and delivered. We expect the repair to be completed and return of the water flow to the pipeline by the end of January, weather permitting.

Sugar Hollow Water Line at the Mechums River Crossing damaged by Hurricane Helene

Construction at Mechums River Crossing

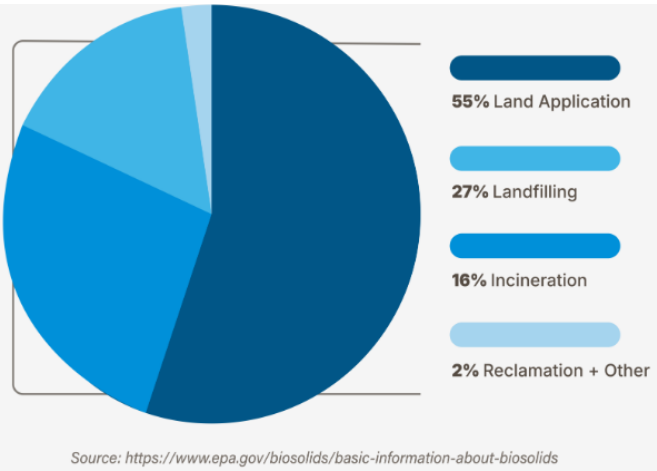
18" Replacement pipe on-site before installation

STRATEGIC PLAN PRIORITY: ENVIRONMENTAL STEWARDSHIP

PFAS in Wastewater Biosolids

On January 14, 2025, the U.S. Environmental Protection Agency (EPA) released the ***Draft Sewage Sludge Risk Assessment for PFOA and PFOS: Information for Wastewater Treatment Plants.*** This draft assessment used hypothetical scenarios to evaluate the health risk of human exposure to PFOS and PFOA found in sewage sludge biosolids that were either land applied for beneficial reuse or surface disposal. The draft risk assessment is not a rule and does not require any action, but it is a step in determining whether regulating PFOA and PFOS in sewage sludge is appropriate under the federal Clean Water Act.

2022 EPA Reports Biosolids Use and Disposal



This assessment focused on risks only to people who live on or near lands that use contaminated biosolids or to people who consume food produced on and water from those sites. The draft risk assessment did not model risks for the public. EPA found that there may be human health risks exceeding the EPA's acceptable thresholds:

- when land-applied biosolids contain 1 part per billion (ppb) of PFOA or PFOS
- drinking contaminated groundwater sourced near a surface disposal site when sewage sludge containing 1 ppb of PFOA or 4 to 5 ppb of PFOS is disposed in an unlined or clay-lined surface disposal unit

EPA is accepting public comments on the draft risk assessment for 60 days, primarily looking for comments on the modeling used for this assessment.

RWSA's wastewater plants generate approximately 14,000 tons of biosolids annually, which are hauled to McGill Environmental in Waverly, VA daily and combined with other products to create compost.

Proposed Legislation from the General Assembly

1. HB2407, SB 1408 - Department of Health; waterworks; mandatory reporting of anomalies; negligence: The bill requires waterworks owners to report certain events to ODW within 24 hours of discovery and, in some cases, within six hours.

2. HB1618 - Commissioner of Health; work group to study the occurrence of microplastics in the Commonwealth's public drinking water; report.

3. SB 1319 – Department of Environmental Quality; industrial wastewater; publicly owned treatment works; PFAS monitoring. Directs the Department of Environmental Quality to require quarterly monitoring for one year for per- and polyfluoroalkyl substances (PFAS) for every industrial wastewater source that discharges pollutants into a publicly owned treatment works.

4. HB 2482 - Virginia Public Procurement Act; competitive sealed bidding; required criteria in invitations to bid for certain construction projects. The bill provides that, for nontransportation-related construction projects in excess of $250,000, shall require at least 12.5 percent of total labor hours of any required construction be performed by individuals registered with and enrolled in approved apprenticeship programs.

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

MEMORANDUM

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

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

REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **NOVEMBER MONTHLY FINANCIAL SUMMARY – FY 2025**

DATE: **JANUARY 28, 2025**

Financial Snapshot

The Authority's operating revenues for the first five months of this fiscal year are $876,600 more than the prorated annual budget estimates, and operating expenses are over the prorated budget by $999,800, resulting in an operating deficit of $123,200. Urban Water flows and operating rate revenue through November are 8.5% over budget estimates. Urban Wastewater flows and operating rate revenue are 6.8% over budget.

Operating and debt service revenues are $943,000 over budget estimates, and total expenses are $994,800 over budget, resulting in a slight overall deficit of $51,400 through November. Revenues and expenses are summarized in the table below:

	Urban Water	Urban Wastewater	Total Other Rate Centers	Total Authority
Operations				
Revenues	$ 5,259,967	$ 5,314,110	$ 1,319,333	$ 11,893,410
Expenses	(5,813,312)	(4,824,001)	(1,379,272)	(12,016,585)
Surplus (deficit)	$ (553,345)	$ 490,109	$ (59,939)	$ (123,175)
Debt Service				
Revenues	$ 5,638,645	$ 4,735,401	$ 1,252,007	$ 11,626,053
Expenses	(5,636,579)	(4,666,557)	(1,251,151)	(11,554,287)
Surplus (deficit)	$ 2,066	$ 68,844	$ 856	$ 71,766
Total				
Revenues	$ 10,898,612	$ 10,049,511	$ 2,571,340	$ 23,519,463
Expenses	(11,449,891)	(9,490,558)	(2,630,423)	(23,570,872)
Surplus (deficit)	$ (551,279)	$ 558,953	$ (59,083)	$ (51,409)

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 following comments help explain most of the other budget vs. actual variances.

A. Annual and Quarterly Transactions - Some revenues and expenses exceed the prorated annual budget due to up-front annual receipts of revenue and quarterly or annual payments of expenses. These transactions appear to significantly impact the budget vs. actual monthly comparisons, but they 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 at the beginning of the fiscal year for certain maintenance agreements and for employer contributions to employees' health savings accounts. The annual $175,000 payment to UVA for the Observatory lease is made in August. Insurance premiums are paid at the beginning of each quarter.
B. Personnel Costs (Urban Water, Urban Wastewater – pages 2, 3, 5) – Urban Water, Crozet Water and Urban Wastewater salaries are higher than budgeted due to various changes in operations. Urban Wastewater salaries are also higher due to "leave" payout upon wastewater manager's retirement.
C. Professional Services (Urban Water, Scottsville Wastewater, Finance & IT – pages 2, 7, 9) – Urban Water has incurred $17,600 in unbudgeted legal fees and is $125,000 over the prorated budget and $25,000 over the annual budget for engineering and technical services for Glenmore and UVA water quality and the Sugar Hollow pipe joint rehabilitation. Scottsville Wastewater has exceeded the annual budget for engineering and technical services by $16,900 for a needs assessment. Bond issuance costs totaling $749,000 have been incurred by the Finance department to issue Bond 2024B to fund various water and wastewater capital projects and up to $743,300 in bond issuance costs. A total of $656,600 of issuance costs have been reimbursed so far.
D. Other Services & Charges (Urban Wastewater– page 5) – Urban Wastewater is currently over the monthly budget for Crozet Pump Station odor control costs.
E. Operations & Maintenance (Urban Water, Crozet Water, Glenmore Wastewater – pages 2, 3, 6) – Crozet Water is $25,200 over the prorated budget in this category due to a GAC exchange. Urban Water is currently $765,200 over the prorated budget due to GAC exchanges and pipeline and appurtenances costs. Glenmore Wastewater is $38,900 over budget for equipment repair and replacement costs.
F. Communication - data & voice (Administration – page 8) – Telephone and data services were inadvertently underbudgeted.

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024
Fiscal Year 2025

Consolidated Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Operations Rate Revenue		$ 25,533,965	$ 10,639,152	$ 11,353,129	$ 713,977	6.71%
Lease Revenue		120,000	50,000	59,853	9,853	19.71%
Admin., Finance/IT, Maint. & Engineering Revenue		905,200	377,167	396,641	19,474	5.16%
Other Revenues		667,768	278,237	371,710	93,473	33.59%
Use of Reserves (Water Resources Fund)		-	-	-	-	
Interest Allocation		165,400	68,917	108,718	39,801	57.75%
Total Operating Revenues		**$ 27,392,333**	**$ 11,413,472**	**$ 12,290,050**	**$ 876,578**	**7.68%**
Expenses						
Personnel Cost	**A, B**	$ 12,816,065	$ 5,340,027	$ 5,469,022	$ (128,995)	-2.42%
Professional Services	**C**	492,650	205,271	472,542	(267,271)	-130.20%
Other Services & Charges	**D**	4,371,588	1,821,495	1,824,608	(3,113)	-0.17%
Communication	**F**	244,950	102,063	134,191	(32,129)	-31.48%
Information Technology		1,470,050	612,521	547,870	64,651	10.55%
Supplies		51,200	21,333	20,852	482	2.26%
Operations & Maintenance	**A, E**	6,698,884	2,791,202	3,436,397	(645,195)	-23.12%
Equipment Purchases		316,950	132,063	120,243	11,819	8.95%
Depreciation		930,000	387,500	387,500	-	0.00%
Total Operating Expenses		**$ 27,392,337**	**$ 11,413,474**	**$ 12,413,225**	**$ (999,751)**	**-8.76%**
Operating Surplus/(Deficit)		**$ (4)**	**$ (2)**	**$ (123,175)**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 25,612,554	$ 10,671,898	$ 10,671,900	$ 3	0.00%
Septage Receiving Support - County		109,440	45,600	109,440	63,840	140.00%
Buck Mountain Lease Revenue		10,000	4,167	1,784	(2,383)	-57.19%
Trust Fund Interest		430,300	179,292	189,253	9,961	5.56%
Reserve Fund Interest		1,580,800	658,667	653,677	(4,990)	-0.76%
Total Debt Service Revenues		**$ 27,743,094**	**$ 11,559,623**	**$ 11,626,053**	**$ 66,430**	**0.57%**
Debt Service Costs						
Total Principal & Interest		$ 16,164,506	$ 6,735,211	$ 7,978,444	$ (1,243,233)	-18.46%
Reserve Additions-Interest		1,580,800	658,667	653,677	4,990	0.76%
Debt Service Ratio Charge		725,000	302,083	302,083	-	0.00%
Reserve Additions-CIP Growth		9,271,960	3,863,317	2,620,084	1,243,233	32.18%
Total Debt Service Costs		**$ 27,742,266**	**$ 11,559,278**	**$ 11,554,288**	**$ 4,990**	**0.04%**
Debt Service Surplus/(Deficit)		**$ 828**	**$ 345**	**$ 71,765**		

Summary

Total Revenues	$ 55,135,427	$ 22,973,095	$ 23,916,103	$ 943,009	4.10%
Total Expenses	55,134,603	22,972,751	23,967,513	(994,761)	-4.33%
Surplus/(Deficit)	**$ 824**	**$ 343**	**$ (51,409)**		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Urban Water Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 11,425,341	$ 4,760,559	$ 5,164,441	$ 403,883	8.48%
Lease Revenue		90,000	37,500	45,825	8,325	22.20%
Miscellaneous		-	-	2,735	2,735	
Use of Reserves (Water Resources Fund)		-	-		-	
Interest Allocation		71,500	29,792	46,966	17,175	57.65%
Total Operating Revenues		**$ 11,586,841**	**$ 4,827,850**	**$ 5,259,967**	**$ 432,117**	**8.95%**
Expenses						
Personnel Cost	**B**	$ 2,570,828	$ 1,071,178	$ 1,168,030	$ (96,852)	-9.04%
Professional Services	**C**	177,000	73,750	222,327	(148,577)	-201.46%
Other Services & Charges		1,076,746	448,644	456,967	(8,323)	-1.86%
Communications		89,700	37,375	47,368	(9,993)	-26.74%
Information Technology		109,400	45,583	23,537	22,047	48.37%
Supplies		7,900	3,292	4,269	(977)	-29.68%
Operations & Maintenance	**A, E**	3,334,814	1,389,506	2,154,738	(765,233)	-55.07%
Equipment Purchases		23,300	9,708	11,917	(2,208)	-22.75%
Depreciation		300,000	125,000	125,000	-	0.00%
Subtotal Before Allocations		$ 7,689,688	$ 3,204,037	$ 4,214,153	$ (1,010,117)	-31.53%
Allocation of Support Departments		3,897,153	1,633,393	1,599,159	34,234	2.10%
Total Operating Expenses		**$ 11,586,841**	**$ 4,837,430**	**$ 5,813,312**	**$ (975,882)**	**-20.17%**
Operating Surplus/(Deficit)		**$ 0**	**$ (9,579)**	**$ (553,345)**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 12,593,874	$ 5,247,448	$ 5,247,450	$ 3	0.00%
Trust Fund Interest		185,000	77,083	81,530	4,447	5.77%
Reserve Fund Interest		744,800	310,333	307,882	(2,452)	-0.79%
Lease Revenue		10,000	4,167	1,784	(2,383)	-57.19%
Total Debt Service Revenues		**$ 13,533,674**	**$ 5,639,031**	**$ 5,638,645**	**$ (386)**	**-0.01%**
Debt Service Costs						
Total Principal & Interest		$ 7,078,274	$ 2,949,281	$ 3,414,250	$ (464,969)	-15.77%
Reserve Additions-Interest		744,800	310,333	307,882	2,452	0.79%
Debt Service Ratio Charge		400,000	166,667	166,667	-	0.00%
Est. New Debt Service - CIP Growth		5,310,600	2,212,750	1,747,781	464,969	21.01%
Total Debt Service Costs		**$ 13,533,674**	**$ 5,639,031**	**$ 5,636,579**	**$ 2,452**	**0.04%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 2,066**		
Rate Center Summary						
Total Revenues		$ 25,120,515	$ 10,466,881	$ 10,898,613	$ 431,731	4.12%
Total Expenses		25,120,515	10,476,461	11,449,891	(973,431)	-9.29%
Surplus/(Deficit)		**$ 0**	**$ (9,579)**	**$ (551,279)**		
Costs per 1000 Gallons		$ 3.41		$ 3.79		
Operating and DS		$ 7.39		$ 7.46		
Thousand Gallons Treated		3,397,700	1,415,708	1,535,666	119,958	8.47%
or						
Flow (MGD)		9.309		10.037		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Crozet Water Rate Center
Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues						
Operations Rate Revenue		$ 1,420,644	$ 591,935	$ 591,935	$ -	0.00%
Lease Revenues		30,000	12,500	14,028	1,528	12.22%
Interest Allocation		8,900	3,708	5,871	2,162	58.31%
Total Operating Revenues		**$ 1,459,544**	**$ 608,143**	**$ 611,834**	**$ 3,691**	**0.61%**
Expenses						
Personnel Cost	**B**	$ 365,428	$ 152,261	$ 162,235	$ (9,973)	-6.55%
Professional Services	**C**	22,900	9,542	26,759	(17,217)	-180.44%
Other Services & Charges		163,107	67,961	59,849	8,113	11.94%
Communications		19,000	7,917	7,868	49	0.61%
Information Technology		35,000	14,583	2,429	12,154	83.35%
Supplies		1,600	667	1,340	(674)	-101.05%
Operations & Maintenance	**E**	426,600	177,750	203,105	(25,355)	-14.26%
Equipment Purchases		3,300	1,375	1,701	(326)	-23.67%
Depreciation		60,000	25,000	25,000	-	0.00%
Subtotal Before Allocations		$ 1,096,935	$ 457,056	$ 490,285	$ (33,229)	-7.27%
Allocation of Support Departments		362,608	151,957	148,939	3,018	1.99%
Total Operating Expenses		**$ 1,459,543**	**$ 609,013**	**$ 639,225**	**$ (30,211)**	**-4.96%**
Operating Surplus/(Deficit)		**$ 1**	**$ (870)**	**$ (27,391)**		

Debt Service Budget vs. Actual

	Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues					
Debt Service Rate Revenue	$ 2,590,368	$ 1,079,320	$ 1,079,320	$ -	0.00%
Trust Fund Interest	32,400	13,500	14,251	751	5.56%
Reserve Fund Interest	93,800	39,083	38,567	(516)	-1.32%
Total Debt Service Revenues	**$ 2,716,568**	**$ 1,131,903**	**$ 1,132,138**	**$ 234**	**0.02%**
Debt Service Costs					
Total Principal & Interest	$ 1,131,172	$ 471,322	$ 471,322	$ -	0.00%
Reserve Additions-Interest	93,800	39,083	38,567	516	1.32%
Estimated New Principal & Interest	1,491,600	621,500	621,500	-	0.00%
Total Debt Service Costs	**$ 2,716,572**	**$ 1,131,905**	**$ 1,131,389**	**$ 516**	**0.05%**
Debt Service Surplus/(Deficit)	**$ (4)**	**$ (2)**	**$ 749**		

Rate Center Summary

	Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Total Revenues	$ 4,176,112	$ 1,740,047	$ 1,743,972	$ 3,925	0.23%
Total Expenses	4,176,115	1,740,918	1,770,613	(29,695)	-1.71%
Surplus/(Deficit)	**$ (3)**	**$ (872)**	**$ (26,642)**		
Costs per 1000 Gallons	$ 7.20		$ 5.97		
Operating and DS	$ 20.60		$ 16.54		
Thousand Gallons Treated	202,697	84,457	107,062	22,605	26.76%
Flow (MGD)	0.555		0.700		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Scottsville Water Rate Center
Revenues and Expenses Summary

	Budget FY 2025	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual					
Notes					
Revenues					
Operations Rate Revenue	$ 741,984	$ 309,160	$ 309,160	$ -	0.00%
Interest Allocation	4,600	1,917	3,044	1,127	58.82%
Total Operating Revenues	**$ 746,584**	**$ 311,077**	**$ 312,204**	**$ 1,127**	**0.36%**
Expenses					
Personnel Cost	$ 239,452	$ 99,772	$ 100,965	$ (1,193)	-1.20%
Professional Services	5,000	2,083	1,171	912	43.77%
Other Services & Charges	68,490	28,538	17,556	10,981	38.48%
Communications	7,000	2,917	10,582	(7,665)	-262.80%
Information Technology	13,400	5,583	11,933	(6,349)	-113.72%
Supplies	200	83	1,539	(1,456)	-1747.38%
Operations & Maintenance	154,600	64,417	35,416	29,000	45.02%
Equipment Purchases	2,200	917	1,431	(515)	-56.16%
Depreciation	40,000	16,667	16,667	0	0.00%
Subtotal Before Allocations	$ 530,342	$ 220,976	$ 197,260	$ 23,715	10.73%
Allocation of Support Departments	216,247	90,538	88,567	1,972	2.18%
Total Operating Expenses	**$ 746,589**	**$ 311,514**	**$ 285,827**	**$ 25,687**	**8.25%**
Operating Surplus/(Deficit)	**$ (5)**	**$ (438)**	**$ 26,377**		
Debt Service Budget vs. Actual					
Revenues					
Debt Service Rate Revenue	$ 190,416	$ 79,340	$ 79,340	$ -	0.00%
Trust Fund Interest	4,000	1,667	1,741	74	4.47%
Reserve Fund Interest	7,000	2,917	3,268	352	12.06%
Total Debt Service Revenues	**$ 201,416**	**$ 83,923**	**$ 84,350**	**$ 426**	**0.51%**
Debt Service Costs					
Total Principal & Interest	$ 148,815	$ 62,006	$ 62,006	$ -	0.00%
Reserve Additions-Interest	7,000	2,917	3,268	(352)	-12.06%
Estimated New Principal & Interest	45,600	19,000	19,000	-	0.00%
Total Debt Service Costs	**$ 201,415**	**$ 83,923**	**$ 84,275**	**$ (352)**	**-0.42%**
Debt Service Surplus/(Deficit)	**$ 1**	**$ 0**	**$ 75**		

Rate Center Summary

Total Revenues	$ 948,000	$ 395,000	$ 396,554	$ 1,554	0.39%
Total Expenses	948,004	395,437	370,102	25,335	6.41%
Surplus/(Deficit)	**$ (4)**	**$ (437)**	**$ 26,452**		
Costs per 1000 Gallons	$ 43.33		$ 32.90		
Operating and DS	$ 55.02		$ 42.60		
Thousand Gallons Treated	17,230	7,179	8,688	1,509	21.02%
or					
Flow (MGD)	0.047		0.057		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Urban Wastewater Rate Center
Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues						
Operations Rate Revenue		$ 11,007,464	$ 4,586,443	$ 4,896,538	$ 310,094	6.76%
Stone Robinson WWTP		17,768	7,403	5,059	(2,344)	-31.66%
Septage Acceptance		600,000	250,000	255,111	5,111	2.04%
Nutrient Credits		50,000	20,833	108,805	87,971	422.26%
Miscellaneous Revenue		-	-	-	-	
Interest Allocation		74,000	30,833	48,597	17,764	57.61%
Total Operating Revenues		**$ 11,749,232**	**$ 4,895,513**	**$ 5,314,110**	**$ 418,596**	**8.55%**
Expenses						
Personnel Cost	**A, B**	$ 1,615,345	$ 673,061	$ 739,519	$ (66,459)	-9.87%
Professional Services		35,000	14,583	11,654	2,929	20.08%
Other Services & Charges	**D**	2,721,750	1,134,063	1,143,631	(9,569)	-0.84%
Communications		14,800	6,167	7,137	(970)	-15.73%
Information Technology		95,500	39,792	42,651	(2,859)	-7.19%
Supplies		2,600	1,083	472	611	56.40%
Operations & Maintenance		2,190,500	912,708	789,719	122,989	13.48%
Equipment Purchases		73,500	30,625	30,625	-	0.00%
Depreciation		470,000	195,833	195,833	(0)	0.00%
Subtotal Before Allocations		$ 7,218,995	$ 3,007,915	$ 2,961,242	$ 46,672	1.55%
Allocation of Support Departments		4,530,238	1,898,049	1,862,758	35,291	1.86%
Total Operating Expenses		**$ 11,749,233**	**$ 4,905,964**	**$ 4,824,001**	**$ 81,963**	**1.67%**
Operating Surplus/(Deficit)		**$ (1)**	**$ (10,451)**	**$ 490,109**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 10,156,560	$ 4,231,900	$ 4,231,900	$ -	0.00%
Septage Receiving Support - County		109,440	45,600	109,440	63,840	140.00%
Trust Fund Interest		208,200	86,750	91,409	4,659	5.37%
Reserve Fund Interest		731,800	304,917	302,652	(2,264)	-0.74%
Total Debt Service Revenues		**$ 11,206,000**	**$ 4,669,167**	**$ 4,735,401**	**$ 66,235**	**1.42%**
Debt Service Costs						
Total Principal & Interest		$ 7,780,072	$ 3,241,697	$ 4,019,960	$ (778,264)	-24.01%
Reserve Additions-Interest		731,800	304,917	302,652	2,264	0.74%
Debt Service Ratio Charge		325,000	135,417	135,417	-	0.00%
Est. New Debt Service - CIP Growth		2,368,300	986,792	208,528	778,264	78.87%
Total Debt Service Costs		**$ 11,205,172**	**$ 4,668,822**	**$ 4,666,557**	**$ 2,264**	**0.05%**
Debt Service Surplus/(Deficit)		**$ 828**	**$ 345**	**$ 68,844**		

Rate Center Summary

Total Revenues	$ 22,955,232	$ 9,564,680	$ 10,049,511	$ 484,831	5.07%
Total Expenses	22,954,405	9,574,786	9,490,558	84,228	0.88%
Surplus/(Deficit)	**$ 827**	**$ (10,106)**	**$ 558,953**		
Costs per 1000 Gallons	$ 3.47		$ 3.20		
Operating and DS	$ 6.77		$ 6.29		
Thousand Gallons Treated	3,390,400	1,412,667	1,508,019	95,352	6.75%
or					
Flow (MGD)	9.289		9.856		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Glenmore Wastewater Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 533,112	$ 222,130	$ 222,130	$ -	0.00%
Interest Allocation		3,700	1,542	2,392	850	55.14%
Total Operating Revenues		**$ 536,812**	**$ 223,672**	**$ 224,522**	**$ 850**	**0.38%**
Expenses						
Personnel Cost		$ 133,566	$ 55,652	$ 60,676	$ (5,024)	-9.03%
Professional Services		10,000	4,167	361	3,806	91.34%
Other Services & Charges		41,840	17,433	18,418	(985)	-5.65%
Communications		3,700	1,542	9,370	(7,828)	-507.77%
Information Technology		14,350	5,979	429	5,551	92.83%
Supplies		-	-	-	-	
Operations & Maintenance	**E**	130,600	54,417	93,269	(38,852)	-71.40%
Equipment Purchases		3,500	1,458	1,458	(0)	0.00%
Depreciation		40,000	16,667	16,667	0	0.00%
Subtotal Before Allocations		$ 377,556	$ 157,315	$ 200,647	$ (43,332)	-27.55%
Allocation of Support Departments		159,262	66,577	64,392	2,185	3.28%
Total Operating Expenses		**$ 536,818**	**$ 223,892**	**$ 265,039**	**$ (41,148)**	**-18.38%**
Operating Surplus/(Deficit)		**$ (6)**	**$ (220)**	**$ (40,518)**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 48,780	$ 20,325	$ 20,325	$ -	0.00%
Trust Fund Interest		500	208	227	19	9.01%
Reserve Fund Interest		-	-	-	-	
Total Debt Service Revenues		**$ 49,280**	**$ 20,533**	**$ 20,552**	**$ 19**	**0.09%**
Debt Service Costs						
Total Principal & Interest		$ 18,720	$ 7,800	$ 7,800	$ -	0.00%
Estimated New Principal & Interest		30,560	12,733	12,733	-	0.00%
Reserve Additions-Interest		-	-	-	-	
Total Debt Service Costs		**$ 49,280**	**$ 20,533**	**$ 20,533**	**$ -**	**0.00%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ 19**		

Rate Center Summary

Total Revenues	$ 586,092	$ 244,205	$ 245,074	$ 869	0.36%
Total Expenses	586,098	244,425	285,573	(41,148)	-16.83%
Surplus/(Deficit)	**$ (6)**	**$ (220)**	**$ (40,499)**		
Costs per 1000 Gallons	$ 12.97		$ 14.93		
Operating and DS	$ 14.16		$ 16.08		
Thousand Gallons Treated	41,401	17,250	17,754	504	**2.92%**
or					
Flow (MGD)	0.113		0.116		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Scottsville Wastewater Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 405,420	$ 168,925	$ 168,925	$ -	0.00%
Interest Allocation		2,700	1,125	1,848	723	64.28%
Total Operating Revenues		**$ 408,120**	**$ 170,050**	**$ 170,773**	**$ 723**	**0.43%**
Expenses						
Personnel Cost		$ 133,636	$ 55,681	$ 60,677	$ (4,995)	-8.97%
Professional Services	C	5,000	2,083	22,044	(19,960)	-958.10%
Other Services & Charges		33,400	13,917	13,911	5	0.04%
Communications		3,650	1,521	337	1,184	77.84%
Information Technology		15,150	6,313	429	5,884	93.21%
Supplies		-	-	-	-	
Operations & Maintenance		44,500	18,542	21,627	(3,086)	-16.64%
Equipment Purchases		3,500	1,458	1,458	(0)	0.00%
Depreciation		20,000	8,333	8,333	(0)	0.00%
Subtotal Before Allocations		$ 258,836	$ 107,848	$ 128,816	$ (20,968)	-19.44%
Allocation of Support Departments		149,278	62,417	60,364	2,052	3.29%
Total Operating Expenses		**$ 408,114**	**$ 170,265**	**$ 189,181**	**$ (18,916)**	**-11.11%**
Operating Surplus/(Deficit)		**$ 6**	**$ (215)**	**$ (18,408)**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 32,556	$ 13,565	$ 13,565	$ -	0.00%
Trust Fund Interest		200	83	95	11	13.56%
Reserve Fund Interest		3,400	1,417	1,307	(109)	-7.72%
Total Debt Service Revenues		**$ 36,156**	**$ 15,065**	**$ 14,967**	**$ (98)**	**-0.65%**
Debt Service Costs						
Total Principal & Interest		$ 7,453	$ 3,105	$ 3,105	$ -	0.00%
Reserve Additions-Interest		3,400	1,417	1,307	109	7.72%
Estimated New Principal & Interest		25,300	10,542	10,542	-	0.00%
Total Debt Service Costs		**$ 36,153**	**$ 15,064**	**$ 14,954**	**$ 109**	**0.73%**
Debt Service Surplus/(Deficit)		**$ 3**	**$ 1**	**$ 13**		
Rate Center Summary						
Total Revenues		$ 444,276	$ 185,115	$ 185,740	$ 625	0.34%
Total Expenses		444,267	185,329	204,135	(18,806)	-10.15%
Surplus/(Deficit)		**$ 9**	**$ (214)**	**$ (18,395)**		
Costs per 1000 Gallons		$ 17.26		$ 24.38		
Operating and DS		$ 18.79		$ 26.31		
Thousand Gallons Treated		23,643	9,851	7,759	(2,092)	**-21.24%**
or						
Flow (MGD)		0.065		0.051		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Administration and Communication

Operating Budget vs. Actual

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ 364,200	$ 151,750	$ 151,750	$ -	0.00%
Miscellaneous Revenue		-	-	5,417	5,417	
Total Operating Revenues		**$ 364,200**	**$ 151,750**	**$ 157,167**	**$ 5,417**	**3.57%**
Expenses						
Personnel Cost		$ 1,348,563	$ 561,901	$ 550,959	$ 10,943	1.95%
Professional Services		153,250	63,854	71,923	(8,069)	-12.64%
Other Services & Charges		161,100	67,125	72,546	(5,421)	-8.08%
Communications	F	9,700	4,042	17,811	(13,769)	-340.68%
Information Technology		5,000	2,083	3,372	(1,289)	-61.86%
Supplies		14,000	5,833	5,998	(164)	-2.82%
Operations & Maintenance		57,250	23,854	21,917	1,937	8.12%
Equipment Purchases		9,000	3,750	3,750	-	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 1,757,863**	**$ 732,443**	**$ 748,276**	**$ (15,833)**	**-2.16%**

Department Summary

Net Costs Allocable to Rate Centers	**$ (1,393,663)**	**$ (580,693)**	**$ (591,109)**	**$ 10,416**	**-1.79%**
Allocations to the Rate Centers					
Urban Water	44.00% **$ 613,212**	**$ 255,505**	**$ 260,088**	**$ (4,583)**	
Crozet Water	4.00% **$ 55,747**	**23,228**	**23,644**	**(417)**	
Scottsville Water	2.00% **$ 27,873**	**11,614**	**11,822**	**(208)**	
Urban Wastewater	48.00% **$ 668,958**	**278,733**	**283,732**	**(5,000)**	
Glenmore Wastewater	1.00% **$ 13,937**	**5,807**	**5,911**	**(104)**	
Scottsville Wastewater	1.00% **$ 13,937**	**5,807**	**5,911**	**(104)**	
	100.00% **$ 1,393,663**	**$ 580,693**	**$ 591,109**	**$ (10,416)**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Finance and Information Technology

Operating Budget vs. Actual

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ 541,000	$ 225,417	$ 225,417	$ 0	0.00%
Miscellaneous Revenue		-	-		-	
Total Operating Revenues		**$ 541,000**	**$ 225,417**	**$ 225,417**	**$ 0**	**0.00%**
Expenses						
Personnel Cost	**A**	$ 2,083,478	$ 868,116	$ 899,439	$ (31,323)	-3.61%
Professional Services	**C**	42,000	17,500	114,502	(97,002)	-554.30%
Other Services & Charges		46,000	19,167	23,218	(4,051)	-21.14%
Communication		65,000	27,083	16,398	10,685	39.45%
Information Technology		962,850	401,188	386,263	14,924	3.72%
Supplies		14,500	6,042	3,912	2,130	35.26%
Operations & Maintenance		5,000	23,854	3,728	20,127	84.37%
Equipment Purchases		7,500	3,125	3,125	-	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 3,226,328**	**$ 1,366,074**	**$ 1,450,584**	**$ (84,510)**	**-6.19%**

Department Summary

Net Costs Allocable to Rate Centers	**$ (2,685,328)**	**$ (1,140,658)**	**$ (1,225,168)**	**$ 84,510**	**-7.41%**
Allocations to the Rate Centers					
Urban Water	44.00% **$ 1,181,544**	**$ 501,889**	**$ 539,074**	**$ (37,184)**	
Crozet Water	4.00% **$ 107,413**	**45,626**	**49,007**	**(3,380)**	
Scottsville Water	2.00% **$ 53,707**	**22,813**	**24,503**	**(1,690)**	
Urban Wastewater	48.00% **$ 1,288,957**	**547,516**	**588,080**	**(40,565)**	
Glenmore Wastewater	1.00% **$ 26,853**	**11,407**	**12,252**	**(845)**	
Scottsville Wastewater	1.00% **$ 26,853**	**11,407**	**12,252**	**(845)**	
	100.00% **$ 2,685,328**	**$ 1,140,658**	**$ 1,225,168**	**$ (84,510)**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Maintenance

Operating Budget vs. Actual

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ -	$ -	
Miscellaneous Revenue		-	-	6,858	6,858	
Total Operating Revenues		**$ -**	**$ -**	**$ 6,858**	**$ 6,858**	
Expenses						
Personnel Cost		$ 1,645,860	$ 685,775	$ 674,969	$ 10,806	1.58%
Professional Services		10,000	4,167	-	4,167	100.00%
Other Services & Charges		29,140	12,142	14,533	(2,391)	-19.70%
Communications		16,200	6,750	9,759	(3,009)	-44.58%
Information Technology		7,500	3,125	510	2,615	83.67%
Supplies		3,500	1,458	-	1,458	100.00%
Operations & Maintenance		138,800	57,833	58,460	(626)	-1.08%
Equipment Purchases		145,750	60,729	54,167	6,563	10.81%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 1,996,750**	**$ 831,979**	**$ 812,398**	**$ 19,581**	**2.35%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (1,996,750)**	**$ (831,979)**	**$ (805,540)**	**$ (12,723)**	**1.53%**
Allocations to the Rate Centers						
Urban Water	30.00%	**$ 599,025**	**$ 249,594**	**$ 241,662**	**$ 7,932**	
Crozet Water	3.50%	**69,886**	**29,119**	**28,194**	**925**	
Scottsville Water	3.50%	**69,886**	**29,119**	**28,194**	**925**	
Urban Wastewater	56.50%	**1,128,164**	**470,068**	**455,130**	**14,938**	
Glenmore Wastewater	3.50%	**69,886**	**29,119**	**28,194**	**925**	
Scottsville Wastewater	3.00%	**59,903**	**24,959**	**24,166**	**793**	
	100.00%	**$ 1,996,750**	**$ 831,979**	**$ 805,540**	**$ 26,439**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Laboratory

Operating Budget vs. Actual

	Budget FY 2025	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Notes					
Revenues					
N/A					
Expenses					
Personnel Cost	$ 463,225	$ 193,011	$ 194,113	$ (1,102)	-0.57%
Professional Services	-	-	-	-	
Other Services & Charges	9,550	3,979	333	3,646	91.63%
Communications	1,050	438	293	145	33.08%
Information Technology	-	-	508	(508)	
Supplies	1,300	542	32	510	94.10%
Operations & Maintenance	133,600	55,667	28,921	26,745	48.05%
Equipment Purchases	23,900	9,958	1,653	8,305	83.40%
Depreciation	-	-	-	-	
Total Operating Expenses	**$ 632,625**	**$ 263,594**	**$ 225,853**	**$ 37,741**	**14.32%**

Department Summary

Net Costs Allocable to Rate Centers	**$ (632,625)**	**$ (263,594)**	**$ (225,853)**	**$ (37,741)**	**14.32%**
Allocations to the Rate Centers					
Urban Water 44.00%	**$ 278,355**	**$ 115,981**	**$ 99,375**	**$ 16,606**	
Crozet Water 4.00%	**25,305**	**10,544**	**9,034**	**1,510**	
Scottsville Water 2.00%	**12,653**	**5,272**	**4,517**	**755**	
Urban Wastewater 47.00%	**297,334**	**123,889**	**106,151**	**17,738**	
Glenmore Wastewater 1.50%	**9,489**	**3,954**	**3,388**	**566**	
Scottsville Wastewater 1.50%	**9,489**	**3,954**	**3,388**	**566**	
100.00%	**$ 632,625**	**$ 263,594**	**$ 225,853**	**$ 37,741**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2024

Engineering

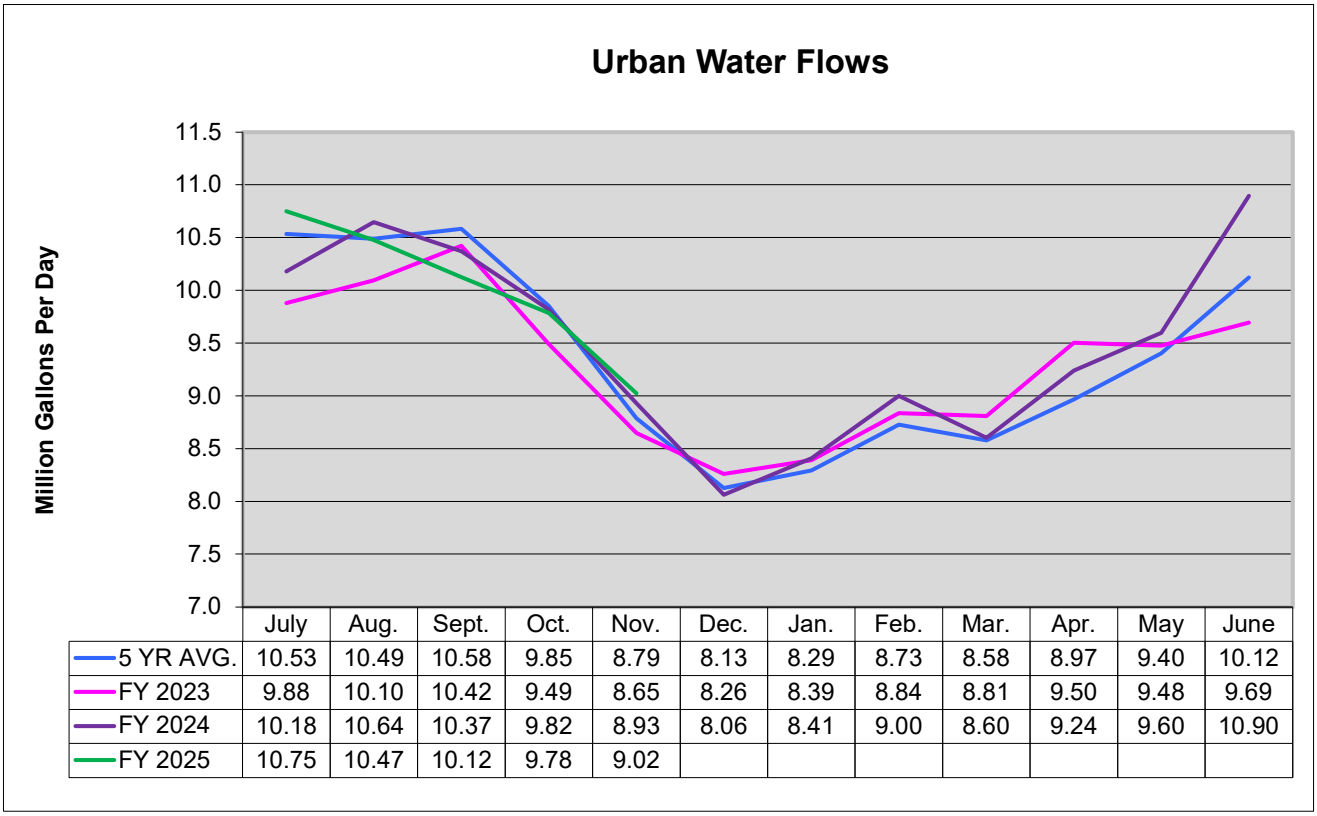
Operating Budget vs. Actual

	Notes	*Budget FY 2025*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ 7,199	$ 7,199	
Total Operating Revenues		**$ -**	**$ -**	**$ 7,199**	**$ 7,199**	
Expenses						
Personnel Cost		$ 2,216,684	$ 923,618	$ 857,441	$ 66,177	7.16%
Professional Services		32,500	13,542	1,800	11,742	86.71%
Other Services & Charges		20,465	8,527	3,646	4,881	57.24%
Communications		15,150	6,313	7,268	(956)	-15.14%
Information Technology		211,900	88,292	75,810	12,482	14.14%
Supplies		5,600	2,333	3,290	(956)	-40.99%
Operations & Maintenance		82,620	34,425	25,496	8,929	25.94%
Equipment Purchases		21,500	8,958	8,958	0	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 2,606,419**	**$ 1,086,008**	**$ 983,709**	**$ 102,299**	**9.42%**

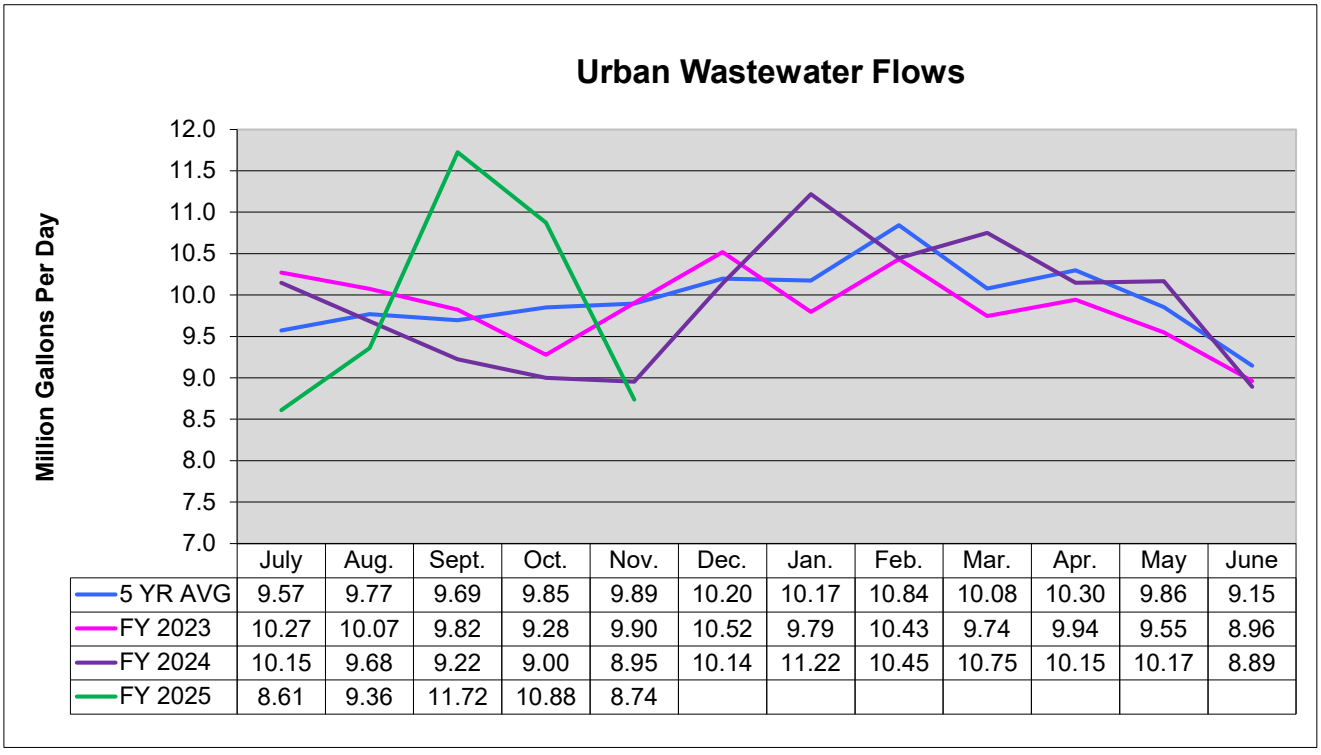
Department Summary

Net Costs Allocable to Rate Centers		**$ (2,606,419)**	**$ (1,086,008)**	**$ (976,510)**	**$ (95,100)**	**8.76%**
Allocations to the Rate Centers						
Urban Water	47.00%	**$ 1,225,017**	**$ 510,424**	**$ 458,959**	**$ 51,464**	
Crozet Water	4.00%	**104,257**	**43,440**	**39,060**	**4,380**	
Scottsville Water	2.00%	**52,128**	**21,720**	**19,530**	**2,190**	
Urban Wastewater	44.00%	**1,146,824**	**477,843**	**429,664**	**48,179**	
Glenmore Wastewater	1.50%	**39,096**	**16,290**	**14,648**	**1,642**	
Scottsville Wastewater	1.50%	**39,096**	**16,290**	**14,648**	**1,642**	
	100.00%	**$ 2,606,419**	**$ 1,086,008**	**$ 976,510**	**$ 109,498**	

Rivanna Water and Sewer Authority
Flow Graphs



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
5 YR AVG.	10.53	10.49	10.58	9.85	8.79	8.13	8.29	8.73	8.58	8.97	9.40	10.12
FY 2023	9.88	10.10	10.42	9.49	8.65	8.26	8.39	8.84	8.81	9.50	9.48	9.69
FY 2024	10.18	10.64	10.37	9.82	8.93	8.06	8.41	9.00	8.60	9.24	9.60	10.90
FY 2025	10.75	10.47	10.12	9.78	9.02							



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
5 YR AVG	9.57	9.77	9.69	9.85	9.89	10.20	10.17	10.84	10.08	10.30	9.86	9.15
FY 2023	10.27	10.07	9.82	9.28	9.90	10.52	9.79	10.43	9.74	9.94	9.55	8.96
FY 2024	10.15	9.68	9.22	9.00	8.95	10.14	11.22	10.45	10.75	10.15	10.17	8.89
FY 2025	8.61	9.36	11.72	10.88	8.74							

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

MEMORANDUM

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

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

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

SUBJECT: **OPERATIONS REPORT FOR DECEMBER 2024**

DATE: **JANUARY 28, 2025**

WATER OPERATIONS:

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

Water Treatment Plant	***Average Daily Production (MGD)***	***Maximum Daily Production in the Month (MGD)***
South Rivanna	7.40	8.17 (12/4/2024)
Observatory	0.60	1.31 (12/6/2024)
North Rivanna	0.23	0.40 (12/11/2024)
Urban Total	8.23	9.47 (12/4/2024)
Crozet	0.59	0.68 (12/9/2024)
Scottsville	0.04	0.058 (12/18/2024)
Red Hill	0.0015	0.003 (12/31/2024)
RWSA Total	8.86	-

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

Status of Reservoirs (as of January 21, 2024):

- Urban Reservoirs are 95% of Total Useable Capacity
  - South Rivanna Reservoir is 100% full
  - Ragged Mountain Reservoir is 96% full
  - Sugar Hollow Reservoir is 76% full (water level lowered to complete bladder piping improvements)
- Beaver Creek Reservoir (Crozet) is 100% full
- Totier Creek Reservoir (Scottsville) is 100% full

WASTEWATER OPERATIONS:

All RWSA Water Resource Recovery Facilities (WRRFs) were in regulatory compliance with their effluent limitations during December 2024. Performance of the WRRFs in December was as follows compared to the respective VDEQ permit limits:

WRRF	*Average Daily Effluent Flow (MGD)*	*Average $CBOD_5$ (ppm)*		*Average Total Suspended Solids (ppm)*		*Average Ammonia (ppm)*	
		RESULT	*LIMIT*	*RESULT*	*LIMIT*	*RESULT*	*LIMIT*
Moores Creek	8.69	<QL	9	<QL	22	0.32	6.4
Glenmore	0.131	2	15	3.8	30	NR	NL
Scottsville	0.055	2	25	5.6	30	NR	NL
Stone Robinson	0.002	4	30	14.5	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 December 2024.

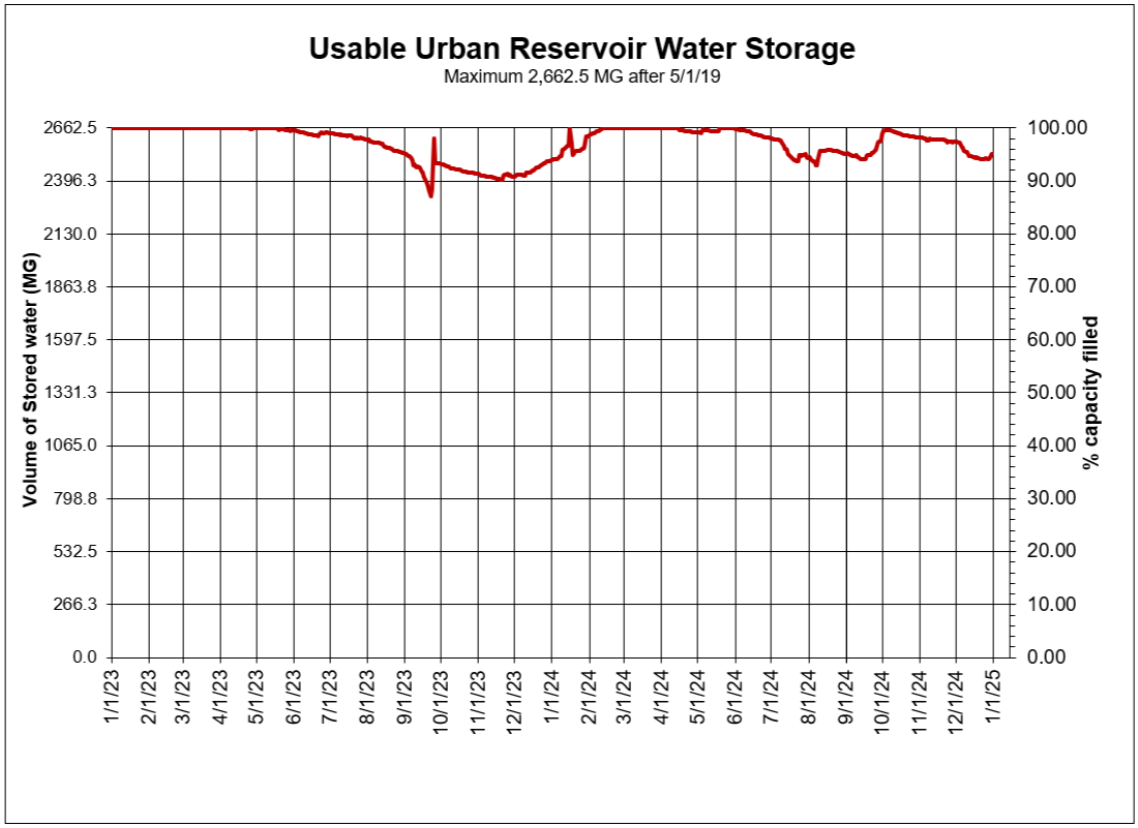
State Annual Allocation (lb./yr.) Permit		*Average Monthly Allocation (lb./mo.) **	*Moores Creek Discharge December (lb./mo.)*	*Performance as % of monthly average Allocation**	*Year to Date Performance as % of annual allocation*
Nitrogen	282,994	23,583	13,543	57%	40%
Phosphorous	18,525	1,636	544	33%	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
1/1/23
2/1/23
3/1/23
4/1/23
5/1/23
6/1/23
7/1/23
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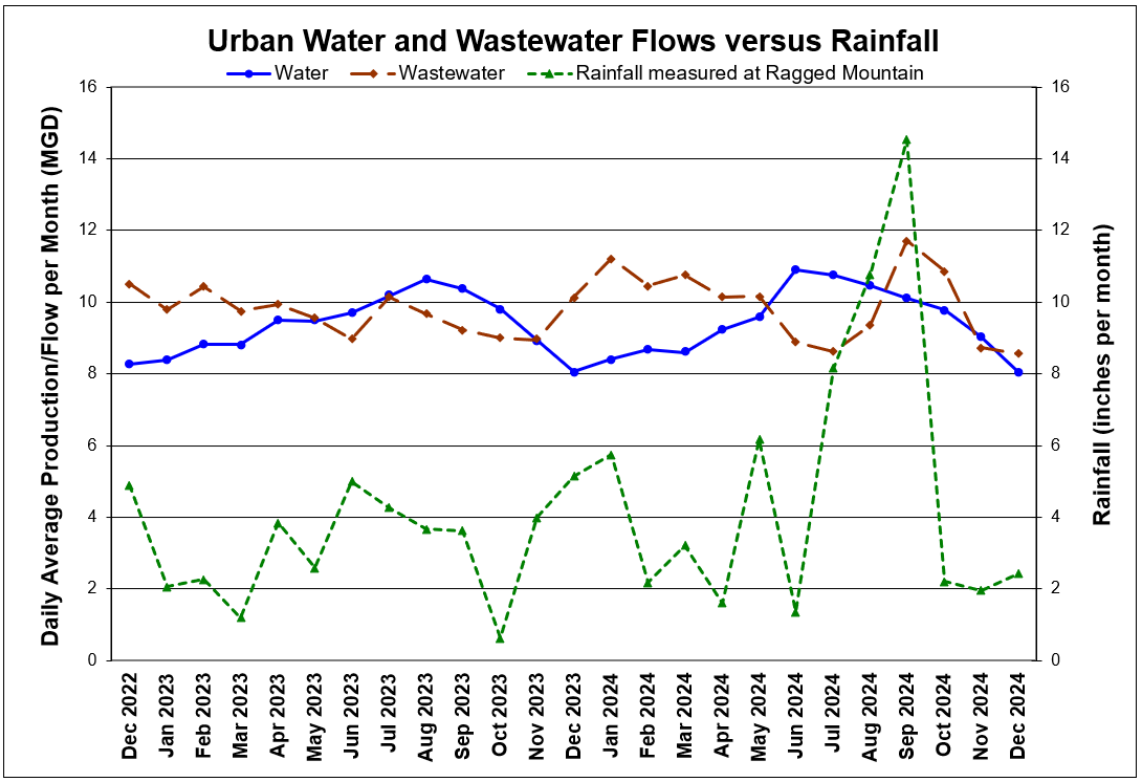
Urban Water and Wastewater Flows versus Rainfall
Water
Wastewater
Rainfall measured at Ragged Mountain
Daily Average Production/Flow per Month (MGD)
Rainfall (inches per month)
16
14
12
10
8
6
4
2
0
Dec 2022
Jan 2023
Feb 2023
Mar 2023
Apr 2023
May 2023
Jun 2023
Jul 2023
Aug 2023
Sep 2023
Oct 2023
Nov 2023
Dec 2023
Jan 2024
Feb 2024
Mar 2024
Apr 2024
May 2024
Jun 2024
Jul 2024
Aug 2024
Sep 2024
Oct 2024
Nov 2024
Dec 2024

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MEMORANDUM

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

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

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

SUBJECT: **CIP PROJECTS REPORT**

DATE: **JANUARY 28, 2025**

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

For the current CIP and additional project information, please visit: https://www.rivanna.org/wp-content/uploads/2024/06/2025-2029-CIP-Final-Draft.pdf

Summary

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

Under Construction

1. MC 5kV Electrical System Upgrades
2. Rivanna Pump Station Restoration
3. Red Hill Water Treatment Plant Upgrades
4. South Fork Rivanna River Crossing
5. RMR to OBWTP Raw Water Line and Pump Station
6. Crozet Pump Stations Rehabilitation
7. MC Building Upfits and Gravity Thickener Improvements
8. MC Structural and Concrete Rehabilitation

Design and Bidding

9. MC Administration Building Renovation and Addition
10. Central Water Line
11. Crozet WTP GAC Expansion – Phase I
12. SRWTP – PAC Upgrades
13. RMR Pool Raise
14. SFRR to RMR Pipeline, Intake, and Facilities
15. Beaver Creek Dam, Pump Station, and Piping
16. Upper Schenks Branch Interceptor, Phase II
17. MC Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades

Planning and Studies

18. MCAWRRF Biogas Upgrades
19. Flood Protection Resiliency Study

Other Significant Projects

20. Urgent and Emergency Repairs
21. Security Enhancements

Under Construction

1. MCAWRRF 5kV Electrical System Upgrades

Design Engineer:	Hazen and Sawyer
Construction Contractor:	Pyramid Electrical Contractors (Richmond, VA)
Construction Start:	May 2022
Percent Complete:	84%
Base Construction Contract + Change Order to Date = Current Value:	$5,180,000 - $529,543 = $4,650,457
Completion:	June 2025
Budget:	$6,200,000

Current Status: 5kV cable and transformer replacement, as well as motor control center replacement, is underway at the Grit Building. The Contractor completed installation of a new ductbank to the Sludge Pumping Building, which was added to the project after it was identified that the original 1970s ductbank was not suitable for safely pulling in the new 5kV cable to that building. Once work at the Grit Building is completed, only 5kV cable and transformer replacement at the Sludge Pumping Building, and demolition of the 1970s vintage knife gear in the Blower Building, remains to be completed on the project.

2. Rivanna Pump Station Restoration

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

Current Status: Contractor continues to order equipment/materials and complete interior piping modifications and installation of rebuilt pumps and available motors. Bypass pumping system should be completely removed by April 2025 with full pump station restoration completed by October 2025.

3. Red Hill Water Treatment Plant Upgrades

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	Anderson Construction (Lynchburg)
Construction Start:	January 2025
Percent Complete:	5%
Base Construction Contract + Change Order to Date = Current Value:	$1,742,375
Completion:	June 2026
Budget:	$2,050,000

Current Status: The existing pressure tank is being inspected and painted. This project received partial grant funding from Albemarle County.

4. South Fork Rivanna River Crossing

Design Engineer:	Michael Baker International (Baker)
Construction Contractor:	Faulconer (Charlottesville)
Construction Start:	December 2024
Percent Complete:	5%
Base Construction Contract + Change Order to Date = Current Value:	$4,916,940
Completion:	January 2027
Budget:	$5,900,000

Current Status: The contractor began a survey of the easement limits, E&S installation, and tree clearing this month.

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

Design Engineer:	Kimley-Horn
Construction Contractor:	Thalle Construction (North Carolina)
Construction Start:	February 2025
Percent Complete:	0%
Base Construction Contract + Change Order to Date = Current Value:	$53,908,400
Completion:	June 2029
Budget:	$61,490,000

Current Status: NTP has been issued and a Pre-Construction Conference completed. A Project Information Meeting will be held with property owners and others from the community on January 29, 2025. The Contractor intends to mobilize in early February, pending County approval of the WPO and Site Plan.

6. Crozet Pump Stations Rehabilitation

Design Engineer:	Wiley | Wilson
Construction Contractor:	Waco, Inc.
Construction Start:	April 2025
Percent Complete:	0%
Base Construction Contract+ Change Order to Date = Current Value:	$9,583,350
Completion:	September 2027
Budget:	$12,350,000

Current Status: Contract documents are being finalized and signed. A Pre-Construction Meeting is scheduled for early February and will coincide with the NTP.

7. MCAWRRF Building Upfits and Gravity Thickener Improvements

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	English (Lynchburg, VA)
Project Start:	March 2023
Project Status:	Award
Construction Start:	May 2025
Completion:	May 2027
Budget:	$12,000,000

Current Status: Bids were opened on December 19, 2024. Two bids were received which were over budget. RWSA is in discussions with the apparent low, responsive, and responsible bidder to identify opportunities for cost savings.

8. MCAWRRF Structural and Concrete Rehabilitation

Design Engineer:	Hazen and Sawyer (Hazen)
Construction Contractor:	WM Schlosser (Hyattsville, MD)
Project Start:	April 2023
Project Status:	Award

Construction Start:	May 2025
Completion:	May 2027
Budget:	$14,000,000

Current Status: Bids were opened on December 18, 2024. Two bids were received which were over budget. RWSA is in discussions with the apparent low, responsive, and responsible bidder to identify opportunities for cost savings.

Design and Bidding

9. Moores Creek Administration Building Renovation and Addition

Design Engineer:	SEH
Project Start:	October 2022
Project Status:	Bidding
Construction Start:	June 2025
Completion:	December 2027
Budget:	$25,000,000

Current Status: Project was advertised on December 20, 2024 and bids are due on February 4, 2025.

10. Central Water Line

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	Bidding (Phase 1)
Construction Start:	June 2025
Completion:	March 2029
Budget:	$47,000,000

Current Status: **Phase 1 Contract (west end):** All private easements have been acquired and the easements with UVA along Hereford Drive have been recorded. The bid opening date has been postponed until at least late February 2025 to address City comments. **Phase 2 Contract (east end):** Redesign efforts in the E. High Street area are in process and survey work is complete. An additional private easement will be required with the redesign as well as new easements on two City parcels. Phase 2 design will be completed in the summer 2025.

11. Crozet GAC Expansion – Phase I

Design Engineer:	SEH
Project Start:	July 2023
Project Status:	100% Design
Construction Start:	August 2025
Completion:	March 2027
Budget:	$10,000,000

Current Status: 100% documents have been completed and are under review. $7.24 M in grant funds from VDH have been awarded for this project.

12. SRWTP – PAC Upgrades

Design Engineer:	SEH
Project Start:	November 2023
Project Status:	100% Design
Construction Start:	October 2025
Completion:	February 2027
Budget:	$1,100,000

Current Status: Design documents have been completed and are ready for bidding. RWSA applied for a Congressionally Directed Spending grant from Senators Kaine and Warner for this project in the amount of $880,000 and have received approval of the grant by the Senate committee. Final grant approval will occur upon approval of the federal budget by Congress and the President. Bidding and construction will begin after this grant is finalized.

13. RMR Pool Raise

Design Engineer:	Schnabel Engineering
Project Start:	April 2024
Project Status:	50% Design
Construction Start:	September 2025
Completion:	September 2026
Budget:	$5,000,000

Current Status: The Design Engineer is continuing to advance clearing plans around the reservoir, and is working to permit the project with multiple agencies. A pre-application meeting with Albemarle County was held on January 27, 2025, and an introductory meeting with VDOT was held on January 10, 2025.

14. SRR to RMR Pipeline, Intake, and Facilities

Design Engineer:	Kimley Horn/SEH
Project Start:	July 2023
Project Status:	60% Design
Construction Start:	February 2026
Completion:	December 2030
Budget:	$120,000,000

Current Status: Design Engineer continues to work on both the new reservoir intake and the pipe between SFRR and RMR.

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:	70% Design
Construction Start:	May 2026
Completion:	January 2030
Budget:	$62,000,000

Current Status: Hazen is proceeding with 60% design of the pump station. Final design by Schnabel Engineering for the dam spillway upgrades, temporary detour, and spillway bridge is ongoing. Discussions with the County have been initiated for acquisition or lease of property for the Pump

Station. A significant construction grant from the NRCS is anticipated.

16. Upper Schenks Branch Interceptor, Phase II

Design Engineer:	CHA Consulting
Project Start:	July 2021
Project Status:	Design
Construction Start:	2026
Completion:	2027
Budget:	$11 – 15 M

Current Status: Meetings with the County and City are ongoing to finalize the piping location and design.

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

Design Engineer:	Hazen and Sawyer (Hazen)
Project Start:	June 2023
Project Status:	75% Design
Construction Start:	June 2025
Completion:	September 2026
Budget:	$3,600,000

Current Status: Staff is making decisions on current septage receiving equipment and billing software, and Hazen is completing a flood resiliency evaluation, as well as working on the 90% design submittal.

Planning and Studies

18. MCAWRRF Biogas Upgrades

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

Current Status: RWSA and City staff continue to discuss all available options to reuse biogas.

19. Flood Protection Resiliency Study

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

Current Status: This project will identify individualized flood mitigation measures for various facilities to increase their resiliency from a 1% to a 0.2% flooding event. Facilities anticipated to be included in the study are as follows: Moores Creek AWRRF, Scottsville WWRRF, and Crozet FET.

Consultants are being selected to perform this study and the specific scope of the evaluation is being confirmed. This project received $198,930 in grant funding from FEMA and VDEM.

Other Significant Projects

20. Urgent and Emergency Repairs

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

Project No.	Project Description	Approx. Cost
2023-01	Finished Water System ARV Repairs	$150,000
2024-08	Sugar Hollow Raw Waterline Break @ Mechums River	$350,000
2024-09	Stillhouse Waterline Erosion @ Ivy Creek	$200,000

- RWSA Finished Water ARV Repairs: RWSA Engineering staff recently met with Maintenance staff to identify a list of Air Release Valves (ARVs) that need to be repaired, replaced, or abandoned. Several of these locations will require assistance from RWSA On-Call Maintenance Contractors, due to the complexity of the sites (proximity to roadways, depth, etc.). The initial round will include seven (7) sites, all along the South Rivanna Waterline. Three replacements have been completed at this time, with a fourth site in progress. This in progress site included abandonment of an existing manual ARV located in the middle of the Route 29-Hydraulic intersection, which has been completed, and was a major coordination effort with VDOT, as they intend to pave this area in the coming weeks. The Contractor is working with VDOT on permits for the final sites. The remaining replacements will likely be scheduled starting in Spring 2025.
- Sugar Hollow Raw Waterline Break at Mechums River: On October 8th, it was discovered that the Sugar Hollow Raw Waterline had failed at its aerial crossing of the Mechums River, due to the impacts associated with Hurricane Helene. RWSA will be utilizing its On-Call Maintenance Contractor, Faulconer Construction, along with its Design Engineer, SEH, to help design and construct the repairs to the aerial crossing. Mobilization occurred on November 5th to address concerns with the existing access road to the site initially. Repairs are now underway, with installation of concrete piers and preparation for pipe installation complete. All necessary materials to complete the repairs are now onsite, after an extended lead time associated with the structural support beam for the piping. Funding opportunities are being pursued through FEMA/VDEM.
- Stillhouse Waterline Erosion at Ivy Creek: In November 2024, it was discovered that the banks of Ivy Creek had experienced significant erosion during some of the heavy rainstorms earlier in the Fall, and that the erosion was now intruding on RWSA's 12" Stillhouse Waterline. The area was temporarily armored with sandbags in December, to protect the waterline from further erosion in the interim. Staff are working with the USACOE to permit a permanent bank stabilization project, which will include placement of large rip-rap along the streambank. Given continued region-wide disaster relief efforts associated with Hurricane Helene, it is anticipated that permits may not be received until Spring 2025. RWSA intends to utilize its On-Call Maintenance Contractor, Faulconer Construction Company, for completion of this work.

21. Security Enhancements

Design Engineer: Hazen & Sawyer
Construction Contractor: Security 101 (Richmond, VA)

Construction Start:	March 2020
Percent Complete:	90% (WA9)
Based Construction Contract + Change Orders to Date = Current Value:	$718,428 (WA1) + $834,742 (WA2-10)
Completion:	June 2024 (WA9), August 2024 (WA10)
Budget:	$2,980,000

Current Status: WA9 will include installation of card access on all exterior doors at the South Rivanna WTP and has been amended to include interior doors at the new IT data center. Design of MCAWRRF entrance modifications with Hazen & Sawyer continues, with discussions with Dominion Energy also ongoing, as relocation of existing electrical infrastructure will be required. This relocation process will need to be finalized prior to the project proceeding to the bidding phase. Relocation of existing electrical infrastructure will require coordination with the adjacent landowner, as the infrastructure must be completely relocated from the entrance area. As these discussions are ongoing, staff have submitted appropriate permitting documents to Albemarle County.

RIVANNA WATER & SEWER AUTHORITY
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MEMORANDUM

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

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

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

SUBJECT: **ADMINISTRATION AND COMMUNICATIONS REPORT**

DATE: **JANUARY 28, 2025**

Human Resources

Fiscal year-to-date turnover rate from July 1, 2024 - January 3, 2025, is 6.7%, which includes one retirement. This rate is below our Strategic Plan turnover goal of less than 10%.

We are pleased to welcome Hayden Johnson to our Maintenance Department team as a Mechanic 4.

We held our annual Holiday Luncheon for all employees on December 18, 2024. Everyone networked and enjoyed a good lunch from Firehouse Subs.

Safety

We held four sessions of Confined Space training for over 70 of our employees. We have this training for our team every other year.

Our new incident reporting system officially went live on January 1, 2025. Any incidents are now reported through Paychex.

Community Outreach

We are pleased to be working with three students from the University of Virginia School of Medicine Public Health Department's Applied Practice Experience. They will be working on public health projects related to water and wastewater for the spring semester.

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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 NOVEMBER 2024 AND DECEMBER 2024**

DATE: **JANUARY 28, 2024**

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

		Month	***Daily Average***	
City Usage (gal)		134,139,486	4,471,316	**49.6%**
ACSA Usage (gal)		136,556,015	4,551,867	**50.4%**
Total (gal)		**270,695,501**	**9,023,183**	

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

		Month	***Daily Average***	
City Usage (gal)		117,916,573	3,803,760	**47.1%**
ACSA Usage (gal)		132,224,571	4,265,306	**52.9%**
Total (gal)		**250,141,144**	**8,069,069**	

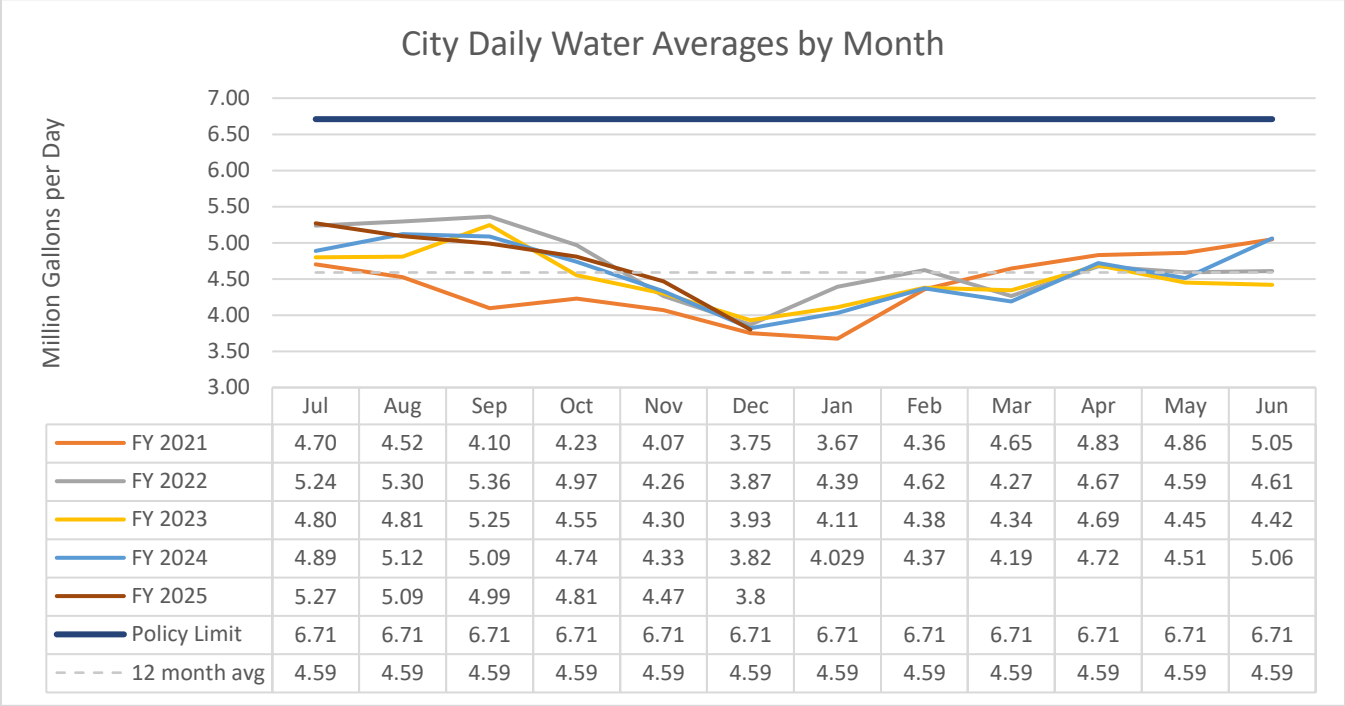
The *RWSA Wholesale Metering Administrative and Implementation Policy* requires that water use be measured based upon the annual average daily water demand of the City and ACSA over the trailing twelve (12) consecutive month period. The *Water Cost Allocation Agreement (2012)* established a maximum water 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 dating back to the beginning of FY 21, the trailing twelve-month average (extended back to January 2024), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA). Completed in 2019 for a cost of about $3.2 M, our Wholesale Metering

Program consists of 25 remote meter locations around the City boundary and 3 finished water flow meters at treatment plants.

Note 1: Meter 18 was experiencing some trouble, and a 3-month average was used for November and December. The meter was repaired in November, then went offline again and was repaired in December. The meter is now functioning properly and reporting.

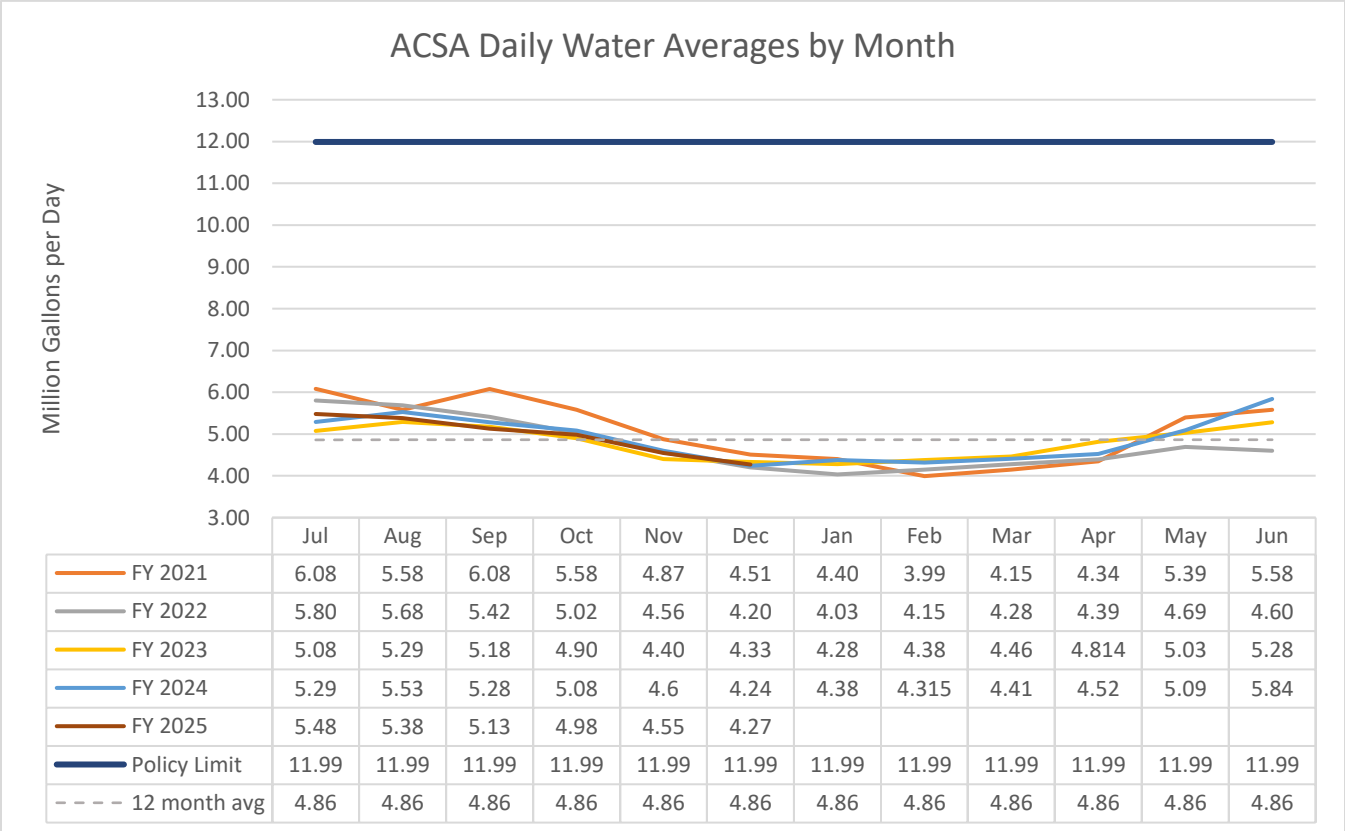
Note 2: The monthly report for November is included in this month's report since the values were not ready for the December board meeting. The City and ACSA allocation graphs below have been updated to account for data through December 2024.

Figure 1: City of Charlottesville Monthly Water Usage and Allocation



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 2021	4.70	4.52	4.10	4.23	4.07	3.75	3.67	4.36	4.65	4.83	4.86	5.05
FY 2022	5.24	5.30	5.36	4.97	4.26	3.87	4.39	4.62	4.27	4.67	4.59	4.61
FY 2023	4.80	4.81	5.25	4.55	4.30	3.93	4.11	4.38	4.34	4.69	4.45	4.42
FY 2024	4.89	5.12	5.09	4.74	4.33	3.82	4.029	4.37	4.19	4.72	4.51	5.06
FY 2025	5.27	5.09	4.99	4.81	4.47	3.8						
Policy Limit	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
12 month avg	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59

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



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 2021	6.08	5.58	6.08	5.58	4.87	4.51	4.40	3.99	4.15	4.34	5.39	5.58
FY 2022	5.80	5.68	5.42	5.02	4.56	4.20	4.03	4.15	4.28	4.39	4.69	4.60
FY 2023	5.08	5.29	5.18	4.90	4.40	4.33	4.28	4.38	4.46	4.814	5.03	5.28
FY 2024	5.29	5.53	5.28	5.08	4.6	4.24	4.38	4.315	4.41	4.52	5.09	5.84
FY 2025	5.48	5.38	5.13	4.98	4.55	4.27						
Policy Limit	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99
12 month avg	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86

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

FROM: **BETHANY HOUCHENS, WATER RESOURCES COORDINATOR**

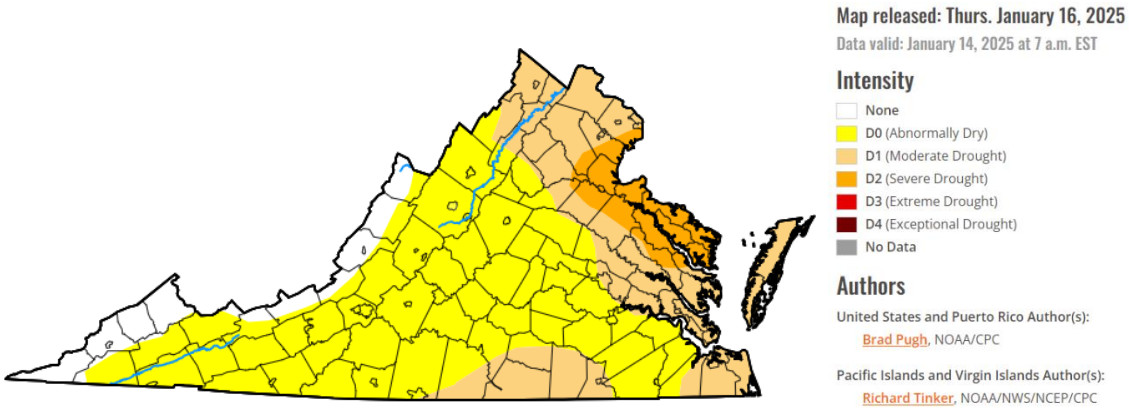
REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**
DAVE TUNGATE, DIRECTOR OF OPERATIONS AND ENVIRONMENTAL SERVICES

SUBJECT: **DROUGHT MONITORING REPORT**

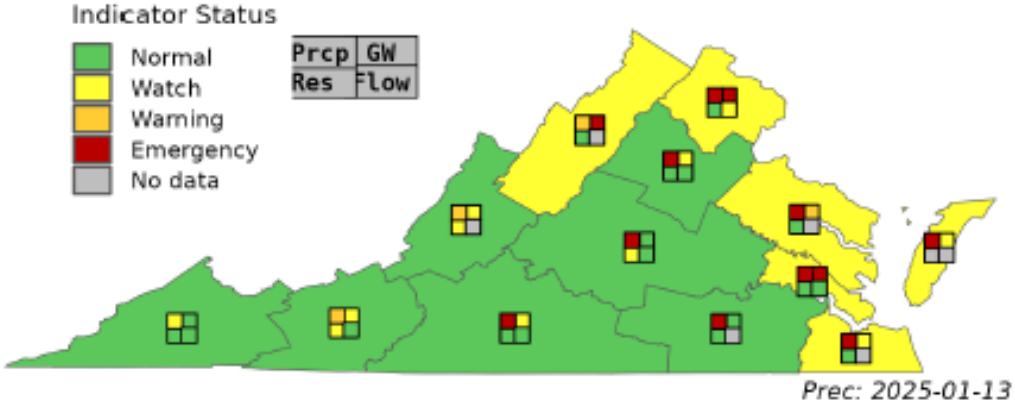
DATE: **JANUARY 28, 2025**

State and Federal Drought Monitoring as of January 16, 2025:

- U.S. Drought Monitoring Report: Indicates the City of Charlottesville and Albemarle County are in Abnormally Dry conditions.



- VDEQ Drought Status Report: Our region is listed as being in a "Normal" level for groundwater and streamflow. Reservoir levels are in a "Watch" status. Precipitation is in an "Emergency" status.



Precipitation & Stream Flows

Charlottesville Precipitation				
Year	Observed (in.)	Normal (in.)	Departure (in.)	Comparison to Normal (%)
2021	33.82	41.61	-7.79	-19
2022	43.53	41.61	+1.92	+5
2023	26.95	41.61	-14.66	-35
2024	35.41	41.61	-6.2	-15

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

USGS Stream Gaging Station Near the Urban Area (Jan 3- Jan 9)				
Gage Name	Rolling 7-day Avg. Stream Flow		Median Daily Streamflow	
	cfs	mgd	cfs	mgd
Mechums River	91.3	59	81	52.4
Moormans River	78.1	50.5	59	38.1
NF Rivanna River	113.9	73.6	89	57.5
SF Rivanna River	247.7	160.1	210	135.7

Median daily flow: January 9th for the period of record (approx. 30 - 80 years)

Status of Reservoirs as of January 21, 2025

- Urban Reservoirs are 95% of Total Useable Capacity
- Beaver Creek Reservoir (Crozet) is 100% of Total Useable Capacity
- Totier Creek Reservoir (Scottsville) is 100% of Total Useable Capacity

Drought History in Central Virginia

- Severe: 1838, 1930, 1966, 1982, 2002
- Longest: May 2007 - April 2009; 103 weeks
- Significant: every 10 -15 years
- Drought of Record: 2001- 2002; 18 months

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

MEMORANDUM

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

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

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

SUBJECT: **APPROVAL TO AMEND PROFESSIONAL ENGINEERING SERVICES - CENTRAL WATER LINE PROJECT - BAKER ENGINEERING**

DATE: **JANUARY 28, 2025**

This request is for approval to increase the Central Water Line project design contingency by $223,200 to $2.38 M. Additional design services totaling $150,000 are currently required to provide water line adjustments in Lewis St., Cleveland Ave., 6th St. SE, and 10th St. NE and an overall pipe profile adjustment. The balance of the contingency will support any future design requirements.

Background

Early phases of this project (initially referred to as the Avon to Pantops Water Main) began in 2017. Due to the complicated nature of the finished water system, and several outstanding hydraulic considerations, the water line project was placed on hold while a comprehensive Urban Finished Water Master Plan was completed. The focus of this project was on the southern half of the urban area water system, which is currently served predominantly by the Avon Street and Pantops water storage tanks. The Avon Street tank is hydraulically well connected to the Observatory Water Treatment Plant, while the Pantops tank is well connected to the South Rivanna Water Treatment Plant. The hydraulic connectivity between the two tanks, however, is less than desired, creating operational challenges and reduced system flexibility. In 1987, the City and ACSA developed the Southern Loop Agreement to connect and strengthen the urban water system in two key phases (with the first being built at the time). The 1987 Agreement and planning efforts were a starting point for this current project.

An engineering contract was negotiated with Baker and approved by the Board of Directors in July 2017. Results from the Urban Finished Water Master Plan and the Central Water Line Routing Study were discussed in multiple workshops with the City and ACSA staff, and it was determined during these meetings that a central water line corridor through the City was the best option to hydraulically interconnect the southern half of the urban area water system, meeting the intent of the original Avon to Pantops Water Main concept.

At the June 2021 Board meeting, the Board of Directors approved a work authorization to take the Central Water Line project from the routing study phase through the bidding phase. The scope of work included performing preliminary engineering, geotechnical investigations, subsurface utility engineering (SUE), survey, final design, permitting, plat preparation, public outreach, and bidding services for approximately five miles of new water line associated with the Central Water Line Project. RWSA staff also brought project presentations to the Board at meetings in January and June of 2022 to provide updates on the evaluation of the alignment routes through the City. At the June 2022 Board of Directors meeting, a resolution was approved to accept the Southern (Cherry Ave) Alignment for final design which included approximately 3,500 feet of 24" water line in the East High St. corridor.

At the June 2024 Board of Directors meeting, the Board authorized the Executive Director to execute a new work authorization for $450,600 with Michael Baker International and to increase the overall contingency to 45% of the original contract amount of $1,488,000. The new work authorization covered the re-design of approximately 5,000 LF of water line to a location outside of E. High St. since it was determined in the later stage of the design effort that there was not enough horizontal underground clearance to accommodate both the Central Water Line and the City's proposed 12" water line within the right-of-way. Much of the remaining contingency has been utilized for a subsequent work authorization to split the Central Water Line project into two bidding contracts so that the western portion of the work could be bid and under construction while the eastern portion of the work near E. High St. was being re-designed.

Following recent review of the plans for the Central Water Line Phase 1 (western portion) project with City staff, water line adjustments in Lewis St., Cleveland Ave., 6th St. SE, and 10th St. NE and an overall pipe profile adjustment were identified. A new work authorization is required for these efforts and there is not enough contingency currently to cover the additional design work. The overall CIP budget for both phases of the Central Water Line project is anticipated to increase by approximately $15 M due to these design modifications which will be reflected in the upcoming FY 26-30 CIP revision.

The June 2024 Board authorization for design and bidding services totaled $1,488,000 with an updated 45% contingency for any potential future amendments needed to complete the work. Previous work authorizations totaled $649,276.50 for additional City water line design, additional asphalt patching in City streets from the SUE work, additional modeling, design to move the Central Water Line out of E. High St. and break the project into two bidding contracts. Increasing the contingency to 60% will provide an additional $233,200 for design requirements and increase the total design budget to $2.38 M.

Board Action Requested:

Approval to increase the Central Water Line project design contingency by $223,200 to a total design budget of $2.38 M, a 60% increase, as required to provide water line adjustments in Lewis St., Cleveland Ave., 6th St. SE, and 10th St. NE and an overall pipe profile adjustment. The balance of the contingency may be used to support any future design requirements within the approved CIP project budget.

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

MEMORANDUM

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

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

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

SUBJECT: **APPROVAL OF ENGINEERING SERVICES — DAM CONCRETE AND STEEL REPAIRS DESIGN, BIDDING, AND CONSTRUCTION PHASE SERVICES – GAI CONSULTANTS**

DATE: **JANUARY 28, 2025**

This request is to authorize a design, bidding, and construction phase services contract with GAI Consultants for an amount not to exceed $238,210 to provide concrete and steel repairs to the dams of Lickinghole Creek, Totier Creek, South Rivanna, and Sugar Hollow reservoirs.

Background

RWSA operates several dams for water supply and sediment storage. These include concrete gravity dams and earthen embankment dams, ranging in age from 10 to over 80 years. Over time, normal wear and tear from water passage and weather can cause degradation of concrete and steel structures. To ensure continued safe operation of these dams into the future, it is imperative to complete periodic maintenance and repairs. This project includes engineering services for the evaluation, design, and construction of concrete and steel repairs at the Lickinghole Creek Dam, Totier Creek Dam, South Rivanna Dam, and Sugar Hollow Dam. Repairs are expected to include injection grouting of voids in concrete structures, concrete surface repairs, recoating steel hoist beams, and installation of new hoist trolleys.

RWSA entered into a term agreement with GAI Consultants on September 17, 2022, for Professional Dam Engineering Services. Under this Work Authorization, GAI will perform a structural condition assessment of the dams and then provide final design, bidding, and construction phase services for the Dam Concrete and Steel Repairs project.

Board Action Requested:

Authorize the Executive Director to execute a Work Authorization with GAI Consultants for Professional Engineering services to provide design, bidding, and construction phase services for the Dam Concrete & Steel Repairs Project for an amount not to exceed $238,210, and any amendments needed not to exceed 25% of the original contract amount and within the approved CIP project budget.

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: **BETHANY HOUCHENS, WATER RESOURCES COORDINATOR**

REVIEWED BY: **BILL MAWYER, EXECUTIVE DIRECTOR**
DAVE TUNGATE, DIRECTOR OF OPERATIONS AND ENVIRONMENTAL SERVICES

SUBJECT: **APPROVAL OF WAIVER EXTENSION FOR UNIVERSITY OF VIRGINIA ROWING PROGRAMS AND RIVANNA ROWING CLUB**

DATE: **JANUARY 28, 2025**

The Board previously granted permission for the University of Virginia (UVA) rowing programs and the Rivanna Rowing Club to use gasoline-powered safety and coaching launches on the South Fork Rivanna Reservoir (SFRR) with the requirement that they continue to research and develop electric launches. On September 26, 2023, the Board granted the Executive Director the approval to extend the waiver to those organizations for one year, through September 2024 with the agreement that they would continue to research the use of electric technology.

Mr. Frank Biller, Director of Rowing of the University of Virginia Men's Rowing Crew, has submitted the attached request to extend the waiver until December 31, 2025. His progress report indicates UVA Rowing has experienced setbacks regarding the fitting of launches with electric motors. The company they are working with to procure electric motors and parts is experiencing a financial crisis, which they are monitoring closely. Currently 1/3 of the launch fleet is electric and in use daily.

Board Action Needed:

Authorize the Executive Director to extend UVA's waiver to December 31, 2025 to allow the use of gasoline-powered safety and coaching launches by the UVA Women's and Men's rowing programs, and the Rivanna Rowing Club, subject to UVA agreeing to other conditions RWSA deems necessary to protect the drinking water supply and the water quality of the SFRR, to include continued research on electric motor technology and expansion of electric motors within the fleet.

VIRGINIA ROWING ASSOCIATION
276 Woodlands Road
Charlottesville, VA 22901

Rivanna Water and Sewer Authority
Attn: Bethany Houchens, Water Resources Manager
695 Moore's Creek Lane
Charlottesville, VA 22902

Via Email

Charlottesville, January 15th, 2025

Extension of Gasoline-Powered Motor Usage Permit

Dear Bethany,

Thank you for reaching out regarding our current permit to use gasoline-powered motors for our safety and coaching launches. Kevin Sauer retired this past spring, after serving the UVA Teams since 1989. Even after I came onboard as the director of rowing, he maintained the relationship with RWSA, including our permits. Now it is my responsibility to represent the UVA Rowing teams as well as the rowing community. I am looking forward to working with you and your team.

In the last letter and request for gasoline-powered motors, Kevin had updated RWSA on the extensive investments that we have made. Since then, there are three safety and coaching launches fully equipped with the "Purewatercraft" systems – and they work great. We also have been very active on the funding and fundraising side, as well having a student-led group raising awareness to our goals of going fully electric. And hopefully also solar-powered!

However, after all these years of investing, researching, and trying out – and after we thought we finally have the ultimate solution, we were informed that our manufacturer and supplier, Purewatercraft, may actually go into bankruptcy procedures. This will put our investments on hold until we know more about what's next. Although, there are more e-powered motors available today

than 10 years ago, at least in theory; we would have to restart our research and trials, since these systems are complex and almost always require product support.

At this point, we cannot make a prediction on the duration of that project. Please consider a permit extension of one year for our rowing programs, as this will keep us “afloat” and safe for the time being.

Hopefully, the Purewatercraft company either pulls through or gets integrated into another company, to continue with production and support of their outstanding products. Rest assured that the UVA Men’s team as well as the Rivanna Rowing Club community program all want to move forward with e-powered engines!

Respectfully,

Virginia Rowing Association

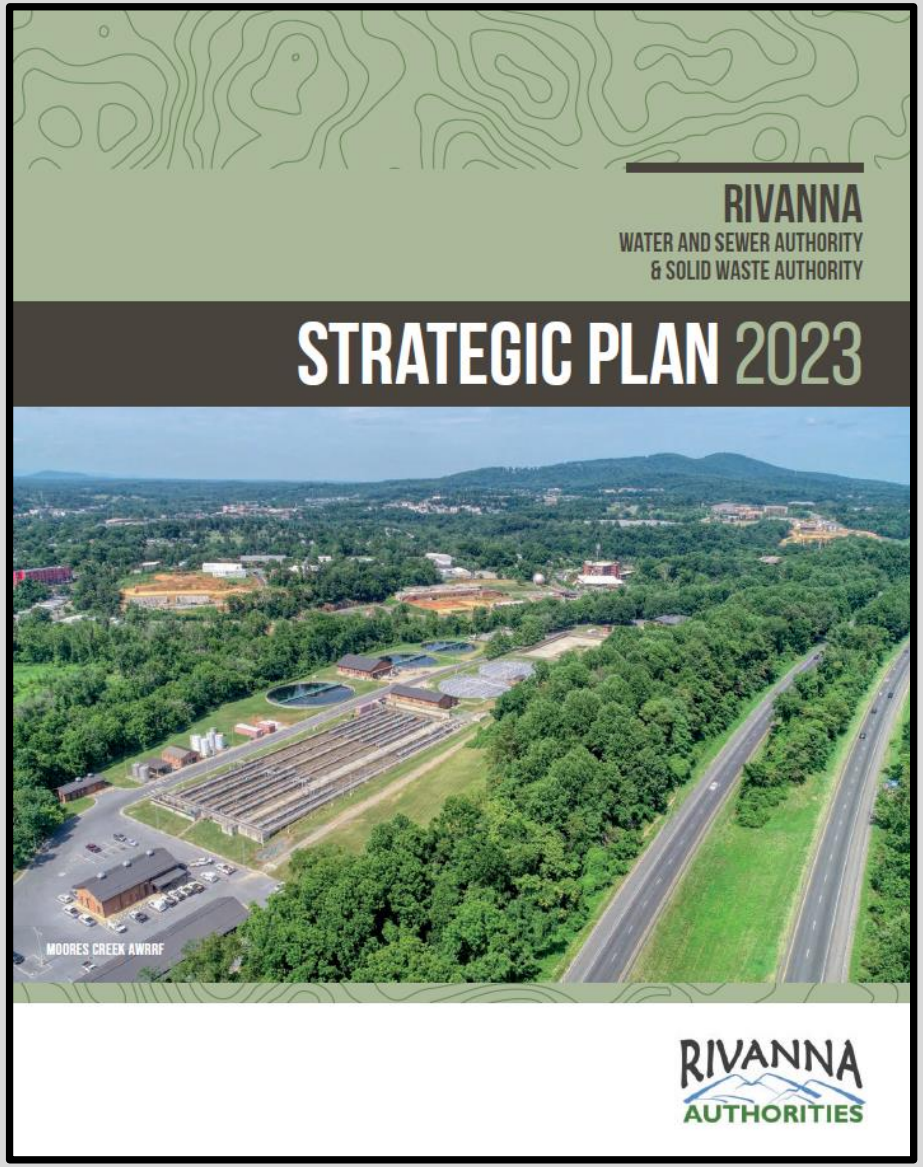
Frank G. Biller, M.Sc., M.B.A.
Director of Rowing
Head Coach

Rivanna Authorities Strategic Plan Update

Presented to the RSWA and RWSA Boards of Directors

By Betsy Nemeth, Director of Administration & Communications

January 28, 2025



Strategic Framework

Vision

To serve the community as a recognized leader in environmental stewardship by providing exceptional water and solid waste services.

Mission

Our knowledgeable and professional team serves the Charlottesville, Albemarle, and UVA community by providing high-quality water and wastewater treatment, refuse, and recycling services in a financially responsible and sustainable manner.

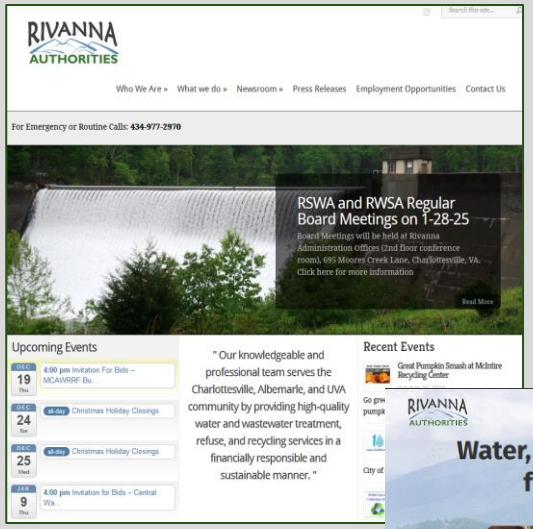
Strategic Framework

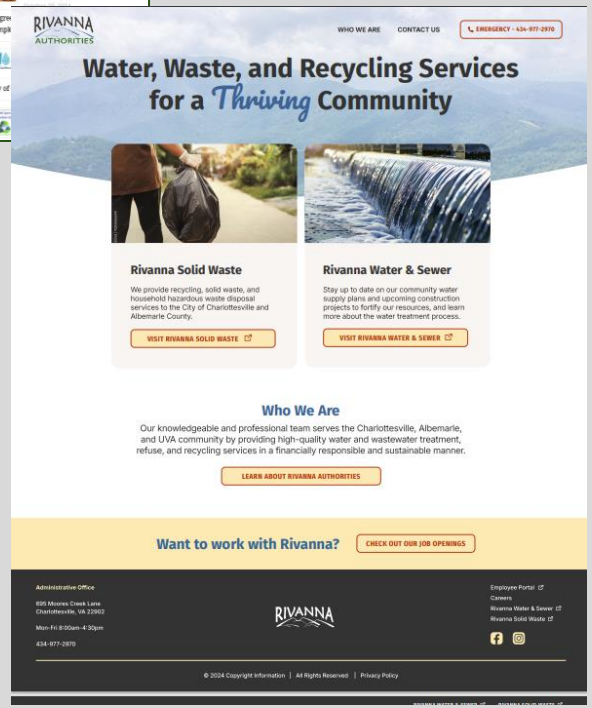
Values

- **Integrity** – We are open and transparent, lead by example, and are committed to ethical behavior.
- **Teamwork** – We work collaboratively to help each other succeed and serve the community.
- **Respect** – We treat our fellow employees, customers, business partners, and stakeholders with dignity and respect by embracing their diverse backgrounds and experiences.
- **Quality** – We deliver exceptional services and products, serve our community responsibly, and safeguard natural resources.

Communication & Collaboration

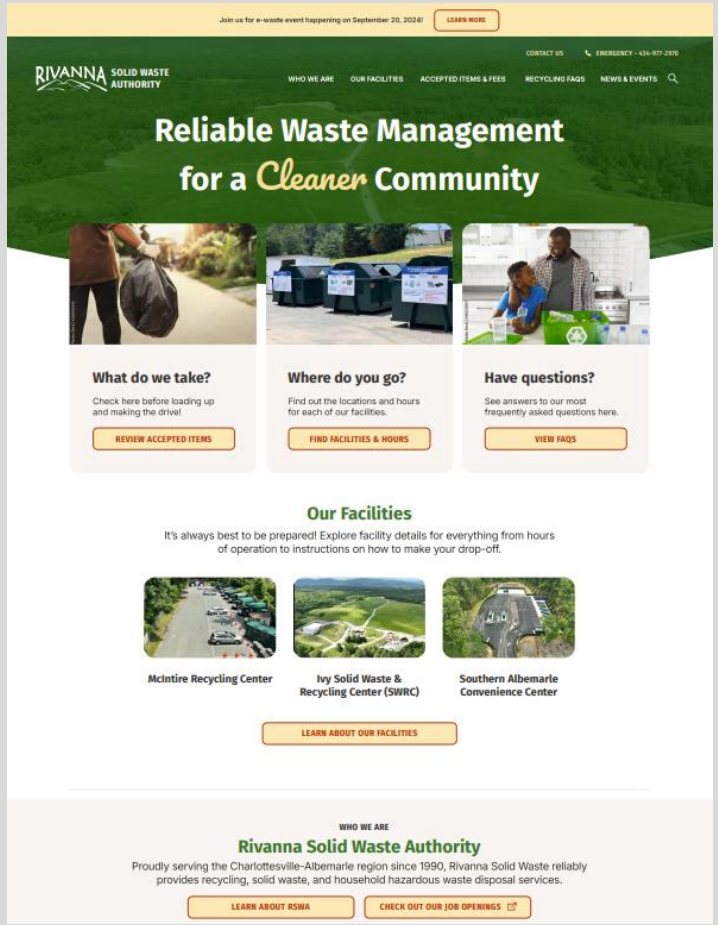
Current
rivanna.org



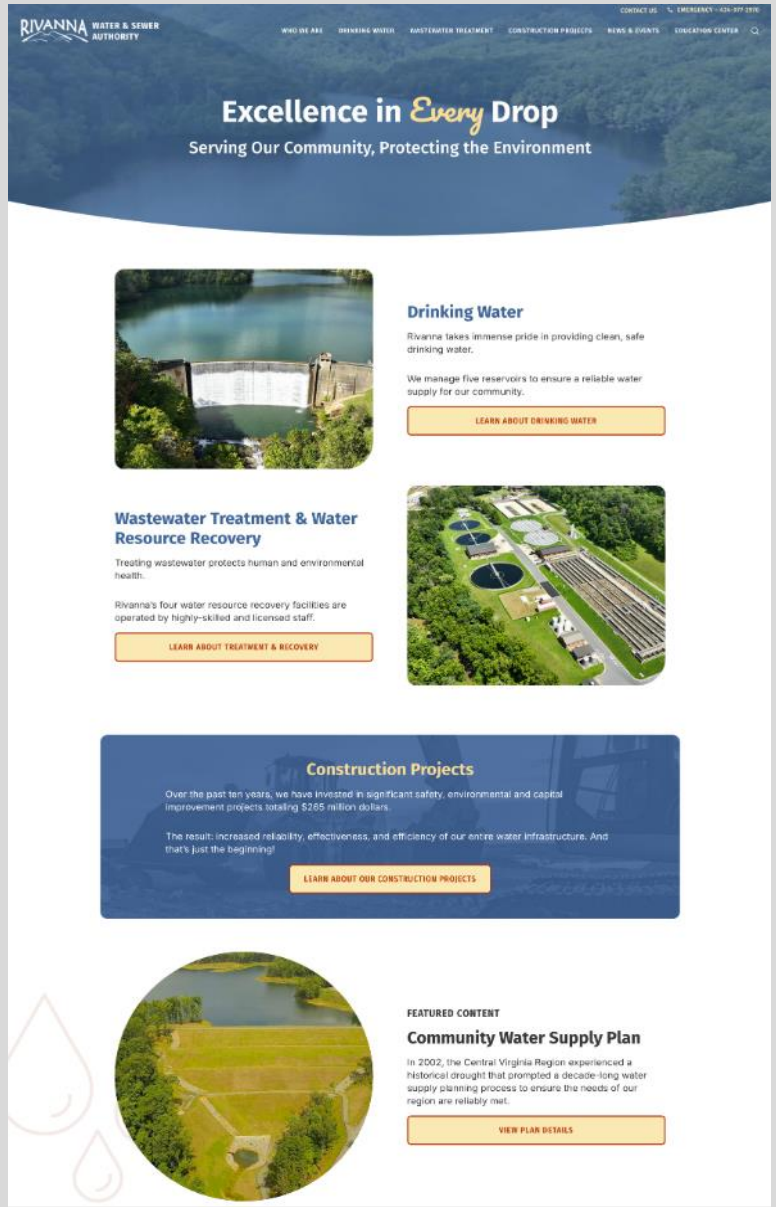


Coming this Spring!

NEW!
www.rivanna.org



www.rivannasolidwaste.com



www.rivannawater.com

Environmental Stewardship

And the winner is:
Kenny Lawhorne
Maintenance Dept.

Workforce Development


CERTIFICATE of ACHIEVEMENT

THIS ACKNOWLEDGES THAT

Rodney Bright

Has Successfully Obtained A CDL-A

Shippers Choice Of Charlottesville (PVCC)

October 23rd, 2024 — Brent's Walter

Date — Examiner


Shippers Choice Virginia — The CDL School

Certificate of Completion

THIS IS TO CERTIFY THAT

GARRETT CARVER

HAS SATISFACTORILY COMPLETED 160 HOURS OF ENTRY LEVEL CDL CLASS A TRAINING IN THE OPERATION OF TRACTOR-TRAILER TRUCKS.

May 9, 2024 — Date

Instructor — Director — President

1993


Shippers Choice Virginia — The CDL School

Certificate of Completion

THIS IS TO CERTIFY THAT

DAVID HEINTGES

HAS SATISFACTORILY COMPLETED 160 HOURS OF ENTRY LEVEL CDL CLASS A TRAINING IN THE OPERATION OF TRACTOR-TRAILER TRUCKS.

May 9, 2024 — Date

Instructor — President

1993


Certificate of Completion

This is to certify that

Tyrone L Hughes

has successfully passed a

Technician TYPE I, III

exam on how to responsibly handle refrigerants as required by EPA's National Recycling and Emissions Reduction Program.

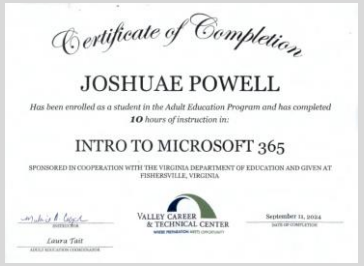
Certified by VGI Training EPA Approved September 30, 1993

Valley Vocational Technical

2409202 — Certificate Number

3/2/2024 — Date

President VGI Training Div


Certificate of Completion

JOSHUAE POWELL

Has been enrolled as a student in the Adult Education Program and has completed 10 hours of instruction in:

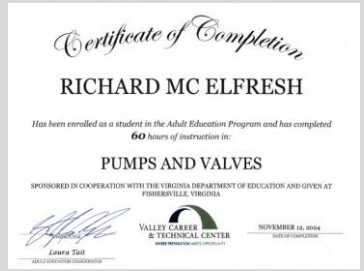
INTRO TO MICROSOFT 365

SPONSORED IN COOPERATION WITH THE VIRGINIA DEPARTMENT OF EDUCATION AND GIVEN AT FISHERSVILLE, VIRGINIA

VALLEY CAREER & TECHNICAL CENTER

September 11, 2024 — DATE OF COMPLETION

Laura Tait — ADULT EDUCATION COORDINATOR


Certificate of Completion

RICHARD MC ELFRESH

Has been enrolled as a student in the Adult Education Program and has completed 60 hours of instruction in:

PUMPS AND VALVES

SPONSORED IN COOPERATION WITH THE VIRGINIA DEPARTMENT OF EDUCATION AND GIVEN AT FISHERSVILLE, VIRGINIA

VALLEY CAREER & TECHNICAL CENTER

NOVEMBER 12, 2024 — DATE OF COMPLETION

Laura Tait — ADULT EDUCATION COORDINATOR


Certificate of Completion

CHARLES WALKER

Has been enrolled as a student in the Adult Education Program and has completed 54.00 hours of instruction in:

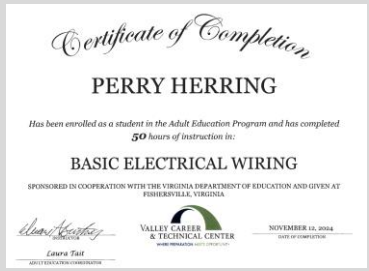
COMMUNICATIONS

SPONSORED IN COOPERATION WITH THE VIRGINIA DEPARTMENT OF EDUCATION AND GIVEN AT FISHERSVILLE, VIRGINIA

VALLEY CAREER & TECHNICAL CENTER

OCTOBER 14, 2024 — DATE OF COMPLETION

Laura Tait — ADULT EDUCATION COORDINATOR


Certificate of Completion

PERRY HERRING

Has been enrolled as a student in the Adult Education Program and has completed 50 hours of instruction in:

BASIC ELECTRICAL WIRING

SPONSORED IN COOPERATION WITH THE VIRGINIA DEPARTMENT OF EDUCATION AND GIVEN AT FISHERSVILLE, VIRGINIA

VALLEY CAREER & TECHNICAL CENTER

NOVEMBER 12, 2024 — DATE OF COMPLETION

Laura Tait — ADULT EDUCATION COORDINATOR

2024 College Tuition Reimbursement

Alisa Cooper – PVCC
Brian Haney – PVCC
David Rhoades – SNH University
Leah Beard – Cornell University
Steven Minnis Jr. – PVCC
Duane Houchens – Mountain Empire CC

Diversity Awareness Training for Managers and the Workforce Development team

2024 Internal Promotions

Brad Puffenbarger – Water Asst. Manager
Josh Bowen – Engineering Inspector Supervisor
Cary Wingo – Water Supervisor
Bethany Houchens – Water Resources Coordinator
Michael Webb – Water Quality Specialist
Chris Ragland – SW Operator/Attendant
Jerry Simmons – Recycling Manager
Rodney Bright – SW Driver/Operator
Raashon Aziz – SW Operator/Attendant
Brian Haney – Wastewater Manager
Tom Corrice – Wastewater Asst. Manager
David Tungate – Deputy Executive Director

Optimization & Resiliency

Moores Creek AWRRF Aeration Basin Operations

- **Electricity Cost Reduction -** The aeration basins require air to help with ammonia removal. Air is supplied by 5 electric blowers. We used to maintain a minimum air flow into the basins for ammonia removal, but we now use an ammonia sensor to adjust the required air flow. This has resulted in an annual savings of approximately $17,000 on electrical costs.
- **Chemical Cost Reduction** -Caustic is fed into the aeration basins to adjust pH and add alkalinity which enhances microbial activity. The Operations staff lowered the minimum microbial alkalinity settings which reduced the required caustic feed rate. This resulted in a cost savings of over $180,000 in 2024.

MCAWRRF Blower

Aeration Basins

Caustic Tanks

Planning & Infrastructure

Asset Management - CityWorks

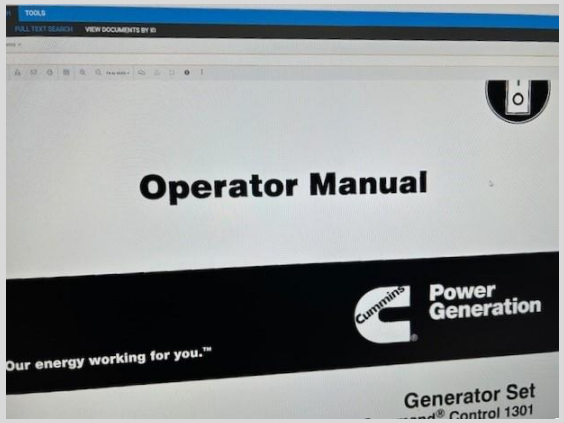
Assets 2024

Total Horizontal Assets: 4296
Total Vertical Assets: 4599
Total Vertical Assets Added in 2024: 990

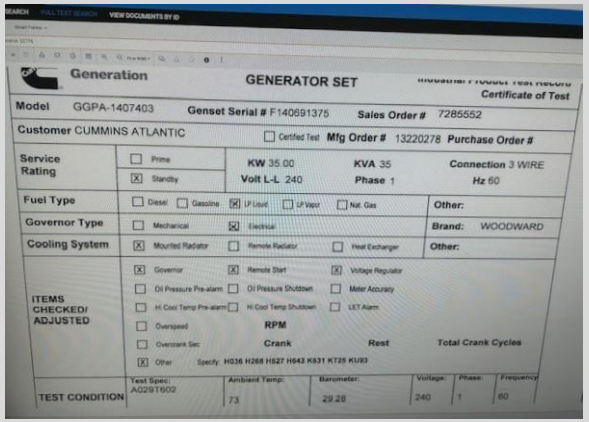
Work Orders 2024

Total Completed Work Orders: 4075
Preventative Maintenance: 3700
Corrective Maintenance: 375

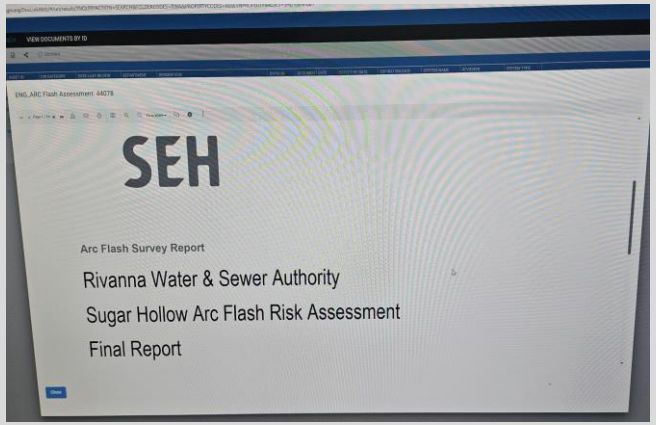
Documents available electronically via CityWorks



Manuals



Inspection Documents



Safety Information

RIVANNA
WATER & SEWER AUTHORITY

RIVANNA
SOLID WASTE AUTHORITY

Providing high-quality water, wastewater, refuse and recycling services to the Charlottesville, Albemarle, and UVA community.

www.rivanna.org

Questions?

ASSET MANAGEMENT PROGRAM UPDATE

FOR THE RSWA AND RWSA BOARDS OF DIRECTORS

Presented by:
Katie McIlwee
Asset Management Coordinator

January 28, 2025

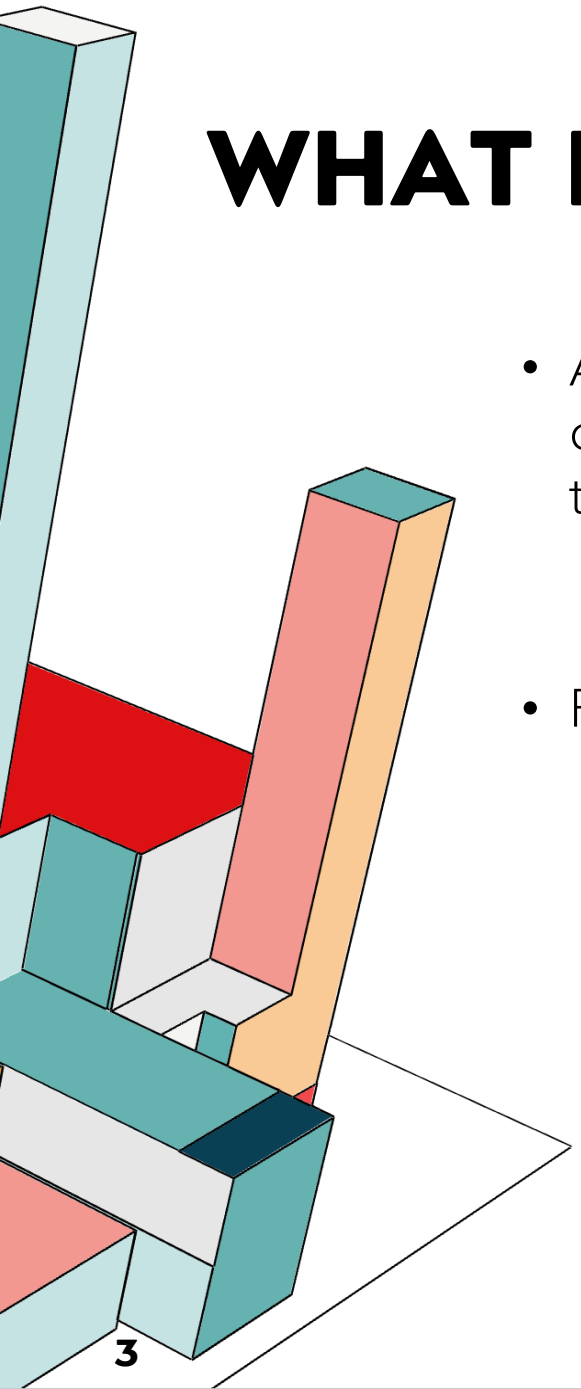
STRATEGIC PLANNING

Infrastructure & Master Planning

- **Goal:** To plan, deliver, and maintain dependable infrastructure in a financially responsible manner.
- **Strategy:** Implement an Authority-wide asset management program.

Asset Management Policy

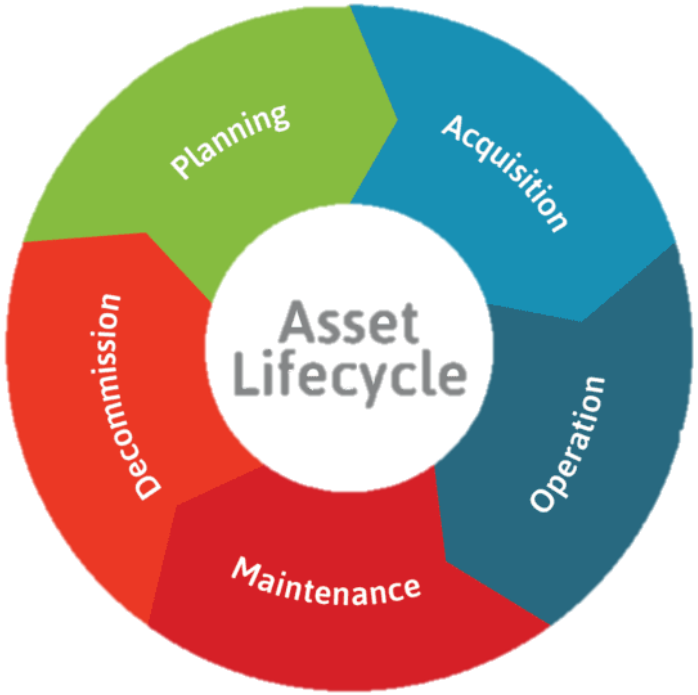
- Our staff and management are committed to implementing an Asset Management Program that will provide established levels of service, while minimizing life cycle costs and managing risk.
- The Asset Management Program will link to the Authority's Strategic Framework and Goals for asset related investments and action plans.



WHAT IS ASSET MANAGEMENT?

- A *long-term* program to attain and sustain the chosen level of service for the life of the asset in the most *cost-effective* manner.

- Rivanna's Asset Management Program consists of:
  - Computerized Maintenance Management Software (CMMS)
  - Asset Register/GIS
  - Decision Support Software (DSS)



EFFECTIVE ASSET MANAGEMENT

The US Government Accounting Office (GAO) identified six key characteristics of an effective asset management framework.

GAO 6 Key Characteristics

1. Establishing formal policies & plans
2. Maximizing an asset portfolio's value
3. Maintaining leadership support
4. Using quality data
5. Promoting a collaborative organizational culture
6. Evaluating and improving asset management practices

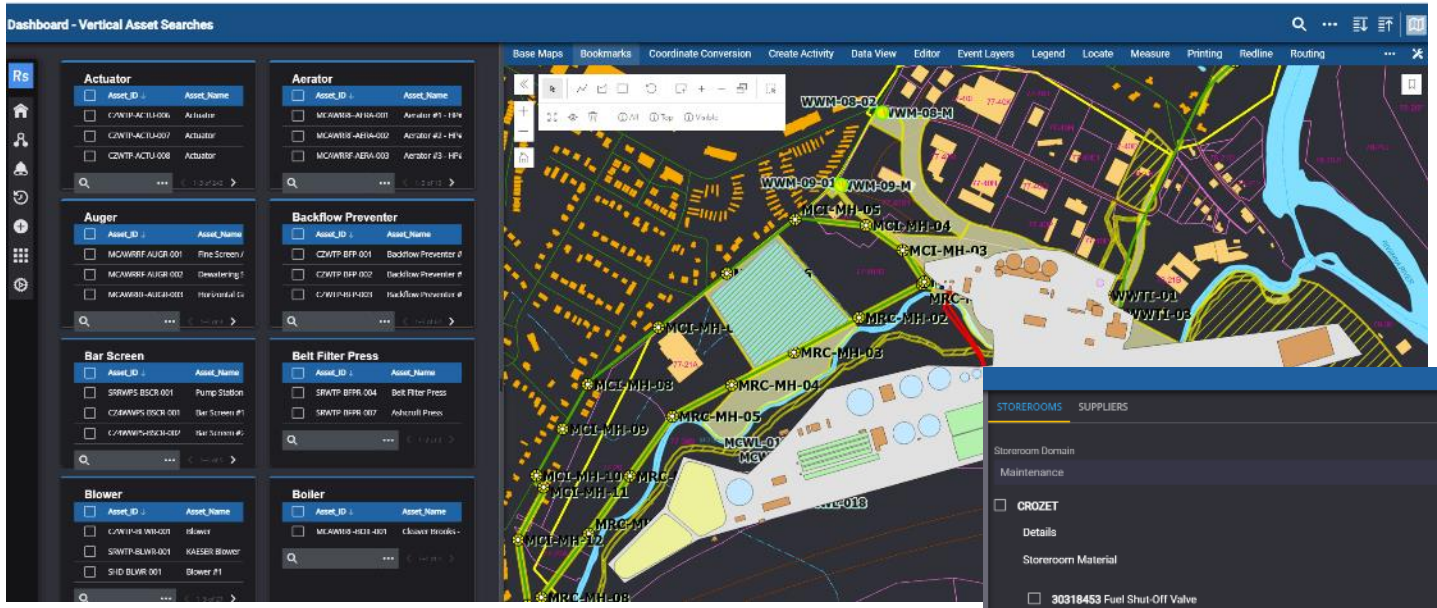
RWSA Putting it into Practice

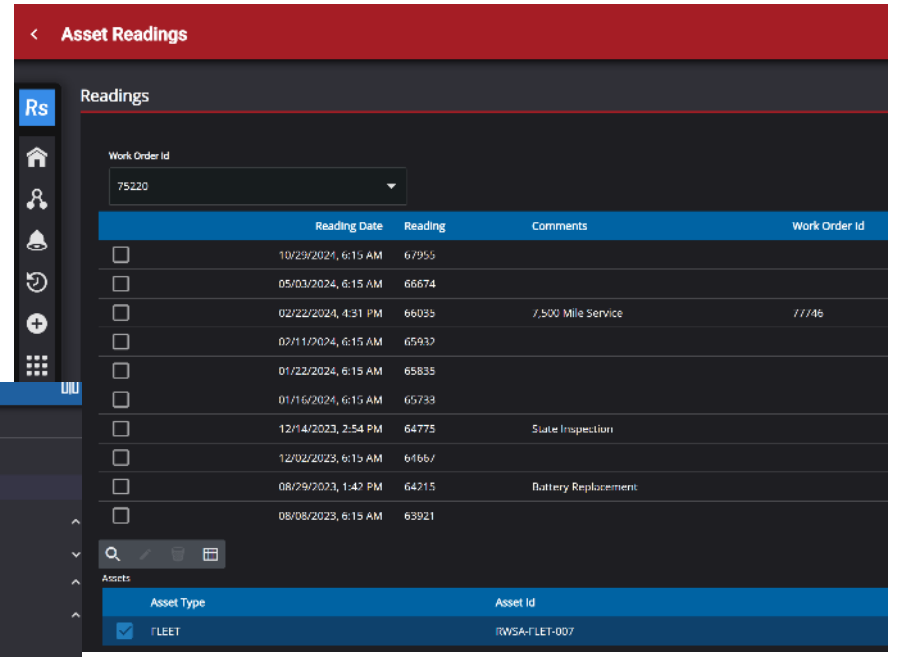
1. Strategic and Tactical Asset Management Plans
2. Decision Support Tools
3. Authority-wide buy-in
4. New Asset Workflow Procedure
5. Coordination with Maintenance, Water, & Wastewater, Lab and Engineering
6. Health Check Report and ongoing feedback from Maintenance & Operations

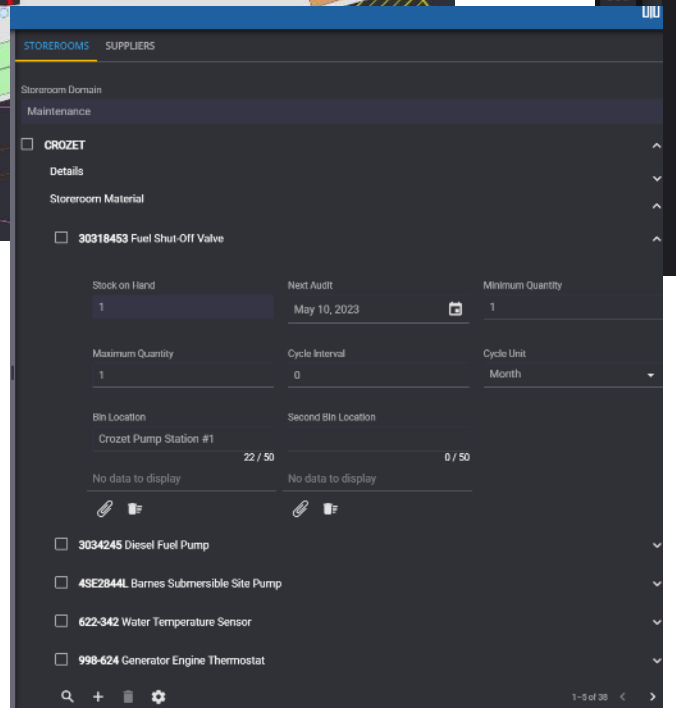
2024 BY THE NUMBERS

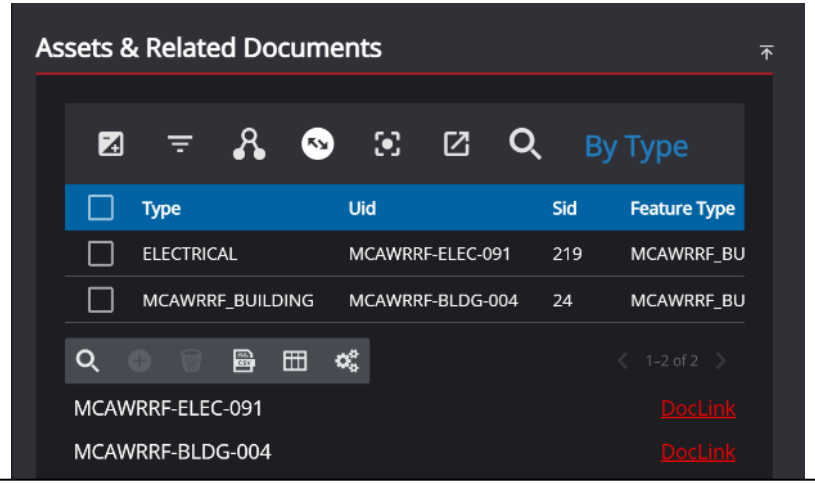
- Total Completed Work Orders: 4,075
- Preventative Maintenance: 3,700
- Corrective Maintenance: 375

- Total Horizontal Assets: 4,296
- Total Vertical Assets: 4,599
- Total Vertical Assets Added: 990



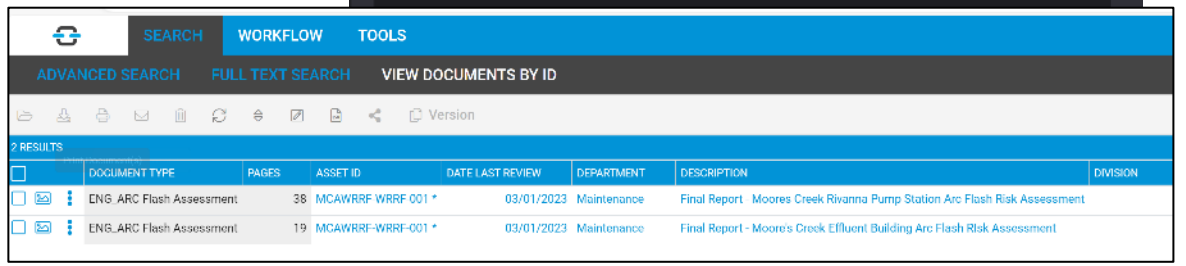




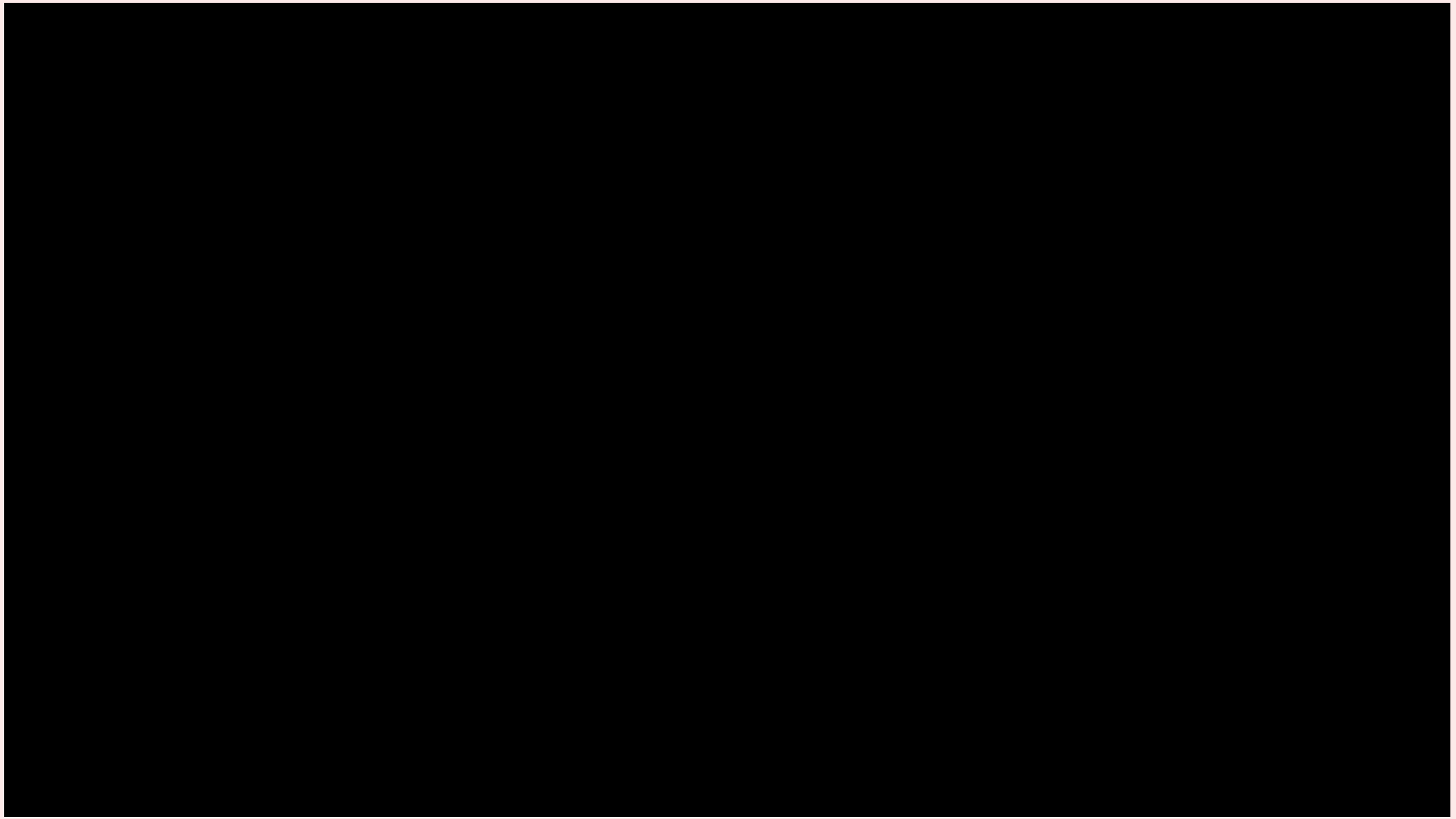


DATA INTEGRATION

- EKOS: Fuel Management
- ESRI: GIS/Spatial Management
- DocLink: Records Management
- Storeroom: Inventory/Materials Management

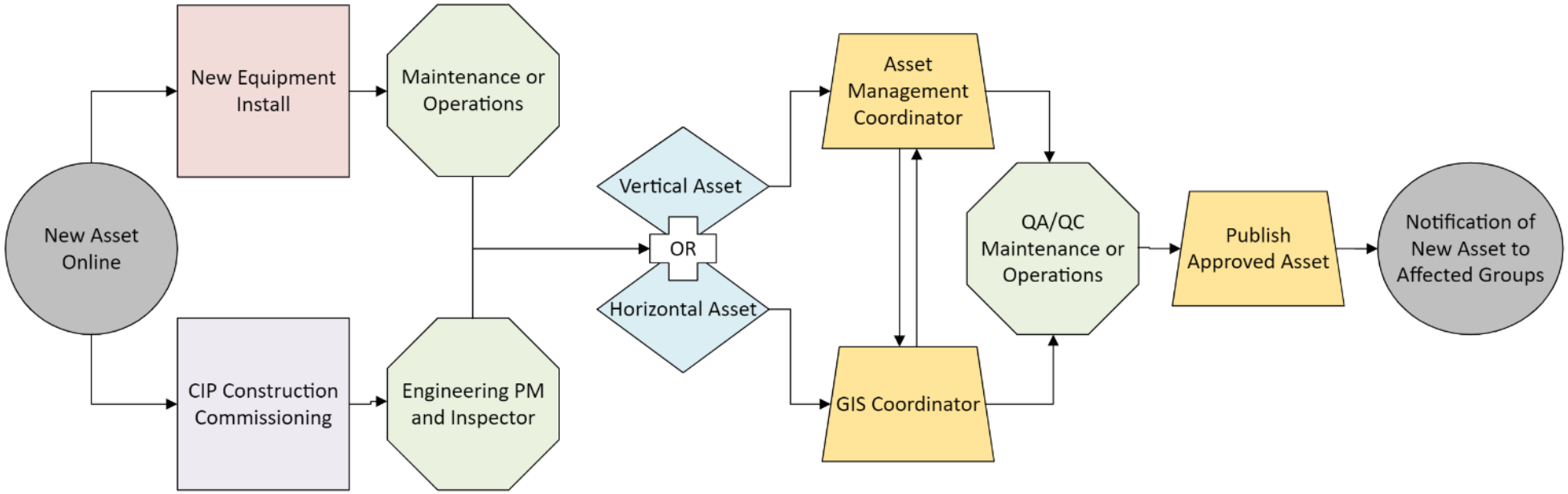


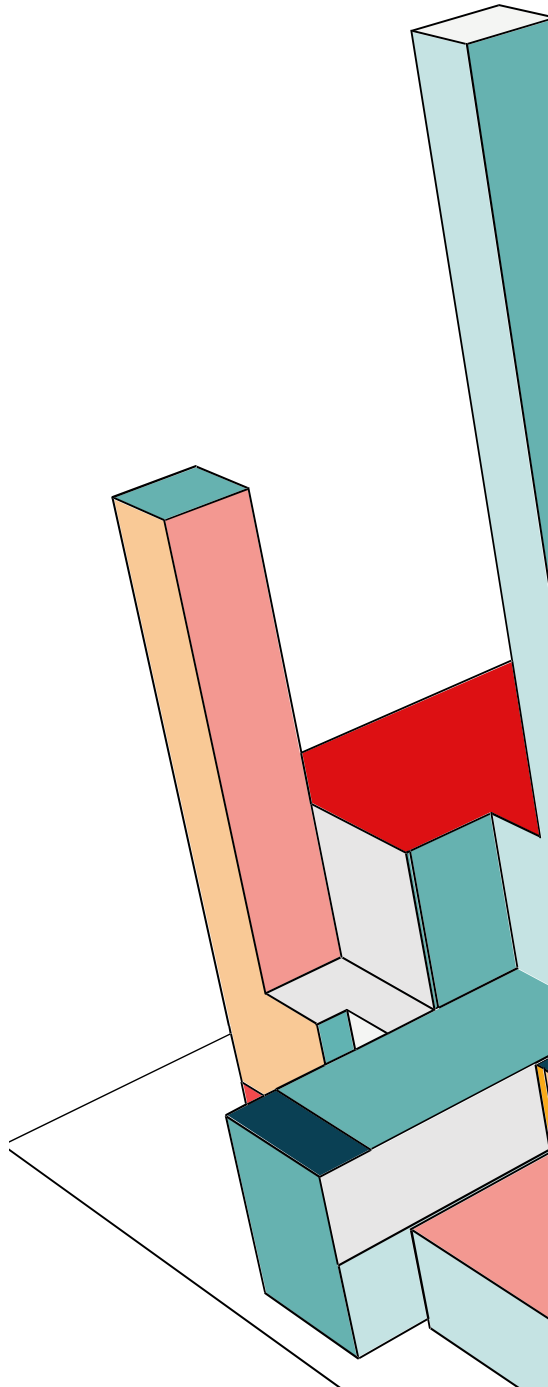
WORK ORDER PROCESS *(VIDEO)*

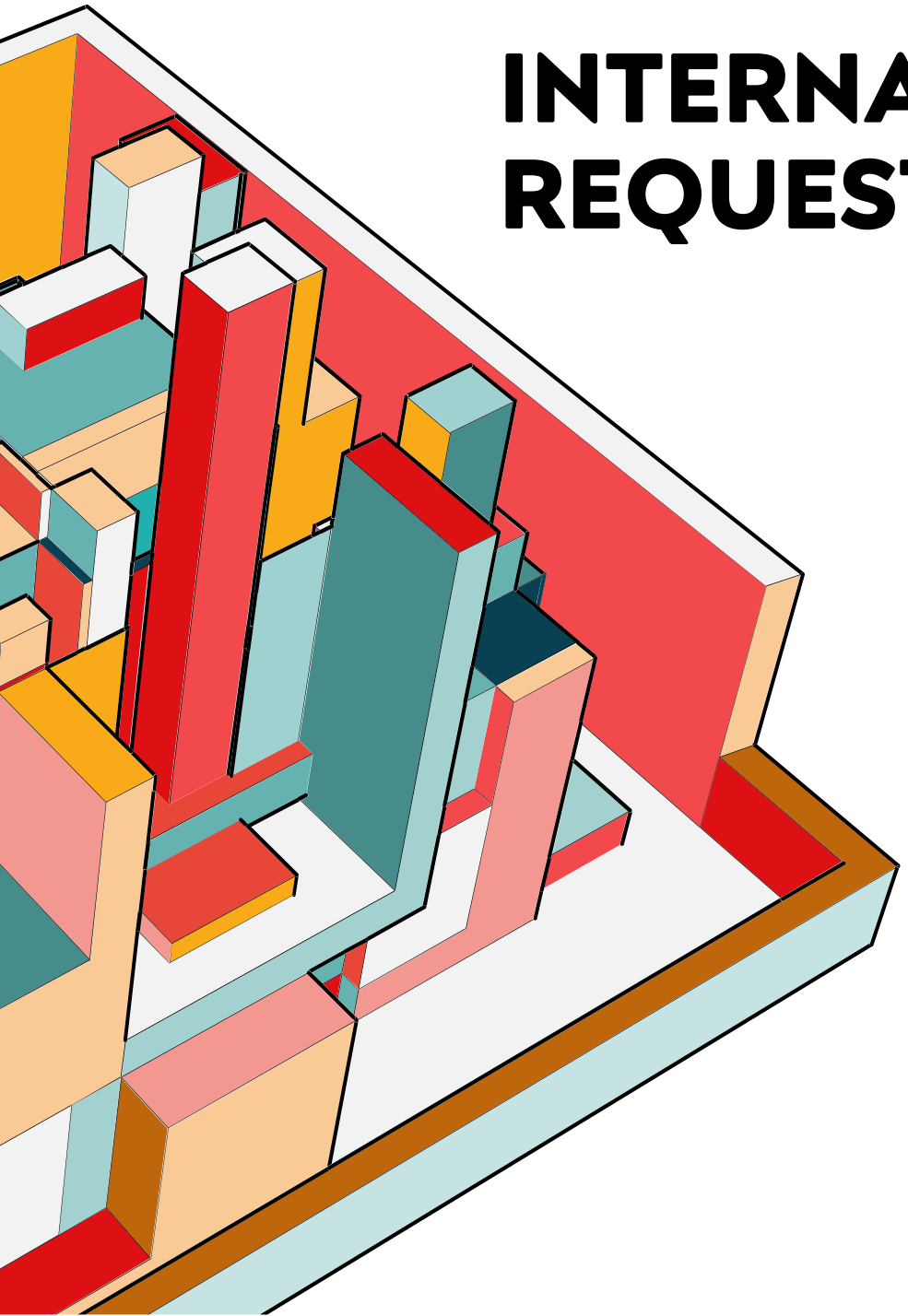


NEW ASSET WORKFLOW

- Several ways new assets are entered into the asset register/GIS
  - Contractor provides information throughout the project
  - Internal asset information request workflow







INTERNAL ASSET INFORMATION REQUEST

Asset Information Request

RIVANNA WATER & SEWER AUTHORITY

Department:

Facility: **Building:** **Room (if applicable):**

Parent ID (if known): **New, Replacement, or Current:**

Asset Type: (Vertical or Horizontal) **Asset Class:** **Asset Name:** (include asset ID if replacement)

PM Required (Y/N): **Frequency:** **Date of First PM:**

PM Type/Work to be Done:

Date Installed: **Hour/Meter Reading:** (at time of form submission)

Manufacturer: **Model:** **Serial Number:**

Cost:

Physical Condition Score: 1 - Very good

1 – Very Good: Excellent physical condition. Operable & well maintained. Asset likely to perform acceptably with routine maintenance for 10+ years. No work required.

2 – Good: Good physical condition and meets current standards. Asset shows minor wear. Deterioration has minimal impact on performance. Minimal short-term failure risk but potential for deterioration or reduced performance in the medium term (5-10 years). Only minor work required, if any.

3 – Moderate/Fair: Fair condition. Functionally sound plant and components but showing some wear with minor failures and some diminished efficiency. Minor components or isolated sections of the asset require replacement or repair, but asset still functions safely at acceptable level of service. Work required but still serviceable.

4 – Poor: Plant and components function but require a high level of maintenance to remain operational. Likely to cause a noticeable deterioration in performance in short-term. No immediate risk to health or safety but work required to ensure asset remains safe. Substantial work required in short-term, asset barely serviceable.

5 – Very Poor: Failed or failure imminent. Asset effective life exceeded, and significant maintenance costs incurred. A high risk of breakdowns with a serious impact on component. No life expectancy. Health and safety hazards exist which present a possible risk to public safety, or asset cannot be serviced/operated without risk to personnel. Major work or replacement.

ON-PLANT VALVE INVENTORY PROGRAM

- Long Standing Off-Site Valve Program
- On-Plant Program Began in March 2024
- Completed in December 2024
- Visited every facility with Water, Wastewater, and Maintenance to confirm all valves are in the Asset Register and GIS/Cityworks
- Added 428 valves to inventory
- Created Preventative Maintenance Work Orders (PMs) for valves
  - Based on manufacturer recommendations and
  - Best practices from Maintenance, Water, and Wastewater

CONDITION ASSESSMENT

Level 1: Desktop

- Completed by Maintenance, Water, Wastewater & Engineering
- On 100% of vertical assets
- Standard scale of 1-5 to define condition score

Level 2: Field

- Completed by Maintenance
- Top 10% of vertical assets* (~715)
  - *Determined using assets with the highest Business Risk Exposure (BRE)
- Asset specific questions to define condition score

1 – Very Good: Excellent physical condition. Operable & well maintained. Asset likely to perform acceptably with routine maintenance for 10+ years. No work required.

2 – Good: Good physical condition and meets current standards. Asset shows minor wear. Deterioration has minimal impact on performance. Minimal short-term failure risk but potential for deterioration or reduced performance in the medium term (5-10 years). Only minor work required, if any.

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Building Roof

Include: Roof Membranes	Access	Built-up	Concrete Deck	Curbs	Eaves
Finishes & Trims	Flashing	Glazed Openings	Guttering and Downsp	Metal Standing Seam	Metal Deck Roofs
Openings	Parapet	Penetrations	Shingle Roof	Single-Ply	Skylights
Slate roofs	Soffit	Tile Roof	Traffic Pads	Ventilation Shafts	Watershedding system components

	Aspect	Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
CONDITION ASSESSMENT							
A	**Roof Structure**	Deterioration	Appears in excellent or as new condition with no visible signs of deterioration.	Minor deterioration evident <10% of asset value required to restore asset to near new condition.	Moderate deterioration. < 30% of asset value required to restore asset to near new condition.	Significant deterioration. < 50% of asset value required to restore asset to near new condition.	Major deterioration of assets performance. Failure likely within near future .
PERFORMANCE ASSESSMENT							
B	**Functionality**	Suitability of the asset to perform its intended function	Asset able to perform its intended current function.	Some minor elements of the asset's function are not able to be provided.	Minor operational difficulties or costs being presented by the loss of function.	Significant operational difficulties or costs presented by the loss of function.	Asset provides very little of its intended function and requires enhancement to correct.
C	**Reliability**	Leakage	No leakage	Small amount of leakage	Moderate amount of leakage occurs	Large amount of leakage occurs	Extensive amount of water gets through roof

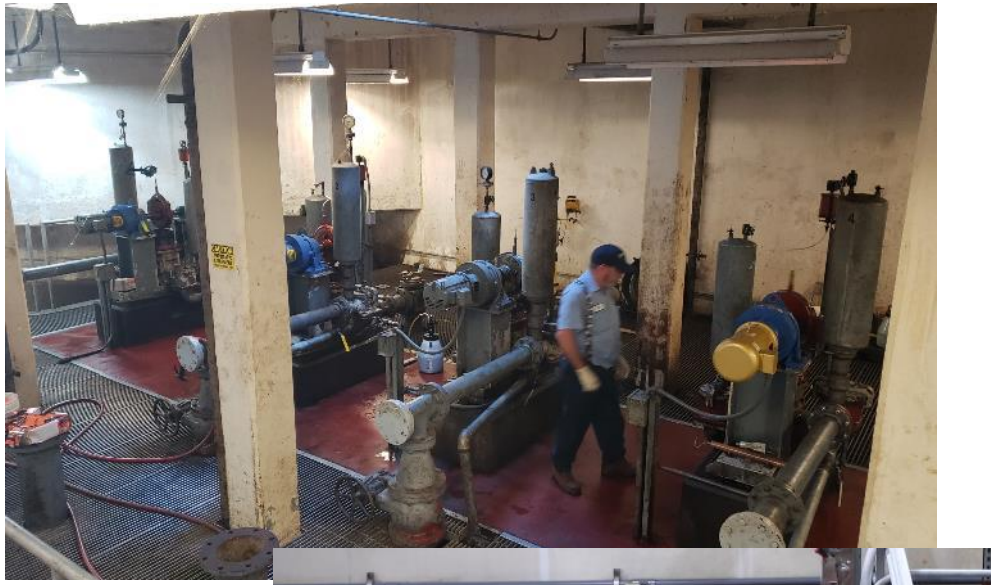
LIFECYCLE

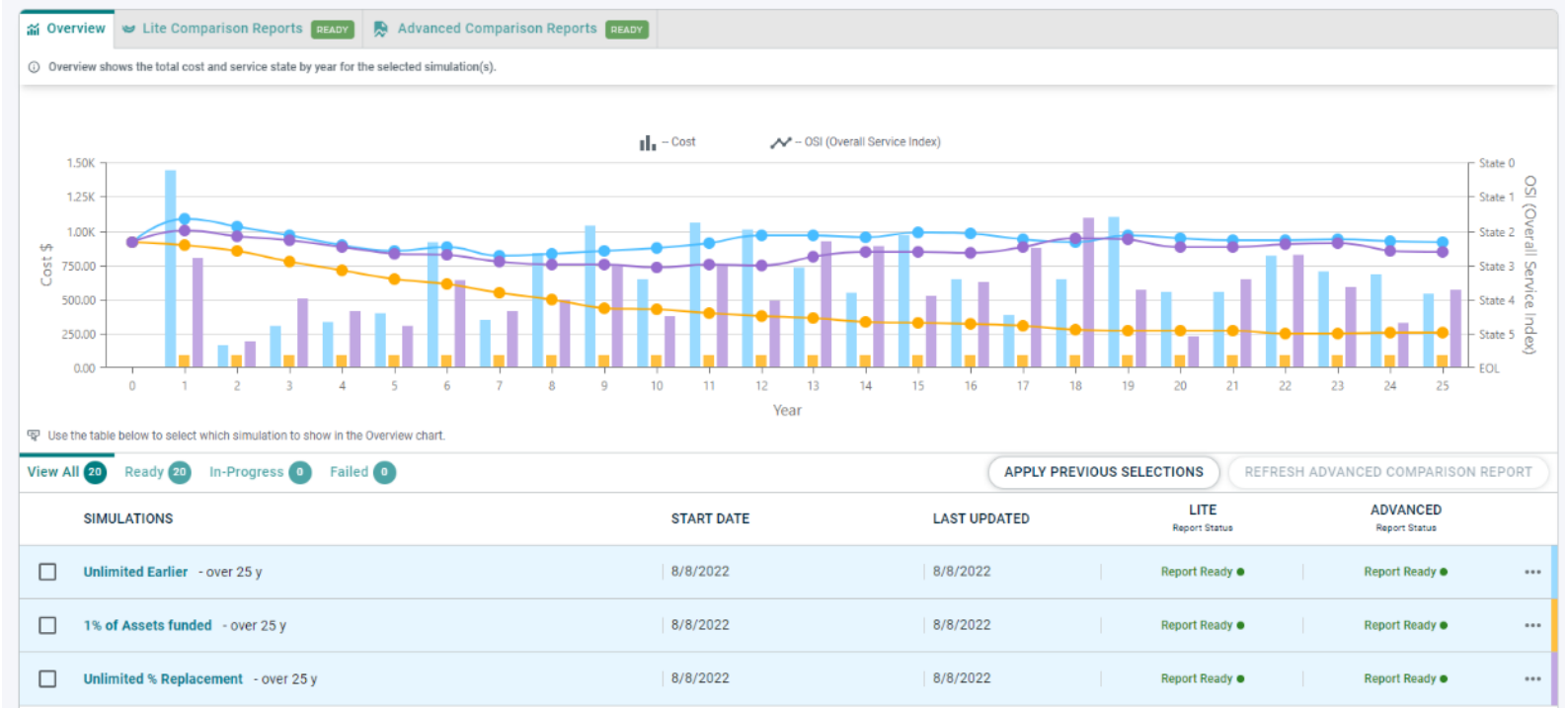
- Lifecycle information will be used as one of the key performance indicator (KPI) to determine asset replacement
- Currently calculated based on Management Strategy Group (MSG), BRE, and Level 1 Desktop Assessment
- Once Level 2 Field Assessments are complete, will provide a holistic approach for replacement determinations to be made based on multiple factors

Asset ID	Asset Name	Install Year	% Life Consumed (Based on Condition)	% Life Consumed (Based on Install Date)
MCAWRRF-PUMP-008	Water Cannon Pump #1	2011	73%	38%
MCAWRRF-PUMP-013	Polymer Pump #4	2011	73%	52%
MCAWRRF-PUMP-016	Ferric Chloride Pump #2	2011	73%	52%
SVWRRF-PUMP-011	UV Recirculation Pump	2011	0%	38%
CZFWPS-PUMP-001	Finish Pump #1	2018	50%	60%
CZFWPS-PUMP-002	Finish Pump #2	2018	50%	60%
CZWTP-PUMP-010	Metering Pump #1	2018	50%	24%
OBWTP-PUMP-014	Intermediate Pump #3	2018	73%	60%
SRWTP-PUMP-021	Intermediate Pump #1	2018	50%	60%
SRWTP-PUMP-023	Intermediate Pump #3	2018	50%	60%

NEXT STEPS

- Level 2 Condition Assessments
- Implementation of DSS Tool
- Continued Refinement of Cityworks Usage & Tools
- RSWA Asset Management in Cityworks





QUESTIONS?

Thank you

Grant Funding Update

Presented to the Boards of Directors

By Annie West, Sustainability and Grants Coordinator

January 28th, 2025

Agenda

01

Capital Project and Operational Grants Overview

02

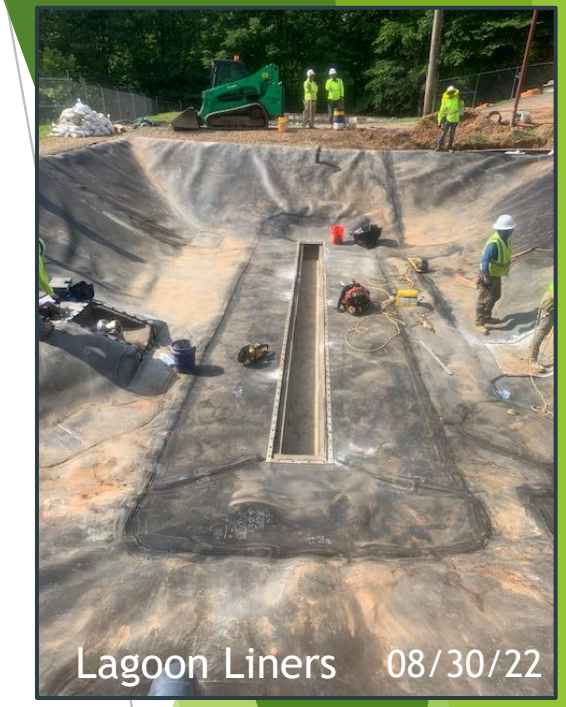
Current Grant Applications Overview

03

Exploring Routes for Funding and Next Steps

Capital Project Grants

Albemarle County	• Red Hill WTP Upgrade and Scottsville Lagoon Liners (2022) • $750,000
FEMA: Building Resilient Infrastructure and Communities (BRIC)	• Flood Protection Resiliency Design and Scoping project (2024) • $198,930
BIL/VDH Emerging Contaminants Funding	• Crozet WTP Granular Activated Carbon Treatment (2022-2025) • $6,240,000
NRCS: Dam Safety and Rehabilitation Program	• Beaver Creek Dam Env. Assessment and Preliminary Design (2023) • $1,020,250


Lagoon Liners 08/30/22

Recent Capital Project Funding

BIL/VDH: Emerging Contaminants Funding

- Crozet WTP Granular Activated Carbon Expansion (2024)
- $1,000,000 for FY25
- Total project funding to $7.2 M

FEMA Hazard Mitigation Grant Program

- Scottsville WW Facility Generator Replacement (2024)
- Disaster 4644: Winter Storm 2022
- $552,258


Crozet GAC Vessels

Total grant funding for Capital Projects: $10,510,283

Operational Grants

VDH Set Asides Grant Program 2020	$14,400 for watershed signage at Totier Creek Reservoir, Beaver Creek Reservoir, and North Fork River Intake
Virginia Risk Sharing Association (VRSA)	Solid Waste: $2,000 Cantilever Gate at Ivy Transfer Station Water & Sewer: $4,640 Safety Vests, Chemical Suits, Gas Monitors
Litter Prevention and Recycling Grants (VDEQ)	Competitive: $13,500 total for FY24 and FY25 Non-Competitive: $52,697

Total grant funding for Operational Projects: $87,237

VRSA Safety Project Photos

Ivy Transfer Station

Cantilever Gate at Ivy Transfer Station

New Safety Equipment

Summary of Existing Grants (2018-2024)

- Grant Applications: 21
- Total $ Requested: >$130,000,000

- **Grants Received: 15**
- **Total $ Awarded: $10,597,475**

- Grants Pending: 2
- Grants not Awarded: 4

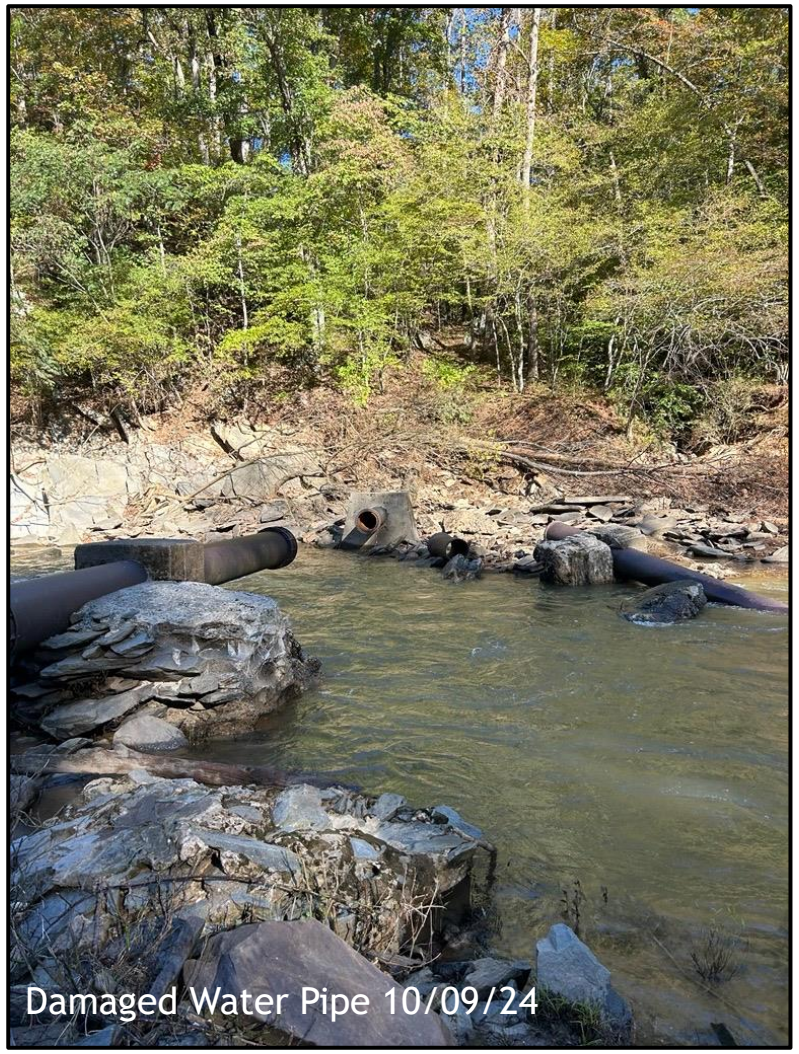
Pending Grants

Congressionally Directed Spending FY24	• South Rivanna WTP- PAC Replacement $880,000
FEMA/ VDEM	• Request for Public Assistance for damage from Hurricane Helene (September 2024) $560,000

Sugar Hollow Raw Water Pipe Break

Mechum's River

RPA for Hurricane Helene



Damaged Water Pipe 10/09/24

Concrete Pier Replacement 12/09/24

Stillhouse Waterline Bank Repair at Ivy Creek

RPA for Hurricane Helene

Streambank Erosion on Ivy Creek

Temporary Pipe and Streambank Stabilization

12/09/24

Exploring Routes of Funding

- Consistent checking in Grants.gov
- Network of State and Federal Grant Agency Staff
- Third-party Grant Consultant
- Federal Declared Disaster Monitoring

What's Next?

Grants for Solar Power installation, Electric Vehicles, and eV Charging Stations

NRCS Funding for Beaver Creek Dam Construction

Re-apply to Annual Grants: VRSA and Litter Prevention and Recycling

FY26 VDH Emerging Contaminants Application

FY24 FEMA’s FMA and BRIC Applications

Questions