



Board of Directors Meeting

January 23, 2024

2:15pm



BOARD OF DIRECTORS

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

DATE: **JANUARY 23, 2024**

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

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

AGENDA

1. CALL TO ORDER

2. AGENDA APPROVAL

3. MINUTES OF PREVIOUS BOARD MEETING ON DECEMBER 12, 2023

4. RECOGNITION

5. EXECUTIVE DIRECTOR'S REPORT

6. ITEMS FROM THE PUBLIC

Matters Not Listed for Public Hearing on the Agenda

7. RESPONSES TO PUBLIC COMMENTS

8. CONSENT AGENDA

a. Staff Report on Finance

b. Staff Report on Operations

c. Staff Report on CIP Projects

d. Staff Report on Administration and Communications

e. Staff Report on Wholesale Metering

f. Staff Report on Drought Monitoring

g. Approval of Engineering Services – Modifications to Reach Additional Pool Level, Ragged Mountain Reservoir – Schnabel Engineering

- h. Approval to Increase Construction Contingency and Amend Capital Improvement Plan – South Rivanna Hydropower Plant Decommissioning Project – English Construction Company, Inc.*
- i. Approval of Engineering Services – North Rivanna Water Treatment Plant Decommissioning – Short Elliott Hendrickson Inc.*

9. OTHER BUSINESS

(Motion and vote to Reconvene the RSWA in a Joint Session with the RWSA)

- a. Presentation: Employee Healthcare and Retirement Benefits Overview
Betsy Nemeth, Director of Administration and Communications*
- b. Presentation: Strategic Plan Update
Betsy Nemeth, Director of Administration and Communications*

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

11. CLOSED MEETING

12. ADJOURNMENT

GUIDELINES FOR PUBLIC COMMENT AT RIVANNA BOARD OF DIRECTORS MEETINGS

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

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

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

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

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

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

Rev. September 7, 2022



RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
December 12, 2023

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, December 12, 2023 at 2:15 p.m. virtually via Zoom.

Board Members Present: Mike Gaffney, Jeff Richardson, Brian Pinkston, Ann Mallek (arrived at 2:35 pm), Gary O'Connell, Lauren Hildebrand.

Board Members Absent: Sam Sanders

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

Attorney(s) Present: Valerie Long.

1. CALL TO ORDER

Mr. Gaffney called the December 12, 2023, regular meeting of the Rivanna Water and Sewer Authority to order at 2:15 p.m.

2. AGENDA APPROVAL

Mr. Pinkston moved that the Board approve the agenda as presented. Mr. Richardson seconded the motion, which passed unanimously. (5-0). (Mr. Sanders and Ms. Mallek were absent.)

3. MINUTES OF PREVIOUS BOARD MEETING ON NOVEMBER 14, 2023

Mr. Pinkston moved that the Board approve the meeting minutes. Mr. O'Connell seconded the motion, which passed unanimously (5-0). (Mr. Sanders and Ms. Mallek were absent.)

4. RECOGNITIONS

There were no recognitions.

5. EXECUTIVE DIRECTOR'S REPORT

Mr. Mawyer stated that it was the fourth year of having all or a few virtual Board meetings. But this would be the last scheduled virtual meeting.

Mr. Pinkston asked if the Board members should state their locations for the purposes of this meeting.

43 Mr. Gaffney stated that would be appropriate.

44 Mr. Pinkston stated that he was located at 575 Alderman Road, Charlottesville, Virginia.

45 Mr. O'Connell stated that he was located at 1720 Yorktown Drive, Charlottesville, Virginia.

46 Mr. Richardson stated that he was located at 401 McIntire Road, Charlottesville, Virginia.

47 Ms. Hildebrand stated that she was located at 305 4th Street NW, Charlottesville, Virginia.

48 Mr. Gaffney stated that he was located at 3180 Dundee Road in Earlysville, Virginia.

49 Ms. Long stated that it would be appropriate to reference the Authority's Remote Participation
50 Program and it being carried out in accordance with the policy adopted by the Authority last
51 year, pursuant to Virginia code authorizing such meetings.

52 Mr. Mawyer stated that as he had previously stated, there were no more virtual meetings
53 scheduled on their agenda. He stated that under their Strategic Plan's priority of Optimization
54 and Resiliency, he was pleased that the Department of Environmental Quality (DEQ) agreed to
55 modify their wastewater permit, eliminating the need for weekend lab testing. He stated that this
56 change would save approximately \$18,000 per year in salary costs as chemists would not be
57 required to work on Saturdays and Sundays.

58 Mr. Mawyer stated that they had urban water permits issued by DEQ and the Army Corps which
59 allowed them to mitigate impacts to wetlands and streams during projects such as the Rivanna to
60 Ragged Pipeline project and the original Ragged Mountain Dam Project. He stated that the Army
61 Corps issued a permit to them in 2008 which was valid for 10 years. He stated that the Corps
62 granted an extension in 2018 extending the permit for another five years to 2023. He stated that
63 recently, the Corps approved a ten-year permit extension to 2033.

64 Mr. Mawyer stated that this extension was intended to cover the Rivanna to Ragged Pipeline
65 project and complete all related work. He stated that the DEQ had issued an original permit in
66 2008, which was valid for 15 years and expired this year. He stated that they applied for a new
67 permit last year, and the DEQ granted them a continuance while the DEQ completed its review.
68 He stated that they anticipated receiving another 15-year permit. He stated that with these
69 extensions and new permits, they hoped to successfully complete all of the projects included in
70 the community's water supply plan.

71 Mr. Mawyer stated that the current water supply data provided in his written report had become
72 outdated due to the recent rainfall over the weekend. He stated that he was pleased to say that all
73 reservoirs were now full, with the exception of Ragged Mountain, which was approximately 200
74 million gallons below capacity. He stated that currently there were 1.2 million gallons stored in
75 Ragged Mountain. He stated that the community consumes about 10 million gallons daily. He
76 stated that the available water in Ragged Mountain would last for roughly 120 days. He stated
77 that this was not an extensive supply, but it was a satisfactory amount. He stated they were
78 pleased to receive the rainfall.

89
90 Mr. Mawyer stated that the updated DEQ drought monitoring chart, similar to the one included
91 in the written report, had also been provided. He stated that the precipitation quadrant for our
92 area was adjusted from being in an “emergency” to a “watch” status. He stated that the previous
93 weekend’s rainfall had reduced drought conditions in our area.

94
95 He stated that over the past 35 months, they had experienced an 18 inch deficit and a 41%
96 shortage in precipitation for calendar year 2023. They were pleased to receive rainfall, but they
97 had not yet exited the drought watch.

98
99 Mr. Mawyer stated that regarding water supply, he wanted to thank Ms. Hildebrand and Mr.
100 Pinkston for their efforts with City Council. He stated that last week, they proposed an
101 amendment to the Ragged Mountain Dam Project Agreement which would allow RWSA to add
102 700 million gallons to Ragged Mountain as soon as possible. He stated that the revised
103 agreement removed some limitations present in the original 2012 agreement, which prohibited
104 adding water until demand reached 85% of the supply. He stated that he was pleased to report
105 that City Council unanimously supported the proposed amendment.

106
107 Mr. Mawyer stated that with approval of the Consent Agenda today and approval by the
108 Albemarle County Service Authority Board of Directors on Thursday, the City and ACSA would
109 be authorized to request the addition of 700 million gallons to Ragged Mountain Reservoir. He
110 stated that this would increase the reservoir’s capacity by 50%, storing an additional 12 feet of
111 water. He stated that the dam was constructed with this expansion in mind, and to achieve this,
112 they must modify the intake tower and close one weir that controls the normal pool level.

113
114 Mr. Mawyer stated that water would flow into the reservoir either from Sugar Hollow when the
115 inflow exceeded 30 million gallons per day or through the new pipeline from South Rivanna to
116 Ragged once it was completed around 2030. He stated that between the two water sources, they
117 would add 700 million gallons, resulting in a 50% increase in the water supply at Ragged
118 Mountain. He stated that this would help secure the community’s water supply for many decades
119 into the future based on growth projections from the City, County, and University.

120
121 Mr. Mawyer stated that he appreciated the help from Ms. Hildebrand, Mr. Sanders, and Mr.
122 Pinkston in obtaining approval from City Council. He stated that moving forward, they would
123 begin designing grading modifications and intake tower changes. He stated that this process
124 would take approximately one year to design and another year to complete. He stated that in
125 about two years, they expected to start adding water to Ragged Mountain and increase the
126 community’s water supply. He stated that this was a significant improvement.

127
128 Mr. Gaffney thanked Mr. Pinkston, Ms. Hildebrand, and Mr. Sanders for their contributions. He
129 asked if the City or Service Authority needed to request Rivanna to move forward with the
130 increase.

131
132 Mr. Mawyer stated that the amendment to the agreement was on today’s Consent Agenda for
133 approval. He also stated that it was scheduled for approval at the Albemarle County Service
134 Authority Board of Directors meeting on Thursday. He stated that following this approval, all

necessary authorizations would be in place to proceed with the project. He stated that the agreement stipulated that either the City or the County could provide Rivanna with a written request to proceed with the project. He stated that they anticipated receiving a letter from Ms. Hildebrand and Mr. O'Connell, requesting RWSA to commence adding the 700 million gallons as soon as possible.

Mr. Pinkston asked if they would be voting on it before ACSA.

Mr. Mawyer stated that he believed it was acceptable.

Ms. Long confirmed that the three-party agreement had no particular sequence that required its implementation.

Mr. Mawyer noted that Ms. Long was the author of the amendment and had collaborated with Mr. O'Connell, Ms. Hildebrand, their attorneys and staff to draft and prepare the document that effectively conveyed their intended purpose.

Mr. Pinkston asked if there were enough Board members present.

Mr. Mawyer confirmed that there were five members present, and a quorum required four members.

Mr. Mawyer stated that last month they visited Roanoke and toured the Western Virginia Water Authority's renewable natural gas facility. He stated that they were collaborating with Ms. Hildebrand and the City to explore the possibility of utilizing methane waste gas from wastewater as an energy source for the community.

Mr. Mawyer stated that this would involve injecting methane into the City's natural gas system, similar to what the Western Virginia Water Authority had done in partnership with the Roanoke Gas Company. He stated that during their visit, they gained valuable insights into WVWA's renewable natural gas system and the challenges they faced while implementing it. He stated that the presentation was informative, and they thanked City staff for accompanying them on the trip.

Mr. Mawyer stated that they also celebrated "Imagine a Day Without Water 2023", an event for school children in the City and County to submit their drawings with the theme of "Tell us how your action saves water." He stated that they had received numerous submissions, and the winners would be selected tomorrow. He stated that the announcement would follow shortly after. He stated that they appreciated the collaboration between the City, ACSA, and their staff on this program.

Mr. Mawyer stated that in addition to community involvement, some staff members participated in the toy lift event, assisting with receiving and distributing toys to families in need during the holiday season. He expressed gratitude to Debra Hoyt, Patricia Defibaugh, and Alisa Cooper for their contributions to the event held earlier this month.

6. ITEMS FROM THE PUBLIC

There were none.

7. RESPONSES TO PUBLIC COMMENTS

There were none.

8. CONSENT AGENDA

a. Staff Report on Finance

b. Staff Report on Operations

c. Staff Report on CIP Projects

d. Staff Report on Administration and Communications

e. Staff Report on Wholesale Metering

f. Staff Report on Drought Monitoring

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

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

Mr. Pinkston moved that the Board approve the Consent Agenda. Mr. O’Connell seconded the motion, which passed unanimously (5-0). (Mr. Sanders and Ms. Mallek were absent.)

9. OTHER BUSINESS

a. Presentation and Vote on Acceptance: FY 23 Audit Report

Matthew McLearen stated that he was with Robinson, Farmer, Cox Associates and would be presenting the audit of financial statements for the fiscal year ending June 30, 2023. He stated that he would speak briefly about the audit, the audit results, and point out a few highlights in the bound audited financial report. He stated that the audit field work was conducted in mid-August, and they had a team of four auditors there for a period of about four days testing records and controls and the timing on the tests that they conducted.

Mr. McLearen stated that there were several required communications between an auditor and those charged with governance, and he would briefly review those. He stated that the communications were also contained in a two-letter document that was displayed on the screen. He stated that he would highlight the key points in this document. He stated that the first point was related to responsibilities under the audit. He stated that both the auditor and the auditee, being the Authority, had responsibilities under the audit process.

Mr. McLearen stated that the auditee was responsible for providing records sufficient for audit purposes and maintaining internal controls, complying with agreements and compliance requirements. He stated that they must ultimately accept responsibility for the financial report.

He stated that the auditor was required to conduct audit tests, test controls, and perform conclusive tests on the financial statements.

Mr. McLearen stated that this letter also discussed accounting estimates, which were commonly used in audited financial statements. He stated that in this case, the Authority had accounting estimates related to the depreciable lives of long-term assets or capital assets and estimates concerning the measurement of net pension and OPEB liabilities. He stated that the letter further described difficulties encountered during the audit process. He noted that it was disclosed that for the fiscal year ending June 30, 2023, no difficulties were encountered in performing the audit or the audit field work.

Mr. McLearen stated that most audits produced audit adjustments. He stated that these adjustments were a normal part of the audit process, with corrected audit adjustments being included in the financial statements. He stated that uncorrected items were not included in the financial statements. He stated that under professional standards, they were required to disclose in detail any uncorrected misstatements. He reported that there were no uncorrected misstatements. He stated that they had no disagreements in applying any accounting principles.

Mr. McLearen stated that one accounting standard was tested and found not to apply to the Authority this year. He stated that they were also required to disclose, under professional standards, their knowledge that management sought consultation from a second audit firm, which was also known as opinion shopping. He stated that they had no knowledge of management seeking a second opinion. He stated that that concluded the letter to those charged with governance.

Mr. McLearen stated that moving on to the actual bound financial report, he mentioned that on the screen, they would see the independent auditor's report. He stated that this was the first of two reports on the audit firm's letterhead, spanning three pages. He stated they had issued an unmodified or clean opinion on the fiscal year ending June 30, 2023 financial statement. He stated that in this document, there was a wealth of detailed information. He stated that there were three summarized financial statements: Exhibit 1, Exhibit 2, and Exhibit 3.

Mr. McLearen asked the Board to review these briefly. He stated that these amounts pertained to the fiscal year ending on June 30, 2023, starting with the Statement of Net Position. He stated that the Statement of Net Position could be found on pages 30 and 31 of the document. He stated that at June 30, 2023, net position was approximately \$173 million.

Mr. McLearen stated that Exhibit 2, the Statement of Revenues, Expenses, and Changes in Net Position, was similar to a profit and loss statement for a for-profit entity. He stated that it reported the increase or decrease in equity or net position. He stated that the change in net position was the third number from the bottom of the statement. He stated that there had been an increase in net position of approximately \$8.2 million for the fiscal year ending on June 30, 2023.

Mr. McLearen stated that Exhibit 3 was the statement of cash flows. He stated that this reported changes strictly in the cash position. He stated that the ending cash position was \$61 million, as

indicated by the double underline halfway down the page. He stated that it reported a decrease in the cash position of approximately \$14.7 million. He stated that one could see the effects of this decrease on that page. He stated that much of this was reported under the addition to capital assets. He stated that cash was extended for capital asset purposes. He stated that this summarized the three financial statements.

Mr. McLearen stated that the final document he would like to present to the Board was the Independent Auditor's Report on Internal Control over Financial Reporting. He stated that in this report, the auditor described any significant deficiencies or material weaknesses in the financial reporting structure or noncompliance with laws. He stated that they confirmed there were no significant deficiencies or material weaknesses in the Authority's financial reporting structure.

Mr. O'Connell moved the Board to accept the Annual Comprehensive Financial Report for Year Ended June 30, 2023 (FY23). Ms. Hildebrand seconded the motion, which passed unanimously (6-0). (Mr. Sanders was absent.)

b. Presentation: Dam Safety Program Overview

Victoria Fort, P.E., Senior Civil Engineer, stated that she managed the engineering department's dam safety program. She stated that she would provide an annual overview of the dam facilities and the program. She stated the agenda included discussing dam safety regulations, how they had incorporated these regulations into the dam safety program, highlighting features of each dam, outlining the emergency planning procedures, and presenting recent and current dam safety projects.

Ms. Fort stated that in the United States, there were approximately 92,000 dams. She stated that about 65% of the dams were privately owned, while the remaining 35% were owned by state, local, or federal governments, or public utilities. She stated the average age of dams in the United States was 61 years, and over 15,000 were high hazard, which meant they would cause loss of life if they were to fail. She stated that 15% of those were estimated to be deficient. She stated that in Virginia, there were over 3,700 dams in the state. She stated that half of the regulated dams had an unknown hazard classification, meaning they did not understand the consequences if they were to fail.

She stated that in Albemarle County, there were approximately 240 dams, with 167 of them being regulated. She stated that there were 20 high-hazard dams and 118 others with unknown hazard potential classification. She stated that Rivanna operated 10 dams, seven of which were regulated.

Ms. Fort stated that since 2018, there had been 39 reported dam incidents in Virginia, five of which resulted in dam failure. She stated that dam failures can lead to catastrophic consequences, such as flooding, loss of life, and severe economic damage.

She stated that the dam owner was responsible for any damages caused by a failure. She stated that one of these incidents occurred in Ivy at the Clover Dam. She stated that in early June 2018, the dam overtopped due to significant rains, causing severe erosion on the downstream side. She stated that they were currently seeking a consultant and would face substantial repair costs. She

313 stated that record reservoir levels were observed at the South Rivanna Dam during the same
314 storm in late May to June of 2018. She stated that the South Rivanna Dam was designed for that
315 level of storm, and it did not sustain any significant damage.

316
317 Ms. Fort stated that in Virginia, the regulatory body for dam safety was the Virginia Department
318 of Conservation and Recreation (DCR), which ensured proper and safe design, construction,
319 operation, and maintenance of Virginia's dams to protect public safety. She stated that every dam
320 in Virginia was subject to these regulations unless they fell under one of three categories: they
321 were either under a certain size, had a specific height limit, or had a certain volume of water
322 impounded behind the dam. She stated that any dams owned or licensed by the federal
323 government were exempted.

324
325 She stated that the South Rivanna Dam was currently licensed by FERC and thus exempt from
326 state regulations. She stated that the last exception included dams operated for mining,
327 agricultural, or canal purposes. She stated that locally, several dams were exempted for
328 agricultural purposes, which meant the state did not have oversight over those facilities.

329
330 Ms. Fort stated that the program encompassed various aspects and required significant
331 involvement from staff members to maintain its functionality. She stated that a substantial part of
332 the program involved permitting and regulatory compliance. She stated Emergency Action Plans
333 were maintained, updated, and trained on. She stated that extensive time and effort were
334 dedicated to facility maintenance and vegetation control. She stated that regular repairs and
335 upgrades were conducted to ensure optimal performance.

336
337 She stated that public safety and outreach were critical components of the program. She stated
338 that compliance with state and federal regulations was achieved through regular reports, studies,
339 and inspections by various departments, and necessary surveys. She stated that constant
340 monitoring was carried out via SCADA systems or on-site personnel. She stated that the
341 facilities were primarily operated for water supply purposes.

342
343 Ms. Fort stated there were four dams classified as high hazard: South Rivanna, Ragged
344 Mountain, Sugar Hollow, and Beaver Creek. She stated they had three low hazard dams: Totier
345 Creek Dam in Scottsville, Lickinghole Creek Dam in Crozet, and the Buck Mountain Property
346 Dam in Free Union. She stated that the last three were unregulated facilities, which included the
347 North Fork Rivanna Low Head Dam, Mechums River Low Head Dam, and Ivy MUC pond dam
348 owned by RSWA.

349
350 Ms. Fort stated that the South Fork Rivanna Dam, a FERC-regulated dam, was built in 1965, and
351 a small hydropower facility was added in 1987, which was why it was regulated by FERC. She
352 stated the decommissioning process was ongoing, and hopefully, by next year, they would fall
353 back under state regulations. She stated it was located on the South Fork of the Rivanna River,
354 and it served as the intake for the South Rivanna Water Treatment Plant. She stated the structure
355 was a concrete gravity dam, measuring 700 feet in length and 54 feet in height.

356
357 Ms. Fort stated the Ragged Mountain Dam was a state-regulated dam constructed between 2012
358 and 2014. She stated it replaced historical dams from 1885 and 1908, and it was an earth fill

embankment dam, spanning 785 feet in length and reaching 125 feet in height. She stated that this was the largest earthen dam they managed. She stated that it was designed to accommodate an extra 12 feet of normal pool, providing an additional 700 million gallons of storage. She stated the dam supplied water to the Observatory Water Treatment Plant.

Ms. Fort stated that Sugar Hollow Dam, another state-regulated dam, was built in 1948 and upgraded in 1998 with a rubber crest gate across the dam's crest. She stated that the crest gate was replaced in 2021, and it was expected to have a service life of approximately 20 years. She stated it is a concrete gravity dam, measuring 480 feet in length and 96 feet in height. She stated that a pipe ran from the Sugar Hollow Dam to fill the Ragged Mountain Reservoir.

Ms. Fort stated that the Beaver Creek Dam was a state-regulated structure built in 1963 for water supply and flood control purposes. She stated that it was constructed through a Natural Resources Conservation Service program. She stated the dam was an earth fill embankment dam, measuring 530 feet in length and 60 feet in height. She stated that it served as a County park in Crozet, attracting numerous visitors daily. She stated that a state road, Brown's Gap Turnpike, ran along the crest of the dam. She stated that the spillway was undersized to meet current dam safety regulations. She stated the design of an upgraded spillway was currently underway and was being funded entirely by NRCS, a division of the USDA.

Ms. Fort stated that Totier Creek Dam was an earth fill dam built in 1971, measuring 277 feet long and 35 feet tall. She stated that it also served as a County park in Scottsville. She stated that the Totier Creek Reservoir provided water for the Scottsville water treatment plant. She stated that the Lickinghole Creek Dam was a state-regulated dam located south of the Beaver Creek Reservoir, and it was built in 1995. She stated that it was a concrete gravity dam that did not serve a water supply function but caught sediment to prevent it from entering the South Fork Reservoir drainage basin. She stated that it was 458 feet long and 32 feet tall.

Ms. Fort stated the Buck Mountain Dam was a small embankment dam constructed in the early 1980s and then acquired a few years later by Rivanna as part of the Buck Mountain property purchase. She stated that it did not have a water supply function. She stated it was an earth fill dam, and it measured 190 feet in length and 33.5 feet in height. She stated that recent studies had revealed that its primary spillway conduit had reached the end of its useful life. She stated the dam would require repair or removal, or other options may be considered in the coming years.

Ms. Fort stated there were three facilities that were unregulated due to their size. She stated the North Rivanna Low Head Dam was a small low head intake that served the North Rivanna Water Treatment Plant. She stated that the plant was scheduled for decommissioning in the next couple of years. She stated that the dam decommissioning was included as part of the project. She stated the Mechums River Low Head Dam was no longer in service and was scheduled for removal. She stated that the Ivy MUC pond dam served a fire safety water storage purpose. She stated that it had recently been lowered to fall below regulatory height thresholds. She stated that minor modifications were planned to accommodate a dry hydrant.

Ms. Fort stated that planning for dam emergencies began with good design and construction, followed by maintenance and prevention. She stated that although they were low probability

events, dam emergencies had high potential impacts; thus, dams were designed with a high level of conservatism to minimize failure risks. She stated some factors contributing to dam emergencies and failures included excessive rainfall beyond a dam's design capacity, which was the most common cause of dam failure. She stated other potential causes were material failure or construction issues, vandalism or terrorism, accidents, or public safety events at the dam site.

Ms. Fort stated that when discussing a dam's hazard potential classification, it referred to the severity of consequences resulting from the dam's failure or misoperation. She stated that this classification did not reflect the dam's condition but rather dictated its design criteria. She stated that a high-hazard potential dam indicated that failure would likely result in loss of life and severe economic damage.

She stated that a significant hazard potential dam suggested possible loss of life and appreciable economic damage upon failure. She stated that a low hazard potential dam implied no expected loss of life or significant economic damage from the dam's failure. She stated that the higher the hazard potential classification, the more stringent the design requirements for the dam, including its ability to withstand larger storms and greater amounts of rainfall.

Ms. Fort stated that the probable maximum precipitation (PMP) referred to the highest possible amount of precipitation that could occur within a specific drainage basin. She stated it represented the most rainfall in a particular area over a given time period. She stated that each drainage basin had its own unique PMP value; for instance, at Sugar Hollow, it was approximately 34 inches of rain within 24 hours, while in the South Fork Rivanna Reservoir, the figure was around 25 inches of rainfall during the same timeframe.

Ms. Fort stated that in Virginia, high-hazard potential dams must be designed to withstand and accommodate at least 90% of the probable maximum flood, which was the flood resulting from PMP precipitation levels. She stated that Rivanna, however, required its high-hazard dams to handle 100% of the PMP. She stated that they had built in an extra level of conservatism to account for potential future changes in regulations and rainfall patterns.

Ms. Fort stated that a two-year storm would produce approximately 3.68 inches of rain over a 24-hour period, while a 100-year storm would yield just over nine inches of rain in 24 hours.

She stated that a PMP was significantly more extreme, with 34 inches of rain in 24 hours. She stated that Hurricane Camille brought over 27 inches of rain overnight to Nelson County in 1969 – equivalent to about 81% of a PMP rainfall event. She stated that similarly in Madison County in 1995, 25 to 30 inches of rain was recorded within 16 hours, which amounted to approximately 86% of a PMP.

Ms. Fort stated that a significant aspect of their dam safety program involves preparing for emergencies at their dams. She stated this included the dam safety program as well as internal development, maintenance, distribution, and training of Emergency Action Plans (EAPs). She stated that public safety and outreach was crucial, as dam safety is a shared responsibility. She stated their ability to communicate hazards to downstream property owners and businesses helps them respond effectively during emergencies. She stated that this included posting signs, sharing

451 alerts, issuing downstream notifications, and engaging in outreach opportunities.

452
453 Ms. Fort stated that dam Emergency Action Plans were required for all high-hazard dams in
454 Virginia. She stated these plans outlined pre-planned actions to minimize or alleviate emergency
455 conditions at a dam during an emergency. She stated that they contained procedures and
456 information on issuing early warning notifications, which aimed to minimize or prevent loss of
457 life and property damage during an emergency event. She stated it outlined the necessary
458 coordination between VDEM, the local Emergency Communications Center, local police, fire
459 rescue, VDOT, the media, local government, and others.

460
461 Ms. Fort stated that the four high-hazard Emergency Action Plans were updated annually. She
462 stated that the EAP outlined the responsibilities of the Authority and the community during an
463 emergency. She stated that the Authority's duties included verifying and assessing emergency
464 conditions at the dam, notifying participating emergency management agencies, taking available
465 or possible corrective action at the facility, issuing condition status reports, and terminating the
466 emergency once it had ended.

467
468 Ms. Fort stated that in turn, external agencies such as the Emergency Communications Center,
469 associated fire rescue police, County, and City governments also had their respective roles to
470 play in managing emergencies. She stated that they were responsible for receiving condition
471 status reports from Rivanna and making notifications to the public. She stated that they
472 coordinate and conduct evacuations from inundation areas if necessary, provide mutual aid, and
473 declare local emergencies, which can bring additional resources to the area.

474
475 Ms. Fort stated that EAPs offered descriptions of different emergency scenarios and stages. She
476 stated that by assessing the stage of the emergency, appropriate actions can be taken. She stated
477 the first condition was a non-failure emergency or Stage One, which meant that extreme rainfall
478 had occurred, and facilities were being monitored closely. She stated that Stage Two indicated
479 that a potential failure situation was developing. She stated this may involve continued rainfall,
480 potential risks of the dam overtopping and failing, or accelerating seepage in the dam.

481
482 She stated that Stage Three signified that failure was imminent or had occurred. She stated it
483 meant the dam was either actively failing or was expected to fail imminently.

484
485 Ms. Fort stated that dam breach inundation maps came with every copy of the EAP and
486 illustrated various failure scenarios and which areas downstream of the dam would be inundated
487 or flooded. She stated the maps also highlighted impacted structures and called out roadways and
488 bridges that would be affected, including the time of arrival of the initial flood wave, peak flood,
489 and expected flood height.

490
491 Ms. Fort stated the South Fork Rivanna Dam hydropower facility was currently being
492 decommissioned, and it was expected to be completed next year. She stated they were installing
493 a reservoir-level monitoring station at the Lickinghole Creek Dam, which was the only one of
494 their dams without a level sensor. She stated that they anticipated this installation to be finished
495 in the next couple of months. She stated that the Beaver Creek Dam spillway upgrades were in
496 planning and design, and it was expected to be ready for bidding in approximately 20 months.

Ms. Fort stated that they were working on a dam concrete and steel repair project, which was a long-term maintenance project at several facilities. She stated that she was reviewing public safety plans and signage design at multiple locations. She stated the Buck Mountain Dam would require remediation. She stated that they always had annual maintenance, permitting, and other activities taking place. She stated that monthly tree and brush clearing occurred alongside these activities.

Ms. Fort stated they conducted seasonal or biennial clearing of brush and stream channels to maintain clearance from obstructions. She stated their water and maintenance departments were responsible for ongoing instrumentation, maintenance, and calibration. She stated that in the upcoming year, they planned to hold an EAP tabletop exercise in collaboration with local emergency management agencies, emergency services personnel, fire rescue, and other relevant organizations. She stated the event would involve regulators such as DCR staff, VDEM representatives, and Rivanna personnel. She stated participants would gather in a room to practice responding to a scenario using the EAP actions as guidance, assessing their performance.

Mr. Pinkston asked how they performed inspections at the South Fork Dam on the upstream side. He asked if they performed dive inspections.

Ms. Fort stated that they did not conduct dive inspections at that facility unless they were examining specific features. She stated that in the past, divers had entered to inspect gates on the upstream side. She stated that whenever the dam stopped spilling, as it did during the summer, they typically attempted to survey the monuments across the crest to determine if there had been any movement since the previous assessment. She stated they also obtained detailed photographs of various dam features to identify whether cracks had widened or if new seeps had emerged that were not noticed in prior inspections.

Ms. Fort stated that personnel from FERC conducted a thorough inspection of the facilities annually, assisted by their staff. She stated they examined various aspects of the dam, including its abutments, seepage adjustment, and concrete condition. She stated they assessed the hydropower facility, vegetation management, and other relevant features.

10. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

Mr. Pinkston stated that he had examined the financial report and found it to contain a lot of information. He stated that an interesting aspect was observing the detailed calculations regarding their pension liabilities, which he was glad they were conducting. He stated that he had learned that the City had decided to manage its own retirement, which he found intriguing. He asked if the Board had ever received a presentation regarding its funding position in VRS.

Mr. Mawyer stated that they had not conducted a presentation. He stated that they were part of the VRS system, and according to his understanding, VRS provided a report to the General Assembly periodically detailing their level of funding for the VRS program. He stated there was a substantial number of localities, authorities, and even cities that were members of VRS. He stated he had conducted a Google search to determine who participated in VRS, and the list was

543 quite extensive.
544

545 Mr. Mawyer stated that VRS informed them annually about their premium and the percentage
546 increase in their contribution. He stated that Rivanna, along with each employee, contributed to
547 VRS. He stated that the rates for organizations were set each year based on their funding status.
548

549 Mr. Richardson stated that he wanted to request that the minutes indicate Ms. Mallek's arrival at
550 the meeting. He stated that Ms. Mallek had just concluded another meeting on behalf of the
551 County and then joined this meeting after attendance had been taken. He stated he wanted to
552 ensure that the record demonstrated her participation in the meeting.
553

554 Ms. Mallek stated that she arrived at approximately 2:35 PM.
555

556 ***11. CLOSED MEETING***

557 There was no reason for a closed meeting.
558

559 ***12. ADJOURNMENT***

560 **At 3:12 p.m., Ms. Mallek moved to adjourn the meeting of the Rivanna Water and Sewer**
561 **Authority. Mr. Richardson seconded the motion, which passed unanimously (6-0). (Mr.**
562 **Sanders was absent.)**
563
564



MEMORANDUM

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

FROM: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: EXECUTIVE DIRECTOR'S REPORT

DATE: JANUARY 23, 2024

STRATEGIC PLAN PRIORITY: EMPLOYEE DEVELOPMENT

New Team Members and Positions

We were pleased to recently hire:

- Leah Beard - Human Resources Manager, Administration & Communications Division

And to promote:

- George Cheape - from Engineering Inspector to Safety Manager, Administration & Communications Division

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

- Daniel Hunter, Wastewater Operator – Class 2
- Schuyler Deal, Wastewater Operator - Class 3
- Seth Marshall, Water Operator - Class 1

Holiday Team Building Event

Staff enjoyed a Holiday celebration in December with boxed lunches and an opportunity to connect with co-workers. Some staff attended the luncheon in the Administrative Building conference room and other departments had lunches delivered to their site.



STRATEGIC PLAN PRIORITY: OPTIMIZATION AND RESILIENCY

Water Fluoridation Quality Awards

The Virginia Department of Health, Office of Drinking Water recently recognized our “efforts to provide the best quality water possible to your consumers” with the 2022 Water Fluoridation Quality Award for the Crozet, North Rivanna, Observatory, and Scottsville Water Treatment Plants. These certificates are awarded annually to systems that meet the following criteria:

- Average fluoride reading for all months during 2022 must be between 0.60 and 1.00
- Days checked each month must be equal to or greater than 75%
- Outliers (points below 0.60 or above 1.00) must be less than or equal to 20%
- The split sample readings should be within 0.20 of each other

STRATEGIC PLAN PRIORITY: PLANNING AND INFRASTRUCTURE

Water Supply Planning

The State Water Control Board recently proposed an amendment to its regulations to require Albemarle, Charlottesville and Scottsville to coordinate with Greene, Buckingham, Fluvanna and Louisa Counties to develop a Regional Water Supply Plan. There will be a final public comment period on the proposal followed by an Executive Review of the amendments (no schedule available yet). Once it is final, DEQ staff will reach out to the newly formed regions to work on the next round of Water Supply Plans. RWSA collaborated with the City, County, ACSA, and the Town of Scottsville on the last Water Supply Plan in 2018.

Budget Schedule

Our process for consideration and approval of the FY 2025 – 2029 CIP and FY 2024 – 2025 Budget include:

December 19, 2023	Meeting with the Board’s Subcommittee, ACSA and City representatives, to present the proposed CIP
February 20, 2024	Meeting with the Board’s Subcommittee, ACSA and City representatives, to present the proposed Budget
February 27, 2024	Presentation of the proposed FY 2025 – 2029 CIP to the Board
March 26, 2024	Presentation of the proposed FY 2024 - 2025 Budget to the Board
May 28, 2024	Public Hearing and approval of the FY 2025 – 2029 CIP and FY 2025 Budget by the Board

STRATEGIC PLAN PRIORITY: ENVIRONMENTAL STEWARDSHIP

Drought Monitoring

Our area was 14.66 inches, or 35%, below normal precipitation in 2023, and 20.5 inches, or 16%, below normal over the last three years.

Charlottesville Precipitation					
Year	Month	Observed (in.)	Normal (in.)	Departure (in.)	Comparison to Normal (%)
2021	Jan - Dec	33.82	41.61	-7.79	-19
2022	Jan - Dec	43.53	41.61	+1.92	+5
2023	Jan - Dec	26.95	41.61	-15.98	-35

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

With recent precipitation, our reservoirs are 100% full except for Ragged Mtn, which is 94% full.

STRATEGIC PLAN PRIORITY: COMMUNICATION AND COLLABORATION

Quarterly Updates

Quarterly update reports were provided to City Council and the Albemarle Board of Supervisors this month.

Imagine a Day Without Water 2023

Congratulations to the winners of the 9th annual “Imagine a Day Without Water Art Contest” sponsored by RWSA, along with the City and ACSA.





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 2024

DATE: JANUARY 23, 2024

Financial Snapshot

The Authority has an overall net surplus of \$605,700 for the first five months of this fiscal year due to operating rate revenue being above average and the receipt of the annual receipt of septage receiving support from the County. Total revenues are \$1,029,200 over budget estimates and total expenses are \$423,500 over budget. Urban Water flows and operations rate revenue are 8% above budget estimates, and Urban Wastewater flows and operations rate revenue are 2% over budget. Revenues and expenses are summarized in the table below:

	Urban Water	Urban Wastewater	Total Other Rate Centers	Total Authority
Operations				
Revenues	\$ 4,628,500	\$ 4,565,254	\$ 1,186,662	\$ 10,380,416
Expenses	(4,354,471)	(4,445,805)	(1,151,597)	(9,951,873)
Surplus (deficit)	<u>\$ 274,029</u>	<u>\$ 119,449</u>	<u>\$ 35,065</u>	<u>\$ 428,543</u>
Debt Service				
Revenues	\$ 4,653,897	\$ 4,405,167	\$ 1,129,233	\$ 10,188,297
Expenses	(4,604,395)	(4,287,194)	(1,119,544)	(10,011,133)
Surplus (deficit)	<u>\$ 49,502</u>	<u>\$ 117,973</u>	<u>\$ 9,689</u>	<u>\$ 177,164</u>
Total				
Revenues	\$ 9,282,397	\$ 8,970,421	\$ 2,315,895	\$ 20,568,713
Expenses	(8,958,866)	(8,732,999)	(2,271,141)	(19,963,006)
Surplus (deficit)	<u>\$ 323,531</u>	<u>\$ 237,422</u>	<u>\$ 44,754</u>	<u>\$ 605,707</u>

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

Detailed Financials

The Authority's total operating revenues through November are \$545,000 over the prorated annual budget estimates, and operating expenses are over budget by \$116,400 resulting in a net operating surplus of \$428,500. The following comments explain most of the other budget vs. actual variances.

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

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

Consolidated
Revenues and Expenses Summary

<i>Budget</i>	<i>Budget</i>	<i>Actual</i>	<i>Budget</i>	<i>Variance</i>
<i>FY 2024</i>	<i>Year-to-Date</i>	<i>Year-to-Date</i>	<i>vs. Actual</i>	<i>Percentage</i>

Operating Budget vs. Actual

Notes

Revenues

Operations Rate Revenue	\$	22,727,003	\$	9,469,585	\$	9,879,266	\$	409,681	4.33%
Lease Revenue		124,000		51,667		58,404		6,737	13.04%
Admin., Maint. & Engineering Revenue		781,000		325,417		333,941		8,524	2.62%
Other Revenues		647,267		269,695		332,526		62,831	23.30%
Use of Reserves (Water Resources Fund)		80,000		33,333		49,200		15,867	47.60%
Interest Allocation		47,250		19,688		61,021		41,334	209.95%
Total Operating Revenues	\$	24,406,520	\$	10,169,383	\$	10,714,357	\$	544,974	5.36%

Expenses

Personnel Cost	B	\$	11,625,091	\$	4,843,788	\$	4,889,260	\$	(45,471)	-0.94%
Professional Services			467,850		194,938		150,083		44,854	23.01%
Other Services & Charges	A, C		3,479,955		1,449,981		1,777,682		(327,701)	-22.60%
Communications	E		221,440		92,267		109,287		(17,020)	-18.45%
Information Technology			1,269,575		528,990		456,477		72,512	13.71%
Supplies			46,300		19,292		20,562		(1,271)	-6.59%
Operations & Maintenance	A		6,035,808		2,514,920		2,373,187		141,733	5.64%
Equipment Purchases	D		345,500		143,958		128,025		15,934	11.07%
Depreciation			915,000		381,250		381,250		-	0.00%
Total Operating Expenses		\$	24,406,519	\$	10,169,383	\$	10,285,813	\$	(116,430)	-1.14%
Operating Surplus/(Deficit)		\$	1	\$	0	\$	428,544			

Debt Service Budget vs. Actual

Revenues

Debt Service Rate Revenue	\$	22,119,060	\$	9,216,275	\$	9,216,280	\$	5	0.00%
Septage Receiving Support - County		109,440		45,600		109,440		63,840	140.00%
Buck Mountain Lease Revenue		1,600		667		1,884		1,217	182.53%
Trust Fund Interest		179,830		74,929		187,036		112,107	149.62%
Reserve Fund Interest		879,900		366,625		673,656		307,031	83.75%
Total Debt Service Revenues	\$	23,289,830	\$	9,704,096	\$	10,188,296	\$	484,200	4.99%

Debt Service Costs

Total Principal & Interest	\$	16,168,944	\$	6,737,060	\$	6,737,060	\$	-	0.00%
Reserve Additions-Interest		879,900		366,625		673,656		(307,031)	-83.75%
Debt Service Ratio Charge		725,000		302,083		302,083		-	0.00%
Reserve Additions-CIP Growth		5,516,000		2,298,333		2,298,333		-	0.00%
Total Debt Service Costs	\$	23,289,844	\$	9,704,102	\$	10,011,133	\$	(307,031)	-3.16%
Debt Service Surplus/(Deficit)	\$	(14)	\$	(6)	\$	177,163			

Summary

Total Revenues	\$	47,696,350	\$	19,873,479	\$	20,902,653	\$	1,029,174	5.18%
Total Expenses		47,696,363		19,873,485		20,296,946		(423,461)	-2.13%
Surplus/(Deficit)	\$	(13)	\$	(6)	\$	605,707			

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Urban Water Rate Center
Revenues and Expenses Summary

Budget FY 2024	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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Operating Budget vs. Actual

		Notes								
Revenues										
Operations Rate Revenue		\$	10,021,362	\$	4,175,568	\$	4,508,508	\$	332,940	7.97%
Lease Revenue			94,000		39,167		44,736		5,570	14.22%
Miscellaneous			-		-		-		-	
Use of Reserves (Water Resources Fund)			80,000		33,333		49,200		15,867	47.60%
Interest Allocation			34,200		14,250		26,056		11,806	82.85%
Total Operating Revenues		\$	10,229,562	\$	4,262,318	\$	4,628,500	\$	366,183	8.59%
Expenses										
Personnel Cost	B	\$	2,384,332	\$	993,472	\$	1,055,552	\$	(62,081)	-6.25%
Professional Services			178,500		74,375		62,557		11,818	15.89%
Other Services & Charges	A, C		769,233		320,514		460,453		(139,939)	-43.66%
Communications			103,200		43,000		40,054		2,946	6.85%
Information Technology	A		127,650		53,188		65,171		(11,983)	-22.53%
Supplies			7,000		2,917		7,456		(4,539)	-155.63%
Operations & Maintenance	A		2,905,068		1,210,445		1,169,422		41,023	3.39%
Equipment Purchases	D		20,100		8,375		18,856		(10,481)	-125.14%
Depreciation			300,000		125,000		125,000		-	0.00%
Subtotal Before Allocations		\$	6,795,083	\$	2,831,285	\$	3,004,521	\$	(173,236)	-6.12%
Allocation of Support Departments			3,434,478		1,431,033		1,349,950		81,082	5.67%
Total Operating Expenses		\$	10,229,561	\$	4,262,317	\$	4,354,471	\$	(92,154)	-2.16%
Operating Surplus/(Deficit)		\$	1	\$	0	\$	274,029			

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		\$ 10,193,779	\$ 4,247,408	\$ 4,247,410	\$ 2	0.00%
Trust Fund Interest		77,500	32,292	80,575	48,283	149.52%
Reserve Fund Interest		423,100	176,292	324,029	147,737	83.80%
Lease Revenue		1,600	667	1,884	1,217	182.53%
Total Debt Service Revenues		\$ 10,695,979	\$ 4,456,658	\$ 4,653,897	\$ 197,239	4.43%
Debt Service Costs						
Total Principal & Interest		\$ 6,964,779	\$ 2,901,991	\$ 2,901,991	\$ -	0.00%
Reserve Additions-Interest		423,100	176,292	324,029	(147,737)	-83.80%
Debt Service Ratio Charge		400,000	166,667	166,667	-	0.00%
Est. New Debt Service - CIP Growth		2,908,100	1,211,708	1,211,708	-	0.00%
Total Debt Service Costs		\$ 10,695,979	\$ 4,456,658	\$ 4,604,395	\$ (147,737)	-3.31%
Debt Service Surplus/(Deficit)		\$ -	\$ -	\$ 49,502		

Rate Center Summary

Total Revenues	\$ 20,925,541	\$ 8,718,975	\$ 9,282,397	\$ 563,422	6.46%
Total Expenses	20,925,540	8,718,975	8,958,866	(239,891)	-2.75%
Surplus/(Deficit)	\$ 1	\$ 0	\$ 323,531		
Costs per 1000 Gallons	\$ 3.01		\$ 2.85		
Operating and DS	\$ 6.16		\$ 5.86		
Thousand Gallons Treated	3,397,700	1,415,708	1,528,827	113,119	7.99%
or					
Flow (MGD)	9.309		9.992		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Crozet Water Rate Center
Revenues and Expenses Summary

<i>Budget FY 2024</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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Operating Budget vs. Actual

Notes

Revenues

Operations Rate Revenue	\$ 1,234,752	\$ 514,480	\$ 514,480	\$ -	0.00%
Lease Revenues	30,000	12,500	13,667	1,167	9.34%
Interest Allocation	4,600	1,917	3,478	1,562	81.47%
Total Operating Revenues	\$ 1,269,352	\$ 528,897	\$ 531,626	\$ 2,729	0.52%

Expenses

Personnel Cost	\$ 341,691	\$ 142,371	\$ 148,079	\$ (5,708)	-4.01%
Professional Services	22,900	9,542	-	9,542	100.00%
Other Services & Charges	133,426	55,594	82,583	(26,988)	-48.55%
Communications	17,600	7,333	7,083	250	3.41%
Information Technology	32,400	13,500	5,513	7,987	59.16%
Supplies	1,500	625	738	(113)	-18.13%
Operations & Maintenance	335,700	139,875	135,726	4,149	2.97%
Equipment Purchases	3,200	1,333	1,333	(0)	0.00%
Depreciation	60,000	25,000	25,000	-	0.00%
Subtotal Before Allocations	\$ 948,417	\$ 395,174	\$ 406,056	\$ (10,882)	-2.75%
Allocation of Support Departments	320,940	133,725	125,894	7,831	5.86%
Total Operating Expenses	\$ 1,269,357	\$ 528,899	\$ 531,950	\$ (3,051)	-0.58%
Operating Surplus/(Deficit)	\$ (5)	\$ (2)	\$ (324)		

Debt Service Budget vs. Actual

Revenues

Debt Service Rate Revenue	\$ 2,385,720	\$ 994,050	\$ 994,050	\$ -	0.00%
Trust Fund Interest	13,500	5,625	14,084	8,459	150.38%
Reserve Fund Interest	34,500	14,375	26,273	11,898	82.77%
Total Debt Service Revenues	\$ 2,433,720	\$ 1,014,050	\$ 1,034,406	\$ 20,356	2.01%

Debt Service Costs

Total Principal & Interest	\$ 1,216,725	\$ 506,969	\$ 506,969	\$ -	0.00%
Reserve Additions-Interest	34,500	14,375	26,273	(11,898)	-82.77%
Estimated New Principal & Interest	1,182,500	492,708	492,708	-	0.00%
Total Debt Service Costs	\$ 2,433,725	\$ 1,014,052	\$ 1,025,950	\$ (11,898)	-1.17%
Debt Service Surplus/(Deficit)	\$ (5)	\$ (2)	\$ 8,457		

Rate Center Summary

Total Revenues	\$ 3,703,072	\$ 1,542,947	\$ 1,566,032	\$ 23,085	1.50%
Total Expenses	3,703,082	1,542,951	1,557,899	(14,948)	-0.97%
Surplus/(Deficit)	\$ (10)	\$ (4)	\$ 8,133		
Costs per 1000 Gallons	\$ 6.26		\$ 5.14		
Operating and DS	\$ 18.27		\$ 15.06		
Thousand Gallons Treated	202,697	84,457	103,451	18,994	22.49%
Flow (MGD)	0.555		0.676		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Scottsville Water Rate Center
Revenues and Expenses Summary

<i>Budget FY 2024</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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Operating Budget vs. Actual

Notes

Revenues

Operations Rate Revenue	\$ 656,460	\$ 273,525	\$ 273,525	\$ -	0.00%
Interest Allocation	2,150	896	1,648	752	83.91%
Total Operating Revenues	\$ 658,610	\$ 274,421	\$ 275,173	\$ 752	0.27%

Expenses

Personnel Cost	\$ 223,641	\$ 93,184	\$ 98,299	\$ (5,115)	-5.49%
Professional Services	5,000	2,083	2,205	(122)	-5.85%
Other Services & Charges	31,800	13,250	17,913	(4,663)	-35.20%
Communications	6,750	2,813	3,464	(652)	-23.17%
Information Technology	19,700	8,208	4,600	3,608	43.96%
Supplies	100	42	181	(139)	-334.38%
Operations & Maintenance	134,800	56,167	43,157	13,009	23.16%
Equipment Purchases	2,000	833	1,348	(515)	-61.78%
Depreciation	40,000	16,667	16,667	0	0.00%
Subtotal Before Allocations	\$ 463,791	\$ 193,246	\$ 187,835	\$ 5,411	2.80%
Allocation of Support Departments	194,815	81,173	75,987	5,185	6.39%
Total Operating Expenses	\$ 658,606	\$ 274,419	\$ 263,823	\$ 10,597	3.86%
Operating Surplus/(Deficit)	\$ 4	\$ 2	\$ 11,350		

Debt Service Budget vs. Actual

Revenues

Debt Service Rate Revenue	\$ 158,736	\$ 66,140	\$ 66,140	\$ -	0.00%
Trust Fund Interest	1,650	688	1,721	1,033	150.29%
Reserve Fund Interest	10,300	4,292	8,084	3,792	88.36%
Total Debt Service Revenues	\$ 170,686	\$ 71,119	\$ 75,945	\$ 4,825	6.79%

Debt Service Costs

Total Principal & Interest	\$ 148,991	\$ 62,080	\$ 62,080	\$ -	0.00%
Reserve Additions-Interest	10,300	4,292	8,084	(3,792)	-88.36%
Estimated New Principal & Interest	11,400	4,750	4,750	-	0.00%
Total Debt Service Costs	\$ 170,691	\$ 71,121	\$ 74,913	\$ (3,792)	-5.33%
Debt Service Surplus/(Deficit)	\$ (5)	\$ (2)	\$ 1,031		

Rate Center Summary

Total Revenues	\$ 829,296	\$ 345,540	\$ 351,117	\$ 5,577	1.61%
Total Expenses	829,297	345,540	338,736	6,804	1.97%
Surplus/(Deficit)	\$ (1)	\$ (0)	\$ 12,381		
Costs per 1000 Gallons	\$ 38.22		\$ 31.55		
Operating and DS	\$ 48.13		\$ 40.50		
Thousand Gallons Treated or Flow (MGD)	17,230	7,179	8,363	1,184	16.49%
	0.047		0.055		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Urban Wastewater Rate Center
Revenues and Expenses Summary

Budget FY 2024	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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Operating Budget vs. Actual

Notes

Revenues

Operations Rate Revenue	\$ 9,908,321	\$ 4,128,467	\$ 4,205,208	\$ 76,741	1.86%
Stone Robinson WWTP	17,267	7,195	7,441	247	3.43%
Septage Acceptance	550,000	229,167	271,169	42,003	18.33%
Nutrient Credits	80,000	33,333	49,915	16,582	49.75%
Miscellaneous Revenue	-	-	4,000	4,000	
Interest Allocation	3,300	1,375	27,521	26,146	1901.49%
Total Operating Revenues	\$ 10,558,888	\$ 4,399,537	\$ 4,565,254	\$ 165,718	3.77%

Expenses

Personnel Cost	B \$ 1,458,300	\$ 607,625	\$ 636,361	\$ (28,736)	-4.73%
Professional Services	40,000	16,667	18,649	(1,982)	-11.89%
Other Services & Charges	C 2,271,556	946,482	1,098,145	(151,664)	-16.02%
Communications	11,600	4,833	7,477	(2,644)	-54.69%
Information Technology	110,600	46,083	18,111	27,973	60.70%
Supplies	1,200	500	1,176	(676)	-135.25%
Operations & Maintenance	2,086,800	869,500	858,242	11,258	1.29%
Equipment Purchases	73,500	30,625	33,190	(2,565)	-8.38%
Depreciation	470,000	195,833	195,833	(0)	0.00%
Subtotal Before Allocations	\$ 6,523,556	\$ 2,718,148	\$ 2,867,185	\$ (149,037)	-5.48%
Allocation of Support Departments	4,035,331	1,681,388	1,578,620	102,768	6.11%
Total Operating Expenses	\$ 10,558,887	\$ 4,399,536	\$ 4,445,805	\$ (46,269)	-1.05%
Operating Surplus/(Deficit)	\$ 1	\$ 0	\$ 119,449		

Debt Service Budget vs. Actual

Revenues

Debt Service Rate Revenue	\$ 9,339,509	\$ 3,891,462	\$ 3,891,465	\$ 3	0.00%
Septage Receiving Support - County	A 109,440	45,600	109,440	63,840	140.00%
Trust Fund Interest	86,900	36,208	90,338	54,130	149.50%
Reserve Fund Interest	410,200	170,917	313,924	143,007	83.67%
Total Debt Service Revenues	\$ 9,946,049	\$ 4,144,187	\$ 4,405,167	\$ 260,980	6.30%

Debt Service Costs

Total Principal & Interest	\$ 7,812,249	\$ 3,255,104	\$ 3,255,104	\$ -	0.00%
Reserve Additions-Interest	410,200	170,917	313,924	(143,007)	-83.67%
Debt Service Ratio Charge	325,000	135,417	135,417	-	0.00%
Est. New Debt Service - CIP Growth	1,398,600	582,750	582,750	-	0.00%
Total Debt Service Costs	\$ 9,946,049	\$ 4,144,187	\$ 4,287,194	\$ (143,007)	-3.45%
Debt Service Surplus/(Deficit)	\$ -	\$ -	\$ 117,973		

Rate Center Summary

Total Revenues	\$ 20,504,937	\$ 8,543,724	\$ 8,970,422	\$ 426,698	4.99%
Total Expenses	20,504,936	8,543,723	8,732,999	(189,276)	-2.22%
Surplus/(Deficit)	\$ 1	\$ 0	\$ 237,422		
Costs per 1000 Gallons	\$ 3.11		\$ 3.09		
Operating and DS	\$ 6.05		\$ 6.07		
Thousand Gallons Treated	3,390,400	1,412,667	1,439,154	26,487	1.87%
or					
Flow (MGD)	9.289		9.406		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Glenmore Wastewater Rate Center
Revenues and Expenses Summary

<i>Budget FY 2024</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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Operating Budget vs. Actual

Notes

Revenues

Operations Rate Revenue	\$ 521,916	\$ 217,465	\$ 217,465	\$ -	0.00%
Interest Allocation	1,700	708	1,281	573	80.91%
Total Operating Revenues	\$ 523,616	\$ 218,173	\$ 218,746	\$ 573	0.26%

Expenses

Personnel Cost	\$ 127,879	\$ 53,283	\$ 56,041	\$ (2,758)	-5.18%
Professional Services	25,000	10,417	9,974	443	4.25%
Other Services & Charges	35,400	14,750	18,744	(3,994)	-27.08%
Communications	3,450	1,438	1,370	67	4.67%
Information Technology	13,000	5,417	413	5,004	92.38%
Supplies	-	-	-	-	
Operations & Maintenance	143,550	59,813	49,715	10,098	16.88%
Equipment Purchases	3,800	1,583	1,583	(0)	0.00%
Depreciation	25,000	10,417	10,417	0	0.00%
Subtotal Before Allocations	\$ 377,079	\$ 157,116	\$ 148,256	\$ 8,860	5.64%
Allocation of Support Departments	146,534	61,056	56,883	4,173	6.83%
Total Operating Expenses	\$ 523,613	\$ 218,172	\$ 205,139	\$ 13,033	5.97%
Operating Surplus/(Deficit)	\$ 3	\$ 1	\$ 13,607		

Debt Service Budget vs. Actual

Revenues

Debt Service Rate Revenue	\$ 22,680	\$ 9,450	\$ 9,450	\$ -	0.00%
Trust Fund Interest	200	83	224	141	169.32%
Reserve Fund Interest	-	-	-	-	
Total Debt Service Revenues	\$ 22,880	\$ 9,533	\$ 9,674	\$ 141	1.48%

Debt Service Costs

Total Principal & Interest	\$ 18,729	\$ 7,804	\$ 7,804	\$ -	0.00%
Estimated New Principal & Interest	4,150	1,729	1,729	-	0.00%
Reserve Additions-Interest	-	-	-	-	
Total Debt Service Costs	\$ 22,879	\$ 9,533	\$ 9,533	\$ -	0.00%
Debt Service Surplus/(Deficit)	\$ 1	\$ 0	\$ 142		

Rate Center Summary

Total Revenues	\$ 546,496	\$ 227,707	\$ 228,421	\$ 714	0.31%
Total Expenses	546,492	227,705	214,672	13,033	5.72%
Surplus/(Deficit)	\$ 4	\$ 2	\$ 13,749		
Costs per 1000 Gallons	\$ 12.65		\$ 10.61		
Operating and DS	\$ 13.20		\$ 11.10		
Thousand Gallons Treated or Flow (MGD)	41,401	17,250	19,336	2,086	12.09%
	0.113		0.126		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Scottsville Wastewater Rate Center
Revenues and Expenses Summary

<i>Budget FY 2024</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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Operating Budget vs. Actual

Notes

Revenues

Operations Rate Revenue	\$ 384,192	\$ 160,080	\$ 160,080	\$ -	0.00%
Interest Allocation	1,300	542	1,037	496	91.51%
Total Operating Revenues	\$ 385,492	\$ 160,622	\$ 161,117	\$ 496	0.31%

Expenses

Personnel Cost	\$ 127,949	\$ 53,312	\$ 56,041	\$ (2,729)	-5.12%
Professional Services	5,000	2,083	-	2,083	100.00%
Other Services & Charges	24,800	10,333	14,738	(4,405)	-42.63%
Communications	3,800	1,583	1,254	330	20.81%
Information Technology	14,025	5,844	413	5,431	92.94%
Supplies	-	-	615	(615)	
Operations & Maintenance	49,500	20,625	14,592	6,033	29.25%
Equipment Purchases	3,700	1,542	1,542	0	0.00%
Depreciation	20,000	8,333	8,333	(0)	0.00%
Subtotal Before Allocations	\$ 248,774	\$ 103,656	\$ 97,527	\$ 6,128	5.91%
Allocation of Support Departments	136,722	56,967	53,157	3,810	6.69%
Total Operating Expenses	\$ 385,495	\$ 160,623	\$ 150,685	\$ 9,938	6.19%
Operating Surplus/(Deficit)	\$ (3)	\$ (1)	\$ 10,433		

Debt Service Budget vs. Actual

Revenues

Debt Service Rate Revenue	\$ 18,636	\$ 7,765	\$ 7,765	\$ -	0.00%
Trust Fund Interest	80	33	94	60	180.50%
Reserve Fund Interest	1,800	750	1,347	597	79.65%
Total Debt Service Revenues	\$ 20,516	\$ 8,548	\$ 9,206	\$ 658	7.69%

Debt Service Costs

Total Principal & Interest	\$ 7,471	\$ 3,113	\$ 3,113	\$ -	0.00%
Reserve Additions-Interest	1,800	750	1,347	(597)	-79.65%
Estimated New Principal & Interest	11,250	4,688	4,688	-	0.00%
Total Debt Service Costs	\$ 20,521	\$ 8,550	\$ 9,148	\$ (597)	-6.99%
Debt Service Surplus/(Deficit)	\$ (5)	\$ (2)	\$ 58		

Rate Center Summary

Total Revenues	\$ 406,008	\$ 169,170	\$ 170,323	\$ 1,153	0.68%
Total Expenses	406,016	169,173	159,832	9,341	5.52%
Surplus/(Deficit)	\$ (8)	\$ (3)	\$ 10,491		
Costs per 1000 Gallons	\$ 16.30		\$ 19.68		
Operating and DS	\$ 17.17		\$ 20.87		
Thousand Gallons Treated	23,643	9,851	7,658	(2,193)	-22.26%
or					
Flow (MGD)	0.065		0.050		

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Administration

<i>Budget FY 2024</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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Operating Budget vs. Actual

Revenues Notes

Payment for Services SWA	\$	781,000	\$	325,417	\$	325,417	\$	0	0.00%
Bond Proceeds Funding Bond Issuance Costs		-		-		-		-	
Miscellaneous Revenue		-		-		5,973		5,973	
Total Operating Revenues	\$	781,000	\$	325,417	\$	331,390	\$	5,973	1.84%

Expenses

Personnel Cost	\$	2,930,008	\$	1,220,837	\$	1,173,355	\$	47,482	3.89%
Professional Services		136,450		56,854		52,317		4,537	7.98%
Other Services & Charges	A	140,760		58,650		70,770		(12,120)	-20.67%
Communications	E	42,800		17,833		30,355		(12,521)	-70.21%
Information Technology		778,800		324,500		298,095		26,405	8.14%
Supplies		22,800		9,500		8,374		1,126	11.85%
Operations & Maintenance		64,200		26,750		17,322		9,428	35.24%
Equipment Purchases		15,000		6,250		6,339		(89)	-1.43%
Depreciation		-		-		-		-	
Total Operating Expenses		\$ 4,130,818		\$ 1,721,174		\$ 1,656,927		\$ 64,247	3.73%

Department Summary

Net Costs Allocable to Rate Centers	\$	(3,349,818)	\$	(1,395,758)	\$	(1,325,537)	\$	(70,221)	5.03%
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Allocations to the Rate Centers

Urban Water	44.00%	\$	1,473,920	\$	614,133	\$	583,236	\$	30,897
Crozet Water	4.00%	\$	133,993		55,830		53,021		2,809
Scottsville Water	2.00%	\$	66,996		27,915		26,511		1,404
Urban Wastewater	48.00%	\$	1,607,913		669,964		636,258		33,706
Glenmore Wastewater	1.00%	\$	33,498		13,958		13,255		702
Scottsville Wastewater	1.00%	\$	33,498		13,958		13,255		702
	100.00%	\$	3,349,818	\$	1,395,758	\$	1,325,537	\$	70,221

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Maintenance

<i>Budget FY 2024</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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Operating Budget vs. Actual

Notes

Revenues

Payment for Services SWA	\$	-	\$	-	\$	-	\$	-
Miscellaneous Revenue		-		-		1,067		1,067
Total Operating Revenues	\$	-	\$	-	\$	1,067	\$	1,067

Expenses

Personnel Cost	\$	1,553,212	\$	647,171	\$	625,904	\$	21,268	3.29%
Professional Services		25,000		10,417		-		10,417	100.00%
Other Services & Charges		36,400		15,167		9,074		6,092	40.17%
Communications		11,300		4,708		10,882		(6,174)	-131.13%
Information Technology		17,500		7,292		505		6,787	93.07%
Supplies		4,000		1,667		-		1,667	100.00%
Operations & Maintenance		114,150		47,563		45,710		1,853	3.89%
Equipment Purchases		201,000		83,750		54,167		29,583	35.32%
Depreciation		-		-		-		-	
Total Operating Expenses	\$	1,962,562	\$	817,734	\$	746,242	\$	71,492	8.74%

Department Summary

Net Costs Allocable to Rate Centers		\$	(1,962,562)	\$	(817,734)	\$	(745,175)	\$	(70,424)	8.61%
<u>Allocations to the Rate Centers</u>										
Urban Water	30.00%	\$	588,768	\$	245,320	\$	223,552	\$	21,768	
Crozet Water	3.50%		68,690		28,621		26,081		2,540	
Scottsville Water	3.50%		68,690		28,621		26,081		2,540	
Urban Wastewater	56.50%		1,108,847		462,020		421,024		40,996	
Glenmore Wastewater	3.50%		68,690		28,621		26,081		2,540	
Scottsville Wastewater	3.00%		58,877		24,532		22,355		2,177	
	100.00%	\$	1,962,562	\$	817,734	\$	745,175	\$	72,559	

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Laboratory

Budget FY 2024	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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Operating Budget vs. Actual

Revenues Notes

N/A

Expenses

Personnel Cost	\$ 456,056	\$ 190,023	\$ 195,613	\$ (5,590)	-2.94%
Professional Services	-	-	-	-	
Other Services & Charges	14,580	6,075	465	5,610	92.34%
Communications	1,400	583	292	291	49.88%
Information Technology	1,000	417	-	417	100.00%
Supplies	1,200	500	351	149	29.71%
Operations & Maintenance	115,300	48,042	23,740	24,301	50.58%
Equipment Purchases	1,700	708	708	(0)	0.00%
Depreciation	-	-	-	-	
Total Operating Expenses	\$ 591,236	\$ 246,348	\$ 221,171	\$ 25,177	10.22%

Department Summary

Net Costs Allocable to Rate Centers		\$ (591,236)	\$ (246,348)	\$ (221,171)	\$ (25,177)	10.22%
<u>Allocations to the Rate Centers</u>						
Urban Water	44.00%	\$ 260,144	\$ 108,393	\$ 97,315	\$ 11,078	
Crozet Water	4.00%	23,649	9,854	8,847	1,007	
Scottsville Water	2.00%	11,825	4,927	4,423	504	
Urban Wastewater	47.00%	277,881	115,784	103,950	11,833	
Glenmore Wastewater	1.50%	8,869	3,695	3,318	378	
Scottsville Wastewater	1.50%	8,869	3,695	3,318	378	
	100.00%	\$ 591,236	\$ 246,348	\$ 221,171	\$ 25,177	

Rivanna Water & Sewer Authority
Monthly Financial Statements - November 2023

Engineering

<i>Budget FY 2024</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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Operating Budget vs. Actual

Notes

Revenues

Payment for Services SWA

Total Operating Revenues

\$ -	\$ -	\$ 1,483	\$ 1,483	
\$ -	\$ -	\$ 1,483	\$ 1,483	

Expenses

Personnel Cost

Professional Services

Other Services & Charges

Communications

Information Technology

Supplies

Operations & Maintenance

Equipment Purchases

Depreciation

Total Operating Expenses

\$ 2,022,024	\$ 842,510	\$ 844,013	\$ (1,503)	-0.18%
30,000	12,500	4,381	8,119	64.95%
22,000	9,167	4,796	4,370	47.68%
19,540	8,142	7,055	1,087	13.35%
154,900	64,542	63,657	885	1.37%
8,500	3,542	1,671	1,871	52.83%
86,740	36,142	15,561	20,580	56.94%
21,500	8,958	8,958	0	0.00%
-	-	-	-	
\$ 2,365,204	\$ 985,502	\$ 950,092	\$ 35,409	3.59%

Department Summary

Net Costs Allocable to Rate Centers

\$ (2,365,204)	\$ (985,502)	\$ (948,609)	\$ (33,926)	3.44%
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Allocations to the Rate Centers

Urban Water

Crozet Water

Scottsville Water

Urban Wastewater

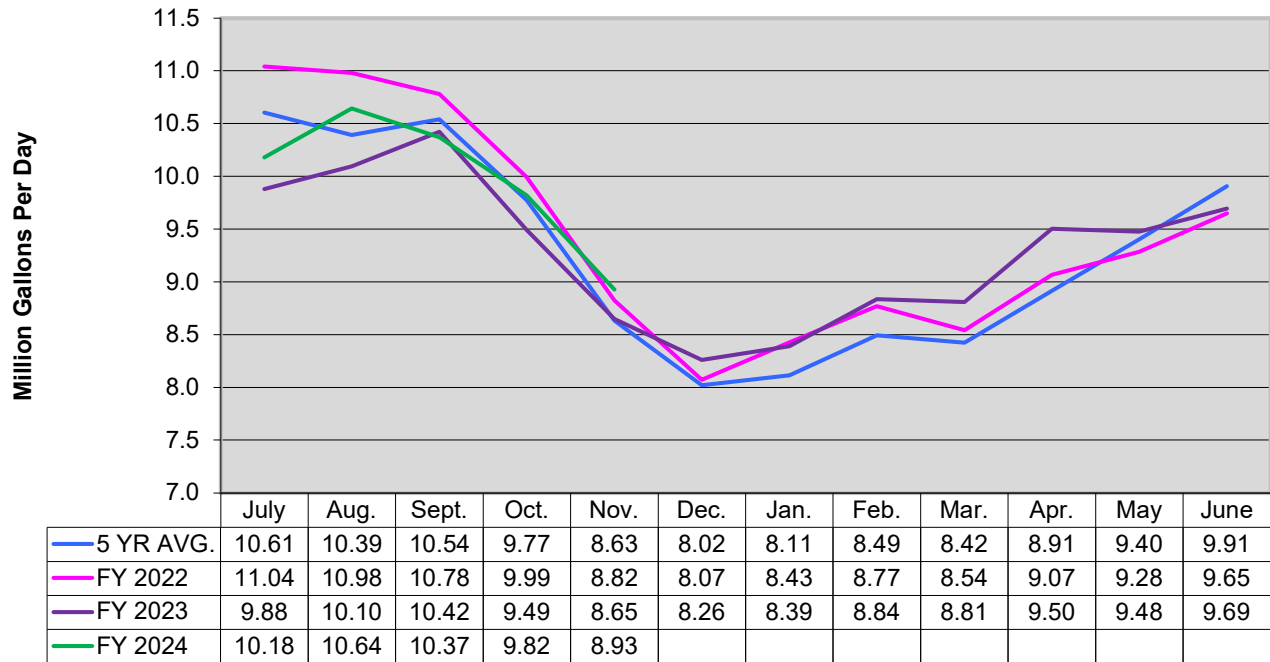
Glenmore Wastewater

Scottsville Wastewater

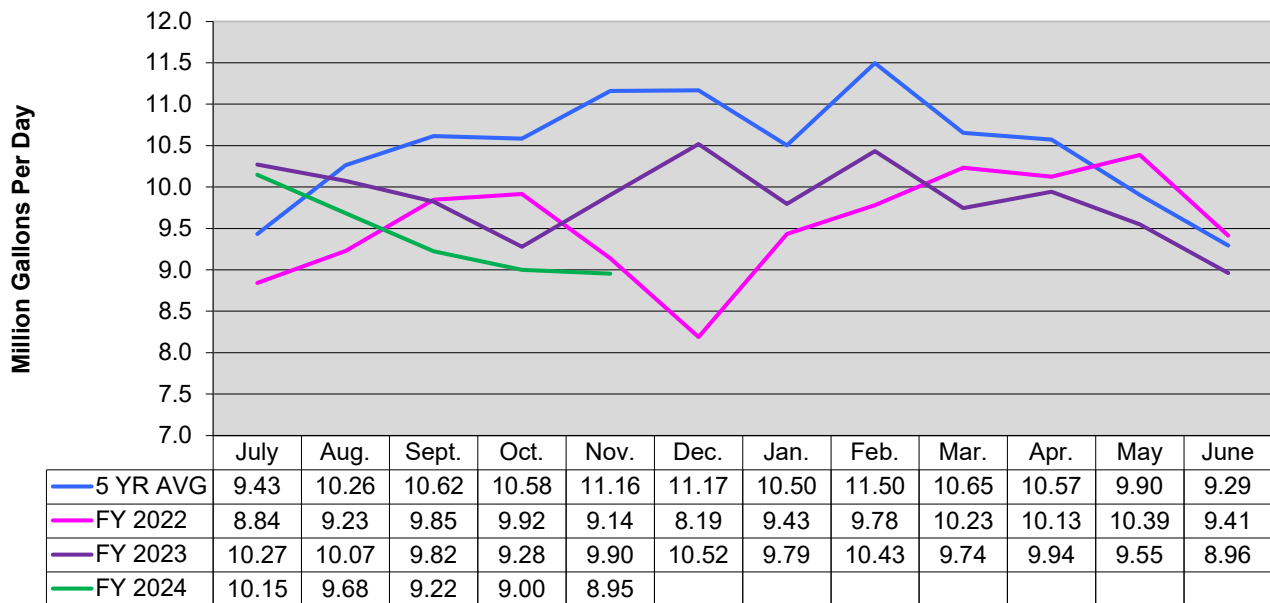
47.00%	\$ 1,111,646	\$ 463,186	\$ 445,846	\$ 17,340
4.00%	94,608	39,420	37,944	1,476
2.00%	47,304	19,710	18,972	738
44.00%	1,040,690	433,621	417,388	16,233
1.50%	35,478	14,783	14,229	553
1.50%	35,478	14,783	14,229	553
100.00%	\$ 2,365,204	\$ 985,502	\$ 948,609	\$ 36,893

**Rivanna Water and Sewer Authority
Flow Graphs**

Urban Water Flows



Urban Wastewater Flows



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 2023

DATE: JANUARY 23, 2024

WATER OPERATIONS:

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

<i>Water Treatment Plant</i>	<i>Average Daily Production (MGD)</i>	<i>Maximum Daily Production in the Month (MGD)</i>
South Rivanna	7.24	8.60 (12/4/2023)
Observatory	0.42	0.97 (12/28/2023)
North Rivanna	<u>0.43</u>	<u>0.62 (12/19/2023)</u>
<i>Urban Total</i>	8.09	9.50 (12/5/2023)
Crozet	0.56	0.62 (12/6/2023)
Scottsville	0.04	0.072 (12/30/2023)
Red Hill	<u>0.0017</u>	0.003 (12/12/2023)
<i>RWSA Total</i>	8.69	-

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

Status of Reservoirs (as of January 17, 2023):

- Urban Reservoirs are 97% of Total Useable Capacity
 - South Rivanna Reservoir is 100% full
 - Ragged Mountain Reservoir is 94% full
 - Sugar Hollow Reservoir is full
- Beaver Creek Reservoir (Crozet) is 100% full
- Totier Creek Reservoir (Scottsville) is 100% full

WASTEWATER OPERATIONS:

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

<i>WRRF</i>	<i>Average Daily Effluent Flow (MGD)</i>	<i>Average CBOD₅ (ppm)</i>		<i>Average Total Suspended Solids (ppm)</i>		<i>Average Ammonia (ppm)</i>	
		<i>RESULT</i>	<i>LIMIT</i>	<i>RESULT</i>	<i>LIMIT</i>	<i>RESULT</i>	<i>LIMIT</i>
Moores Creek	9.8	1.0	9	0.16	22	0.32	2.2
Glenmore	0.144	3.8	15	5.2	30	NR	NL
Scottsville	0.07	2.8	25	12.0	30	NR	NL
Stone Robinson	0.001	NR	30	NR	30	NR	NL

NR = Not Required

NL = No Limit

<QL: Less than analytical method quantitative level (2.0 ppm for CBOD, 1.0 ppm for TSS, and 0.1 ppm for Ammonia).

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

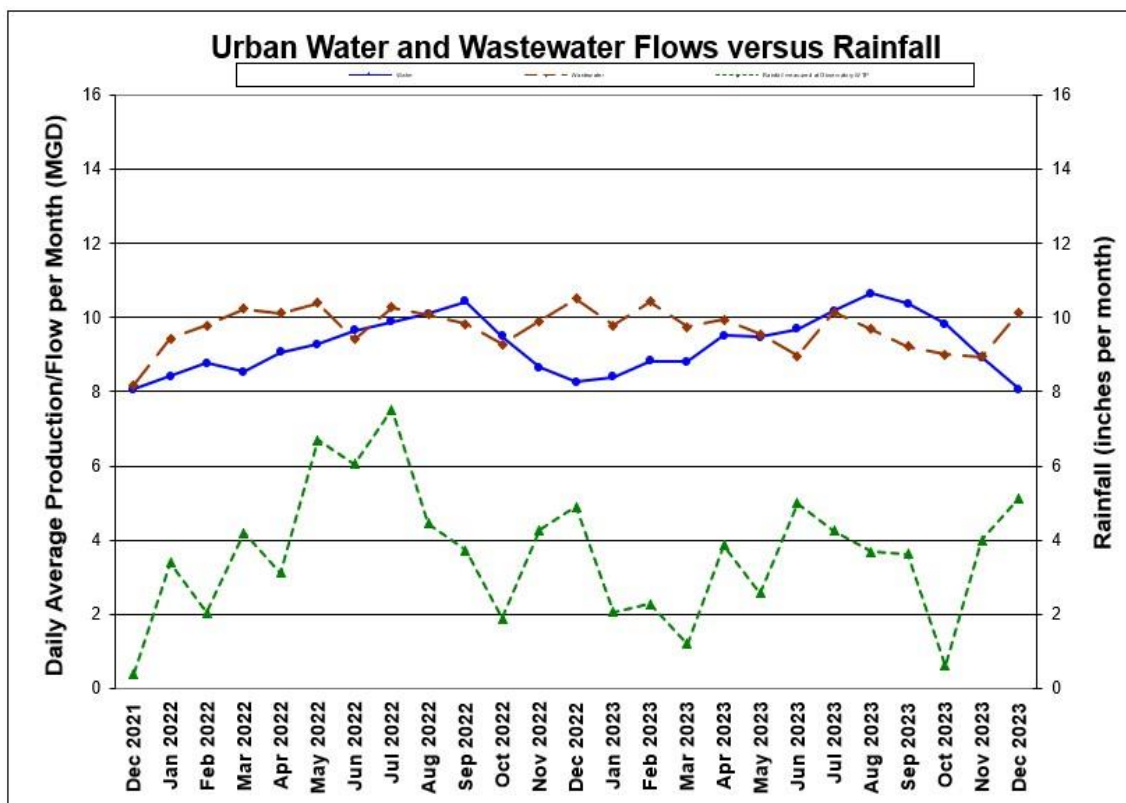
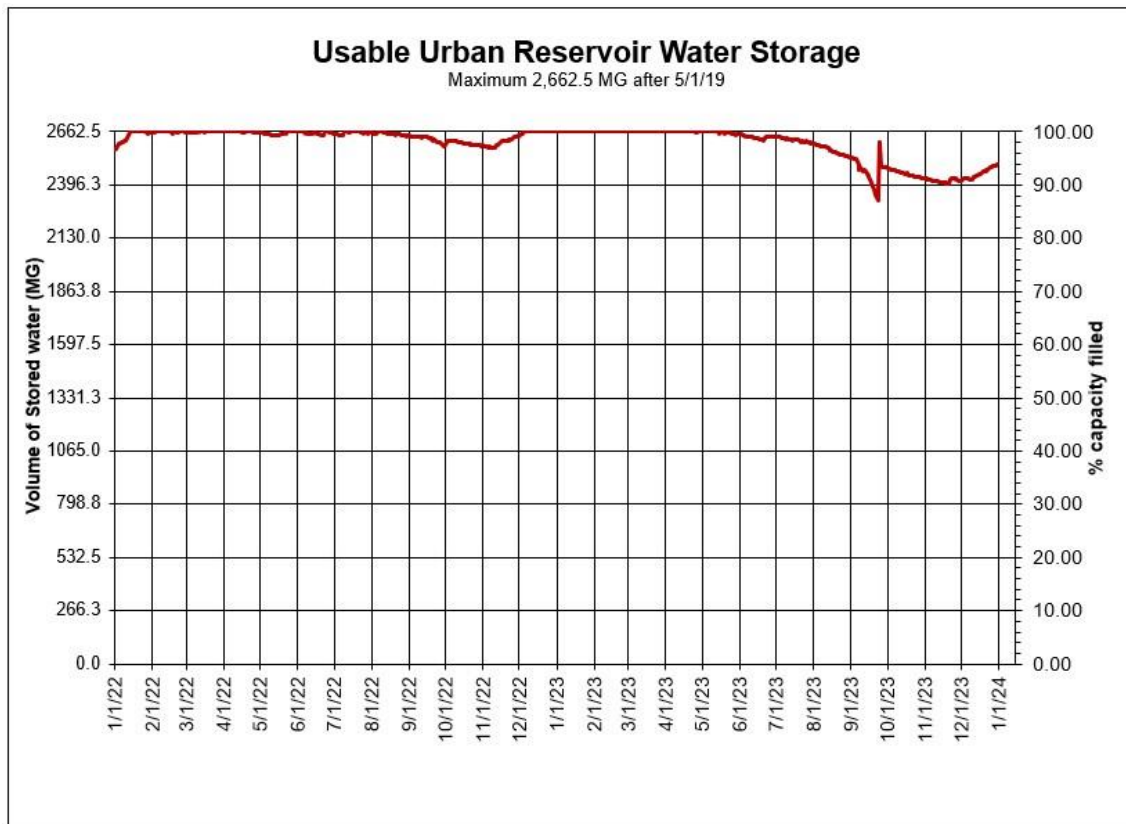
<i>State Annual Allocation (lb./yr.) Permit</i>		<i>Average Monthly Allocation (lb./mo.) *</i>	<i>Moores Creek Discharge December (lb./mo.)</i>	<i>Performance as % of monthly average Allocation*</i>	<i>Year to Date Performance as % of annual allocation</i>
Nitrogen	282,994	23,583	11,546	49%	44%
Phosphorous	18,525	1,636	416	25%	27%

*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



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 23, 2024

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

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

Summary

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

Under Construction

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

Design and Bidding

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

Planning and Studies

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

Other Significant Projects

21. Urgent and Emergency Repairs
22. Security Enhancements

Under Construction

1. South Rivanna and Observatory Water Treatment Plant Renovations

Design Engineer:	Short Elliot Hendrickson, Inc. (SEH)
Construction Contractor:	English Construction Company (Lynchburg, VA)
Construction Start:	May 2020
Percent Complete:	94%
Base Construction Contract +	
Change Orders to Date = Current Value:	\$36,748,500 + \$1,329,762 = \$38,078,262
Completion:	July 2024
Budget:	\$43,000,000

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

improvements and final instrumentation programming work continues.

2. Airport Road Water Pump Station and Piping

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	Anderson Construction, Inc. (ACI) (Lynchburg, VA)
Construction Start:	December 2021
Percent Complete:	80%
Base Construction Contract + Change Order to Date = Current Value:	$\$8,520,312 + \$205,908 = \$8,726,221$
Completion:	September 2024
Budget:	\$10,000,000

Current Status: Water line is substantially complete. All sections of the waterline have passed pressure testing, with flushing and disinfection on-going. Paving of Berkmar Drive will proceed and is weather dependent. The pump station is dried-in and startup and testing can begin once electric power, water, and fiber installations to the site are complete. The roof will go on this month while the plumbers and electricians complete their work inside the pump station. Dominion is scheduled to run underground electric to the site in January.

3. MCAWRRE 5kV Electrical System Upgrades

Design Engineer:	Hazen and Sawyer (Hazen)
Construction Contractor:	Pyramid Electrical Contractors (Richmond, VA)
Construction Start:	May 2022
Percent Complete:	30%
Base Construction Contract + Change Order to Date = Current Value:	$\$5,180,000 - \$848,368 = \$4,331,632$
Completion:	December 2024
Budget:	\$5,635,000

Current Status: All major site-related work, including underground electrical ductbank, equipment pads, and curb and gutter replacements, is complete. Small electrical equipment for this project continues to arrive at the site, with the larger equipment scheduled to arrive later this Winter through early Spring.

Design and Bidding

4. South Fork Rivanna River Crossing

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

Current Status: Easement acquisition work is on-going. A required easement on the south side of the river is on a remnant property from the VDOT Berkmar Bridge project, and we cannot finalize that

easement until the property transfer back to the original property owner is complete. We had a meeting with VDOT in an effort to move this acquisition forward. Another outstanding easement is on a Virginia Dominion Power parcel for which we completed a Phase 1 Environmental Survey because Virginia Dominion Power prefers that we purchase the small parcel instead of acquiring an easement. The final outstanding easement is with Albemarle County for an easement across the Brookhill Park property along Rio Mills Rd for which a final draft is pending.

5. **Red Hill Water Treatment Plant Upgrades**

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

Current Status: One bid of \$2.1 M was received for the project and is currently under review by staff. The bid was significantly higher than the construction cost estimate and project budget, thus efforts are being undertaken to review higher cost components of the current design to consider potential revisions. This project received partial grant funding from Albemarle County.

6. **Central Water Line**

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	70% Design
Construction Start:	December 2024
Completion:	December 2028
Budget:	\$41,000,000

Current Status: Design of 90% construction documents and easement acquisitions are underway. Soil borings and utility test pits along the alignment are complete. Railroad permits will be submitted this month.

7. **Scottsville WRRF Whole Plant Generator and ATS**

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

Current Status: A recent update from VDEM indicated that the grant approval and funding process may continue until Summer 2024. As a result, the overall project schedule is uncertain.

8. **Moore's Creek Administration Building Renovation and Addition**

Design Engineer:	SEH
Project Start:	October 2022
Project Status:	60% Design
Construction Start:	September 2024
Completion:	May 2027
Budget:	\$20,000,000

Current Status: Completion of the 90% design continues with consideration of Value Engineering items. Site planning for the temporary trailers is being incorporated as well. The educational exhibit concept design is ongoing and will be incorporated into the 90% documents.

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

Design Engineer:	Kimley-Horn
Project Start:	August 2018
Project Status:	85% Design
Construction Start:	September 2024
Completion:	December 2028
Budget:	\$44,000,000

Current Status: Design of the pump station is nearing 75% completion. Waterline design has reached 90% completion throughout the alignment. The Design Engineer has submitted the Water Protection Ordinance permit application to the County and is preparing to submit plans to UVA for review as well.

10. MCAWRRF Building Upfits and Gravity Thickener Improvements

Design Engineer:	Short Elliot Hendrickson (SEH)
Project Start:	March 2023
Project Status:	5% Design
Construction Start:	August 2024
Completion:	August 2026
Budget:	\$7,500,000

Current Status: Long-term needs were vetted during the PER phase and the project scope has been expanded. The total project budget has increased from \$5,000,000 to \$7,500,000 to account for these enhanced improvements. As the design process continues and this project cost is further evaluated, a formal budget amendment will be submitted for Board approval.

11. Emmet Street Water Line Betterment

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

Budget: \$2,900,000

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

An analysis of possible water main alignments along the Emmet Street Corridor was completed for the section between Morton Drive and Hydraulic Road. The report detailing this analysis was completed in December 2023.

12. MCAWRRF Structural and Concrete Rehabilitation

Design Engineer:	Hazen and Sawyer (Hazen)
Project Start:	April 2023
Project Status:	Preliminary Engineering
Construction Start:	September 2024
Completion:	December 2026
Budget:	\$11,300,000

Current Status: Revisions are underway to the DRAFT PER Report in order to include additional information and associated costs for the digester alternatives. Design documents are progressing for all of the other structural rehabilitation and repair elements towards a 90% deliverable within the next month.

13. Crozet Pump Stations Rehabilitation

Design Engineer:	Wiley Wilson
Project Start:	July 2023
Project Status:	60% Design
Construction Start:	January 2025
Completion:	December 2026
Budget:	\$10,350,000

Current Status: 60% design documents have been completed and a review workshop was held on January 9th.

14. Crozet GAC Expansion – Phase I

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

Current Status: Preliminary engineering evaluations and coordination with regulatory authorities are continuing. The environmental waiver review and public notification for the VDH grant program has commenced. A preliminary engineering report from SEH is expected this month.

15. Beaver Creek Dam, Pump Station and Piping Improvements

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

Current Status: Design work is underway by Hazen for the new raw water pump station, intake, raw water main, and hypolimnetic oxygenation system, and by Schnabel Engineering for final design of the dam spillway upgrades, temporary detour, and spillway bridge. Site survey work for the pump station will be completed in February 2024.

16. SFRR to RMR Pipeline, Intake, and Facilities

Design Engineer:	Kimley Horn/SEH
Project Start:	July 2023
Project Status:	10% Design
Construction Start:	June 2025
Completion:	December 2030
Budget:	\$79,700,000

Current Status: Boundary survey of the of the watermain alignment in VDOT right-of-way is underway, as is the geotechnical investigation throughout the alignment. Modifications to the Ragged Mtn Reservoir intake tower and perimeter grading to allow for the 12-foot pool raise will be also included in this overall project. A short section of the 36" raw water main will be constructed with the Victorian Heights housing development on Woodburn Road. Construction of that section of main is expected to begin this month.

17. Upper Schenks Branch Interceptor, Phase II

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

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

Planning and Studies

18. Asset Management Plan

Design Engineer:	GHD, Inc.
Project Start:	July 2018
Project Status:	AMP Implementation – 78% Complete
Completion:	AMP Implementation – 2024
Budget:	\$1,180,000

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

19. MCAWRRF Biogas Upgrades

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

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

20. North Rivanna Water Treatment Plant Decommissioning

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

Current Status: A work authorization for engineering design, bidding, and construction services by SEH is included in this month's consent agenda. Staff are pursuing funding and administrative assistance for removal of the North Fork Rivanna low head dam from the U.S. Fish and Wildlife Service through their Partners for Fish and Wildlife Program.

Other Significant Projects

21. Urgent and Emergency Repairs

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

Project No.	Project Description	Approx. Cost
2023-01	Finished Water System ARV Repairs	\$150,000

- RWSA Finished Water ARV Repairs: RWSA Engineering staff recently met with Maintenance staff to identify a list of Air Release Valves (ARVs) that need to be repaired, replaced, or abandoned. Several of these locations will require assistance from RWSA On-Call Maintenance Contractors, due to the complexity of the sites (proximity to roadways, depth, etc.). The initial round will include six (6) sites, all along the South Rivanna Waterline, and will be completed starting in March 2024.

22. Security Enhancements

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

Current Status: WA6 includes card access installation at RWSA's remote sites, including all dams and pump stations. Work has been completed at the sites, with programming, testing, and network development work ongoing to close out the project. WA7, which includes a pilot of a program that will test electronic padlocks at several RWSA facilities, has begun. These electronic padlocks have the potential to add an extra layer of security to unmanned facilities such as tanks, dams, and other facilities. If the pilot is successful, wide scale implementation of this technology is possible. The locks have been distributed to staff for use as of the week of November 27th. WA9 will include installation of card access on all exterior doors at the South Rivanna WTP. Materials for the work have been procured, and work is slated to start on January 15th. Design of MCAWRRF entrance modifications with Hazen & Sawyer also continues, with discussions with Dominion Energy also ongoing, as relocation of existing electrical infrastructure will be required. This relocation process will need to be finalized prior to the project proceeding to the bidding phase. Relocation of existing electrical infrastructure will require coordination with the adjacent landowner, as the infrastructure must be completely relocated from the entrance area. As these discussions are ongoing, staff has submitted appropriate permitting documents with Albemarle County.



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 23, 2024

Human Resources

I am pleased to announce that we have a new Human Resources Manager, Leah Beard. Leah most recently worked for the University of Virginia Credit Union as a Human Resources Generalist. Prior to that, she was the Assistant Director for Diversity Programs at the University of Virginia School of Medicine. Leah is a Society of Human Resources Management certified professional. She has a bachelor's degree in education and art history from Longwood University and a Master of Public Administration degree from Old Dominion University.

Annual turnover for the Rivanna Water and Sewer Authority, for the fiscal year beginning on July 1, 2023, is 7.0% through December, under our Strategic Plan goal of 10%.

Safety

I am pleased to announce that we have a new Safety Manager, George Cheape. George has worked with the Rivanna Water and Sewer Authority as an Engineering/Construction Inspector since 2018. George holds a Class 2 Wastewater Operator license, a Class 2 Water Operator license, and he is a master electrician and plumber. Before he joined us as an employee, he was an instructor who we used for some of our safety training.

Community Outreach

The Imagine a Day Without Water Art Contest will be announced the contest winners on December 13, 2023. They are:

- | | | |
|---------------------|---------------------|--|
| • K – 2nd Grade: | Willa Chow | 1st Grade, Greenbrier Elementary School |
| • 3rd – 4th Grade: | Saya Cantor | 4th Grade, Mountaintop Montessori School |
| • 5th – 6th Grade: | Ava Canine | 6th Grade, Henley Middle School |
| • 7th – 8th Grade: | Helen Hernandez | 7th Grade, Village School |
| • 9th – 12th Grade: | Shoukufeh Alizada | 10th Grade, Charlottesville High School |
| • Fan Favorite: | Aaron Hu, 3rd Grade | Hollymead Elementary School |

In addition, because they encouraged participation in the contest, teachers Jeannette Stott (Monticello High School), Lynne Herman (Greenbrier Elementary School), Dana Snead (Henley Middle School), and Kim Taylor (Village School) received gift cards to be used for classroom projects.

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 DECEMBER 2023

DATE: JANUARY 23, 2024

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

		<i>Month</i>	<i>Daily Average</i>	
City Usage (gal)		118,526,668	3,823,505	47.4%
ACSA Usage (gal)		131,393,899	4,238,513	52.6%
Total (gal)		249,922,567	8,062,018	

The *RWSA Wholesale Metering Administrative and Implementation Policy* requires that water use be measured based upon the annual average daily water demand of the City and ACSA over the trailing twelve (12) consecutive month period. The *Water Cost Allocation Agreement (2012)* established a maximum water allocation for each party. If the annual average water usage of either party exceeds this value, a financial true-up would be required for the debt service charges related to the Ragged Mountain Dam and the SRR-RMR Pipeline projects. Below are graphs showing the calculated monthly water usage by each party, the trailing twelve-month average (extended back to January 2023), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA). Completed in 2019 for a cost of about \$3.2 M, our Wholesale Metering Program consists of 25 remote meter locations around the City boundary and 3 finished water flow meters at treatment plants.

Figure 1: City of Charlottesville Monthly Water Usage and Allocation

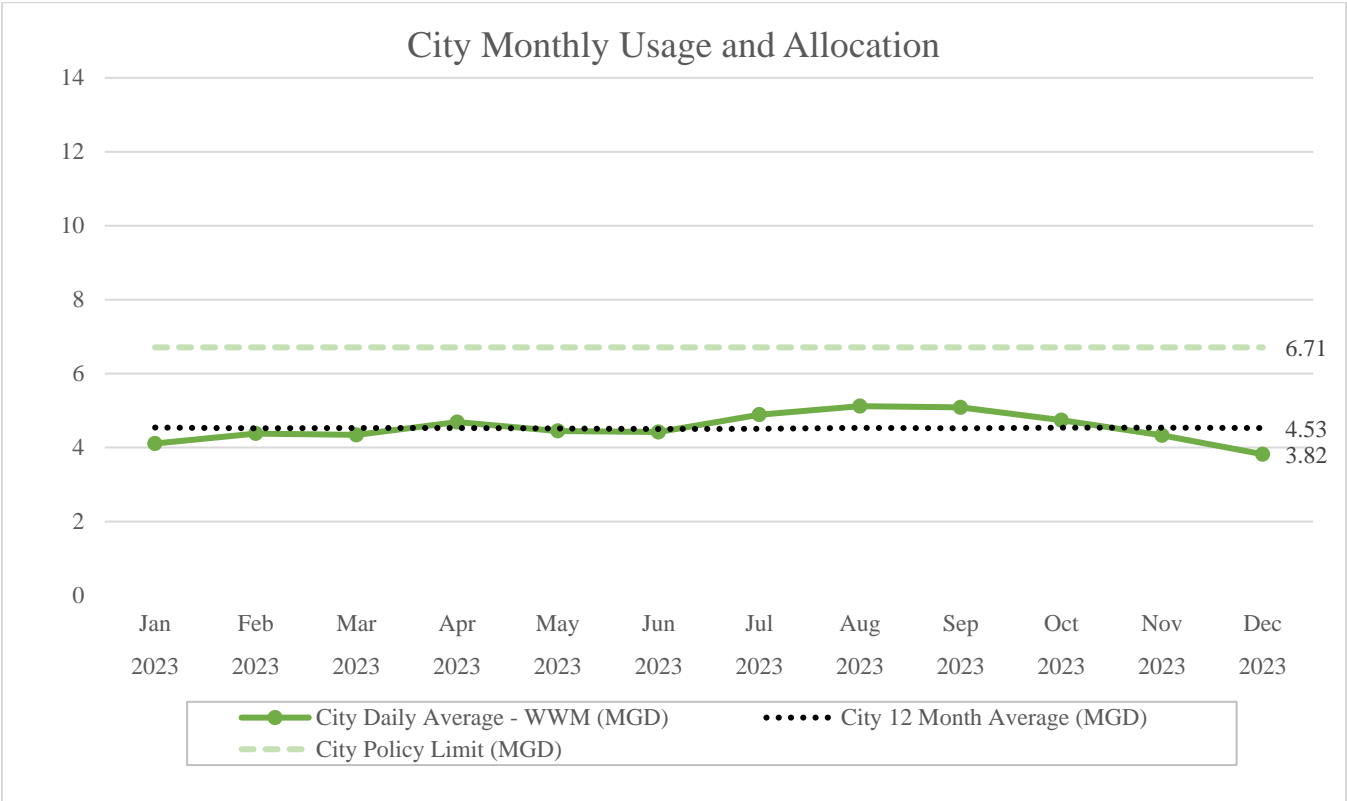
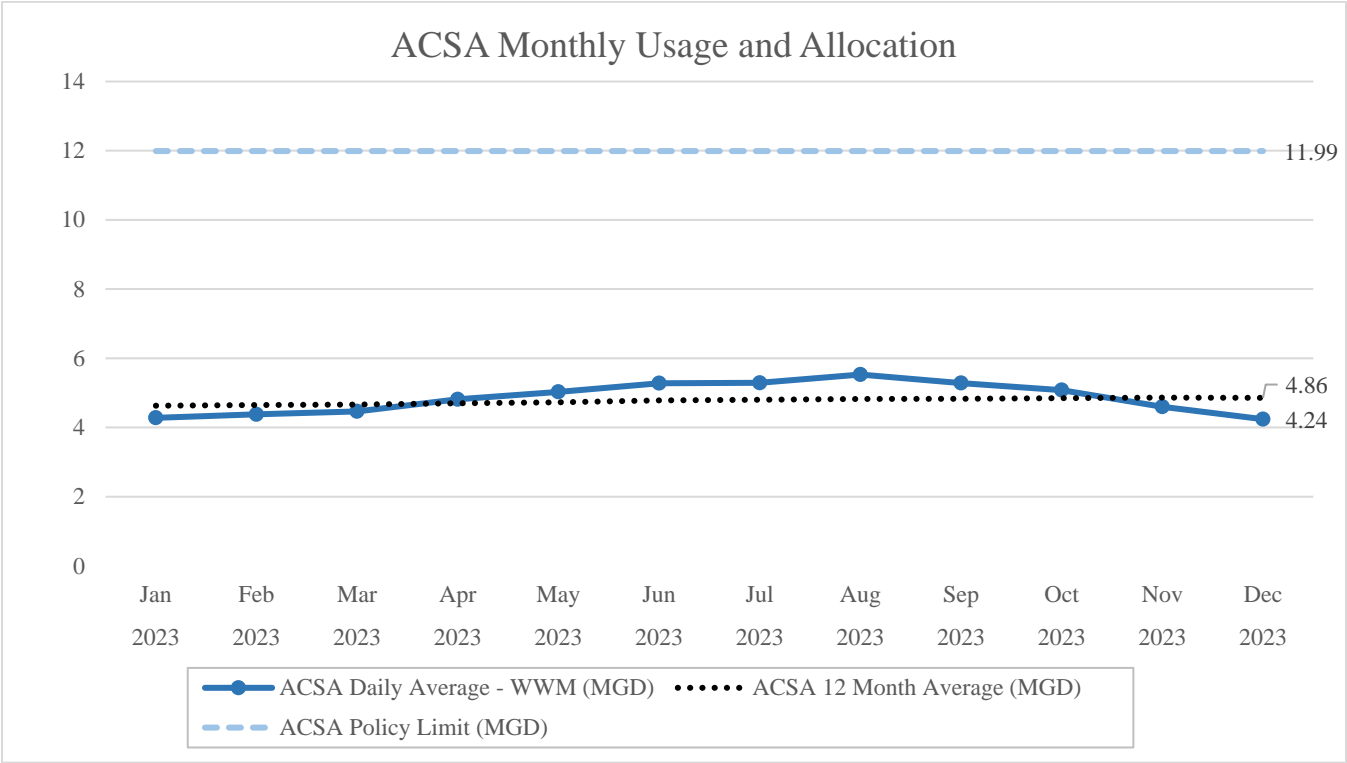
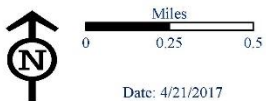


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation



Meter Locations for the Wholesale Water Metering Project



Date: 4/21/2017



695 Moores Creek Lane
Charlotteville, VA 22902
p.434-977-2970
www.rivanna.org
www.rivannagis.org

Meter Site Locations - WWMP

- 01, Pepsi Place
- 02, Michael Pl / Wilson Ct
- 03, Wilder Dr
- 06, Long St / River Rd

- 08, Franklin St / Carlton Ave / Broadway St
- 09, Moores Creek Ln
- 11, Avon St
- 12, Loma Ln / Harris Rd
- 14, Old Lynchburg Rd
- 15, Ivy Rd / Colonnade Dr

- 16, Ricky Rd / Barracks Rd
- 17, Ricky Rd (near Wayne Ave)
- 18, North Berkshire Rd
- 19, Hydraulic Rd / Inglewood Dr
- 20, Trader Joes
- 22, Rio Rd @ Church of Our Savior

- 23, Greenbrier Dr / Rio Rd
- 24, Greenbrier Ter
- 25, University Heights Apts
- 26, Seminole Trl
- 28, Rio Rd / Melbourne Rd
- 29, Pen Park Ln

- 30, Darden Towle Park
- 31, Stribling Ave
- 32, Fontaine Ave



TO: RIVANNA WATER & SEWER AUTHORITY
BOARD OF DIRECTORS

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

REVIEWED: BILL MAWYER, EXECUTIVE DIRECTOR

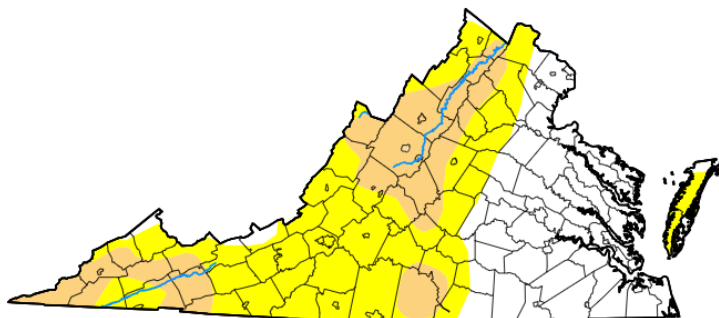
SUBJECT: DROUGHT MONITORING REPORT

DATE: JANUARY 23, 2024

State and Federal Drought Monitoring, as of January 11, 2024:

- U.S. Drought Monitoring Report: Indicates the western portion of Albemarle County are experiencing Moderate drought conditions. The City of Charlottesville and the eastern parts of the County are listed as Abnormally Dry. This is a decrease in severity from last month.

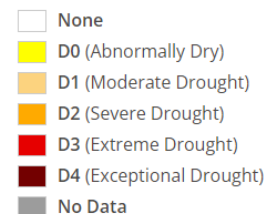
Virginia



Map released: Thurs. January 11, 2024

Data valid: January 9, 2024 at 7 a.m. EST

Intensity



Authors

United States and Puerto Rico Author(s):

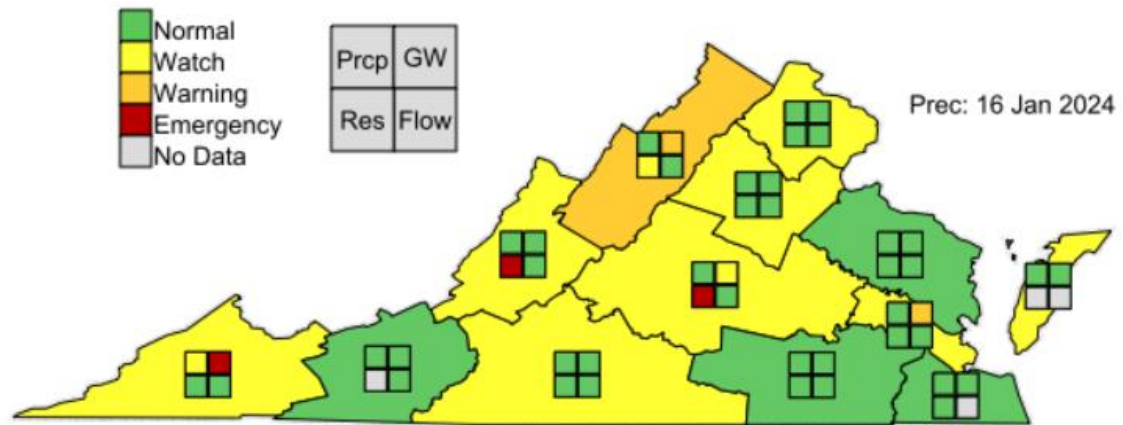
[Adam Hartman](#), NOAA/NWS/NCEP/CPC

Pacific Islands and Virgin Islands Author(s):

[Anthony Artusa](#), NOAA/NWS/NCEP/CPC

- VDEQ Drought Status Report: Our region is listed as being in a “Normal” level for precipitation and streamflows, “Watch” level for groundwater levels, and an “Emergency” level for reservoir levels. The VDEQ issued a Drought Watch Advisory for this region as of

November 27, 2023. Recent rain has helped to alleviate dry conditions and RWSA reservoirs are 96 % full.



Precipitation & Stream Flows

Charlottesville Precipitation					
Year	Month	Observed (in.)	Normal (in.)	Departure (in.)	Comparison to Normal (%)
2021	Jan - Dec	33.82	41.61	-7.79	-19
2022	Jan - Dec	43.53	41.61	+1.92	+5
2023	Jan – Dec	26.95	41.61	-15.98	-35

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

USGS Stream Gaging Station Near the Urban Area (January 2-January 8)				
Gage Name	Rolling 7-day Avg. Stream Flow		Median Daily Streamflow	
	cfs	mgd	cfs	mgd
Mechums River	48.1	31.1	84	54.3
Moormans River	40.7	26.3	72	46.5
NF Rivanna River	79.8	51.6	84	54.3
SF Rivanna River	143.9	93.0	255	164.8

Median daily flow: January 8th for the period of record (approx. 30 - 80 years)

Status of Reservoirs (as of January 17, 2024)

- Urban Reservoirs are 96% of Total Useable Capacity
 - South Rivanna Reservoir is 100%
 - Ragged Mountain Reservoir is 94%

- Sugar Hollow Reservoir is 100%
- Beaver Creek Reservoir (Crozet) is 100%
- Totier Creek Reservoir (Scottsville) is 100%

Drought History in Central Virginia

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



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 – MODIFICATIONS
TO REACH ADDITIONAL POOL LEVEL, RAGGED MOUNTAIN
RESERVOIR – SCHNABEL ENGINEERING**

DATE: JANUARY 23, 2024

This request is to authorize the Executive Director to execute a Work Authorization with Schnabel Engineering totaling \$408,800 to provide engineering services for the design, permitting and bidding required to increase the normal pool level 12 feet at the Ragged Mountain Reservoir. The estimated cost for this work is \$5 million and will be completed as part of the CIP project for the South Rivanna to Ragged Mountain Reservoir Pipeline, Intake, and Facilities Project (\$80 M total).

Background

The new earthen Ragged Mountain Dam was completed in 2014 as a major infrastructure addition in the community's Water Supply Plan. The new dam not only corrected safety issues at the original site, but also raised the pool of the reservoir by 30 feet, with provisions to raise the reservoir pool elevation an additional 12 feet in the future. With several of the Water Supply Plan Projects (SRR-RMR Pipeline, RMR-OBWTP Pipeline and Pump Station, etc.) now under design and recognizing current climate change conditions, the parties (City, ACSA, RWSA) to the 2012 Ragged Mountain Dam Project Agreement authorized RWSA to proceed with raising the pool level the additional 12 feet ahead of the schedule originally included in the agreement.

RWSA entered into a term agreement with Schnabel Engineering on August 15, 2022, for Dam Engineering Services. Under this contract, Schnabel will provide engineering services for the design, permitting, and bidding phases of the RMR Pool Raise Project. Engineering staff has negotiated a scope of work for these services to include the following:

- Project Site Investigation & Stakeholder Coordination
- Geotechnical Exploration
- Final Design & Permitting
- Bidding Phase Services

This project will include design of all necessary appurtenances to reach the additional pool level and transfer of water into RMR, including modifications to the existing intake structure, as well as to the Sugar Hollow Transfer Line discharge, floating bridge modifications, and relocation of RWSA's storage shed and boat ramp facilities.

Board Action Requested:

Authorize the Executive Director to execute a Work Authorization with Schnabel Engineering for design, permitting, bidding, and construction phase engineering services for the RMR Pool Raise Project totaling \$408,800, and any amendments needed to complete the tasks identified above, not to exceed 25% of the Work Authorization amount, provided the resulting total cost is within the approved CIP project budget.



MEMORANDUM

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

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

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

**SUBJECT: APPROVAL TO INCREASE CONSTRUCTION CONTINGENCY
AND AMEND CAPITAL IMPROVEMENT PLAN – SOUTH
RIVANNA HYDROPOWER PLANT DECOMMISSIONING
PROJECT – ENGLISH CONSTRUCTION COMPANY, INC.**

DATE: JANUARY 23, 2024

This request is to increase the construction contingency from 10% to 28% of the awarded construction amount (from \$70,691 to \$198,000 = an increase of \$127,308) due to unforeseen repairs required for removal of the electric power generating equipment, and to amend the Capital Improvement Plan by \$185,000 to a revised total of \$1,195,000.

Background:

RWSA constructed a hydropower plant with a 954 KW capacity at the South Fork Rivanna Dam in 1987 to provide electric power for the South Rivanna Water Treatment Plant. Power generation was limited for several years due to various mechanical issues, and the unit has been completely offline since 2013 following a flood event which impacted the mechanical and electrical equipment. An economic analysis was performed to determine whether it was financially beneficial to rehabilitate the plant. The results of the analysis determined there were limited scenarios where a positive return on investment would be expected. Based on this analysis, the Board of Directors approved decommissioning the plant in October 2016, and authorized staff to petition the Federal Energy Regulatory Commission (FERC) to surrender our Exemption from licensing and decommission the facility. FERC approved the surrender application and the accompanying decommissioning plan, which included removal of damaged electrical and mechanical equipment and repurposing the 72-inch diameter flow control gate for the turbine back into a low-level reservoir drain.

This construction project was advertised for bids on September 29, 2021 (RFB No. 384). One bid of \$973,916 was received on November 2, 2021, by English Construction Company, Inc. from Lynchburg, VA. Since this bid value exceeded the total Capital Budget for the project, negotiations to reduce the scope of work were initiated with the contractor. Through a review of the contract documents, the costs associated with the various project elements, and a cursory inspection of the gate, it was initially determined that the planned replacement of a 72-inch sluice gate was more costly than expected and that repairs to the gate may be sufficient. These conclusions were then submitted to and approved by the FERC. Based on this revision, English

Construction Company, Inc. was able to identify a cost reduction of \$267,000. While this cost reduction did not bring the overall bid value to within the total Capital Budget for the project, it was determined that the resulting cost was competitive and reasonable in the current market. This cost reduction was included in Change Order No. 1 and the project was awarded for \$706,916. Once construction began, a more thorough cleaning and inspection of the existing gate was feasible, and cracks were identified that were not visible previously. As a result, it was determined that the gate was in fact not repairable and needed to be replaced. This process was evaluated with the consultant and the contractor to develop a more cost-effective approach to the replacement than what was originally considered in the initial design. The total cost associated with this revised gate replacement process and additional construction administration time for the consultant is approximately \$215,600.

The current Capital Improvement Plan (CIP) budget for this project is \$1,010,000. Incorporating the additional costs referenced above, represents an increase to the CIP Budget of \$185,000 and a total revised project budget of \$1,195,000.

Board Action Requested:

1. Authorize the Executive Director to execute a construction contingency increase with English Construction Company, Inc. from 10% to 28% of the original contract value for the South Rivanna Hydropower Plant Decommissioning Project (RFB No. 384).
2. Amend the FY 2024 Capital Improvement Plan to increase the project budget by \$185,000 to a revised total project budget of \$1,195,000.



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 – NORTH RIVANNA
WATER TREATMENT PLANT DECOMMISSIONING – SHORT
ELLIOTT HENDRICKSON INC.**

DATE: JANUARY 23, 2024

This request is to authorize the Executive Director to execute a Work Authorization with Short Elliott Hendrickson Inc. (SEH) totaling \$199,898 to provide engineering services for the design, permitting, bidding, and construction phases of the North Rivanna Water Treatment Plant Decommissioning Project. The current CIP project budget is \$2.6 million. Decommissioning of this plant will begin after completion of the Airport Road Water Pumping Station and South Rivanna Pipe Crossing projects in 2026.

Background

The North Rivanna Water Treatment Plant (NRWTP) has been in use since the 1970's with minimal upgrades aside from the addition of a Granular Activated Carbon filter system in 2018. A feasibility study was completed to determine if the NRWTP should be upgraded or decommissioned. In May 2021, the study recommended, and the Board approved, decommissioning of the plant to more optimally utilize our resources (\$12 M estimated upgrade cost) with other improvements throughout the Urban Water System. Decommissioning of the NRWTP will include demolition of the plant facilities, removal of the low head dam on the North Fork Rivanna River, and returning the property to its pre-existing condition. The dam is intended to be removed in coordination with the US Fish and Wildlife Service (USFWS) as part of their "Partners for Fish and Wildlife" Program.

RWSA entered into a term agreement with SEH on July 21, 2023, for Professional Water Treatment Plant Engineering Services. Under this contract, SEH will provide engineering services for the design, permitting, bidding, and construction of the North Rivanna Water Treatment Plant Decommissioning Project. Engineering staff has negotiated a scope of work for these services to include the following:

- Development of Demolition Project Documents
- Focused Environmental Investigation
- Regulatory Approval and Closeout Requirements

- Bid and Construction Phase Services
- Coordination with USFWS for dam and intake removal

Board Action Requested:

Authorize the Executive Director to execute a Work Authorization with Short Elliott Hendrickson Inc. for design, permitting, bidding, and construction phase engineering services for the North Rivanna Water Treatment Plant Decommissioning project totaling \$199,898, and any amendments needed to complete the tasks identified above, not to exceed 25% of the Work Authorization amount, provided the resulting total cost is within the approved CIP project budget.

Employee Healthcare and Retirement Benefits Overview



Betsy Nemeth

Director of Administration and Communications

Board of Directors Meeting

January 23, 2024

Insurance/Benefits Broker - OneDigital

- OneDigital, from Charlottesville, works with the Rivanna Authorities to develop healthcare solutions for our employees. Services includes procuring our medical, dental, and vision insurance, and contracting with administrators for our Flexible Spending, Health Reimbursement, and COBRA programs.
- OneDigital aids in the issuance of RFP's for health insurance and the negotiation for rates paid by the Rivanna Authorities.

Healthcare



Medical Insurance – Anthem

- Two Plans – HealthKeepers Health Savings Account (HSA) Plan with a high deductible(\$3000/\$6000) and a HealthKeepers Point of Service (POS) plan with a lower deductible(\$1000/\$2000).
- Health Savings Accounts are provided for employees in the HSA Plan with contributions from Rivanna based on type of coverage.
- Health Reimbursement Arrangement are provided for “Employee Only” participants in the Healthkeepers HSA Plan. Flexible Spending Accounts are available for participants in the HealthKeepers POS plan.
- RWSA will contribute about \$1.4 M and RSWA about \$0.3 M for employee health insurance in FY 2024.

Dental and Vision Insurance



- Dental and Vision Insurance coverage through Ameritas.
- Cost to employees for dental coverage is dependent on who they choose to include in their coverage (i.e. family, spouse).
- Vision is provided to all employees at no cost.

Rivanna Authorities' Monthly Medical Insurance Costs

Anthem Medical HK-POS	Employee	Rivanna	Total
Employee Only	\$35.00	\$685.64	\$720.64
Employee + Child	\$111.00	\$873.40	\$984.40
Employee + Children	\$327.00	\$1,138.07	\$1465.07
Employee + Spouse	\$373.00	\$1,241.23	\$1,614.23
Employee + Family	\$454.00	\$1769.18	\$2,223.18

Anthem Medical HK-HSA	Employee	Rivanna	Total
Employee Only	\$5.00	\$601.37	\$606.37
Employee + Child	\$70.00	\$758.30	\$828.30
Employee + Children	\$265.00	\$967.76	\$1,232.76
Employee + Spouse	\$305.00	\$1,053.27	\$1,358.27
Employee + Family	\$360.00	\$1,510.65	\$1,870.65

Other Local Government Monthly Medical Insurance Costs for Employees

	Employee Only	Employee + Spouse	Employee + Child	Employee + Children	Employee + Family
Albemarle County					
Albemarle Select Plan (PPO)	\$92.00	\$247.00	\$136.00	\$260.00	\$346.00
Albemarle Choice Plan (HDHP)	\$20.00	\$140.00	\$56.00	\$140.00	\$188.00
City of Charlottesville					
POS 1	\$72.56	\$474.72	\$308.14	\$412.02	\$604.30
POS 2	\$26.04	\$394.40	\$238.04	\$317.58	\$508.12
HMO	\$0.00	\$189.88	\$80.60	\$106.72	\$277.48
Rivanna Authorities					
Anthem HK - POS	\$35.00	\$373.00	\$111.00	\$327.00	\$454.00
Anthem HK - HSA	\$5.00	\$305.00	\$70.00	\$265.00	\$360.00

Retirement Benefit



- Participation in the Va Retirement System (VRS) is required for all employees, with a mandatory contribution of 5% of their “credible” compensation.
- RWSA contributes 8.39% for each employee, and RSWA contributes 4.86% for each employee.
- Employer contribution rates are determined by VRS every 2 years. Ours is expected to change in July 2024.
- VRS also provides life insurance equal to two times an employee’s annual salary, which is funded by the Rivanna Authorities.

VRS Plan 1



- VRS membership began before July 1, 2010, and the employee had at least 5 years of service prior to January 1, 2013.
- 30% of our employees participate in Plan 1.
- Defined benefit plan (pension).
- Pension is based on years of service, average of the employee's highest 36 consecutive months of compensation and a retirement multiplier of 1.7%. *(With 30 years of service, retirement pension = $30 \times 0.017 = 51\%$ of salary)*

VRS Plan 2



- VRS membership from July 1, 2010 to December 31, 2013 or hired before July 1, 2010 and does not have 5 years of service as of January 1, 2013.
- 6% of our employees participate in Plan 2.
- Defined benefit plan (pension).
- Pension is based on years of service, average of the employee's highest 60 consecutive months of compensation and a retirement multiplier of 1.65%. *(With 30 years of service, retirement pension = $30 \times 0.0165 = 49.5\%$ of salary)*

VRS Hybrid Plan



- VRS membership date on or after January 1, 2014.
- 64% of the employees of the Rivanna Authorities are Hybrid Plan members.
- Defined benefit plan (pension) AND defined contribution plan (401a).
- Pension is based on years of service, average of the employee's highest 60 consecutive months of compensation and a retirement multiplier of 1%.
(With 30 years of service, retirement pension = $30 \times 0.01 = 30\%$ of salary)
- Eligible to save an additional 4% in a Hybrid 457 retirement account and the Rivanna Authorities match up to an additional 2.5%.
- Hybrid Plan members also receive employer paid short-term and long-term disability insurance.

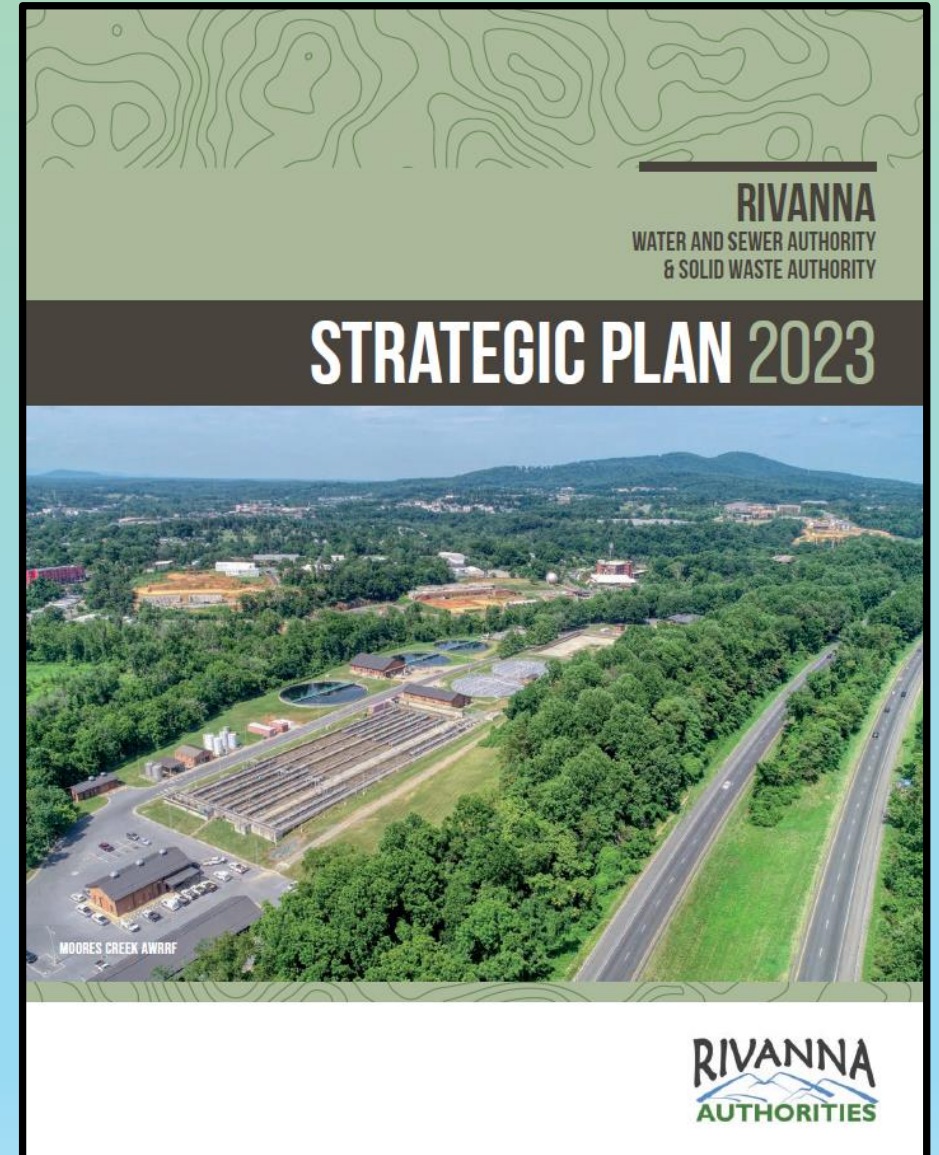


Questions?

Thank you

Rivanna Authorities Strategic Plan Update

**Presented to the RSWA and RWSA Boards of Directors
By Betsy Nemeth, Director of Administration &
Communications
January 23, 2024**



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.

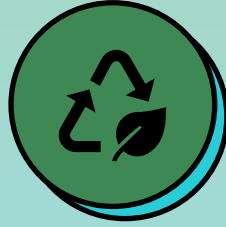
Respect – We treat our fellow employees, customers, business partners, and stakeholders with dignity and respect by embracing their diverse backgrounds and experiences.

Quality – We deliver exceptional services and products, serve our community responsibly, and safeguard natural resources.

PRIORITIES



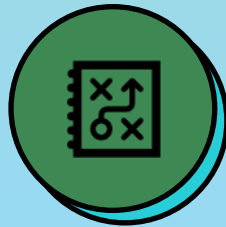
Communication and Collaboration



Environmental Stewardship



Workforce Development



Optimization and Resiliency



Planning and Infrastructure

COMMUNICATION AND COLLABORATION

To elevate awareness of the Authorities' impact and value through proactive communication, effective partnerships, and community involvement.



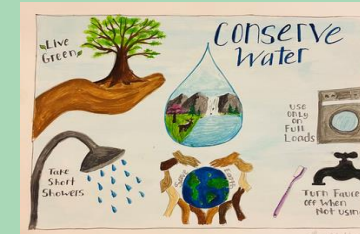
Volunteer Time Off

Charlottesville Toy Lift



Education

Tours of our facilities

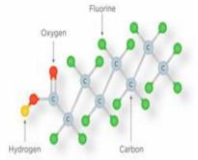


Community Awareness

Imagine A Day Without Water
Winners Announced

What You Need to Know About PFAS

What are PFAS and PFOS/PFOA?



PFAS, or per- and polyfluoroalkyl substances, are a group of about 15,000 man-made, persistent synthetic compounds used in a variety of industrial and consumer products. They have been used in industry to make everyday products that resist heat, oil, stains, grease, and water since the 1940's. They are extremely stable and do not breakdown in the environment.

Communications

Webpage Additions about PFAS

ENVIRONMENTAL STEWARDSHIP

To demonstrate and promote best practices in sustainability, resources conservation, and environmental education.



"No Mow" Initiative

Success of diversity of wildlife. Expanding program to include seeding of wildflowers.



Community Partnerships

Continued engagement with numerous groups.



Environmental Engagement

Met goal of increasing engagement hours. Planning for Environmental Education Center.



Resource Conservation

Value Engineering to include Resource Conservation: solar panels, etc.

WORKFORCE DEVELOPMENT

To attract, develop, and retain a professional, highly skilled, engaged, and diverse team.



Learning Management System
On demand Employee Training



Leadership Development Program
Succession Planning through
Employee Development



Professional Development
Mechanic Training &
Apprenticeships



Staffing Master Plan
Updated 5 Year Plan

OPTIMIZATION AND RESILIENCY

To empower a culture of innovative and collaborative thinking that advances efficient operational processes, technology modernization, and risk mitigation.



Moore's Creek AWWRF Sodium Hydroxide Dosing Monitoring with SCADA - Chemical Cost Savings

\$70,000 in 84 days



Water Department Zeta Meter to Optimize Alum Use – Chemical Cost Savings

\$26,000 in 2023



Safety Optimization

Making Lock Out/Tag Out documents more accessible to our team in Cityworks.



Moore's Creek VPDES Permit Modification

Eliminated weekend work in the Lab saving overtime pay \$18,600 annually

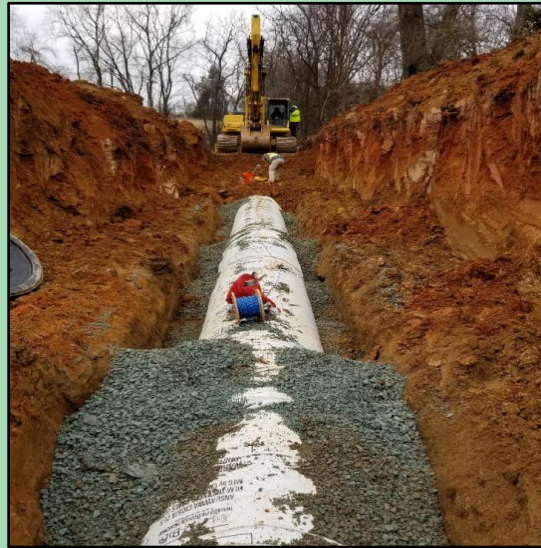
PLANNING AND INFRASTRUCTURE

To address evolving needs by planning, delivering, and maintaining dependable infrastructure and facilities in a financially responsible manner.



Asset Management

Cityworks 100% up and running – all work order requests are now completed in Cityworks.



Reduce Critical Infrastructure Disruptions

Preliminary Assessments Complete



Knowledge Sharing

Dam Safety Training, Documents in Doclink for easy access



Knowledge Acquisition

Baseline set for average training hours over a 6-month period – 500 total training hours



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

www.rivanna.org

QUESTIONS?