RIVANNA
WATER & SEWER AUTHORITY

Board of Directors Meeting

November 16, 2021

2:15pm

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

BOARD OF DIRECTORS

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

DATE: **November 16, 2021**

LOCATION: **Virtually via ZOOM**

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

AGENDA

1. ***CALL TO ORDER***
2. ***STATEMENT FROM THE CHAIR***
3. ***MINUTES OF PREVIOUS BOARD MEETINGS***
   a. *Minutes of Regular Board Meeting on October 26, 2021*
4. ***RECOGNITION***
5. ***EXECUTIVE DIRECTOR'S REPORT***
6. ***ITEMS FROM THE PUBLIC***
7. ***RESPONSES TO PUBLIC COMMENTS***
8. ***CONSENT AGENDA***
   a. *Staff Report on Finance*
   b. *Staff Report on Operations*
   c. *Staff Report on Ongoing Projects*
   d. *Staff Report on Wholesale Metering*
   e. *Staff Report on the Control of Firearms and Ammunition – General Administrative Procedure #2*
   f. *Staff Report on the Use of Credit Cards – General Administrative Procedure #3*
   g. *Recommendation for Disposition of FY 2021 Rate Center Results*
   h. *Series 2021 Bond Issue - Update*
   i. *Approval of Calendar Year 2022 Meeting Schedule*

9. ***OTHER BUSINESS***

a. *Presentation: FY 21 CSFR and Audit Report; Matthew McLearen, Robinson, Farmer, Cox Associates*

- *Letter of Communication to the Board*

(reconvene RSWA for a JOINT SESSION with the RWSA)

b. *Presentation: Safety Program Update; Liz Coleman, Safety Manager*

(complete RWSA meeting, then complete RSWA meeting)

10. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

11. CLOSED MEETING

12. ADJOURNMENT

GUIDELINES FOR PUBLIC COMMENT AT VIRTUAL RIVANNA BOARD OF DIRECTORS MEETINGS

If you wish to address the Rivanna Board of Directors during the time allocated for public comment, please use the "chat" feature in the Zoom Meeting interface.

Members of the public who submit comments will be recognized during the specific time designated on the meeting agenda for "Items From The Public." The comment(s) will be read aloud to the Board of Directors only during this agenda item, so comments must be received prior to the end of this agenda item. The comments will be read by the Rivanna Authority's Executive Coordinator/Clerk of the Board.

Members of the public requesting to speak will be recognized during the specific time designated on the meeting agenda for "Items From The Public." 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.

If you would like to submit a comment, please keep in mind that Board of Directors meetings are formal proceedings and all comments are recorded on tape. In order to give all who wish to submit a comment proper respect and courtesy, the Board requests that commenter follow the following guidelines:

- Submit your comment prior to the start of or during the "Items from the Public" section of the Agenda.
- In your comment, state your full name and address and your organizational affiliation if commenting 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;
- Be respectful and civil in all interactions at Board meetings;
- 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 commenters 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 Administration office upon request or can be viewed on the Rivanna website.

Rev. May 20, 2020

CALL TO ORDER

STATEMENT OF CHAIR TO OPEN MEETING

This is Mike Gaffney, Chair of the Rivanna Water and Sewer Authority.

I would like to call the November 16, 2021 meeting of the Board of Directors to order.

Notwithstanding any provision in our Bylaws to the contrary, as permitted under the City of Charlottesville's Continuity of Government Ordinance adopted on March 25, 2020, Albemarle County's Continuity of Government Ordinance adopted on April 15th, 2020, and revised effective October 1, 2020 and Chapter 1283 of the 2020 Acts of the Virginia Assembly effective April 24, 2020, we are holding this meeting by real time electronic means with no board member physically present at a single, central location.

All board members are participating electronically. This meeting is being held pursuant to the second resolution of the City's Continuity of Government Ordinance and Section 6 of the County's revised Continuity of Government Ordinance. All board members will identify themselves and state their physical location by electronic means during the roll call which we will hold next. I note for the record that the public has real time audio-visual access to this meeting over Zoom as provided in the lawfully posted meeting notice and real time audio access over telephone, which is also contained in the notice. The public is always invited to send questions, comments, and suggestions to the Board through Bill Mawyer, the Authority's Executive Director, at any time.

ROLL CALL:

Ms. Hildebrand: Please state your full name and location.
Mr. O'Connell: Please state your full name and location.
Dr. Palmer: Please state your full name and location.
Mr. Richardson: Please state your full name and location.
Mr. Sanders: Please state your full name and location.
Mr. Snook: Please state your full name and location.

And I am Mike Gaffney, located at _____.

Joining us today electronically are the follow Authority staff members:

Bill Mawyer, Lonnie Wood, Jennifer Whitaker, David Tungate, John Hull, Deborah Anama, Liz Coleman, and Katie McIlwee

We are also joined electronically by Carrie Stanton, counsel to the Authority.

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RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
October 26, 2021

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, October 26, 2021 at 2:15 p.m. via Zoom.

Board Members Present: Mike Gaffney, Jeff Richardson, Lauren Hildebrand, Gary O'Connell, Lloyd Snook, Liz Palmer.

Board Members Absent: Chip Boyles.

Rivanna Staff Present: Lonnie Wood, Katie McIlwee, Deborah Anama, Jennifer Whitaker, David Tungate, John Hull, Patricia Difibaugh, and Scott Schiller.

Attorney(s) Present: Carrie Stanton.

1. CALL TO ORDER

Mr. Gaffney called the October 26, 2021, regular meeting of the Rivanna Water and Sewer Authority to order at 2:17 p.m.

2. STATEMENT FROM THE CHAIR

Mr. Gaffney read the following statement aloud:

"This is Mike Gaffney, Chair of the Rivanna Water and Sewer Authority.

"I would like to call the October 26, 2021, meeting of the Board of Directors to order.

"Notwithstanding any provision in our Bylaws to the contrary, as permitted under the City of Charlottesville's Continuity of Government Ordinance adopted on March 25, 2020, Albemarle County's Continuity of Government Ordinance adopted on April 15th, 2020, and revised effective October 1, 2020, and Chapter 1283 of the 2020 Acts of the Virginia Assembly effective April 24, 2020, we are holding this meeting by real-time electronic means with no Board member physically present at a single, central location.

"All Board members are participating electronically. This meeting is being held pursuant to the second resolution of the City's Continuity of Government Ordinance and Section 6 of the County's revised Continuity of Government Ordinance. All Board members will identify themselves and state their physical location by electronic means during the roll call which we will hold next. I note for the record that the public has real-time audio-visual access to this meeting over Zoom as provided in the lawfully posted meeting notice and real-time audio access over telephone, which is also contained in the notice. The public is always invited to send questions, comments, and suggestions to the Board through Bill Mawyer, the Authority's Executive Director, at any time."

Mr. Gaffney called the roll.

Ms. Lauren Hildebrand stated she was located at 305 4th Street Northwest in Charlottesville, VA.

Mr. Gary O'Connell stated he was located at the ACSA offices at 168 Spotnap Road, Charlottesville, VA.

Dr. Liz Palmer stated she was located in Albemarle County on Mechum Banks Drive, Charlottesville, VA.

Mr. Jeff Richardson stated he was located at the County Administration Building at 401 McIntire Road in Charlottesville, VA.

Mr. Lloyd Snook stated he was located at 408 East Market Street, Charlottesville, VA.

Mr. Mike Gaffney stated he was located at 3180 Dundee Road in Earlysville, VA.

Mr. Gaffney stated the following Authority staff members were joining the meeting electronically: Lonnie Wood, Jennifer Whitaker, David Tungate, Patricia Defibaugh, Scott Shiller, John Hull, Deborah Anama, and Katie McIlwee.

Mr. Gaffney stated they were also joined electronically by Carrie Stanton, Counsel to the Authority.

3. MINUTES OF PREVIOUS BOARD MEETINGS

a. Minutes of Regular Board Meeting on September 28, 2021

Mr. Gaffney asked if Ms. Stanton would detail the changes to the Board minutes that were sent out.

Ms. Stanton stated she had three clarifications, and what was circulated to the Board indicated convention for the code section references in lines 312 and 328. She stated there were no substantial changes, just where the periods and dashes should be in Section 2.2-3711-A(1) of the Code of Virginia and Section 2.2-3712(D) of the Code of Virginia. She stated that Line 28 should be September 28, 2021, and there were some clarifications starting on Line 312 to "so move" for the state of purpose.

Mr. Gaffney asked if there were any comments or other changes from Board members.

Dr. Palmer moved that the Board approve the minutes of the September 28, 2021 meeting as amended by Ms. Stanton. The motion was seconded by Mr. O'Connell and passed 6-0.

4. RECOGNITIONS

Mr. Gaffney stated the next item was a resolution for appreciation of Chip Boyles, and he read the resolution into the record:

WHEREAS, Mr. Boyles has served as a member of the Rivanna Water & Sewer Authority and Rivanna Solid Waste Authority Board of Directors since February of 2021; and

WHEREAS, over that same period Mr. Boyles has demonstrated leadership in water and

sewer, solid waste and recycling services; and has been a valuable member of the Boards of Directors and a resource to the Authorities; and

WHEREAS, Mr. Boyles's understanding of the water, sewer, solid waste and recycling operations of the City of Charlottesville, the Water & Sewer Authority and the Solid Waste Authority has supported a strategic decision-making process that provided benefits to the customers served by the City of Charlottesville as well as the community as a whole; and WHEREAS, the Water & Sewer Authority and Solid Waste Authority Boards of Directors are most grateful for the professional and personal contributions Mr. Boyles has provided to both Authorities and to the community.

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water & Sewer Authority and the Rivanna Solid Waste Authority Boards of Directors recognize, thank, and commend Mr. Boyles for his distinguished service, efforts, and achievements as a member of the Rivanna Water & Sewer Authority and the Rivanna Solid Waste Authority, and present this Resolution as a token of esteem, with their best wishes in his future endeavors.

BE IT FURTHER RESOLVED that this Resolution be entered upon both the permanent Minutes of the Rivanna Water & Sewer Authority and the Rivanna Solid Waste Authority.

Mr. Snook moved to approve the resolution, which was seconded by Mr. O'Connell. The motion passed 6-0.

5. EXECUTIVE DIRECTOR'S REPORT

Mr. Lonnie Wood reported that there were a few recognitions under the strategic plan goal of workforce development. He stated that Ceara Schwake, Jeremy Lawson, and Duane Houchens had all passed their respective water operator tests, which qualifies them for a promotion. He stated he would like to congratulate them and stated he knew they had worked hard to accomplish that. He stated he would skip over to the strategic plan goal for communication and collaboration and let Ms. Whitaker address the infrastructure. He stated that under public outreach for the communication goal, Ms. Whitaker had given a presentation to the UVA civil engineering class on water resource and public sector engineering. He stated that the previous week, three employees had participated in the United Way Day of Caring: Betsy Nemeth, Dyon Vega, and Victoria Fort participated in a Moormons River cleanup, along with Thomas Jefferson Trout Unlimited and Therapeutic Adventures.

Ms. Whitaker reported that one of the things Mr. Mawyer had wanted to highlight was that the second Beaver Creek Reservoir dam pump station and piping modification public meeting had been held online on October 6. She stated about 30 members of the public had participated, in addition to members of the County staff and NRCS. She stated they were also beginning the design on the central water line pipe, which would be a 24- and 30-inch pipeline that traverses from the Observatory Water Treatment Plant over to approximately Free Bridge, and discussions of funding allocations for that project were also underway. She stated as many of them knew, easements were being worked on for the south Rivanna Ragged Mountain pipeline and the Ragged to Observatory pipeline and pump station. She stated that the easement just signed was with Trinity Presbyterian Church, which was just off of Reservoir Road, and they were working on an agreement with the Department of Forestry as well. She stated there was one final private

owner they were working with along with UVA and the UVA Foundation. She stated they were making some headway with both UVA and the Foundation and had several meetings in the last few weeks, exchanging some concepts and drawing ideas. She stated also being worked on was the section of what was called Birdwood to Garth Road, which is the west section of the South Rivanna Ragged Mountain pipeline that is in the Ivy Road corridor, and they were working on the last easement for this project.

Mr. Gaffney asked if there were any comments or questions on the Executive Director's report. Hearing none, he moved on to items from the public.

6. ITEMS FROM THE PUBLIC

Mr. Gaffney opened the meeting to the public. He asked that speakers identify themselves for the public record.

Ms. Dede Smith introduced herself as a resident 2652 Jefferson Park Circle in the City. She stated she would like to make a brief comment about the central water line discussion that was on the agenda today and had just been heard about from Ms. Whitaker. She stated she would like to relay a little story before she asked her questions. She stated after the Unite the Right rally when the *New York Times* and *ProPublica* came to town to look at education, they sought out people who had a history with it.

Ms. Smith stated that to her, they stated that they kept hearing the two words "northside" and "southside," and they did not understand what that meant. She stated that people referred to it when referring to the elementary schools, and Mr. Snook would understand that. She stated that what she stated to them was that it basically meant that generally, above and below the railroad tracks, which bisect the City east to west. She stated the two young women asked if there was an actual railroad track. She stated it was sort of funny because they only knew of "other side of the tracks" as an expression.

Ms. Smith stated that the central water line route as it was now, from point A to point B, was entirely on the north of the railroad tracks, but the pipeline route immediately goes south to under the railroad tracks and made the southside roundabout way, goes back under the railroad tracks, to the northside. She stated that her question was if they would see more alternative routes that were more direct, which would almost de facto make it shorter—which she assumed would relate to costs. She asked if they would see alternative routes, costs, and impacts associated with them. She stated she would hope that the rationale for a route would not be that was the way it had always been, because that did not speak well to their history.

Ms. Smith stated her second question was really for City officials, and that was if they would work with City government to see if they could combine digging up the road, which appeared to all be on public roads, with West Main Street, which would be a potential route to underground utilities, or if it could be combined with the Ridge McIntire project. She stated these were just projects she knew about, and she was most concerned that they considered alternative routes.

Mr. Gaffney thanked Ms. Smith. He asked if there were any other speakers from the public. Hearing none, Mr. Gaffney closed the items from the public.

7. RESPONSES TO PUBLIC COMMENT

Mr. Gaffney asked if there were any Board members that would like to speak to Ms. Smith's comments. He stated that normally they would leave that to follow up in their next Board meeting, and with Mr. Mawyer out, that may be more appropriate. He invited comments from Board members.

Ms. Snook stated that he wanted to comment briefly in response to Ms. Smith's comments. He stated that certainly one of the things that had been discussed in the past and may well again be discussed in the future was the question of whether the central waterline improvement could be made to run down West Main Street. He stated the thought had been expressed at various points that if they were going to be digging up West Main Street anyway for the West Main streetscape project, that that would be a logical time to do that. He stated the catch was that at that point, the West Main streetscape project had been taken off the City's capital improvement plan—mainly because they were going to be spending $75 million to renovate Buford Middle School and would not have capital funds available for that kind of thing. He stated the West Main route certainly was something he knew had been contemplated by both City government and the RWSA, but it did not seem at all likely at this point.

8. CONSENT AGENDA

Mr. Gaffney asked if there were any items Board members wanted to pull for comments or questions.

Dr. Palmer moved that the Board approve the Consent Agenda. Mr. O'Connell seconded the motion, which passed 6-0.

9. OTHER BUSINESS

a. Presentation and Public Hearing on Wastewater Rates and Charges for FY21-22

Mr. Wood reported that every five years, the Authority was required to assess the wastewater flows coming into the Authority's system from the City and the County, per the 2014 wastewater project cost-allocation agreement. He stated they would meter certain points on the system where the City's sewer lines intercepted with theirs and/or the County's. He stated the flow coming in was measured, and the consultants took the data and modeled it for an average daily flow and a peak flow based on a two-year weather event. He stated what the data showed, which Ms. Whitaker had presented in August and was shown currently on the screen, was that they had some significant decreases in flow because they had been making investments in rehabilitating the sewer pipe systems and their sewer facilities. He stated the City's effort had reaped the most benefit, with very significant reduction in flow.

Mr. Wood stated that what that translated into, which Mr. Mawyer had presented in the last RWSA Board meeting, was a shift in cost between the City and the County. He stated that cost shift was about $434,000 per year for those projects that were covered under that agreement. He stated that in September, they presented a preliminary rate schedule for the Board to adopt, which they had. He stated that they advertised the rates, and now they were at the point where they

would need a public hearing and adoption of the attached resolution in the Board packet. He stated the rate was effective October 1 but would be retroactively applied to the July through September bills. He stated those bills had already gone out and had been paid, so the rate could not be changed going back to July, but what could be done was adjust the bills as if the rates were in effect in July. He stated that would be about a $108,000 adjustment from the City to the County on the October bill. He asked if there were any questions.

Mr. Gaffney opened the public hearing.

There were no members of the public that identified that they wished to speak.

Mr. Gaffney closed the public meeting and asked if there were any comments or questions from the Board before voting on the resolution.

Dr. Palmer moved that the Board approve the resolution of the proposed rates and charges for Fiscal Year 21-22. Mr. Snook seconded the motion, which passed 6-0.

b. Industrial Waste Pretreatment Program; Patricia Defibaugh, Laboratory Manager

Ms. Defibaugh greeted the Board and introduced herself as the new laboratory manager at RWSA. She stated that today she would review the industrial waste pretreatment program. She stated that the purpose of this program was to protect the sewer system and wastewater treatment plants through limits on industrial waste discharges, which was a requirement of the EPA and the Virginia Department of Environmental Quality.

Ms. Defibaugh explained that the Virginia pollutant discharge elimination system required that Rivanna implement a pretreatment program that complies with the EPA's Clean Water Act. We must submit a report to Virginia DEQ treatment program on January 31st of each year. She stated that the pretreatment program looked at the following constituents: fats, oils, and greases, metals including manganese, copper, lead, and heavy metals, nutrients including nitrogen and phosphorous, pH, and biochemical oxygen demand.

Ms. Defibaugh stated that Rivanna proceeded to identify industrial users, as they were most concerned with significant industrial users. She stated that these were either a categorical user, metal-finishing semiconductor manufacturing, or non-categorical, discharging more than 25,000 gallons per day or having the potential to adversely affect their treatment processes. She stated that businesses with processes that discharge pollutants of concern to the sewer system were restaurants, breweries, wineries, dentists, and dry cleaners.

Ms. Defibaugh stated that there were three current industrial waste users: Virginia Diodes, Mikro Systems, and Northrop Grumman. She stated the permits were issued to them on July 1st, 2019 and would expire on June 30, 2022. She stated each year, each industry was required to submit a semi-annual report for the periods ending in June and December of each year. She stated that a significant industrial user basically had four parts: an average flow of 25,000 GPD of process wastewater; contributes a process waste stream that makes up 5% or more of the average dry weather hydraulic or organic capacity of a treatment plant; is subject to categorical pretreatment standards; or had a significant impact, either singularly or in combination with other significant

dischargers or the treatment works for the quality of its effluent.

Ms. Defibaugh stated that what was new with the industrial waste program was that in 2020, the Virginia General Assembly enacted HB586, which required finding out how much PFAS, or per and polyfluoroalkyl substances, they have in their wastewater. She stated DEQ would be sending out a survey to Rivanna's significant industrial users to confirm their use and manufacture of PFAS compounds. She asked if there were any questions.

Dr. Palmer stated that Ms. Defibaugh had mentioned that the breweries were of some concern. She asked why the breweries were on their sewer system now in this list that she had given them. She asked her to talk a bit about breweries and why they would or would not be on this list.

Ms. Defibaugh stated she was pretty new at this job, but she believed it had to do with the chemical composition of the waste they were discharging.

Dr. Palmer stated that made sense. She thanked Ms. Defibaugh.

Mr. Gaffney stated he had a follow-up question and asked Mr. O'Connell and Ms. Hildebrand to weigh in. He asked if, for the businesses that were on that list that discharged less than 25,000 gallons, the City and the ACSA monitored the discharges from those businesses.

Mr. O'Connell responded that there was an active fats, oils, and grease (FOG) program, and in their case, there were about 200 grease traps that they regularly inspected. He stated they were mostly restaurants, but there were a few other users based upon their use quantities. He stated it was part of a City and County program, and it was administered in the County and the City administers a similar program for City businesses.

Ms. Hildebrand stated that any new assessment that comes in, they mirror what the requirements are in the City code that Rivanna has. She stated they monitor those new businesses closely and ensure they don't suddenly fit into one of the significant user categories, and the City assists Rivanna in that effort.

Mr. Gaffney asked if the assumptions were that there were no potential new businesses that would be significant industrial users contemplated at this time.

Ms. Hildebrand stated that was correct from the City's point of view.

Mr. Snook asked how big a restaurant was likely to be before it hit the 25,000 GPD threshold. He stated there were hundreds and hundreds of restaurants, but none of them are on the list.

Mr. O'Connell replied that all those restaurants would be on the FOG, the grease trap list. He stated some of them could be pretty small, but some are larger ones. He stated as Ms. Hildebrand stated, as new development was occurring, the wastewater contents that come from that particular business were reviewed and evaluated. He noted a restaurant would typically require a grease trap—but that expanded to a number of other businesses as well.

Mr. Snook asked if it was included on the list because of the FOG requirements rather than the water flows.

Ms. Hildebrand confirmed that this was correct. She stated typically, when they evaluated a restaurant, it was usually allocated 25 GPD per seat. She stated there would have to be 1,000 seats in a restaurant; she stated she did not have it in front of her, but it was generally that kind of level. She noted they usually do not hit that threshold.

Mr. Snook thanked Ms. Hildebrand.

c. Major Capital Projects Construction Update; Scott Schiller, Engineering Manager

Mr. Schiller greeted the Board and stated he would review the major projects construction update and would also talk about a few significant design projects currently underway.

Mr. Schiller stated that he would first talk about some recently completed projects over the past year. He stated the first was the Crozet Water Treatment Plan expansion, which was to increase the plant's capacity to 1 MGD to 2 MGD. He stated it also improved their backwash storage process, as well as added an extension to the existing GAC/chemical feed building. He stated that they also added two new intermediate pumps into the GAC building, as well as adding a new raw water pump and VFD to the raw water pump station. He stated while the project was to increase the capacity of the treatment process components, they also added some pumping capabilities upstream and downstream of the treatment process to make sure they can convey water that out of the reservoir and into the system. He presented a slide of the new backwash tank and the refurbished lagoon; the Power Activated Carbon contactors, flock basins, and sedimentation basins, as well as new plate settlers, installed in the sedimentation basins to increase the treatment capacity of the basins. He pointed out the new GAC building and chemical extension with the new unloading dock.

Mr. Schiller stated the next slide showed the lower level of the filter building, which had new piping and blower for the filter system. He stated there was a new bathroom with a locker, which he thought the operators appreciated. He referenced another view of the plant where they could see the new Power Activated Carbon silo, which was back by the water ball where they store the backwash water. He stated that was finished in Crozet this past July with a cost of about $8.5 million.

Mr. Schiller stated the South Rivanna Dam gate repairs and safety improvements consisted of leakage through the two 36" mud gates on the north and south abutments that they wanted to repair. He stated it was found there were some issues with the stem guides and actuators, so their on-call maintenance contractor, Bander Smith, took care of it. He stated they also improved access to both north and south towers. He stated they put in new aluminum ladders in the inside towers, and they also installed a few anchor points and a new walkway and railing to get up to the north tower. He stated if anyone had seen access to the north tower before, it was quite daunting to get to that, so this was a much safer process to get to that tower. He stated this work was completed in August 2021 at a cost of approximately $400,000.

Mr. Schiller reported that the Sugar Hollow rubber crest gate replacement project was to replace the rubber gate and some electrical mechanical components, which were all pretty much at the end of their useful life. He referenced a slide showing the installation of the new bladder and stated the new compressor was inside the dam structure itself, noting a picture of the bladder inflated and the reservoir beginning to fill up again. He stated they had gone through some tests of the bladder through a deflating and reinflating process, and everything was working pretty well—with one minor leak in the bladder that had been repaired. He stated they were in the final completion phase and would be done this fall, with a total cost of about $1.7 million.

Mr. Schiller reported that for projects currently under construction, the Observatory and South Rivanna water treatment plant improvement projects were to increase Observatory's capacity from 7.7 MGD to 10 MGD and then increase the reliability of South Rivanna to be able to treat 12 MGD. He stated that the picture shown was of South Rivanna and was an aerial they had taken recently. He stated the basins in the front were the sedimentation basins, and the smaller basins adjacent to them were the flocculation basins. He stated there had been a lot of work to improve mud valves and some sludge piping between all those basins. He stated in the back of that image was the beginning of a new administration building at that plant for the water department, noting that the filter building was larger than it was before. He stated they had added two additional filters in that expansion. He stated that from a structural standpoint it was pretty much complete; there was still some piping work to complete and the filters themselves. He stated they also enclosed the liquid lime container, which was behind the filter building. He stated the one other building behind the main filter plant,and adjacent to the GAC building was a new fluoride and alum storage building. He stated improvements at South Rivanna were moving along nicely.

Mr. Schiller presented some aerials of the Observatory site and stated work had really begun in earnest there. He stated they had cleared and begun to install the foundation work for the new chemical storage building which would house all of the main plant chemicals other than hypochlorite, which was still in its existing building. He stated they also had begun to expand the filter building for the new backwash pumps in order to begin the refurbishment of the main filter building. He stated all the new plate settlers, which were going into two of the sanitation basins, were stored there next to the existing GAC building. He stated things were getting ready to move pretty swiftly over at that plant as well. He stated that they were now looking for this project to be completed in March of 2023, and an overall budget of $43 million.

Mr. Schiller reported that the next project was the wastewater flow equalization tank and pump station upgrades in Crozet, which were to provide offline storage of wet weather local to the Crozet area to avoid affecting downstream sewer capacity during wet weather events. He stated they were building a one-million-gallon storage tank, as well some improvements to the existing pump station. He referenced a picture of a pre-stressed structure, where they poured the tank wall pieces locally and then tilted them up and stood them on top of the base, noting where they began to line the tank with wire and pre-stress it and then cover the wire with gunite shotcrete. He stated now they were in the process of putting on the last layer of gunite shotcrete on the side of the tank and were getting ready to do a leakage test on that tank, then move into more significant internal pump station improvements. He stated that project was moving along nicely, and they were expecting to be completed no later than November of 2022 at a budget of $5.4

million.

Mr. Schiller stated the lighting improvements at the Moores Creek plant were being done to improve site lighting for safety purposes, as well as to meet Albemarle County lighting requirements. He referenced an image of a shield that had been installed on some of the existing wall packs with the intent of converting all of the external lighting to full cutoff—meaning that it did not have any significant light pollution, directing the light down where it was needed instead of out into the sky. He stated some wall packs were installing these shields and they were doing some of the same for the streetlights. He continued with an image showing the installation of some new concrete bases for new light posts. He stated this work was well underway and would be completed by February 2022 in accordance with the County requirements, with a budget of about $600,000.

Mr. Schiller stated the Airport Road pump station and piping project was established to basically be able to take urban pressures on water and send it into the Piney Mountain storage tank. He stated it was also going to be part of the future airport pressure zone when that was developed. He stated bids were opened at the beginning of this month, and went to the Board with a recommendation of award in the consent agenda, which just passed. He stated this project would be complete in December of 2023, with a budget of $10 million.

Mr. Schiller stated the Moores Creek clarifiers and lime silo demolition project was at the Moores Creek Plant and was to demolish the two in-plant clarifiers that were no longer in operation. He stated that was being done to remove safety concerns with the open basins, as well as to allow for future expansion. He stated space was premium at this plant, so if there was an opportunity to create some, they would like to do so. He stated another goal of this project was to remove an abandoned lime silo. He stated this project had just started, and they were in the process of finalizing the schedule with the contractor and were working through some submittals and material acquisition, which was more challenging these days than it had been in the past. He stated they were looking for this project to be completed in May 2022 with a budget of $790,000.

Mr. Schiller stated the Glenmore Water Resource Recovery Facility influent pump and Variable Frequency Motor Drive addition was the next project and could be seen in an aerial image of the treatment plant on the slide. He stated the pump station was adjacent to the main road, and the new in-plant pump would be installed because there was an open slot for a third pump. He stated they had to install a Variable Frequency Motor Drive, which would actually be installed in the main plant. He stated there was some wiring to go back and forth between those two locations and some other work, but largely will have those pumps installed and a new exhaust fan in the low well at the pump station. He stated this project had been awarded, and the work will be completed in July of 2022, with a budget of $370,000.

Mr. Schiller stated he would go through some design projects that were just about to go to construction as well as some other significant projects they wanted to include in the presentation. He stated the Moores Creek 5KV Electrical System Upgrade was an upgrade of the original electrical components of this plant when it was built in the 1980s. He stated it was to replace a number of components that were at the end of their serviceable lives. He stated this included a number of the motor control centers, some of the transformers and a new switchgear building.

He stated these were a lot of electrical components that represent a lot of challenges when it came to maintaining plant operations amongst disconnecting this equipment and still trying to maintain electrical service to the plant. He stated it had been a complicated design, but they were looking to get this advertised next month with bid opening shortly after the new year. He stated they were expecting the project to be completed in 2024, with a budget of $5 million.

Mr. Schiller stated the South Rivanna River crossing and North Rivanna Transmission Main project was to install a second South Rivanna River crossing for the main water conveyance line. He stated the main line that currently existed was to the east of Rt. 29, and they were planning to install a redundant line to the west. He stated as they could see on the slide, there were a number of different location options, and they were trying to figure out which made the most sense from not only an environmental and cultural impact standpoint but also from a project standpoint. He stated they were at the point of trying to finalize what that alignment would be, and then they could move into more significant design. He stated that this project, along with the Airport Road Pump Station Project, are important components to provide a more reliable source of water to the northern urban zone as well as the North Rivanna pressure zone. He stated they were looking for this project to be completed by 2024, with a budget of $6 million.

Mr. Schiller stated that the Birdwood to Old Garth water line project, was a portion of the main transmission line for raw water transfer from the South Rivanna Reservoir to the Ragged Mountain Reservoir. He stated there would be 1,000 feet of 36-inch pipe, and this was being done to basically get ahead of private development that was planned to avoid additional costs that could occur should they do it after that development took place. He stated that they were at a 60% design of this project, and they had been discussing the work with VDOT and the railroad folks. He stated this design was progressing nicely and they were trying to do it in concert with a few remaining easements that were being finalized on the north side of the project. He stated they were looking for this project to be completed in 2024, with a budget of $2 million.

Mr. Schiller stated that next was the Beaver Creek Dam, pump station and piping modifications project. He stated it was essentially to upgrade to the spillway, so it would meet DCR dam safety standards. He stated as part of that project, they would be replacing the existing raw water pump station, intake, and the raw water pipeline to the Crozet Water Treatment Plant. He stated they recently had a public meeting in which they discussed the project and some of the spillway alternatives. He stated they also had worked with several alternatives to determine where the best location for the future pump station site would be and they brought that to the Board recently, with the focus being on pump station site number one. He stated that they continued to work through that design as well as the NRCS funding process and the design components that they required as they looked to get this project completed by 2026 with an overall budget of about $31 million.

Mr. Schiller stated they were working on the Ragged Mountain Reservoir to Observatory Water Treatment Plant pump station and water line project. He stated this was one of the legs of the main raw water conveyance project. He stated this one was of importance because it improved the raw water conveyance from Ragged Mountain to the Observatory Water Treatment Plant. He stated they were currently upgrading Observatory to 10 MGD, so they were looking to create a more reliable raw water source to the treatment plant. He stated that right now, they were

working through some preliminary design components as they finalized some remaining easements. He stated they would be replacing some outdated infrastructure and making the raw water supply of the treatment plant much more reliable. He stated completion was estimated for 2027, with an overall budget of $30 million.

Mr. Schiller stated that the last significant project is the central water line project, which will improve water flow pressure and redundancy in the urban system and better hydraulically connect the Observatory Water Treatment Plant to the central and eastern portions of the City. He stated they were at the beginning design of this project and were looking at some of the connection points. He stated it was about five miles of 24-inch and 30-inch water main they were looking to install in this area. He stated they were expecting to be completed by 2027 with an overall budget of $31 million.

Mr. Schiller stated he knew he had to go through all of the slides quickly. He stated if they had any questions or interest in specifics to please let him know.

Mr. O'Connell thanked Mr. Schiller and stated that was a really good tour of all of the projects. He stated it was hard to see all of it other than the way he just did it.

Mr. Schiller stated it was a 30-minute presentation done in 10.

Dr. Palmer stated she agreed. She thanked Mr. Schiller and stated she had some questions after reading the packet, but it was cleared up when listening to him go through it.

Mr. Gaffney asked if there were any other comments or questions from staff. Hearing none, they would move onto remote camera capabilities.

d. Remote Camera Capabilities; Lonnie Wood

Mr. Wood reported that a couple of years ago, they started replacing most of their closed-circuit TVs. He stated closed-circuit TVs were an older technology that had a DVR and ran off an internal network. He stated video can take up a lot of bandwidth in a network. He stated they moved to a web-based system that used the browser as a viewer, and it was much more efficient for the network. He stated they had quite a few cameras now. He stated displayed were all of their livestream. He showed Sugar Hollow on the screen. He stated it had many capabilities such as archiving and motion search. He stated the motion search works by selecting an area for the motion search and it would pick up anything that was deemed to be motion. He stated there was something from last week when they were siphoning off the Sugar Hollow reservoir, and the camera picked them up testing some things out there and pulling the siphons off. He stated all of their sites were displayed, such as Moores Creek and all of the wastewater treatment plants, all of the water treatment plants (except Red Hill) and all of the reservoirs (except Totier Creek), and Ivy MUC. He stated they were going to test out Ivy customer vehicles so receipts did not have to be handed out of the window, and instead there would be a screen capture of a driver and a timestamp on the ticket, give them their ticket, and that would be the receipt they had online. He showed the South Rivanna dam. He stated it had days and days of storage, from 30 days to 160. He stated they also could take screenshots for archives. He stated there was an archive someone

took when work was being done on the dam back in June. He stated he wanted to show one from the other night. He stated there was a bear that visited the South Rivanna plant in the middle of the night. He stated where it started off, they could not figure out what it was, but then the bear came out. He stated the bear was inside the gate and he did not know how he got inside the gate, but it was just looking around.

Mr. Gaffney asked if the bear got out of the gate too.

Mr. Wood stated it evidently did. He stated that was just a brief show of what the camera system could do. He stated it was very efficient for their network and they could give people access to it and they could check it out as they needed to.

Mr. O'Connell asked if it was tied to intruder alarms, or if that was a separate system.

Mr. O'Connell stated that would be the access control system, so it would be separate.

Mr. Gaffney asked if anyone was monitoring these on a regular basis.

Mr. Wood stated the operators did monitor it. He stated they would monitor this when they were here, because they have to figure out when to switch out the trucks when they get full. He stated there was an operational use for some of them, but there was no one watching the video 24/7. He stated that a lot of it was going to be forensic, so if there was an incident they could go back and look at it. He stated for example, when they were getting close to a drought situation, they would monitor to see when a reservoir stops flowing, because that was an indicator for when they would have to start the time clock on the minimal release requirements, so it was showing real-time overflow of the dam. He stated it was safe sending an operator to put their eyes on it once or twice a day to see when it stopped overflowing.

Dr. Palmer stated that maybe it was not efficient enough to warrant it, but with respect to swimming at Sugar Hollow in the reservoir and rope swings, had they considered at all pointing these cameras at the reservoir.

Mr. Wood stated they had two in Sugar Hollow. He stated they sat right next to the data line. He stated one was pointed downstream, but they could not get a good view of it. He stated that going anywhere further downstream would not be possible because the data line was not always accessible that way. He stated they would have to be put at almost every 50- or 100-foot intervals to get the coverage needed.

Dr. Palmer thanked Mr. Wood.

Mr. Wood stated the cameras could zoom in, but in the summertime when people were swimming, it would not get the coverage needed. He stated the other camera had a good view, but it was not panning around.

Mr. Gaffney stated hopefully no one was swimming that close to the dam.

Mr. Wood stated hopefully, yes.

Mr. Gaffney stated it was pretty neat.

Dr. Palmer agreed it was.

Mr. Wood stated the IT Department came up with it a few years ago and he was thankful for their effort for this. He stated operations staff like to keep adding more and more cameras.

Mr. Gaffney asked if there were any other comments or questions for Mr. Wood.

Mr. O'Connell thanked Mr. Wood for showing that. He stated he knew they had some of that but not all of it.

10. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

There were no other items presented.

11. CLOSED MEETING

There was no reason for a closed meeting.

12. ADJOURNMENT

At 3:11 p.m., Dr. Palmer moved to adjourn the meeting of the Rivanna Water and Sewer Authority. Mr. O'Connell seconded the motion, which passed unanimously (6-0).

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
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MEMORANDUM

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

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **EXECUTIVE DIRECTOR'S REPORT**

DATE: **NOVEMBER 16, 2021**

STRATEGIC PLAN GOAL: WORKFORCE DEVELOPMENT

Recognitions

The professional qualifications of our staff continue to improve and enhance our services. The following employees have successfully completed the requirements for a license from the State:

Tom Corrice:	passed the Class 1 WW Operator exam
Dave Ulan:	passed the Class 2 WW Operator exam
Dawn Wood:	passed the Class 3 Water Operator exam
Cary Wingo:	passer the Class 3 Water Operator exam

Staff receive a 5% salary increase after passing a higher-level licensing exam. A special "thanks" to Operations Division Director, David Tungate, and his management team for providing preparatory training to help staff gain these higher credentials.

COVID Vaccinations

87% of RWSA staff (83 of 96) have been vaccinated. Two staff members need one additional vaccination for all to be fully vaccinated. Mandatory testing for the unvaccinated will begins on December 7, 2021.

Overall RWSA / RSWA Vaccination Rate: 89%

STRATEGIC PLAN GOAL: INFRASTRUCTURE AND MASTER PLANNING

Sugar Hollow Reservoir "Gate" Replacement

Replacement of the inflatable rubber gate, which sits on top of the concrete dam and controls the upper 5 feet of the water level in the reservoir, has been successfully completed. The SHR has filled to its normal pool level, and water has been transferred to fill Ragged Mtn Reservoir since October 29, 2021 as we refill our largest water supply reservoir in preparation for the higher demands and lower precipitation anticipated during the upcoming summer.

Beaver Creek Reservoir Dam, Pump Station and Piping Modifications

Approval of the completed project planning study for the Natural Resources Conservation Service is scheduled for July 2022. An application for federal design and construction funding from NRCS (65%) will be submitted in early 2022.

Central Water Pipe

Preparation of engineering plans and specifications continue for this 24 - 30" finished water distribution pipe to be completed along a 5-mile alignment through the City. This major drinking water pipe is needed to strengthen the urban drinking water system in the City and the County. A funding allocation agreement for the project is also under discussion. Project information, including alternate routes considered, will be provided on our web page this month.

Ragged Mtn Reservoir to Observatory WTP Water Pipe and Pump Station

We recently executed easement agreements with Trinity Presbyterian Church and the Virginia Department of Forestry. Discussions continue with one final private owner on Reservoir Road, as well as with UVA Foundation and UVA for the remaining pump station and pipe easements.

S. Rivanna to Ragged Mtn Reservoir Water Pipe

We expect to obtain easement agreements with the last 2 private owners located on Woodburn Road this year. Our efforts continue with the UVA Foundation for the remaining easements. Preparation of engineering plans and specifications continue for a 0.25-mile section of this 36" raw water pipe from Birdwood to Old Garth Road.

Sewer System Rehabilitation

A recent newspaper article about the cleanliness of the James River and the sanitary sewer overflows from the City of Richmond's wastewater system accentuated the importance of the investments made locally in sewer system rehabilitation programs. VDEQ has given Richmond until 2035 to eliminate sewer overflows, which the City estimates will cost $900 M. In recent presentations to the Board, we reviewed how the City of Charlottesville, ACSA, and RWSA have invested $165 M in sewer system rehabilitation over the last 12 years to minimize sewer system overflows for the benefit of our community and streams.

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MEMORANDUM

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

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

REVIEWED: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **SEPTEMBER MONTHLY FINANCIAL SUMMARY – FY 2022**

DATE: **NOVEMBER 16, 2021**

Urban Water flow and rate revenues are 18% over budget estimates through September, and Urban Wastewater flow and rate revenues are 1% over budget. Revenues and expenses are summarized in the table below:

	Urban Water	Urban Wastewater	Total Other Rate Centers	Total Authority
Operations				
Revenues	$ 2,484,244	$ 2,428,292	$ 582,220	$ 5,494,756
Expenses	(2,097,128)	(2,243,341)	(592,280)	(4,932,749)
Surplus (deficit)	$ 387,116	$ 184,951	$ (10,060)	$ 562,007
Debt Service				
Revenues	$ 1,910,874	$ 2,256,621	$ 501,638	$ 4,669,133
Expenses	(1,914,115)	(2,178,927)	(502,398)	(4,595,440)
Surplus (deficit)	$ (3,241)	$ 77,694	$ (760)	$ 73,693
Total				
Revenues	$ 4,395,118	$ 4,684,913	$ 1,083,858	$ 10,163,889
Expenses	(4,011,243)	(4,422,268)	(1,094,678)	(9,528,189)
Surplus (deficit)	$ 383,875	$ 262,645	$ (10,820)	$ 635,700

When reviewing the Authority as a whole, operating revenues are $501,000 over budget and operating expenses are $74,000 over budget.

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 be significant impacts on the budget vs. actual monthly comparisons but will even out as the year progresses. Septage receiving support revenue of $109,441 is billed to the County annually in July. Annual payments are made for leases, health savings

account contributions, and certain maintenance agreements. Insurance premiums are paid quarterly.

B. Personnel Costs (Urban Water – page 2) – Urban Water's salaries were a little higher than budgeted for July and August due to some overlap of salaries for the outgoing water department manager and the interim manager.
C. Professional Services (Crozet Water – page 3) – Crozet Water incurred unbudgeted engineering and technical services expenses for a water demand forecast update.
D. Information Technology (Urban Water, Scottsville Water, Urban Wastewater – pages 2,4, and 5) – These rate centers are over budget on SCADA maintenance and support costs.
E. Operations & Maintenance (Scottsville Wastewater – page 7) – Scottsville Wastewater incurred $14,000 of unbudgeted repairs to the lagoon intake gates.

Attachments

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021
Fiscal Year 2022

Consolidated
Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	*Budget FY 2022*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Operations Rate Revenue		$ 18,810,555	$ 4,702,639	$ 5,089,590	$ 386,951	8.23%
Lease Revenue		105,000	26,250	18,144	(8,106)	-30.88%
Admin., Maint. & Engineering Revenue		553,000	138,250	139,308	1,058	0.77%
Other Revenues		540,589	135,147	248,373	113,225	83.78%
Use of Reserves-GAC		316,250	79,063	85,600	6,538	8.27%
Rate Stabilization Reserves		200,000	50,000	50,000	-	0.00%
Interest Allocation		8,200	2,050	3,051	1,001	48.82%
Total Operating Revenues		**$ 20,533,594**	**$ 5,133,399**	**$ 5,634,065**	**$ 500,666**	**9.75%**
Expenses						
Personnel Cost	**B**	$ 9,649,988	$ 2,277,481	$ 2,273,569	$ 3,912	0.17%
Professional Services	**C**	712,050	178,013	136,882	41,130	23.11%
Other Services & Charges		3,111,400	777,850	722,034	55,816	7.18%
Communications		191,412	47,853	55,956	(8,103)	-16.93%
Information Technology	**A,D**	447,100	111,775	201,408	(89,633)	-80.19%
Supplies		42,160	10,540	8,941	1,599	15.17%
Operations & Maintenance	**A,E**	4,864,235	1,216,059	1,387,794	(171,735)	-14.12%
Equipment Purchases		615,250	153,813	60,475	93,338	60.68%
Depreciation		900,000	225,000	225,000	-	0.00%
Reserve Transfers		-	-	-	-	
Total Operating Expenses		**$ 20,533,595**	**$ 4,998,383**	**$ 5,072,058**	**$ (73,675)**	**-1.47%**
Operating Surplus/(Deficit)		**$ (1)**	**$ 135,016**	**$ 562,007**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 18,193,960	$ 4,548,490	$ 4,548,495	$ 5	0.00%
Use of Reserves		-	-	-	-	
Septage Receiving Support - County		109,440	27,360	109,441	82,081	300.00%
Buck Mountain Lease Revenue		1,600	400	-	(400)	-100.00%
Trust Fund Interest		33,700	8,425	436	(7,989)	-94.83%
Reserve Fund Interest		80,000	20,000	10,762	(9,238)	-46.19%
Total Debt Service Revenues		**$ 18,418,700**	**$ 4,604,675**	**$ 4,669,134**	**$ 64,459**	**1.40%**
Debt Service Costs						
Total Principal & Interest		$ 14,256,077	$ 3,564,019	$ 3,564,019	$ -	0.00%
Reserve Additions-Interest		80,000	20,000	10,762	9,238	46.19%
Debt Service Ratio Charge		725,000	181,250	181,250	-	0.00%
Reserve Additions-CIP Growth		3,357,634	839,409	839,409	-	0.00%
Total Debt Service Costs		**$ 18,418,711**	**$ 4,604,678**	**$ 4,595,440**	**$ 9,238**	**0.20%**
Debt Service Surplus/(Deficit)		**$ (11)**	**$ (3)**	**$ 73,694**		

Summary

Total Revenues	$ 38,952,294	$ 9,738,074	$ 10,303,198	$ 565,125	5.80%
Total Expenses	38,952,306	9,603,061	9,667,498	(64,437)	-0.67%
Surplus/(Deficit)	**$ (12)**	**$ 135,013**	**$ 635,700**		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Urban Water Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2022*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 7,971,504	$ 1,992,876	$ 2,360,118	$ 367,242	18.43%
Lease Revenue		75,000	18,750	12,263	(6,487)	-34.60%
Miscellaneous		-	-	-	-	
Use of Reserves-GAC		300,000	75,000	85,600	10,600	14.13%
Rate Stabilization Reserves		100,000	25,000	25,000	-	0.00%
Interest Allocation		3,400	850	1,263	413	48.59%
Total Operating Revenues		**$ 8,449,904**	**$ 2,112,476**	**$ 2,484,244**	**$ 371,768**	**17.60%**
Expenses						
Personnel Cost	**B**	$ 2,039,157	$ 483,255	$ 499,965	$ (16,711)	-3.46%
Professional Services		279,200	69,800	40,959	28,841	41.32%
Other Services & Charges		734,150	183,538	139,036	44,501	24.25%
Communications		98,670	24,668	27,056	(2,389)	-9.68%
Information Technology	**D**	80,500	20,125	36,196	(16,071)	-79.86%
Supplies		5,100	1,275	2,010	(735)	-57.65%
Operations & Maintenance	**A**	2,250,440	562,610	670,688	(108,078)	-19.21%
Equipment Purchases		15,400	3,850	3,850	0	0.00%
Depreciation		300,000	75,000	75,000	-	0.00%
Reserve Transfers		-	-	-	-	
Subtotal Before Allocations		$ 5,802,617	$ 1,424,120	$ 1,494,762	$ (70,642)	-4.96%
Allocation of Support Departments		2,647,289	627,973	602,367	25,606	4.08%
Total Operating Expenses		**$ 8,449,906**	**$ 2,052,093**	**$ 2,097,128**	**$ (45,036)**	**-2.19%**
Operating Surplus/(Deficit)		**$ (2)**	**$ 60,383**	**$ 387,116**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 7,621,725	$ 1,905,431	$ 1,905,432	$ 1	0.00%
Trust Fund Interest		12,000	3,000	158	(2,842)	-94.73%
Reserve Fund Interest		39,300	9,825	5,284	(4,541)	-46.22%
Use of Reserves		-	-	-	-	
Lease Revenue		1,600	400	-	(400)	-100.00%
Total Debt Service Revenues		**$ 7,674,625**	**$ 1,918,656**	**$ 1,910,874**	**$ (7,782)**	**-0.41%**
Debt Service Costs						
Total Principal & Interest		$ 5,215,275	$ 1,303,819	$ 1,303,819	$ -	0.00%
Reserve Additions-Interest		39,300	9,825	5,284	4,541	46.22%
Debt Service Ratio Charge		400,000	100,000	100,000	-	0.00%
Reserve Additions-CIP Growth		2,020,050	505,013	505,013	-	0.00%
Total Debt Service Costs		**$ 7,674,625**	**$ 1,918,656**	**$ 1,914,115**	**$ 4,541**	**0.24%**
Debt Service Surplus/(Deficit)		**$ -**	**$ -**	**$ (3,241)**		
Rate Center Summary						
Total Revenues		$ 16,124,529	$ 4,031,132	$ 4,395,118	$ 363,986	9.03%
Total Expenses		16,124,531	3,970,749	4,011,244	(40,495)	-1.02%
Surplus/(Deficit)		**$ (2)**	**$ 60,383**	**$ 383,874**		
Costs per 1000 Gallons		$ 2.49		$ 2.08		
Operating and DS		$ 4.75		$ 3.99		
Thousand Gallons Treated		3,397,700	849,425	1,006,018	156,593	18.44%
or						
Flow (MGD)		9.309		10.935		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Crozet Water Rate Center
Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	Budget FY 2022	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues						
Operations Rate Revenue		$ 1,058,856	$ 264,714	$ 264,714	$ -	0.00%
Lease Revenues		30,000	7,500	5,881	(1,619)	-21.59%
Use of Reserves-GAC		13,000	3,250	-	(3,250)	-100.00%
Interest Allocation		500	125	177	52	41.55%
Total Operating Revenues		**$ 1,102,356**	**$ 275,589**	**$ 270,772**	**$ (4,817)**	**-1.75%**
Expenses						
Personnel Cost		$ 324,463	$ 76,907	$ 78,956	$ (2,049)	-2.66%
Professional Services	C	15,100	3,775	16,890	(13,115)	-347.41%
Other Services & Charges		104,450	26,113	24,461	1,651	6.32%
Communications		17,530	4,383	4,545	(162)	-3.70%
Information Technology		5,250	1,313	8,277	(6,964)	-530.60%
Supplies		1,500	375	199	176	46.82%
Operations & Maintenance		296,900	74,225	74,347	(122)	-0.16%
Equipment Purchases		28,000	7,000	750	6,250	89.29%
Depreciation		60,000	15,000	15,000	-	0.00%
Reserve Transfers		-	-	-	-	
Subtotal Before Allocations		$ 853,193	$ 209,090	$ 223,424	$ (14,334)	-6.86%
Allocation of Support Departments		249,161	59,126	56,714	2,412	4.08%
Total Operating Expenses		**$ 1,102,354**	**$ 268,215**	**$ 280,138**	**$ (11,922)**	**-4.45%**
Operating Surplus/(Deficit)		**$ 2**	**$ 7,374**	**$ (9,366)**		

Debt Service Budget vs. Actual

	Budget FY 2022	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues					
Debt Service Rate Revenue	$ 1,847,832	$ 461,958	$ 461,958	$ -	0.00%
Trust Fund Interest	2,900	725	37	(688)	-94.95%
Use of Reserves	-	-	-	-	
Reserve Fund Interest	2,500	625	334	(291)	-46.62%
Total Debt Service Revenues	**$ 1,853,232**	**$ 463,308**	**$ 462,328**	**$ (980)**	**-0.21%**
Debt Service Costs					
Total Principal & Interest	$ 1,216,667	$ 304,167	$ 304,167	$ -	0.00%
Reserve Additions-Interest	2,500	625	334	291	46.62%
Reserve Additions-CIP Growth	634,070	158,518	158,518	-	0.00%
Total Debt Service Costs	**$ 1,853,237**	**$ 463,309**	**$ 463,018**	**$ 291**	**0.06%**
Debt Service Surplus/(Deficit)	**$ (5)**	**$ (1)**	**$ (690)**		

Rate Center Summary

	Budget FY 2022	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Total Revenues	$ 2,955,588	$ 738,897	$ 733,100	$ (5,797)	-0.78%
Total Expenses	2,955,591	731,524	743,156	(11,631)	-1.59%
Surplus/(Deficit)	**$ (3)**	**$ 7,373**	**$ (10,055)**		
Costs per 1000 Gallons	$ 5.44		$ 3.95		
Operating and DS	$ 14.58		$ 10.48		
Thousand Gallons Treated	202,697	50,674	70,889	20,215	39.89%
Flow (MGD)	0.555		0.771		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Scottsville Water Rate Center
Revenues and Expenses Summary

	Notes	*Budget FY 2022*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual						
Revenues						
Operations Rate Revenue		$ 514,704	$ 128,676	$ 128,676	$ -	0.00%
Use of Reserves-GAC		3,250	813		(813)	-100.00%
Interest Allocation		200	50	85	35	70.86%
Total Operating Revenues		**$ 518,154**	**$ 129,539**	**$ 128,761**	**$ (777)**	**-0.60%**
Expenses						
Personnel Cost		$ 195,695	$ 46,338	$ 48,133	$ (1,795)	-3.87%
Professional Services		2,900	725	1,740	(1,015)	-139.99%
Other Services & Charges		28,100	7,025	4,081	2,944	41.91%
Communications		4,930	1,233	1,652	(420)	-34.05%
Information Technology	D	1,250	313	11,768	(11,455)	-3665.75%
Supplies		770	193	56	136	70.77%
Operations & Maintenance		87,200	21,800	17,684	4,116	18.88%
Equipment Purchases		1,500	375	375	-	0.00%
Depreciation		40,000	10,000	10,000	0	0.00%
Reserve Transfers		-	-	-	-	
Subtotal Before Allocations		$ 362,345	$ 88,001	$ 95,489	$ (7,489)	-8.51%
Allocation of Support Departments		155,813	37,026	35,322	1,704	4.60%
Total Operating Expenses		**$ 518,158**	**$ 125,027**	**$ 130,811**	**$ (5,785)**	**-4.63%**
Operating Surplus/(Deficit)		**$ (4)**	**$ 4,512**	**$ (2,050)**		
Debt Service Budget vs. Actual						
Revenues						
Debt Service Rate Revenue		$ 138,888	$ 34,722	$ 34,722	$ -	0.00%
Trust Fund Interest		300	75	4	(71)	-94.79%
Reserve Fund Interest		1,200	300	161	(139)	-46.19%
Total Debt Service Revenues		**$ 140,388**	**$ 35,097**	**$ 34,887**	**$ (210)**	**-0.60%**
Debt Service Costs						
Total Principal & Interest		$ 125,892	$ 31,473	$ 31,473	$ -	0.00%
Reserve Additions-Interest		1,200	300	161	139	
Reserve Additions-CIP Growth		13,299	3,325	3,325	-	
Total Debt Service Costs		**$ 140,391**	**$ 35,098**	**$ 34,959**	**$ 139**	**0.39%**
Debt Service Surplus/(Deficit)		**$ (3)**	**$ (1)**	**$ (72)**		
Rate Center Summary						
Total Revenues		$ 658,542	$ 164,636	$ 163,649	$ (987)	-0.60%
Total Expenses		658,549	160,125	165,771	(5,646)	-3.53%
Surplus/(Deficit)		**$ (7)**	**$ 4,511**	**$ (2,122)**		
Costs per 1000 Gallons		$ 30.07		$ 26.10		
Operating and DS		$ 38.22		$ 33.07		
Thousand Gallons Treated		17,230	4,308	5,012	705	16.36%
or						
Flow (MGD)		0.047		0.054		

Rivanna Water & Sewer Authority
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Urban Wastewater Rate Center
Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	Budget FY 2022	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues						
Operations Rate Revenue		$ 8,535,195	$ 2,133,799	$ 2,153,507	$ 19,709	0.92%
Stone Robinson WWTP		20,589	5,147	4,236	(911)	-17.70%
Septage Acceptance		475,000	118,750	139,662	20,912	17.61%
Nutrient Credits		45,000	11,250	104,475	93,225	828.67%
Rate Stabilization Reserve		100,000	25,000	25,000	-	0.00%
Miscellaneous Revenue		-	-	-	-	
Interest Allocation		3,800	950	1,412	462	48.68%
Total Operating Revenues		**$ 9,179,584**	**$ 2,294,896**	**$ 2,428,292**	**$ 133,396**	**5.81%**
Expenses						
Personnel Cost		$ 1,289,471	$ 304,831	$ 314,429	$ (9,598)	-3.15%
Professional Services		208,500	52,125	44,726	7,399	14.19%
Other Services & Charges		2,011,700	502,925	509,774	(6,849)	-1.36%
Communications		9,800	2,450	3,906	(1,456)	-59.41%
Information Technology	D	56,500	14,125	32,544	(18,419)	-130.40%
Supplies		1,200	300	472	(172)	-57.17%
Operations & Maintenance	A	1,672,520	418,130	487,010	(68,880)	-16.47%
Equipment Purchases		294,250	73,563	12,500	61,063	83.01%
Depreciation		470,000	117,500	117,500	(0)	0.00%
Reserve Transfers		-	-	-	-	
Subtotal Before Allocations		$ 6,013,941	$ 1,485,949	$ 1,522,860	$ (36,911)	-2.48%
Allocation of Support Departments		3,165,643	751,592	720,482	31,110	4.14%
Total Operating Expenses		**$ 9,179,584**	**$ 2,237,540**	**$ 2,243,342**	**$ (5,801)**	**-0.26%**
Operating Surplus/(Deficit)		**$ (0)**	**$ 57,356**	**$ 184,951**		

Debt Service Budget vs. Actual

	Budget FY 2022	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues					
Debt Service Rate Revenue	$ 8,568,221	$ 2,142,055	$ 2,142,057	$ 2	0.00%
Septage Receiving Support - County	109,440	27,360	109,441	82,081	300.00%
Trust Fund Interest	18,500	4,625	237	(4,388)	-94.89%
Use of Reserves	-	-	-	-	
Reserve Fund Interest	36,300	9,075	4,886	(4,189)	-46.16%
Total Debt Service Revenues	**$ 8,732,461**	**$ 2,183,115**	**$ 2,256,621**	**$ 73,505**	**3.37%**
Debt Service Costs					
Total Principal & Interest	$ 7,689,212	$ 1,922,303	$ 1,922,303	$ -	0.00%
Reserve Additions-Interest	36,300	9,075	4,886	4,189	46.16%
Debt Service Ratio Charge	325,000	81,250	81,250	-	0.00%
Reserve Additions-CIP Growth	681,950	170,488	170,488	-	0.00%
Total Debt Service Costs	**$ 8,732,462**	**$ 2,183,116**	**$ 2,178,927**	**$ 4,189**	**0.19%**
Debt Service Surplus/(Deficit)	**$ (1)**	**$ (0)**	**$ 77,694**		

Rate Center Summary

	Budget FY 2022	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Total Revenues	$ 17,912,045	$ 4,478,011	$ 4,684,913	$ 206,902	4.62%
Total Expenses	17,912,046	4,420,656	4,422,268	(1,612)	-0.04%
Surplus/(Deficit)	**$ (1)**	**$ 57,355**	**$ 262,645**		
Costs per 1000 Gallons	$ 2.71		$ 2.62		
Operating and DS	$ 5.28		$ 5.17		
Thousand Gallons Treated	3,390,400	847,600	855,585	7,985	0.94%
or					
Flow (MGD)	9.289		9.300		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Glenmore Wastewater Rate Center
Revenues and Expenses Summary

	Budget FY 2022	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Operating Budget vs. Actual					
Notes					
Revenues					
Operations Rate Revenue	$ 404,028	$ 101,007	$ 101,007	$ -	0.00%
Rate Stabilization Reserve	-	-	-	-	
Interest Allocation	200	50	64	14	28.16%
Total Operating Revenues	**$ 404,228**	**$ 101,057**	**$ 101,071**	**$ 14**	**0.01%**
Expenses					
Personnel Cost	$ 94,885	$ 22,434	$ 23,111	$ (677)	-3.02%
Professional Services	12,900	3,225	-	3,225	
Other Services & Charges	34,300	8,575	8,266	309	3.60%
Communications	3,130	783	930	(148)	-18.88%
Information Technology	2,000	500	560	(60)	-11.99%
Supplies	-	-	69	(69)	
Operations & Maintenance	121,650	30,413	20,479	9,934	32.66%
Equipment Purchases	3,800	950	950	(0)	0.00%
Depreciation	10,000	2,500	2,500	0	0.00%
Subtotal Before Allocations	$ 282,665	$ 69,379	$ 56,865	$ 12,513	18.04%
Allocation of Support Departments	121,563	28,934	27,353	1,580	5.46%
Total Operating Expenses	**$ 404,229**	**$ 98,313**	**$ 84,219**	**$ 14,094**	**14.34%**
Operating Surplus/(Deficit)	**$ (1)**	**$ 2,744**	**$ 16,852**		
Debt Service Budget vs. Actual					
Revenues					
Debt Service Rate Revenue	$ 7,412	$ 1,853	$ 1,854	$ 1	0.05%
Trust Fund Interest	-	-	-	-	
Reserve Fund Interest	200	50	32	(18)	-35.44%
Total Debt Service Revenues	**$ 7,612**	**$ 1,903**	**$ 1,886**	**$ 1**	**0.05%**
Debt Service Costs					
Total Principal & Interest	$ 1,578	$ 395	$ 395	$ -	0.00%
Reserve Additions-CIP Growth	5,834	1,459	1,459	-	0.00%
Reserve Additions-Interest	200	50	32	18	35.44%
Total Debt Service Costs	**$ 7,612**	**$ 1,903**	**$ 1,885**	**$ 18**	**0.93%**
Debt Service Surplus/(Deficit)	**$ -**	**$ -**	**$ 1**		

Rate Center Summary

Total Revenues	$ 411,840	$ 102,960	$ 102,957	$ (3)	0.00%
Total Expenses	411,841	100,216	86,104	14,112	14.08%
Surplus/(Deficit)	**$ (1)**	**$ 2,744**	**$ 16,853**		
Costs per 1000 Gallons	$ 9.76		$ 10.13		
Operating and DS	$ 9.95		$ 10.35		
Thousand Gallons Treated	41,401	10,350	8,316	(2,034)	**-19.65%**
or					
Flow (MGD)	0.113		0.090		

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Scottsville Wastewater Rate Center
Revenues and Expenses Summary

Operating Budget vs. Actual

	Notes	Budget FY 2022	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
Revenues						
Operations Rate Revenue		$ 326,268	$ 81,567	$ 81,567	$ -	0.00%
Interest Allocation		100	25	49	24	95.20%
Total Operating Revenues		**$ 326,368**	**$ 81,592**	**$ 81,616**	**$ 24**	**0.03%**
Expenses						
Personnel Cost		$ 94,875	$ 22,431	$ 23,111	$ (680)	-3.03%
Professional Services		10,250	2,563	361	2,201	85.90%
Other Services & Charges		21,800	5,450	7,364	(1,914)	-35.11%
Communications		3,400	850	1,121	(271)	-31.92%
Information Technology		1,500	375	1,390	(1,015)	-270.78%
Supplies		-	-	-	-	
Operations & Maintenance	**E**	58,100	14,525	32,451	(17,926)	-123.42%
Equipment Purchases		3,800	950	950	(0)	0.00%
Depreciation		20,000	5,000	5,000	(0)	0.00%
Subtotal Before Allocations		$ 213,725	$ 52,144	$ 71,749	$ (19,605)	-37.60%
Allocation of Support Departments		112,640	26,801	25,363	1,438	5.37%
Total Operating Expenses		**$ 326,365**	**$ 78,945**	**$ 97,112**	**$ (18,167)**	**-23.01%**
Operating Surplus/(Deficit)		**$ 3**	**$ 2,647**	**$ (15,496)**		

Debt Service Budget vs. Actual

Revenues						
Debt Service Rate Revenue		$ 9,882	$ 2,471	$ 2,472	$ 2	0.06%
Trust Fund Interest		-	-	0	0	
Reserve Fund Interest		500	125	65	(60)	-48.34%
Total Debt Service Revenues		**$ 10,382**	**$ 2,596**	**$ 2,537**	**$ (59)**	**-2.25%**
Debt Service Costs						
Total Principal & Interest		$ 7,453	$ 1,863	$ 1,863	$ -	0.00%
Reserve Additions-Interest		500	125	65	60	48.34%
Estimated New Principal & Interest		2,431	608	608	-	0.00%
Total Debt Service Costs		**$ 10,384**	**$ 2,596**	**$ 2,536**	**$ 60**	**2.33%**
Debt Service Surplus/(Deficit)		**$ 2**	**$ 1**	**$ 1**		

Rate Center Summary

Total Revenues	$ 336,750	$ 84,188	$ 84,153	$ (35)	-0.04%
Total Expenses	336,749	81,541	99,648	(18,106)	-22.21%
Surplus/(Deficit)	**$ 1**	**$ 2,646**	**$ (15,495)**		
Costs per 1000 Gallons	$ 13.80		$ 24.57		
Operating and DS	$ 14.24		$ 25.21		
Thousand Gallons Treated	23,643	5,911	3,953	(1,958)	**-33.12%**
or					
Flow (MGD)	0.065		0.043		

Rivanna Water & Sewer Authority
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Administration

Operating Budget vs. Actual

	Notes	*Budget FY 2022*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ 551,000	$ 137,750	$ 138,501	$ 751	0.55%
Miscellaneous Revenue		2,000	500	807	307	61.44%
Total Operating Revenues		**$ 553,000**	**$ 138,250**	**$ 139,308**	**$ 1,058**	**0.77%**
Expenses						
Personnel Cost		$ 2,177,998	$ 512,358	$ 502,408	$ 9,950	1.94%
Professional Services		163,200	40,800	31,301	9,499	23.28%
Other Services & Charges		86,200	21,550	20,250	1,300	6.03%
Communications		21,000	5,250	6,405	(1,155)	-22.00%
Information Technology	**A**	171,900	42,975	84,358	(41,383)	-96.29%
Supplies		21,500	5,375	4,302	1,073	19.96%
Operations & Maintenance		68,600	17,150	10,669	6,481	37.79%
Equipment Purchases		25,200	6,300	3,800	2,500	39.68%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 2,735,598**	**$ 651,758**	**$ 663,493**	**$ (11,735)**	**-1.80%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (2,182,598)**	**$ (513,508)**	**$ (524,184)**	**$ 10,677**	**-2.08%**
Allocations to the Rate Centers						
Urban Water	44.00%	**$ 960,343**	**$ 225,943**	**$ 230,641**	**$ (4,698)**	
Crozet Water	4.00%	**$ 87,304**	**20,540**	**20,967**	**(427)**	
Scottsville Water	2.00%	**$ 43,652**	**10,270**	**10,484**	**(214)**	
Urban Wastewater	48.00%	**$ 1,047,647**	**246,484**	**251,609**	**(5,125)**	
Glenmore Wastewater	1.00%	**$ 21,826**	**5,135**	**5,242**	**(107)**	
Scottsville Wastewater	1.00%	**$ 21,826**	**5,135**	**5,242**	**(107)**	
	100.00%	**$ 2,182,598**	**$ 513,508**	**$ 524,184**	**$ (10,677)**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Maintenance

Operating Budget vs. Actual

Notes

	Budget FY 2022	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues					
Payment for Services SWA	$ -	$ -	$ -	$ -	
Miscellaneous Revenue	-	-	-	-	
Total Operating Revenues	**$ -**	**$ -**	**$ -**	**$ -**	
Expenses					
Personnel Cost	$ 1,398,597	$ 329,949	$ 333,853	$ (3,904)	-1.18%
Professional Services	-	-	-	-	
Other Services & Charges	61,200	15,300	3,270	12,030	78.62%
Communications	15,730	3,933	5,809	(1,877)	-47.72%
Information Technology	9,500	2,375	86	2,289	96.39%
Supplies	2,000	500	234	266	53.10%
Operations & Maintenance	89,600	22,400	23,262	(862)	-3.85%
Equipment Purchases	208,100	52,025	31,500	20,525	39.45%
Depreciation	-	-	-	-	
Total Operating Expenses	**$ 1,784,727**	**$ 426,482**	**$ 398,015**	**$ 28,467**	**6.67%**

Department Summary

Net Costs Allocable to Rate Centers	**$ (1,784,727)**	**$ (426,482)**	**$ (398,015)**	**$ (28,467)**	**6.67%**
Allocations to the Rate Centers					
Urban Water 30.00%	**$ 535,418**	**$ 127,945**	**$ 119,404**	**$ 8,540**	
Crozet Water 3.50%	**62,465**	**14,927**	**13,931**	**996**	
Scottsville Water 3.50%	**62,465**	**14,927**	**13,931**	**996**	
Urban Wastewater 56.50%	**1,008,371**	**240,962**	**224,878**	**16,084**	
Glenmore Wastewater 3.50%	**62,465**	**14,927**	**13,931**	**996**	
Scottsville Wastewater 3.00%	**53,542**	**12,794**	**11,940**	**854**	
100.00%	**$ 1,784,727**	**$ 426,482**	**$ 398,015**	**$ 28,467**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Laboratory

Operating Budget vs. Actual

	Notes	*Budget FY 2022*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
N/A						
Expenses						
Personnel Cost		$ 411,037	$ 96,831	$ 95,618	$ 1,213	1.25%
Professional Services		-	-	-	-	
Other Services & Charges		7,900	1,975	1,226	749	37.95%
Communications		1,300	325	214	111	
Information Technology		200	50	180	(130)	-260.00%
Supplies		1,300	325	297	28	8.76%
Operations & Maintenance		120,590	30,148	35,980	(5,832)	-19.35%
Equipment Purchases		1,700	425	425	(0)	0.00%
Depreciation		-	-	-	-	
Total Operating Expenses		**$ 544,027**	**$ 130,079**	**$ 133,939**	**$ (3,861)**	**-2.97%**

Department Summary

Net Costs Allocable to Rate Centers		**$ (544,027)**	**$ (130,079)**	**$ (133,939)**	**$ 3,861**	**-2.97%**
Allocations to the Rate Centers						
Urban Water	44.00%	**$ 239,372**	**$ 57,235**	**$ 58,933**	**$ (1,699)**	
Crozet Water	4.00%	**21,761**	**5,203**	**5,358**	**(154)**	
Scottsville Water	2.00%	**10,881**	**2,602**	**2,679**	**(77)**	
Urban Wastewater	47.00%	**255,693**	**61,137**	**62,952**	**(1,815)**	
Glenmore Wastewater	1.50%	**8,160**	**1,951**	**2,009**	**(58)**	
Scottsville Wastewater	1.50%	**8,160**	**1,951**	**2,009**	**(58)**	
	100.00%	**$ 544,027**	**$ 130,079**	**$ 133,939**	**$ (3,861)**	

Rivanna Water & Sewer Authority
Monthly Financial Statements - September 2021

Engineering

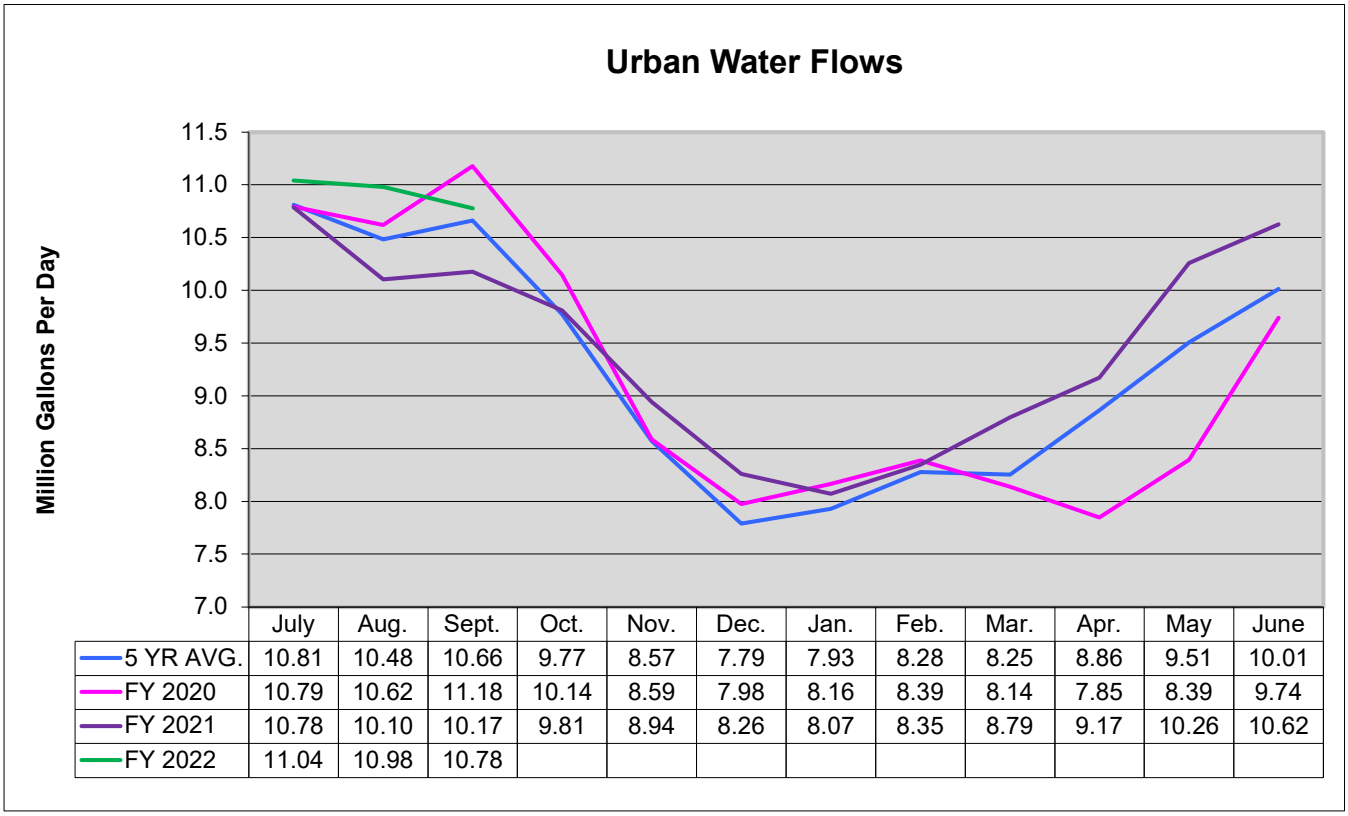
Operating Budget vs. Actual

	Notes	*Budget FY 2022*	*Budget Year-to-Date*	*Actual Year-to-Date*	*Budget vs. Actual*	*Variance Percentage*
Revenues						
Payment for Services SWA		$ -	$ -	$ -	$ -	
Total Operating Revenues		**$ -**	**$ -**	**$ -**	**$ -**	
Expenses						
Personnel Cost		$ 1,623,810	$ 382,147	$ 353,986	$ 28,161	7.37%
Professional Services		20,000	5,000	905	4,095	81.90%
Other Services & Charges		21,600	5,400	4,306	1,094	20.26%
Communications		15,922	3,981	4,317	(336)	-8.45%
Information Technology		118,500	29,625	26,050	3,575	12.07%
Supplies		8,790	2,198	1,301	896	40.78%
Operations & Maintenance		98,635	24,659	15,224	9,435	38.26%
Equipment Purchases		33,500	8,375	5,375	3,000	35.82%
Depreciation & Capital Reserve Transfers		-	-	-	-	
Total Operating Expenses		**$ 1,940,757**	**$ 461,384**	**$ 411,463**	**$ 49,921**	**10.82%**

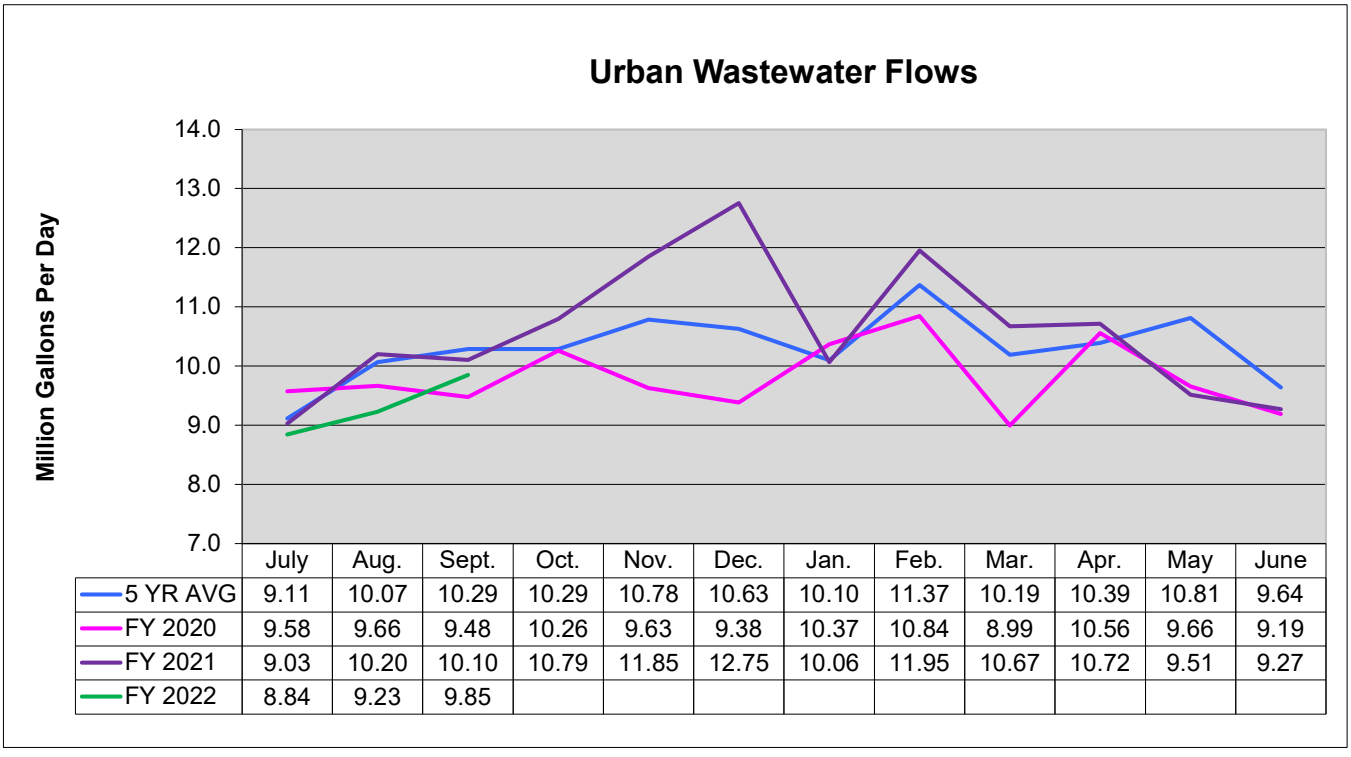
Department Summary

Net Costs Allocable to Rate Centers		**$ (1,940,757)**	**$ (461,384)**	**$ (411,463)**	**$ (49,921)**	**10.82%**
Allocations to the Rate Centers						
Urban Water	47.00%	**$ 912,156**	**$ 216,851**	**$ 193,388**	**$ 23,463**	
Crozet Water	4.00%	**77,630**	**18,455**	**16,459**	**1,997**	
Scottsville Water	2.00%	**38,815**	**9,228**	**8,229**	**998**	
Urban Wastewater	44.00%	**853,933**	**203,009**	**181,044**	**21,965**	
Glenmore Wastewater	1.50%	**29,111**	**6,921**	**6,172**	**749**	
Scottsville Wastewater	1.50%	**29,111**	**6,921**	**6,172**	**749**	
	100.00%	**$ 1,940,757**	**$ 461,384**	**$ 411,463**	**$ 49,921**	

Rivanna Water and Sewer Authority
Flow Graphs



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
5 YR AVG.	10.81	10.48	10.66	9.77	8.57	7.79	7.93	8.28	8.25	8.86	9.51	10.01
FY 2020	10.79	10.62	11.18	10.14	8.59	7.98	8.16	8.39	8.14	7.85	8.39	9.74
FY 2021	10.78	10.10	10.17	9.81	8.94	8.26	8.07	8.35	8.79	9.17	10.26	10.62
FY 2022	11.04	10.98	10.78									



	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
5 YR AVG	9.11	10.07	10.29	10.29	10.78	10.63	10.10	11.37	10.19	10.39	10.81	9.64
FY 2020	9.58	9.66	9.48	10.26	9.63	9.38	10.37	10.84	8.99	10.56	9.66	9.19
FY 2021	9.03	10.20	10.10	10.79	11.85	12.75	10.06	11.95	10.67	10.72	9.51	9.27
FY 2022	8.84	9.23	9.85									

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

MEMORANDUM

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

FROM: **DAVE TUNGATE, DIRECTOR OF OPERATIONS**

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

SUBJECT: **OPERATIONS REPORT FOR OCTOBER 2021**

DATE: **NOVEMBER 16, 2021**

WATER OPERATIONS:

The average and maximum daily water produced in October 2021 were as follows:

Water Treatment Plant	***Average Daily Production (MGD)***	***Maximum Daily Production in the Month (MGD)***
South Rivanna	7.79	8.73 (10/1/2021)
Observatory	1.80	2.44 (10/5/2021)
North Rivanna	0.45	0.55 (10/5/2021)
Urban Total	10.04	11.48 (10/6/2021)
Crozet	0.70	1.016 (10/4/2021)
Scottsville	0.06	0.08 (10/19/2021)
Red Hill	0.0016	0.003 (10/1/2021)
RWSA Total	10.74	-

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

- RWSA is in the process of completing a scheduled corrosion inhibitor optimization program. We will transition from a poly-phosphate product to an ortho-phosphate product in all of our water treatment plants. Our VDH (Virginia Department of Health) approved plan required a transitional product with ortho and poly phosphate to be fed for 1 year before feeding an ortho-only phosphate product. VDH reviewed all applicable water plant records, residential lead and copper samples, and distribution system water quality data before allowing the ortho phosphate product to be used. The Crozet water system successfully completed the transition and has been feeding an ortho phosphate product since February 2021. The Scottsville water system also successfully completed the transition and started feeding an ortho phosphate product in October 2021. The Urban Water Treatment Plants began the transition in February 2021 and expect to complete the transition in January 2022. The program was made possible with close collaboration between RWSA, ACSA, and City of Charlottesville Utilities.

Status of Reservoirs (as of November 10, 2021):

- Urban Reservoirs: 94% of Total Useable Capacity
- Ragged Mountain Reservoir is 89% full
- Sugar Hollow Reservoir is full (100%)
- South Rivanna Reservoir is full (100%)
- Beaver Creek Reservoir is full (100%)
- Totier Creek Reservoir is full (100%)

WASTEWATER OPERATIONS:

All RWSA Water Resource Recovery Facilities (WRRFs) were in regulatory compliance with their effluent limitations during October 2021. Performance of the WRRFs in October was as follows compared to the respective VDEQ permit limits:

WRRF	***Average Daily Effluent Flow (MGD)***	***Average $CBOD_5$ (ppm)***		***Average Total Suspended Solids (ppm)***		***Average Ammonia (ppm)***	
		RESULT	***LIMIT***	***RESULT***	***LIMIT***	***RESULT***	***LIMIT***
Moores Creek	9.80	5.0	10	<QL	22	<QL	2.2
Glenmore	0.091	4.0	15	4.2	30	NR	NL
Scottsville	0.040	4.0	25	1.6	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 October 2021.

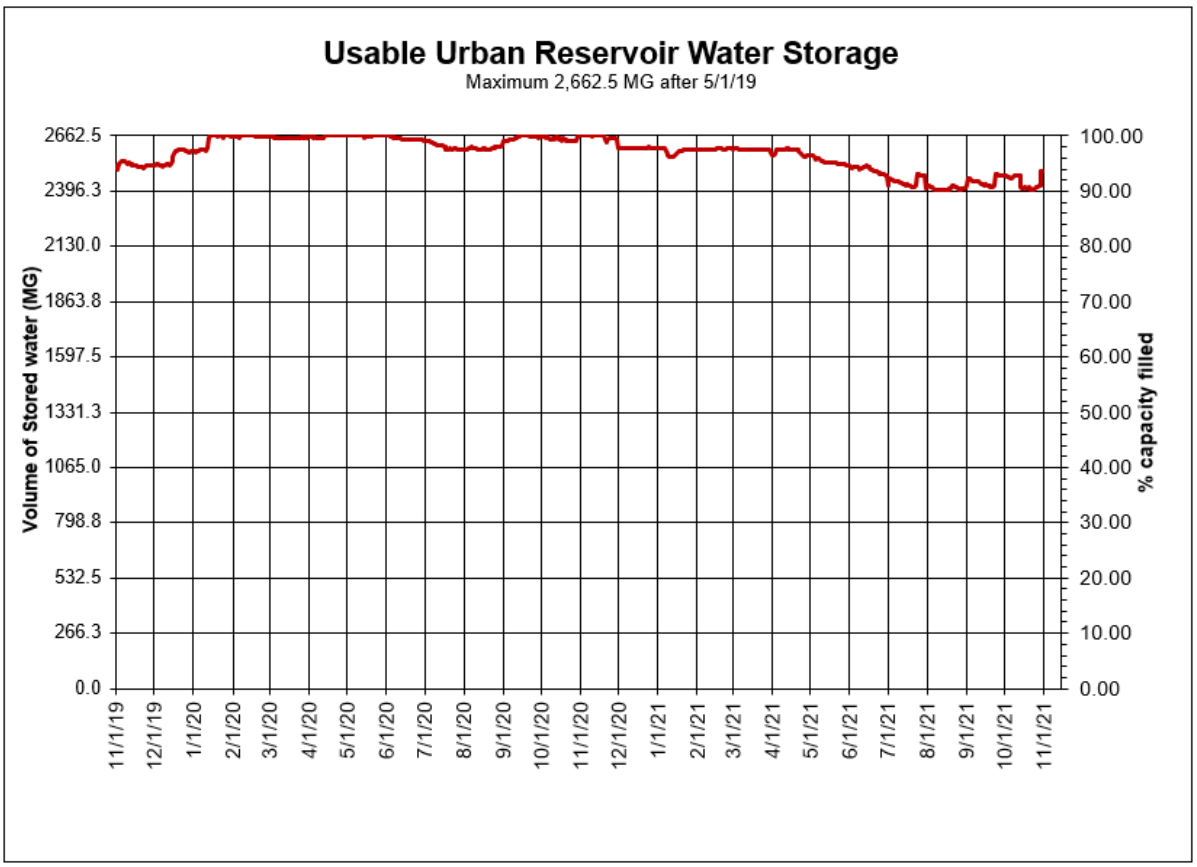
State Annual Allocation (lb./yr.) Permit		***Average Monthly Allocation (lb./mo.) ****	***Moores Creek Discharge October (lb./mo.)***	***Performance as % of monthly average Allocation****	***Year to Date Performance as % of annual allocation***
Nitrogen	282,994	23,583	7267	31%	24%
Phosphorous	18,525	1,544	377	24%	29%

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

WATER AND WASTEWATER DATA:

The following graphs are provided for review:

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


Usable Urban Reservoir Water Storage
Maximum 2,662.5 MG after 5/1/19
Volume of Stored water (MG)
% capacity filled
2662.5
2396.3
2130.0
1863.8
1597.5
1331.3
1065.0
798.8
532.5
266.3
0.0
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
11/1/19
12/1/19
1/1/20
2/1/20
3/1/20
4/1/20
5/1/20
6/1/20
7/1/20
8/1/20
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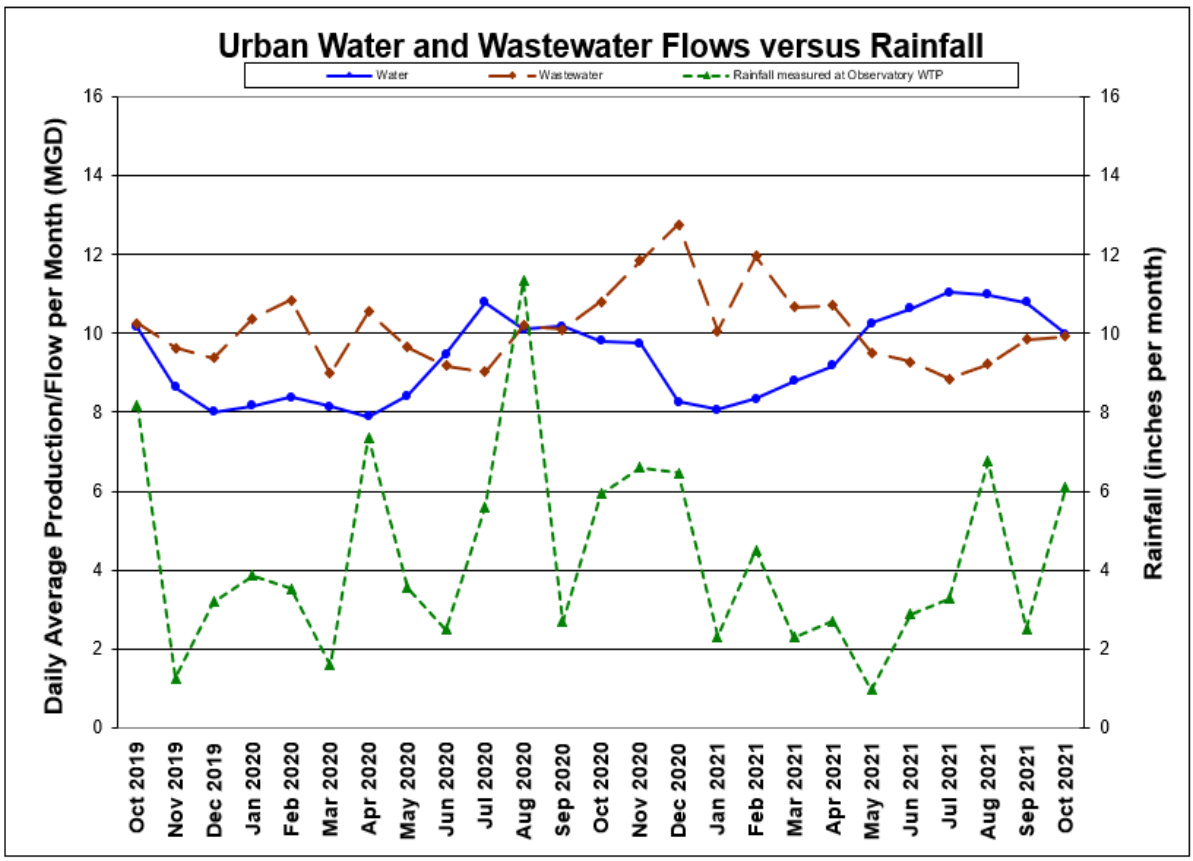
11/1/21


Urban Water and Wastewater Flows versus Rainfall
Water
Wastewater
Rainfall measured at Observatory WTP
Daily Average Production/Flow per Month (MGD)
Rainfall (inches per month)
16
14
12
10
8
6
4
2
0
Oct 2019
Nov 2019
Dec 2019
Jan 2020
Feb 2020
Mar 2020
Apr 2020
May 2020
Jun 2020
Jul 2020
Aug 2020
Sep 2020
Oct 2020
Nov 2020
Dec 2020
Jan 2021
Feb 2021
Mar 2021
Apr 2021
May 2021
Jun 2021
Jul 2021
Aug 2021
Sep 2021
Oct 2021

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MEMORANDUM

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

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

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

SUBJECT: **STATUS REPORT: ONGOING PROJECTS**

DATE: **NOVEMBER 16, 2021**

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

For the current, approved CIP, please visit: https://www.rivanna.org/wp-content/uploads/2021/06/2022-2026-CIP-Final.pdf

Under Construction

1. South Rivanna and Observatory Water Treatment Plant Renovations
2. Crozet Flow Equalization Tank
3. MC Aluminum Slide Gate Replacements
4. MC Exterior Lighting Improvements
5. MC Generator Fuel Expansion
6. MC Clarifier and Silo Demolition
7. Glenmore WRRF Influent Pump & VFD Addition
8. Airport Road Water Pump Station and Piping

Design and Bidding

9. Ragged Mtn Reservoir to Observatory WTP Raw Water Line and Pump Station
10. South Rivanna to Ragged Mtn. Raw Water Line – Birdwood to Old Garth
11. Beaver Creek Dam, Pump Station and Piping Improvements
12. South Rivanna River Crossing
13. MC 5kV Electrical System Upgrades
14. Central Water Line
15. Upper Schenks Branch Interceptor, Phase II

Planning and Studies

16. South Rivanna Reservoir to Ragged Mtn Reservoir Water Line Right-of-Way
17. Urban Finished Water Infrastructure Master Plan

18. Asset Management Plan
19. MC Facilities Master Plan
20. SRR to RMR Pipeline – Pretreatment Pilot Study

Other Significant Projects

21. Urgent and Emergency Repairs
22. Interceptor Sewer & Manhole Repair
23. 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:	50%
Base Construction Contract + Change Orders to Date = Current Value:	$36,748,500 + $474,849 = $37,223,349
Completion:	March 2023
Budget:	$43,000,000

Current Status: Work continues at the SR WTP with construction of the filter building expansion, the Alum and Fluoride Chemical Storage Building, Administration Building, sedimentation basin improvements and replacement of a clarifier drive. Work at the OB WTP includes continued foundation work associated with the new Chemical Storage Building and expansion of the filter building and installation of the new backwash pumps.

2. Crozet Flow Equalization Tank

Design Engineer:	Schnabel Engineering
Construction Contractor:	Anderson Construction (Lynchburg, VA)
Construction Start:	September 2020
Percent Complete:	60%
Based Construction Contract + Change Orders to Date = Current Value:	$4,406,300
Completion:	November 2022
Budget:	$5,400,000

Current Status: The concrete dome roof, installation of prestressed wire and the initial gunite layers for the walls have been completed. Electrical work and installation of new pumps in the pump station have begun. Leakage testing of the tank is anticipated for mid-November and methods for performing the second phase of bypass pumping around the existing station are being evaluated as required for pump replacement work.

3. MC Aluminum Slide Gate Replacements

Design Engineer:	Hazen and Sawyer
Construction Contractor:	Waco Incorporated (Sandston, VA)
Construction Start:	September 2020
Percent Complete:	85%
Base Construction Contract + Change Orders to Date = Current Value:	$373,600 - $30,400 = $343,200
Completion:	December 2021
Budget:	$675,000

Current Status: One of the existing mud valves near the Headworks was broken beyond repair. A new mud valve has been ordered and has a 3-4 week lead time. Work will resume in November.

A quote package for temporary bypass pumping and slide gate inspection for the Moores Creek Pump Station was awarded to Waco in September. Hazen is reviewing the bypass pumping submittal. This work will define the repairs and budget needed to complete the slide gate repair in the Moores Creek Pump Station.

4. MC Exterior Lighting Improvements

Design Engineer:	Hazen and Sawyer
Construction Contractor:	Pyramid Electrical Contractors (Richmond, VA)
Construction Start:	April 2021
Percent Complete:	65%
Base Construction Contract + Change Order to Date = Current Value:	$349,000
Completion:	February 2022
Budget:	$600,000

Current Status: Conduit has been installed for all new light poles. Installation of pole bases for new lights continues and is expected to be completed this month. All the new LED light heads have been installed for the street lighting.

5. MC Generator Fuel Storage Expansion

Design Engineer:	Short Elliot Hendrickson, Inc. (SEH)
Construction Contractor:	Waco Incorporated (Sandston, VA)
Construction Start:	July 2021
Percent Complete:	30%
Base Construction Contract + Change Order to Date = Current Value:	$168,860
Completion:	January 2022
Budget:	$220,000

Current Status: The 8,000 gallon, above ground fuel storage tank has been ordered and delivery is expected in November 2021. Concrete footings have been completed, to be followed by the concrete

pad for the tank this month.

6. MC Clarifier and Lime Silo Demolition

Design Engineer:	Hazen and Sawyer
Construction Contractor:	Pleasant View Developers (Staunton, VA)
Construction Start:	November 2021
Percent Complete:	0%
Base Construction Contract + Change Order to Date = Current Value:	$649,000
Completion:	August 2022
Budget:	$790,000

Current Status: A Notice to Proceed was issued on October 28, 2021. The contractor is acquiring materials (piping) and will be on site when received.

7. Glenmore WRRF Influent Pump and VFD Addition

Design Engineer:	Wiley|Wilson
Construction Contractor:	MEB (Chesapeake, VA)
Construction Start:	September 2021
Percent Complete:	5%
Base Construction Contract + Change Order to Date = Current Value:	$288,000
Completion:	October 2022
Budget:	$370,000

Current Status: MEB will be on-site in January.

8. Airport Road Water Pump Station and Piping

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	Anderson Construction, Inc. (Lynchburg, VA)
Construction Start:	December 2021
Percent Complete:	0%
Base Construction Contract + Change Order to Date = Current Value:	$8,520,312.50
Completion:	December 2023
Budget:	$10,000,000

Current Status: There is currently a 5-6 month lead time for ductile iron pipe, fittings, and some pump station materials so the contractor will begin work on submittals, however, mobilization to the site may not be until Spring 2022.

Design and Bidding

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

Design Engineer:	Michael Baker International (Baker) (Right of Way)
Design Engineer:	Kimley-Horn (Design)
Project Start:	August 2018
Project Status:	Design (5%) & Easement Acquisition
Construction Start:	2023
Completion:	2027
Budget:	$29,375,000

Current Status:

Preparation of engineering plans and specifications is underway. Survey work along portions of the water main alignment is underway, along with cultural resources investigations. Following the October 25th workshop with Operations, Maintenance, and Engineering staff, work continues on the pump station Basis of Design Report, including a hydraulic evaluation of pumping scenarios. Kimley-Horn continues to assist staff with preparing documents for easement negotiations. Easement negotiations with one private owner, UVA, and the UVA Foundation continue.

10. South Rivanna Reservoir to Ragged Mtn. Reservoir Raw Water Line – Birdwood to Old Garth

Design Engineer:	Kimley-Horn
Project Start:	June 2021
Project Status:	55% Design
Construction Start:	Summer 2022
Completion:	2023
Budget:	$1,980,000

Current Status:

We expect to obtain easement agreements with the last 2 private owners located on Woodburn Road this year. Our efforts continue with the UVA Foundation for the remaining easements.
Preparation of engineering plans and specifications continue for a 0.25-mile section of this 36" raw water pipe from Birdwood to Old Garth Road. One remaining easement is under negotiation with the UVA Foundation for this phase of the project. Development of 60% design documents is underway and submittals have been made to the railroad and local regulatory authorities.

11. 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:	67% NRCS Planning Process
Construction Start:	2024
Completion:	2026
Budget:	$30,870,000

Current Status: Staff is moving forward with development of a Joint Permit Application and supporting documents for submission to DEQ by the end of 2021. Remaining NRCS requirements,

including review and approval of the planning study, are scheduled for completion by July 2022. An application for design and construction funding from NRCS will be submitted in early 2022.

12. South Rivanna River Crossing

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2020
Project Status:	30% Design
Construction Start:	Winter 2023
Completion:	Summer 2024
Budget:	$5,850,000

Current Status: Baker and its subconsultants completed survey work and the routing analysis. Baker has recommended a water line route that will cross the river parallel to the west side of the Berkmar Bridge and follow Rio Mills Road until it intersects the new 24" water line in Route 29. Based on the recommended alignment and potential regulatory requirements, the schedule for completion has been adjusted to account for a full JPA review and approval process.

13. MC 5 kV Electrical System Upgrades

Design Engineer:	Hazen and Sawyer
Project Start:	August 2020
Project Status:	95% Design
Construction Start:	March 2022
Completion:	June 2024
Budget:	$5,050,000

Current Status: Hazen has begun preparation of the bid-ready submittal. Hazen is also working on the resubmittal of applicable County permitting documents. A second round of conduit field investigations is being conducted to confirm the condition of existing conduits intended for reuse. A request for bids is expected prior to the holidays in December.

14. Central Water Line

Design Engineer:	Michael Baker International (Baker)
Project Start:	July 2021
Project Status:	5% Design
Construction Start:	January 2024
Completion:	June 2026
Budget:	$31,000,000

Current Status: RWSA is sending notification letters to property owners adjacent to the planned pipe alignment about survey work which will be conducted over the winter months. A meeting was held with UVA to review potential CWL routes across its property for connection to our 24" Observatory Water Line. A new CWL project informational webpage will be added to our website this month.

15. Upper Schenks Branch Interceptor, Phase II

Design Engineer:	Frazier Engineering, P.A.
Project Start:	July 2021
Project Status:	Design
Construction Start:	TBD
Completion:	TBD
Budget:	$4,725,000

Current Status: A revised draft alignment of the sewer line being installed within easements and out of the roadway has been completed and provided to the City of Charlottesville and Albemarle County for review.

Planning and Studies

16. South Rivanna Reservoir to Ragged Mtn. Reservoir Water Line Right-of-Way

Design Engineer:	Michael Baker International (Baker)
Project Start:	October 2017
Project Status:	Easement Acquisition
Completion:	2021
Budget:	$2,295,000

Current Status: Progress continues in our efforts to acquire the 8 miles of easements and agreements (with VDOT) for this 36" water line. Easements from the last 2 private owners will be completed this CY. Discussions continue on remaining easements with the UVA Foundation.

17. Urban Finished Water Infrastructure Master Plan

Design Engineer:	Michael Baker International (Baker)
Project Start:	November 2018
Project Status:	97% complete
Completion:	December 2021
Budget:	$253,000

Current Status: A workshop with the City and ACSA was held on November 2, 2021 to go over the master plan recommendations. Comments from the workshop will be incorporated into the final master plan.

18. Asset Management Plan

Design Engineer:	GHD, Inc.
Project Start:	July 2018
Project Status:	Phase 2 – 99% Complete CMMS Implementation – 45% Complete
Completion:	Phase 2 – 2021 CMMS Implementation – June 2022

Budget: $1,180,000

Current Status: A draft Tactical Asset Management Plan has been reviewed and comments provided to GHD for it to be finalized. For implementation of the new CMMS, GHD is completing updates to our facility geodatabase and continuing the software configuration process. Workshops have been scheduled to review integration of Cityworks with other RWSA software.

19. MC Facilities Master Plan

Design Consultant:	Hazen and Sawyer
Project Start:	August 2019
Project Status:	97% Complete
Completion:	December 2021
Budget:	$275,000

Current Status: A workshop with the City and ACSA is scheduled for November 17th to go over the final master plan recommendations.

20. SRR to RMR Pipeline – Pretreatment Pilot Study

Design Consultant:	SEH
Project Start:	August 2020
Project Status:	100% Complete (Phase 1), 45% Complete (Phase 2)
Completion:	July 2022
Budget:	$22,969 (Phase 1), $98,629 (Phase 2)

Current Status: Phase 1, analysis of existing water quality and seasonal weather data, has been completed. SEH and staff have finalized the memo for this portion of the study. Phase 2 of the study has begun and includes detailed reservoir water quality modeling performed by DiNatale Water Consultants. DiNatale has completed some baseline modeling scenarios using a desktop model, and staff have provided feedback to better represent future conditions in the model. Based upon staff feedback, DiNatale is also running further model runs to continue evaluating options for the future transfer system.

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
2020-24	Erosion Between CZI MH-55 and 56	$25,000
2021-04	UWL-ARV-15 Settlement	$25,000

2021-05	Erosion Near SRW-059	$40,000
2021-08	MCAWRRF Digester Manway Sealing	$70,000
2021-09	SLW Erosion Near SLW-022	$15,000
2021-13	UWL-ARV-12 Abandonment and Replacement	$75,000
2021-15	Scottsville Raw Waterline Leak at Totier Creek Road	$10,000

- Erosion Between CZI MH-55 & 56: Excessive runoff from the adjacent Buckingham Branch railroad has caused moderate erosion over the Crozet Interceptor near Lynx Farm Lane. Staff is working with its On-Call Maintenance Contractor, Digs, Inc., to install erosion control measures over the easement, to better protect the existing 18" sanitary sewer. Staff has coordinated this work with Buckingham Branch, as well as adjacent property owners in the area. The work is slated to take place in November.

- UWL-ARV-15 Settlement: While marking a Miss Utility Ticket, the RWSA Engineering Department identified an ARV that was settling with a small section of Kenwood Lane. No immediate danger to the ARV is present, however, staff has looked at the issue with its On-Call Maintenance Contractor, and is coordinating the necessary repairs. The overall scope of work will be to excavate around the ARV, replace the entire ARV assembly with more modern materials, install an appropriate structure/manhole around the ARV, and then perform all applicable site restoration. Work began during the week of 9/27, and staff found that the existing corp stop was seized, and the existing ARV assembly was very corroded, with a small leak/drip between the ARV and corp stop. Staff is coordinating a shutdown of the Urban Waterline following the ongoing watermain replacement in Emmet Street, which has facilitated a planned shutdown of the Observatory Waterline. Once the Urban Waterline is shutdown, staff can safely remove and replace the existing corp stop and ARV assembly and the On-Call Maintenance Contractor can complete the installation of the surrounding manhole structure and appropriate site restoration.

- SRW-059 Erosion: During routine line inspections, the RWSA Maintenance Department identified that blowoff valve SRW-059 was experiencing continued erosion from the adjacent Meadow Creek, near the intersection of Melbourne and Rio Road. In addition, stormwater flows from Rio Road were found to be causing significant erosion elsewhere along the easement in the same general vicinity as well. RWSA is coordinating with its On-Call Maintenance Contractor, Digs, Inc., for completion of the associated repairs, and is also coordinating with VDOT and other applicable regulatory agencies having jurisdiction over the work. This work was completed on October 12, 2021,

- MCAWRRF Digester Manway Sealing: Staff has identified the immediate need to repair gas leaks in Digesters #1, #2 and #3 at the MCAWRRF. The gas leaks are a safety concern and are causing significant concrete degradation which has led to Digester #2 being taken out of service thereby reducing solids processing redundancy. Following external and internal inspections by our engineering consultants, it has been decided that installation of rubber seals in the manways and sample ports will mitigate gas leaks into the annular roof space and decrease further concrete degradation. Waco, Inc. was selected to perform the work under an Emergency Declaration by the Executive Director and seals were installed in Digester #2. Unfortunately, the Digester continued to leak gas once back in service so further investigative work is warranted to determine the source of the leaks and evaluate the structural integrity of the annular roof space. Waco will

continue the investigative work and perform roof corings prior to proceeding with seal installations in Digesters #1 and #3. This work will proceed once the seals for Digester #1 have been delivered.

- Erosion Near SLW-022: In Spring 2021, staff identified an area of erosion over RWSA's 20" Southern Loop Waterline (SLW), located near Forest View Road in Albemarle County. During subsequent site visits, it was determined that an adjacent creek/stormwater channel has silted in, causing water to become redirected over the RWSA Easement during heavy rain events. Staff is coordinating easement restoration efforts through its On-Call Maintenance Contract for later this fall/winter, and is also coordinating with Albemarle County Water Resources staff on potential collaborative efforts to address the issues on the RWSA easement and improve stormwater flow in the area.

- UWL-ARV-12 Abandonment and Replacement: As mentioned under the Urban Waterline Valve and Blow-off repair project previously, UWL-ARV-12, which is located in the entrance to the Exxon Gas Station along Rio Road, is slated to be abandoned in place due to its condition and difficult to access location. The Air Release Valve is planned to be relocated into an adjacent grassy area, improving performance with all-new materials, and facilitating better staff access. Work was completed by RWSA's On-Call Maintenance Contractor, Faulconer Construction, during the week of October 18, 2021.

- Scottsville Raw Waterline Leak atTotier Creek Road: On Saturday, October 23, the RWSA Maintenance and Engineering Departments were notified by the Water Department of a potential leak on the Scottsville Raw Waterline on Totier Creek Road. Since this apparent leak was on the main from the reservoir, which serves as a backup to the creek intake, the main was isolated, and staff planned the repair for the following week. RWSA Maintenance staff completed the repairs on October 27, 2021, after finding a split in the existing ductile iron piping. All work was coordinated with the Albemarle County Parks and Recreation Department, who manages the area around the reservoir.

22. Interceptor Sewer and Manhole Repair

Design Engineer:	Frazier Engineering
Construction Contractor:	Tri-State Utilities, LLC
Construction Start:	November 2017
Percent Complete:	Evaluation – 100%
Base Construction Contract + Change Orders to Date = Current Value:	$37,980
Expected Completion:	June 2022
Budget:	$1,088,330 (Urban) + $880,000 (Crozet) = $1,968,330

Current Status: With the completion of the Upper Morey Creek Interceptor (MRI) Point Repair/New MH Installation, all rehabilitation work on the Upper MRI has been completed. Staff continues coordination on the lower Powell Creek Interceptor and a portion of the Woodbrook Interceptor, as these are the next high-priority areas to be addressed based upon the latest CCTV footage. The scope of this rehabilitation work is likely to include several sections of Cured in Place Piping, as well as manhole rehabilitation. A Notice to Proceed was issued to Tri-State Utilities, LLC on 10/4 to perform

additional cleaning and CCTV work and that was completed on October 15, 2021. Staff is reviewing the footage with Frazier Engineering, and is beginning preparation of a bid package for the necessary rehabilitation measures.

23. Security Enhancements

Design Engineer:	N/A
Construction Contractor:	Security 101
Construction Start:	March 2020
Percent Complete:	90% (WA 2 & 3), 0% (WA 4)
Based Construction Contract + Change Orders to Date = Current Value:	$718,428.00 (WA1) + $91,130.32 (WA2) + $128,166.69 (WA3) + $189,698.95 (WA4) = $1,127,423.96 (total)
Completion:	December (WA 2 & 3), February 2022 (WA 4)
Budget:	$2,810,000

Current Status: Access control system installation has been completed on all exterior doors at MCAWRRF, as well as all WTP motorized gates. The Card Access System is in use at the Administration, Engineering, and Maintenance Buildings at MCAWRRF, as well as at various process buildings across the site and at the WTP gates. The only task that remains is some door and lock hardware improvements under WA #2, which will enhance the functionality of the card access system. Other miscellaneous improvements include installation of card access on 3 additional doors, and improvements to the intercom system in the Administration Building. This work is underway, with the lock and door equipment currently being installed across the site. The majority of the new cylinders and handles have been installed, with some still in long manufacturing lead times. Replacement of various doors across the site has begun, with those anticipated to be completed in November. Card access installation at the Crozet and Scottsville WTP exterior doors under WA #3 is substantially complete. Finally, WA #4 includes security conduit at the South Rivanna and Observatory WTPs that was not included in the Improvements Project. This work began on November 2, 2021.

History

Under Construction

1. South Rivanna and Observatory Water Treatment Plant Renovations

An informational meeting with prospective contractors was held on September 26, 2019 to maximize interest in the project. A project kickoff meeting with staff was held on November 14, 2018 and 30% design documents were provided in February. A Value Engineering Workshop took place the week of April 8, 2019, and a memo summarizing the results has being completed. Agreed upon results were incorporated into the project. The project was advertised, and bids were received. English Construction was awarded the contract and a Notice to Proceed was issued on May 18, 2020. Coordination with UVA and Dominion on a new electrical easement at the plant has been completed and documents are being finalized.

Observatory: This project will upgrade the plant from 7.7 to 10 MGD capacity. Costs to upgrade the plant to 12 MGD were determined to be too high at this time. Much of the Observatory Water Treatment Plant is original to the 1953 construction. A Condition Assessment Report was completed by SEH in October of 2013. The approved Capital Improvement Plan project was based on the findings from this report. The flocculator systems were replaced and upgraded as part of the Drinking Water Activated Carbon and WTP Improvements project (GAC). Four additional GAC contactors will be included in the design.

South Rivanna: The work herein includes expansion of the coagulant storage facilities; installation of additional filters to meet firm capacity needs; the addition of a second variable frequency drive at the Raw Water Pump Station; the relocation for the electrical gear from a sub terrain location at the Sludge Pumping Station; a new building on site for additional office, lab, control room and storage space; improvements to storm sewers to accept allowable WTP discharges; of new metal building to cover the existing liquid lime feed piping and tanks. The scope of this project will not increase the 12 MGD plant treatment capacity.

2. **Crozet Flow Equalization Tank**

A 2016 update to the 2006 model was completed which evaluated the I&I reduction goals previously established and future capital project needs. Based on the results of that study, it was determined that the Crozet Interceptor system and the existing Crozet Pump Stations (1 through 4) have adequate capacity to handle the 2015 peak wet weather flow from the Crozet Service Area during a two-year storm. However, as projected growth in the service area occurs, peak wet weather flows in the area under the storm conditions established in the updated model will begin to exceed the firm capacities of the pump stations by 2025. Additional I&I reductions in order to reduce flows enough to not exceed the pump station firm capacities are not feasible and as a result, the construction of a flow equalization tank was identified as the best method to alleviate wet weather capacity issues.

While the study indicates that capacity should not be an issue until 2025, a flow equalization tank would also provide a significant benefit to the maintenance of the Crozet Pumping Station system which currently lacks system storage necessary to allow adequate time to perform repairs on the pumps and the associated force mains while the system is down.

Greeley and Hansen completed a siting study to determine the location for the flow equalization tank based on the results of the comprehensive model update. The results of the siting study were reviewed with ACSA and a final tank location was determined.

A work authorization with Schnabel Engineering was finalized and a Project Kick-off Meeting was held on July 12, 2018. The construction bids were received on July 16, 2020. Anderson Construction of Lynchburg, VA was awarded the construction contract. Notice to Proceed on this project was given on October 9, 2020 and now construction is in progress.

3. **MC Aluminum Slide Gate Replacements**

Several large aluminum slide gates are located at the influent side of the Moores Creek Pump Station. These gates allow staff to stop or divert flow to perform maintenance activities. After repeated attempts to repair the deteriorated gates, it is now necessary to replace the gates and modify the gate arrangement. There are also several deteriorated gates at the Ultraviolent disinfection facility that leak water, causing a reduced capacity of the facility. Replacement of these gates will restore the process to full capacity. Work also includes replacement of the cast iron gates in the holding pond

pump station and new actuators on the headworks gates. A Notice to Proceed for these efforts was provided on October 6, 2020. The work specific to the Moores Creek Pump Station will be bid under a separate project due to the extensive bypass pumping.

4. **Sugar Hollow Dam – Rubber Crest Gate Replacement and Intake Tower Repairs**

In 1998, the Sugar Hollow Dam underwent a significant upgrade to improve structural stability and spillway capacity. The original metal spillway gates were replaced with a manufactured five-foot-high inflatable rubber dam that is bolted to the existing concrete structure. This rubber dam allows for the normal storage of water in the reservoir with the ability to be lowered during extreme storm events. The rubber dam has an approximate service life of twenty years and is therefore now due for replacement. The aging intake tower structure has been inspected and evaluated. Recommended repairs include repair or replacement of intake trash racks and sealing/grouting of minor concrete wall cracks. This project was advertised for construction in July 2020 and Allegheny Construction was awarded the project. A Notice to Proceed was provided on October 1, 2020.

5. **MC Exterior Lighting Improvements**

The lighting at the 80-acre MCAWRRF consists of over 300 fixtures installed over the entire life of the facilities presence at Moores Creek. In 2019, Albemarle County investigated the lighting plan at the facility and issued a Zoning Notice of Violation.

RWSA and Albemarle County staff have been working together to best address the issue. A photo metric plan of existing lighting was submitted to the county for review. RWSA has submitted a minor site plan amendment and Architectural Review Board submission that will include a large scale replacement of non-compliant fixtures as well as address industrial lighting standards for the entire facility. The submission was approved by the County and design is underway.

The design has been completed by Hazen and Sawyer and the project was awarded to Pyramid Electrical Contractors, LLC. Notice to Proceed was provided on April 13, 2021.

6. **MC Generator Fuel Expansion**

The Moores Creek AWRRF south side electrical facilities have a single large system back-up power generator that was installed between 2009 – 2012 during the ENR plant upgrade. The generator has a belly tank that allows for approximately 22 hours of operation. This project will install an ancillary fuel tank that will allow for approximately three days of operation. A Notice of Award was issued to Waco, Inc. Construction of the concrete pad the new tank will rest on as well as electrical connections for the tank are in progress. Tank delivery is expected in November.

7. **MC Clarifier and Lime Silo Demolition**

The two in-plant clarifiers were constructed in the late 1950's and were taken out of service as a result of the Odor Control Project at the plant. Due to the age of the tanks, various components have significantly deteriorated over time and no additional uses for these tanks have been identified. In addition, due to their out-of-service status, they remain empty and a safety concern for plant staff and visitors. There is also an abandoned lime silo currently located adjacent to the Solids Handling Building. Lime was previously used with the old plat and frame presses before centrifuges were installed for sludge dewatering purposes. This project will include the complete demolition of the in-plant clarifiers by removing all existing components, backfilling the area, and returning the area to open space and removing the lime silo from the plant and properly disposing of it. The project was

advertised, and bids are due on July 1, 2021. A Notice of Award was issued on August 6, 2021 and a Notice to Proceed was issues on September 28, 2021.

8. Glenmore WRRF Influent Pump and VFD Addition

The 0.381-mgd water resource recovery facility, located within the Glenmore subdivision, is operated by RWSA. The facility includes an influent pumping station located immediately adjacent to the treatment facility. The Glenmore WRRF is predicted to see additional dry and wet weather flows as construction within the service area continues. Future wet weather flows will require higher influent pumping capacity and an additional pump and electrical variable frequency drive will be required to maintain firm capacity. After discussions with the Operations and Maintenance departments, installation of a new exhaust fan in the influent pump station will also be included. A work authorization for this project has been finalized and design is underway. The project was advertised, and bids are due on July 8, 2021. A Notice of Award was issued on August 6, 2021.

Design and Bidding

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

A Work Authorization was executed in December 2018 with Michael Baker International for the raw water line routing study, preliminary design, plat creation and the easement acquisition process for this portion of the project. Raw water is transferred from the Ragged Mountain Reservoir (RMR) to the Observatory Water Treatment Plant (WTP) by way of two 18-inch cast iron pipelines, which have been in service for more than 110 and 70 years, respectively. The increased frequency of emergency repairs and expanded maintenance requirements are one impetus for replacing these pipelines. The proposed water line will be able to reliably transfer water to the expanded Observatory plant. The new pipeline will be constructed of 36-inch ductile iron and will be approximately 2.6 miles feet in length. The segment of the project immediately east of the RMR will constitute a portion of the proposed South Rivanna Reservoir to RMR raw water main project as part of the approved 50-year Community Water Supply Plan.

The RMR to Observatory WTP raw water pump station is planned to replace the existing Stadium Road and Royal pump stations, which have exceeded their design lives or will require significant upgrades with the Observatory WTP expansion. The pump station will pump up to 10 million gallons per day (MGD) of raw water to the Observatory WTP. The new pump station site selection and design are being conducted in coordination with the South Rivanna Reservoir to RMR pipeline in the interest of improved operational and cost efficiencies. An integrated pump station would also include the capacity to transfer up to 16 MGD of raw water from RMR back to the SR WTP.

Both Design Work Authorizations received Board of Directors approval on July 27, 2021. A kickoff meeting was held on September 17, 2021, and a meeting to begin establishing boundary conditions for the RMR Pump Station was held on October 25, 2021.

10. South Rivanna Reservoir to Ragged Mtn. Reservoir Raw Water Line -Birdwood to Old Garth

This project is the continuation of the SRR to RMR 36" raw water pipeline built on the Birdwood Golf Course. Design effort were authorized in June 2021 with construction anticipated in Summer 2022.

11. Beaver Creek Dam and Pump Station Improvements

Dam: A spillway upgrade alternative for the dam has been selected and was presented in a public meeting on October 6, 2021. A new raw water pump station site and pipe access route were selected and approved by the Board in August 2021.

RWSA operates the Beaver Creek Dam and reservoir as the sole raw water supply for the Crozet Area. In 2011, an analysis of the Dam Breach inundation areas and changes to Virginia Department of Conservation and Recreation (DCR) *Impounding Structures Regulations* prompted a change in hazard classification of the dam from Significant to High Hazard. This change in hazard classification requires that the capacity of the spillway be increased. This CIP project includes investigation, preliminary design, public outreach, permitting, easement acquisition, final design, and construction of the anticipated modifications. Work for this project will be coordinated with the new relocated raw water pump station and intake and a reservoir oxygenation system project.

Schnabel Engineering developed three alternatives for upgrading the capacity of the Beaver Creek Dam Spillway in 2012. Following the adoption of a new Probable Maximum Precipitation (PMP) Study on December 9, 2015 and the release of DCR guidelines for implementing the PMP study in March of 2016, RWSA determined it would proceed with an updated alternatives analysis and Preliminary Engineering Report for upgrading the dam spillway. Following the completion of an updated alternatives analysis by Schnabel Engineering, staff met with members of Albemarle County and ACSA staff to discuss the preferred alternative. It was determined that staff would proceed with design of a labyrinth spillway and chute through the existing dam with a bridge to allow Browns Gap Turnpike to cross over the new spillway.

In 2020, staff received grant funding for a planning and environmental study from the Natural Resources Conservation Service (NRCS). The project kicked off in August 2020 and is expected to be completed in July 2022. Following completion of the study and acceptance of the Plan-Environmental document by NRCS, staff will pursue additional grant funding through NRCS that, if available, could cover up to 65% of final design and construction costs.

Pump Station: The Drinking Water Infrastructure Plan for the Crozet water service area, developed by Hazen and Sawyer, recommends installation of a new Raw Water Pump Station and Intake at the Beaver Creek Dam in order to meet new minimum instream flow requirements and provide adequate raw water pumping capacity to serve the growing Crozet community for the next 50 years. The pump station will be moved out of its existing location at the toe of the dam to a new location, to be determined during design. The new intake structure will include enhanced controls to allow for access to the best quality water at any given time.

12. Airport Road Water Pump Station and Piping

The Rt. 29 Pump Station and Pipeline master plan was developed in 2007 and originally envisioned a multi-faceted project that reliably connected the North and South Rivanna pressure bands, reduced excessive operating pressures, and developed a new Airport pressure zone to serve the highest elevations near the Airport and Hollymead Town Center. The master plan update was completed in June of 2018 to reflect the changes in the system and demands since 2007. This project, along with the South Rivanna River Crossing and North Rivanna Transmission Main project, will provide a reliable and redundant finished water supply to the North Rivanna area. The proposed pump station will be able to serve system demands at both the current high pressure and future low-pressure conditions. These facilities will also lead to future phase implementation which will include a storage tank and the creation of the Airport water pressure zone. The North Rivanna Transmission Main

improvements included under a separate CIP project have been added to this project to allow connection of the pump station to the distribution system.
Bids were opened on October 7, 2021 and this work was awarded at the October 2021 Board of Directors meeting. The contractor is working to submit their bonds and insurance and it is anticipated that contracts will be executed and a Notice to Proceed issued in December.

13. South Rivanna River Crossing

RWSA has previously identified through master planning that a 24-inch water main will be needed from the South Rivanna Water Treatment Plant (SRWTP) to Hollymead Town Center to meet future water demands. Two segments of this water main were constructed as part of the VDOT Rt. 29 Solutions projects, including approximately 10,000 LF of 24-inch water main along Rt. 29 and 600 LF of 24-inch water main along the new Berkmar Drive Extension, behind the Kohl's department store. To complete the connection between the SRWTP and the new 24-inch water main in Rt. 29, there is a need to construct a new river crossing at the South Fork Rivanna River. Acquisition of right-of-way will be required at the river crossing.

14. MC 5 kV Electrical System Upgrades

After discussions through the Moores Creek Facilities Master Plan, it was identified that several areas of the MCAWRRF, including the Blower Building, Sludge Pumping Building, Grit Removal Building, Moores Creek Pumping Station, and the Administration Building are all still connected to the original 5kV switchgear in the Blower Building. This equipment, including the associated cabling, switchgear, transformers, and motor control centers (MCCs), has a useful life expectancy of 20-30 years. Most of this equipment was installed around 1980. With the equipment having well exceeded its useful life expectancy at this point, safety is a concern given the large electric loads that the cabling and other equipment are handling on a day-to-day basis. Failure of the existing 5kV infrastructure could also result in temporary outages of certain treatment processes, and repairs could take weeks to months given the lead times associated with equipment of this age. A technical memo was provided in July 2020 by Hazen & Sawyer, which recommended that a CIP Project be added immediately to encompass replacement of the original 1980s-vintage 5kV cables, switchgear, transformers, and MCCs. A CIP Amendment Recommendation and Engineering Services Work Authorization was approved during the August 2020 Board of Directors Meeting. The Design Work Authorization was executed on October 6, 2020.

A Design Kickoff Meeting was held virtually on October 20, 2020. A site visit was attended on November 5, 2020 by Hazen & Sawyer staff, as well as RWSA Maintenance and Engineering Department staff. 50% Design Documents were provided in Spring 2021, with staff feedback provided soon thereafter. A follow-up site visit by Hazen was performed in July 2021, in order to confirm the availability of spare conduits across the site and plan for the associated cable replacements. 95% Design Documents were provided by Hazen in September 2021, and staff returned comments in October 2021. Field work was conducted in Fall 2021 to evaluate the condition of conduits within the existing ductbank network, as well as verify pathways and connectivity within the network.

15. Central Water Line

Route alignment determination, hydraulic modeling, and preliminary design were underway in 2017. Due to the complicated nature of our finished water systems, it was decided at the August 2018 Board meeting that a more comprehensive approach was warranted and we should complete the Finished Water Master Plan prior to moving forward with final design and construction of the Central Water Line (formerly referred to as the Avon to Pantops Water Main). The focus of this project was on the

southern half of the urban area water system which is currently served predominantly by the Avon Street and Pantops water storage tanks. The Avon Street tank is hydraulically well connected to the Observatory Water Treatment Plant, while the Pantops tank is well connected to the South Rivanna Water Treatment Plant. The hydraulic connectivity between the two tanks, however, is less than desired, creating operational challenges and reduced system flexibility. In 1987, the City and ACSA developed the Southern Loop Agreement which laid out two key phases (with the first being built at the time). The 1987 Agreement and planning efforts were a starting point for this current project. An engineering contract has been negotiated and was approved by the Board of Directors in July 2017. Recent efforts and modeling for the Urban Finished Water Infrastructure Master Plan have determined that a central water line corridor through the City is the best option to hydraulically connect the Observatory Water Treatment Plant to the Pantops area.

16. Upper Schenks Branch Interceptor, Phase II

The Schenks Branch Sanitary Sewer interceptor is a pipeline operated by RWSA that serves the City of Charlottesville. The 21-inch sewer line was originally constructed by the City in the 1950s. Evaluations from the flow metering and modeling from the Comprehensive Sanitary Sewer Interceptor Study, and negotiations with the ACSA and City, resulted in an inflow and infiltration reduction plan from which it was concluded that increased capacity of the Schenks Branch Interceptor was needed for wet weather peak flow. Due to several road construction projects and the construction of the Meadow Creek Interceptor project along the sewer alignment, Schenks Branch was to be constructed in multiple phases. The completed sections, collectively known as the Lower Schenks Branch Interceptor, include the Tie-in to Meadow Creek, the section along McIntire Road Ext, and the section though the Route 250 Interchange.

The remaining sections, which are considered the Upper Schenks Branch Interceptor, were split into 2 phases. The first phase has been completed and is located within City-owned Schenks Greenway adjacent to McIntire Road, and the second phase is to be located on County property (baseball field and County Office Building) adjacent to McIntire Road.

Planning and Studies

17. South Rivanna Reservoir to Ragged Mtn. Reservoir Water Line Right-of-Way

The approved 50-year Community Water Supply Plan includes the construction of a raw water line from the South Rivanna Reservoir to the Ragged Mountain Reservoir. This water line will replace the existing Upper Sugar Hollow Pipeline and increase raw water transfer capacity in the Urban Water System. The preliminary route for the water line followed the proposed Route 29 Charlottesville Bypass; however, the Bypass project was suspended by VDOT in 2014, requiring a more detailed routing study for the future water line. This project includes a routing study, preliminary design, and preparation of easement documents, as well as acquisition of water line easements along the approved route.

Baker has completed the routing study. Preliminary design, plat creation and the acquisition of easements are underway. Property owners were contacted to request permission to access properties for topographical surveying. A community information meeting was held in June 2018.

18. Urban Finished Water Infrastructure Master Plan

As identified in the 2017 Strategic Plan, the Authority has a goal to plan, deliver and maintain

dependable infrastructure in a financially responsible manner. Staff has identified asset master planning as a priority strategy to improve overall system development. Many previously identified projects in the urban finished water treatment and distribution system are in preliminary engineering, design, or construction. As such, staff have identified a need to develop a current and ongoing finished water master plan.

19. Asset Management Plan

Asset management is the practice of managing our infrastructure to minimize the total cost of owning and operating these assets while providing desired service levels. In doing so, it is used to make sure planned maintenance activities take place and that capital assets are replaced, repaired, or upgraded at the right time, while ensuring that the money necessary to perform those activities is available. RWSA has some components of an asset management program in place (i.e. GIS, work order system), but has identified the need to further develop the program as part of our Strategic Planning process. In order to continue to build the program, a consultant has been procured to assist with a three-phase process that will include facilitation and development of an asset management strategic plan, development and management of a pilot study where the results of the strategic plan will be applied to a specific class of assets, and assistance through a full implementation process. As part of this three-phase process, the consultant also assisted RWSA with the procurement of a new CMMS software package to facilitate the overall program. Cityworks was selected and implementation has begun.

20. MC Facilities Master Plan

The majority of the Moores Creek Water Resource Recovery Facility was constructed in the early 1980's. At the time, the plant layout was developed with space held open for future process expansion. With the Enhanced Nutrient Removal (ENR) project in 2009, the operation and layout of the plant was fundamentally altered, as needed to meet the new regulation. The project did anticipate the need for future expansion and some of the processes have readily available space. However, a full expansion plan was not developed at the time. As identified in the Strategic Plan, the Authority has a goal to plan, deliver and maintain dependable infrastructure in a financially responsible manner. Staff has identified asset master planning as a priority strategy to improve overall system development. As such, this project will serve to evaluate and plan for future space and process needs to accommodate capacity expansion and/or anticipated regulatory changes.

21. SRR to RMR Pipeline – Pretreatment Pilot Study

As part of the SRR to RMR Pipeline project, the impact of sending raw water from the SRR to RMR has been previously studied and a significant amount of pretreatment was initially identified as being needed to avoid reducing the quality of the raw water contained within the RMR. With the pipeline easement acquisition process well underway and additional information now available associated with the proposed timing of this overall project based on water demand projections, the intent of this project is to update the pretreatment needs anticipated.

The study is anticipated to be completed in 4 phases: 1. Analysis and Correlation of Existing Water Quality and Seasonal Weather Data 2. Enhanced Water Quality Sampling 3. Pretreatment Piloting 4. Level Setting for the Final Pretreatment Solution. Phase 1 commenced in January 2021 and was completed in July 2021. Phase 2 began in June 2021.

Other Significant Projects

22. Urgent and Emergency Repairs

- South Rivanna Dam Apron and River Bank Repairs

  Intense rainfall between May 30-31, 2018 resulted in extensive flooding throughout Charlottesville and parts of Albemarle County, with flows over the South Fork Rivanna Dam reaching more than 7 feet over the spillway crest at its peak. Staff has inspected the dam and abutments to determine the extent of damage resulting from the extreme flooding. Although there is no discernible damage to the dam itself, staff found erosion damage to the north downstream river bank and substantial displacement of large stone downstream of the dam to form a rock dam and pool below the north apron. Additionally, some damage to concrete structures on both aprons was noted, including possible creation of voids beneath the concrete and loss of concrete joint filler. Repairs to the river bank and removal of the rock dam were completed June 3-7, 2019 under RWSA's on-call construction contract.

- Urban Water Line Valve and Blow-off Repair

  During its routine inspections of the Water System, the Maintenance Department discovered a blowoff (drain) valve along the Urban Waterline (UWL-017) that had significant leakage. In addition, during one of the numerous heavy rain events received in 2018, the water in the creek adjacent to the drain line rose, eroding the area around the drain line and causing the headwall to become disconnected from the end of the pipe. Staff will be coordinating internally to confirm the overall scope of the project, including whether the drain line will need to be further reinforced or restrained.

23. Interceptor Sewer and Manhole Repair

Results from sewer flow monitoring and modeling under the Comprehensive Sanitary Sewer Study provided awareness to specific inflow and infiltration (I&I) concerns in the collection system and resulted in strengthened commitments from the City, ACSA and RWSA to continue professional engineering services to aid in the rehabilitation and repair of the sewer collection system. Engineering services will be used for sewer infrastructure condition assessments and the development of a sewer rehabilitation bid package for the procurement of a contractor to perform the recommended rehabilitation work.

Lining work and manhole rehabilitation on the Upper Morey Creek Interceptor began in Fall 2019 and was completed in Fall 2020. A critical section of upper Morey Creek Interceptor under Rt. 250 was lined on August 28, 2020. 65' of new ductile iron sewer to replace a sagging section of vitrified clay piping was installed in May 2021. Tri-State Utilities completed over 3,000 LF of Sewer Cleaning and CCTV under RFQ No. 1105 in October 2021 on high-priority portions of the Powell Creek and Woodbrook Interceptors.

24. Security Enhancements

As required by the Federal Bioterrorism Act of 2002 and the American Water Infrastructure Act of 2018, water utilities must conduct Vulnerability Assessments and have Emergency Response Plans. RWSA recently completed an updated Risk Assessment of its water system in collaboration with the Albemarle County Service Authority (ACSA), City of Charlottesville (City), and University of

Virginia (UVA). A number of security improvements that could be applied to both the water and wastewater systems were identified. The purpose of this project will be to install security improvements at RWSA facilities including additional security gate and fencing components, vehicle bollards, facility signage, camera system enhancements, additional security lighting, intrusion detection systems, door and window hardening, installation of industrial strength locks, communication technology and cable hardening, and an enhanced access control program.

RWSA Engineering staff held a meeting with Operations staff to discuss overall project needs and priorities in October 2018. Meetings with ACSA and City staff were held in Fall/Winter 2018-2019 to discuss how access control and intrusion detection systems have been implemented into to the day-to-day operations of the two utilities. A Request for Proposal (RFP) for an Implementer to facilitate selection of an access control system, confirmation of design requirements based upon RWSA's facilities and project goals, and installation of the selected system was issued on June 6, 2019. RWSA conducted a Pre-Proposal Meeting on June 14, 2019, and proposals were opened on June 27, 2019. Interviews were conducted on July 15-16, 2019, and a Contract Award Recommendation was approved by the Board on July 23, 2019. Access Control System Installation at MCAWRRF began in March 2020. Access Control System Installation was completed in the Administration and Engineering Buildings by the week of November 30, 2020, completing installation of the physical access control system across the MCAWRRF site. Training for staff was completed on November 10, 2020. RWSA authorized improvements to locks and doors across the MCAWRRF site on May 4, 2021, in order to improve the condition of the hardware and subsequently, operations of the access control system. In addition, installation of the card access system on all exterior doors at the Scottsville and Crozet Water Treatment Plants (SVWTP and CZWTP, respectively) was authorized shortly thereafter. RWSA also authorized installation of security conduits not already included at SRWTP and OBSWTP under the Improvements Project in August 2021.

Access Control on exterior doors at the CZWTP and SVWTP was substantially completed in November 2021.

RIVANNA WATER & SEWER AUTHORITY
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MEMORANDUM

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

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

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

SUBJECT: **WHOLESALE METERING REPORT FOR OCTOBER 2021**

DATE: **NOVEMBER 16, 2021**

The monthly and average daily Urban water system usages by the City and the ACSA for October 2021 were as follows:

	Month	***Daily Average***	
City Usage (gal)	154,049,963	4,969,354	**49.7%**
ACSA Usage (gal)	155,622,205	5,020,071	**50.3%**
Total (gal)	**309,672,168**	**9,989,425**	

The *RWSA Wholesale Metering Administrative and Implementation Policy* requires that water use be measured based upon the annual average daily water demand of the City and ACSA over the trailing twelve (12) consecutive month period. The *Water Cost Allocation Agreement (2012)* established a maximum water allocation for each party. If the annual average water usage of either party exceeds this value, a financial true-up would be required for the debt service charges related to the Ragged Mountain Dam and the SRR-RMR Pipeline projects. Below are graphs showing the calculated monthly water usage by each party, the trailing twelve-month average (extended back to November 2020), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA).

Figure 1: City of Charlottesville Monthly Water Usage and Allocation

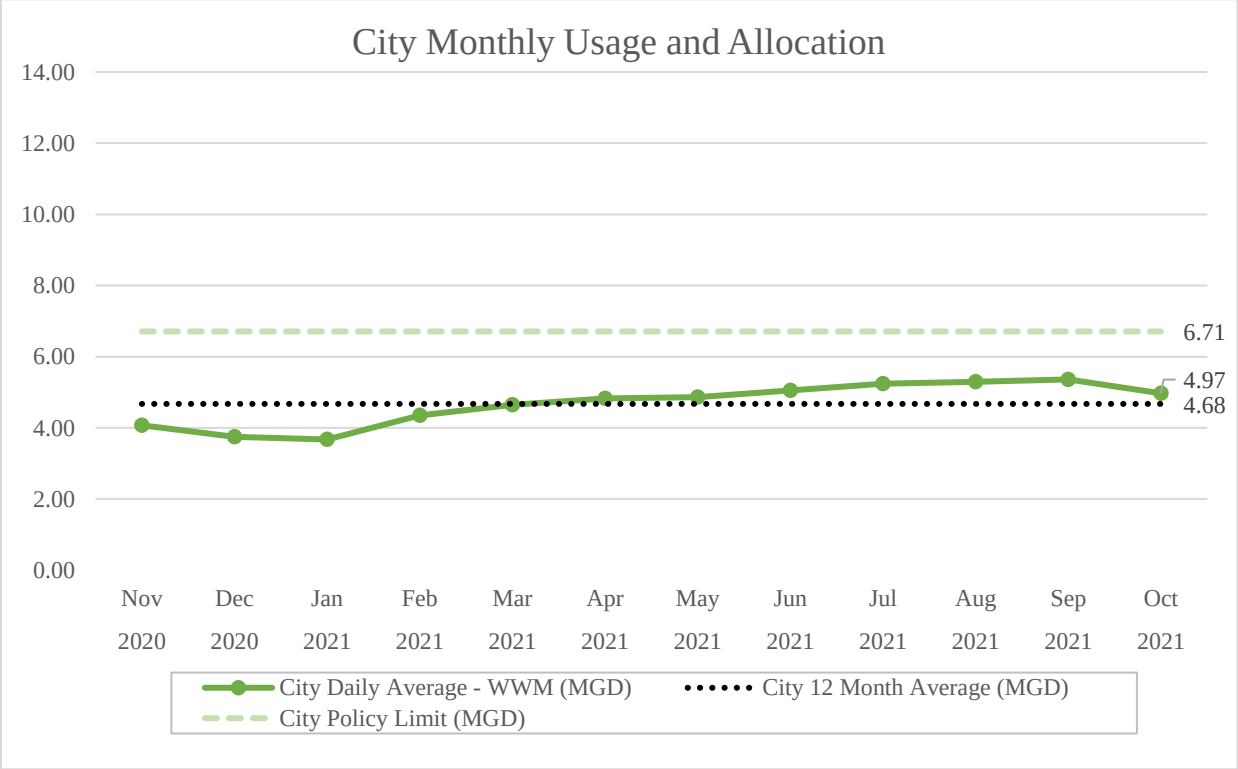
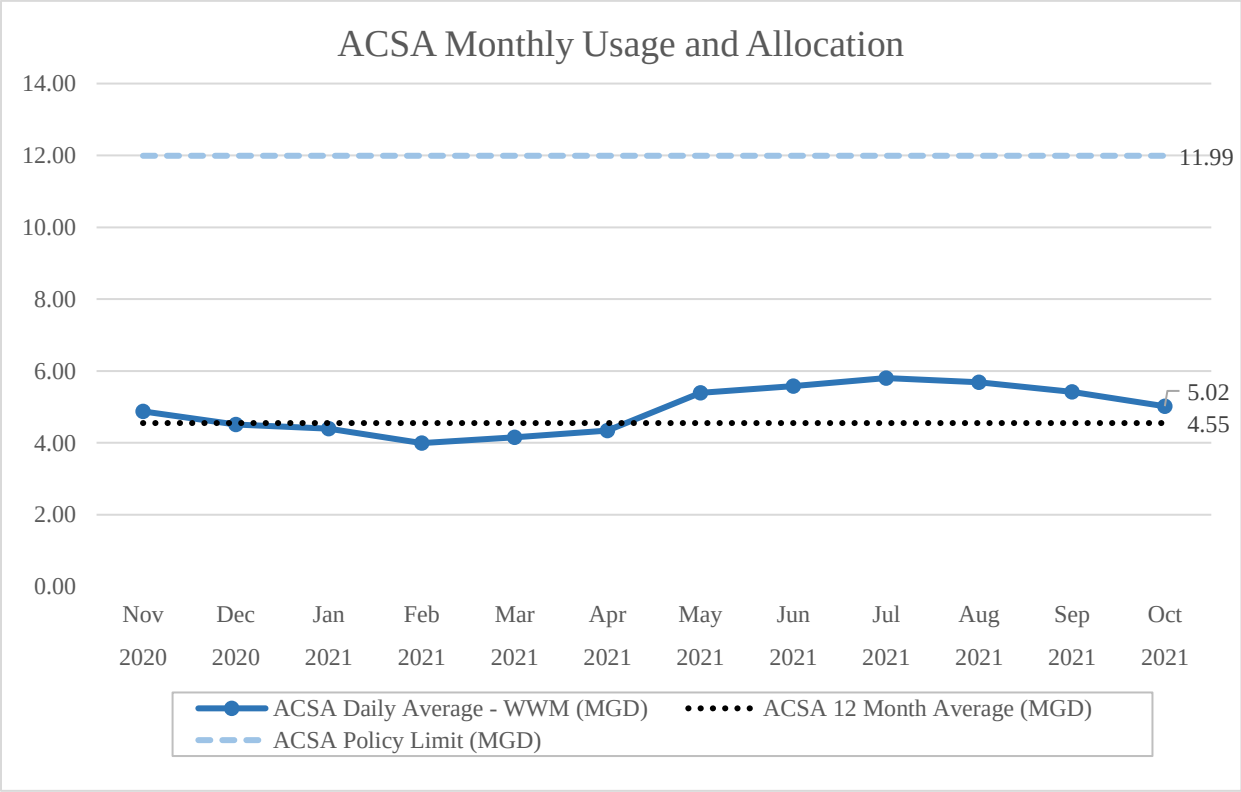


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation



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MEMORANDUM

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

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **CONTROL OF FIREARMS AND AMMUNITION**
GENERAL ADMINISTRATIVE PROCEDURE #2

DATE: **NOVEMBER 16, 2021**

This memo is to provide an update on our procedures related to firearms and ammunition in Rivanna buildings.

General Administrative Procedure #2 was initially completed in August 2019 to provide guidance for our staff on the control of firearms and ammunition when on Rivanna property and in Rivanna vehicles. The procedure was recently updated to include requirements which prohibit the public from possessing firearms and ammunition when in Rivanna buildings, generally as adopted by the City of Charlottesville and County of Albemarle for their buildings. Signs will be posted at the entrance to our buildings to notify the public about this requirement. Staff are required to keep firearms and ammunition in locked private vehicles when on Rivanna property.

Board Action Requested

This update is provided for information only.

Attachment: General Administrative Procedure #2: Control of Firearms and Ammunition

RIVANNA AUTHORITIES
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2. Control of Firearms and Ammunition	Prepared By: Executive Director
Approved: August 26, 2019	Updated: November 1, 2021

Purpose

It is the intent of the Rivanna Authorities to maintain high standards of professional conduct, safety, security and customer service. Rivanna promotes the security of our employees, facilities and customers through the implementation of security procedures, measures and enforcement as required to maintain a safe environment. Our procedures must be consistent with the laws established by the Commonwealth of Virginia, which allow public employers to adopt workplace procedures for the public who may lawfully enter our buildings and for employees.

Control of Firearms and Ammunition

A. Procedures for the Public

Firearms and ammunition are prohibited in Rivanna buildings. Signs will be posted at the buildings to which this prohibition will apply. Exceptions to this procedure include:

1. Those stated in Albemarle County Code Section 10-118(C) for Rivanna buildings located in Albemarle County.

2. Those stated in City of Charlottesville Code Section 33-10(d) for Rivanna buildings located in the City of Charlottesville and in Rivanna buildings located on property owned by the University of Virginia.

3. Those with written permission from the Executive Director.

Firearms and ammunitions may be possessed by the public in a locked private vehicle when utilizing the Ivy Transfer Station or other Rivanna buildings, but must remain in the vehicle.

B. Procedures for Employees

Employees are not permitted to carry, or to possess in a Rivanna vehicle, firearms or ammunition while on duty. This includes firearms for which employees have a lawful permit. Employees may store lawfully possessed firearms and ammunition in a locked private vehicle while on Authority property. Firearms and ammunition must remain in the private vehicle while on Authority property. Exceptions to this procedure for employees require prior written permission from the Executive Director.

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

MEMORANDUM

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

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **USE OF CREDIT CARDS**
GENERAL ADMINISTRATIVE PROCEDURE #3

DATE: **NOVEMBER 16, 2021**

This memo is to provide an update on the use of credit cards by Rivanna managers and a limited number of staff. A General Administrative Procedure for the use of credit cards was developed by the Rivanna management team in August 2019 and recently updated. The original procedure established the authorizations and practices for the use of credit cards to support certain operational expenditures including those:

- with urgent payment requirements
- which must be paid by credit card
- normally less than $5000 for a single purchase

These expenditures must comply with the Virginia Public Procurement Act and the Rivanna Purchasing Manual. All credit card expenditures must be approved by the Executive Director or the Director of Finance and are reviewed by our Purchasing managers and staff to ensure compliance with these procedures.

For a recent 12-month period, 164 credit card purchases were made totaling about $61,000, or less than 0.15% of our combined RWSA/RSWA operating budgets totaling $44.3M. Purchases were made with credit cards for items in the following categories:

10/1/2020 to 9/30/2021	Amount
Conferences – Water / WW Annual Meeting	$4,890.10
Conferences / Training	$2,832.00
DMV Registration Fees	$35.00
Employee Appreciation, Retirement, Service Awards, and Team Building Events	$3,110.98
HR Vacancy Advertising	$4,439.39
Information Technology – Supplies	$9,410.62
Maintenance Dept - Parts and Supplies	$7,231.81
Miscellaneous Travel	$481.54
Office Supplies	$2,452.27
Operator Lodging - snow event (Feb 2021)	$352.76

Regulatory Permits and Fees	$10,957.78
Technical Reference Materials	$840.54
Safety Supplies	$2,613.19
Technical Training - Maintenance	$5,690.00
Utilities – Data, Electric	$3,417.82
IVY MUC Credit Card Fees	$1,238.54
Recycling Data Materials	$990.00
Total	**$60,984.34**

To provide appropriate "checks and balances" in our credit card and procurement process, no one is permitted to approve his/her own credit card charges. The Executive Director and the Director of Finance review each other's charges. Further, in the recent update to the general administrative procedure, the Executive Director will send a monthly summary of any credit card charges and travel-related expenses incurred by the Executive Director to the Boards of Directors starting in December 2021. The Executive Director will also continue to notify the Boards in advance of any significant annual or sick leave usage by the Executive Director.

Board Action Requested

This update is provided for information only.

Attachment: General Administrative Procedure #3: Credit Cards

RIVANNA AUTHORITIES
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3. Use of Credit Cards	Prepared By: Executive Director
Approved: August 26, 2019	Updated: November 1, 2021

Purpose

Rivanna closely manages its financial resources to ensure they are utilized appropriately. All purchases must directly support Rivanna, and be completed in accordance with the Purchasing Manual. This procedure is to outline typical practices for minor operational expenditures paid with credit cards.

Credit Cards

Rivanna credit cards will be available primarily for use by the Executive Director and the Director of Finance, as well as limited staff. Typical instances of when these cards may be used include:

- Permit fees, license renewals or other administrative fees and charges, when available to be paid online
- Conferences or training and any associated registration fees, travel, and lodging
- Office and educational supplies
- Business meals, refreshments, and emergency food supplies
- Urgent or Emergency purchases – IT hardware, errors in billing disrupting services, etc.

Credit cards are to be used mainly as a means of payment and do not bypass purchasing/procurement requirements. Procurement requirements still must comply with the Purchasing Manual and VPPA, as amended. Transactions will normally be less than $5000 for a single purchase. All charges to the credit cards must be approved by the Executive Director or the Director of Finance via the **Credit Card Charge Form (see attached)**. Vendor receipt for the purchase must be submitted to the Accounts Payable office promptly supporting the charge to the credit card account.

To provide appropriate "checks and balances" in our credit card and procurement process, no one is permitted to approve his/her own credit card charges. The Executive Director and the Director of Finance will review each other's charges. Further, the Executive Director will send a monthly summary of any credit card charges and travel-related expenses incurred by the Executive Director to the Boards of Directors starting in December 2021.

695 MOORES CREEK LANE
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MEMORANDUM

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

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

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

SUBJECT: **RECOMMENDATION FOR DISPOSITION OF FY 2021 RATE CENTER RESULTS**

DATE: **NOVEMBER 16, 2021**

The Authority ended the previous fiscal year with a cumulative net surplus of roughly $300,400. There were contrasting results when comparing the two Urban rate center results for FY 2021. The Urban Water rate center finished the year with a $473,900 deficit while the Urban Wastewater rate center had a $869,900 surplus. The deficit in Urban Water was due to several expenses exceeding budget estimates, including $365,000 in fees for engineering services such as the UVa Hospital analysis (which was billed to UVa), VWP permit renewal and Buck Mt. land planning. There were also several significant pipeline break repairs that ran over budget for $400,000. There were some excess revenues from rate and other charges that helped bring that deficit down. For Urban Wastewater, despite overspending the budget by $300,000 related to line breaks and equipment repairs, there was still a surplus due to excess revenues of roughly $1,180,000 more than budget estimates. Crozet Water had a deficit due to excess expenses for engineering services for updates to the water supply plan, and chemical purchases.

Background: After the completion of the audit, staff performs an analysis and reconciliation between rate centers of the year ending financial results and the effect on the operating cash liquidity position. This is also done to ensure that rate center results are kept separate from each other. In years similar to FY 2021, one rate center may have a deficit and others may have a surplus, therefore, we do not want one rate center's surplus funding another rate center's deficit.

There is only one operating cash account where all transactions originate during the year for all capital and operating activities including inflow from revenues and bond proceeds, and outflow for expenses and debt payments. Capital transactions are reconciled and separated at the end of each month, (i.e., no capital funds are in the operations account at the end of each month or at year end). However, rate center operating results are comingled until this process of determining the results for the year and making transfers to or from the respective rate center reserves to ensure proper segregation is completed.

The operations account has a target working cash balance of 60 days of cash and cash equivalents on hand to meet daily and monthly cash flow needs, which currently is $6,403,200 (based on the FY 2022 budget). This is an increase of $302,350 from the prior year, because the FY 2022 budget was increased

compared to the FY 2021 budget. At year end, this target is compared to actual cash basis results for the fiscal year, and the variance, if any, is brought before the Board for action, which is consistent with the Authority's financial policy.

At year end, operating cash and cash equivalents were as follows:

Cash on hand	$6,703,600
60 Day Cash Target	$6,403,200
Surplus Operational Cash	$ 300,400

The target amount of operating cash is overfunded by $300,400 due to the previously mentioned year-end results. Therefore, the following transfers to/(from) the discretionary reserves are recommended for FY 2021 to bring the operations account back to the target balance and properly keep the six rate center reserves separated. FY 2020 to FY 2017 transfers are included for comparison:

Transfers to (from) reserves based on ending results for each rate center:

	FY2021	FY2020	FY2019	FY2018	FY2017
Urban Water	**$ (473,900)**	$ (432,300)	$ (1,466,200)	$ 1,800	$ 113,700
Urban Wastewater	**869,900**	153,000	1,716,400	(1,313,500)	(673,900)
Crozet Water	**(107,700)**	117,500	(80,300)	(58,500)	(18,600)
Scottsville Water	**18,800**	64,500	1,100	30,100	30,200
Glenmore Wastewater	**(3,800)**	(25,500)	25,400	26,800	(5,300)
Scottsville Wastewater	**(2,900)**	27,600	33,200	17,700	7,900
	$ 300,400	$ (95,200)	$ 229,600	$ (1,295,600)	$ (546,000)

To summarize the year-end process, one of the Authority's financial policies is to keep the operations account, defined here as cash and cash equivalents, financially sound with 60 days of cash for normal operating cash flow needs. That goal will continue to be met, and the reserves will continue to provide for the yearly variances in budget versus actual results. As any given year progresses, the operations account temporarily funds rate center deficits and accumulates surpluses, and a reconciliation of the results to allocate the respective surpluses and deficits is performed annually after the year-end audit is completed. The Board has taken similar action for the previous 15 years. Attached is a summary of the ending reserves for Fiscal Year 2021.

Board Action Requested:

Board approval is requested to transfer funds to/(from) the respective reserves for FY 2021 ending results to or from the operations account as follows:

Urban Water	$ (473,900)	Urban Wastewater	$ 869,900
Crozet Water	$ (107,700)	Glenmore Wastewater	$ (3,800)
Scottsville Water	$ 18,800	Scottsville Wastewater	$ (2,900)

Attachment

Rivanna Water and Sewer Authority
Statement of Reserve Balances
June 2021 Reserves

	June FY 2021 Ending Balance	FROM (TO) OPERATIONS ACCOUNT FY 2021 ending results reserve adjustment proposed Board action needed **	Adjusted FY 2021 Ending Balance
Urban Water			
Discretionary Reserve	$ 10,342,018	$ (473,900)	$ 9,868,118
Rate Stabilization Fund	905,746		905,746
Watershed Management Fund	161,027		161,027
Subtotal	$ 11,408,791		$ 10,934,891
Urban Wastewater			
Discretionary Reserve	$ 9,071,534	869,900	$ 9,941,434
Rate Stabilization Fund	878,767		878,767
Subtotal	$ 9,950,301		$ 10,820,201
Crozet Water			
Discretionary Reserve	$ 528,872	(107,700)	$ 421,172
Scottsville Water			
Discretionary Reserve	$ 282,604	18,800	$ 301,404
Glenmore Wastewater			
Discretionary Reserve	$ 34,780	(3,800)	$ 30,980
Scottsville Wastewater			
Discretionary Reserve	$ 43,892	(2,900)	$ 40,992
Capital Fund			
Specific Capital Projects	$ 233,206		$ 233,206
Vehicle Replacement Fund	$ 1,112,075		$ 1,112,075
Subtotal Discretionary Reserves	$ 23,594,521	$ 300,400	$ 23,894,921
Indenture Restricted Minimum	$ 500,000		$ 500,000
*Total Reserves **	**$ 24,094,521**		**$ 24,394,921**

*** - Agrees to investment balances - audited.**

**** - Proposed Board action**

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MEMORANDUM

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

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

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

SUBJECT: **SERIES 2021 BOND ISSUE - UPDATE**

DATE: **NOVEMBER 16, 2022**

The Board of Directors authorized issuance of a Series 2021 Bond needed for debt financing of current and upcoming CIP projects during its meeting on August 24, 2021. The bond issuance was successfully priced on October 27, 2021 through the fall VRA public financing program. The final cumulative interest rate received was 2.56% on the $40.5 M bond, as shown below:

2021 Bond Summary

Construction funds needed	$	39,968,000
Local Costs of Issuance (COI)		135,000
VRA COI and underwriting fees		393,091
Total Proceeds needed	$	40,496,091
Par Amount of Bond	$	36,980,000
Premium received		3,516,091
Total Bond	$	40,496,091

The bonds were sold at a $36.98 million par value with a $3.52 million premium. This will create a $40.5 million construction fund account to hold the bond proceeds to pay for capital project expenses and issuance costs. The annual debt service on this bond will be on average $1.9 million per year with the last payment occurring on October 1, 2051.

The projects being funded are listed below:

Projects	Budget 2022	Total Expenses Posted 6/2021	2018 Bond Proceeds Remaining	2021 Bond
Projects with Construction Funds Available:				
Observatory WTP Improvements	23,000,000	$ 2,980,356	$ 2,077,847	$ 17,941,800
South Rivanna WTP Improvements	20,000,000	9,298,931	3,790,265	6,910,800
New Project Funding Needs:				
Sugar Hollow Rubber Gate Replacement	1,770,000	1,116,128	-	1,770,000
Airport Rd. PS & Trans. Main	10,000,000	235,010	-	10,000,000
Scottsville WTP Lagoon Liner Replacement	315,000	-	-	315,000
Red Hill WTP Upgrade	150,000	-	-	150,000
Crozet PS Rehab	590,000	42,267	-	590,000
Moores Creek Slide Gate Replacement	1,350,000	284,337	-	1,350,000
Moores Creek Lighting Upgrade	570,000	77,141	-	570,000
Glenmore Pump and VFD	370,000	27,469	-	370,000
TOTALS	**$ 58,115,000**	**$ 14,061,639**	**$ 5,868,112.00**	**$ 39,967,600**

Board Action Requested

This update is provided for information only.

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MEMORANDUM

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

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

SUBJECT: **APPROVAL OF BOARD MEETING SCHEDULE FOR CALENDAR YEAR 2022**

DATE: **NOVEMBER 16, 2021**

This memo is to propose a schedule for Board meetings during calendar year 2022, as indicated by the attachment.

Since 2009, the Board has met on the fourth Tuesday of the month at 2:15 p.m. (or upon conclusion of the RSWA Meeting when it is also held), except traditionally the November and December meetings have been advanced to avoid conflicts with the Thanksgiving and Christmas holidays. The proposed schedule continues this practice.

Board Action Requested

Approval of the attached Board Meeting Schedule for Calendar Year 2022.

Attachment

RIVANNA WATER & SEWER AUTHORITY
695 Moores Creek Lane | Charlottesville, Virginia 22902-9016
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Board Meeting Schedule

Listed below are the proposed RWSA Board of Directors meeting dates for calendar year 2022:

Tuesday, January 25, 2022

Tuesday, February 22, 2022

Tuesday, March 22, 2022

Tuesday, April 26, 2022

Tuesday, May 24, 2022

Tuesday, June 28, 2022

Tuesday, July 26, 2022

Tuesday, August 23, 2022

Tuesday, September 27, 2022

Tuesday, October 25, 2022

Tuesday, November 15, 2022*

Tuesday, December 13, 2022*

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

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

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MEMORANDUM

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

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

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

SUBJECT: **COMPREHENSIVE ANNUAL FINANCIAL REPORT FISCAL YEAR ENDING JUNE 30, 2021**

DATE: **NOVEMBER 16, 2021**

The Authority's Comprehensive Annual Financial Report for the fiscal year ending June 30, 2021 is included with your Board packet. A large part of preparing the financial statements involves having the financial reports audited for the purposes of obtaining an opinion from an independent Certified Public Accountant as to the accuracy of the information presented in the report.

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

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

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

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

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

Communication with Those Charged with Governance

To the Board of Directors
Rivanna Water & Sewer Authority

We have audited the financial statements of financial statements of Rivanna Water & Sewer Authority for the year ended June 30, 2021. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated August 5, 2021. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Rivanna Water & Sewer Authority are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2021. We noted no transactions entered into by the entity during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the Authority's financial statements were:

> Management's estimate of the useful lives of depreciable assets is based on industry standards. Pension and OPEB estimates were determined by valuations performed by actuaries. We evaluated the key factors and assumptions used to develop the estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to each opinion unit's financial statements taken as a whole.

Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated October 25, 2021.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the entity's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to management's discussion and analysis and the schedules related to pension and OPEB funding, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were not engaged to report on the introductory section or statistical section which accompany the financial statements but are not RSI. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Restriction on Use

This information is intended solely for the use of the Board of Directors and management of Rivanna Water & Sewer Authority and is not intended to be, and should not be, used by anyone other than these specified parties.

Robinson, Farmer Cox Associates

Charlottesville, Virginia
October 25, 2021

SAFETY PROGRAM UPDATE

for the RWSA/RSWA Boards of Directors

November 16, 2021

Presented by Liz Coleman, Safety Manager

Safety is a continuous improvement process that protects staff and reduces the number of workplace deaths, injuries, and illnesses.

Our Safety Program is Part of Our Strategic Plan Goal of Operational Optimization:

"To efficiently, reliably, and **safely** provide high quality services, assuring the best value for our customers."

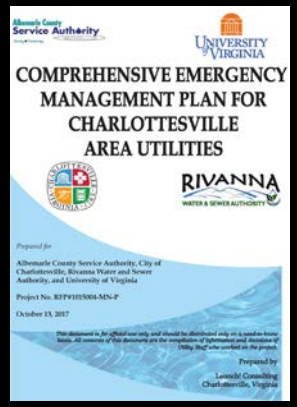
Strategies to help us meet our safety goals:

Enhance our **culture of safety**.

Protect our **workforce** and the public **through** continually growing a **culture of safety**.

SAFETY PROGRAM

- SAFETY MANUAL
- SAFETY TRAINING
- EQUIPMENT PURCHASES
- JOB PROCEDURES
- NEW EMPLOYEE ORIENTATION
- CONTRACTOR SAFETY
- EMERGENCY MANAGEMENT




Safety Manual Chapters
1.0 Safety Program Overview
2.0 Post-Incident Procedures
3.0 Safety Incentives
4.0 Blood-borne Pathogens
5.0 Confined Spaces
6.0 Hazard Communications
7.0 Chemical Hygiene
8.0 Hearing Conservation
9.0 LOTO
10.0 Respiratory Protection
11.0 Outdoor Safety
12.0 Back Safety
13.0 Personal Protective Equip.
14.0 Radio Safety
15.0 Vehicle Safety
16.0 Welding Safety
17.0 Spill Response
18.0 Fall Protection
19.0 Emergency Action Plan
20.0 Fire Prevention
21.0 Trenching
22.0 Asbestos
23.0 Crane Safety
24.0 COVID
25.0 Electrical Safety

SAFETY TRAINING NEEDS

- EACH DEPARTMENT HAS A TRAINING MATRIX BASED ON OSHA REQUIREMENTS THAT INCLUDES:
  - ANNUAL REQUIRED TRAINING
  - PERIODIC REQUIRED TRAINING (EVERY 3 YEARS)
  - ANNUAL BEST PRACTICES
  - DEPARTMENTS:
    - ADMINISTRATION (INCLUDES I.T.)
    - ENGINEERING
    - LABORATORY
    - MAINTENANCE
    - WASTEWATER
    - WATER
    - SOLID WASTE

SAFETY TRAINING TAKES TIME

DEPARTMENT	ANNUAL HOURS PER EMPLOYEE IN SAFETY TRAINING
Solid Waste	22
Administration	16
Engineering	22
Laboratory	19
Maintenance	27
Wastewater	22
Water	26

SAFETY TRAINING UPDATE

- 2020-2021 TRAINING
  - 8 HOUR HAZARDOUS CHEMICALS FOR MANAGERS
  - HEAVY EQUIPMENT TRAINING FOR SOLID WASTE
  - HANDS ON FIRE EXTINGUISHER TRAINING AT SOLID WASTE
  - ADVANCED ACCIDENT TRAINING BY VRSA FOR MANAGERS
  - CONFINED SPACE CERTIFICATION TRAINING
  - VIRTUAL NEW EQUIPMENT TRAINING FOR FALL PROTECTION USE
  - ALL ANNUAL REQUIRED TRAINING
  - SOME PERIODIC REQUIRED TRAINING
  - SOME ANNUAL BEST PRACTICES TRAINING

PURCHASED EQUIPMENT AND GRANTS RECEIVED

- Eyewashes
- Fiberglass Ladders
- Gas Meters
- Audible Methane Alarm in Digester Building
- Radios for New Network
- Fall Protection/Retrieval Systems
  - Purchase and Installation of Masts and 16 Sleeves to Supportive Masts at
    - 5 at Moores Creek
    - 9 at South Rivanna
    - 2 at North Rivanna

RWSA received $4,000 in FY 21

- VRSA SAFETY EQUIPMENT GRANT
  - FIBERGLASS LADDERS FOR MAINTENANCE
  - EXTRA RADIOS FOR NEW NETWORK

RSWA received $2,000 in FY 21

- VRSA SAFETY TRAINING GRANT
  - HEAVY EQUIPMENT SAFETY TRAINING FOR STAFF

VRSA =VIRGINIA RISK SHARING ASSOCIATION provides auto, property, liability and worker's compensation insurance for Rivanna Authorities.

PROGRAM ENHANCEMENTS:

- NEW EMPLOYEE SAFETY ORIENTATION
  - Orientation Training is given prior to first day on the job.
  - Orientation Training is Department Specific.

- JOB PROCEDURES
  - ARC Flash labeling
  - Lockout/Tagout
    - Written procedures for 2000 pieces of equipment
      - 700 completed.

ENHANCEMENTS

- SAFETY SHOWERS & EYEWASHES
  - All installed except outside Solids Handling Bldg.

INSPECTIONS AND ELECTRONIC RECORDKEEPING

- Combustible Dust
- Gas Meter Calibrations
- Fall Protection Hoists
- Cranes
- Eyewash and Safety Showers
- Automated External Defibrillator (AED)

SAFETY PROGRAM RESOURCES

One Full Time Safety Manager

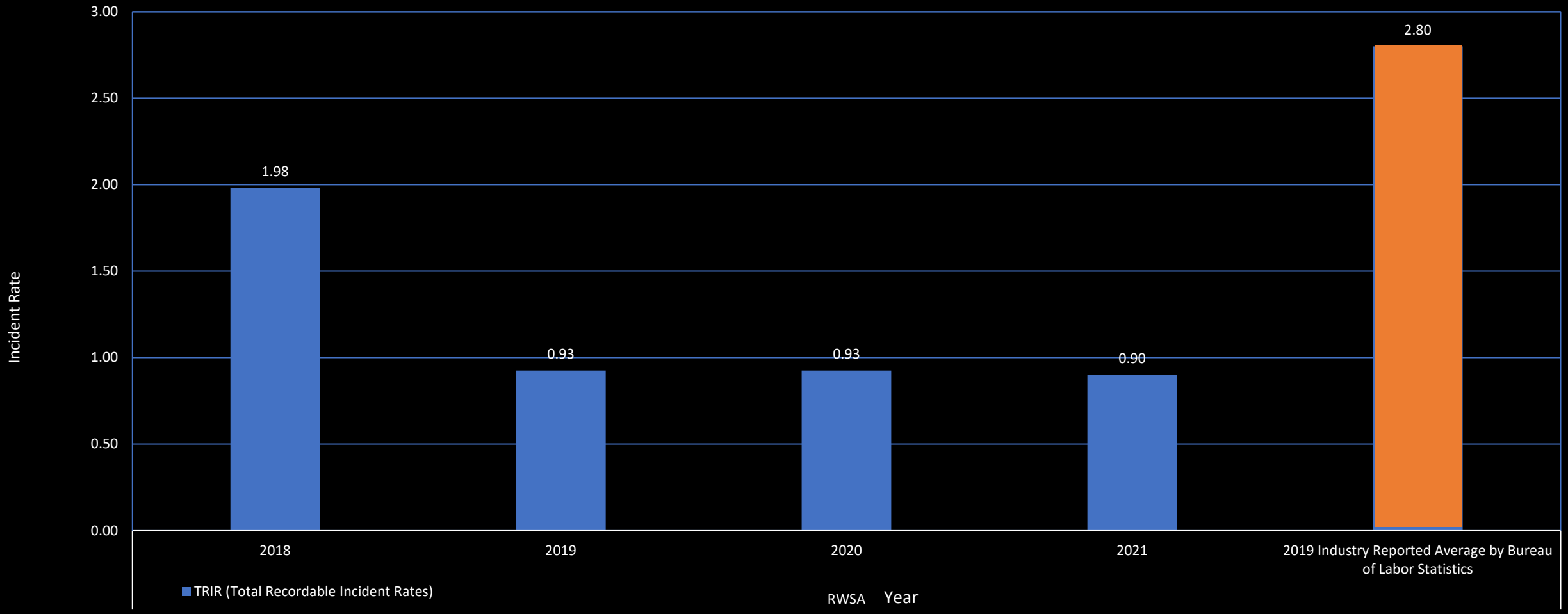
Staff Safety Committee

RWSA 2021-2022 Budget: $109,650

RSWA 2021-2022 Budget: $26,000

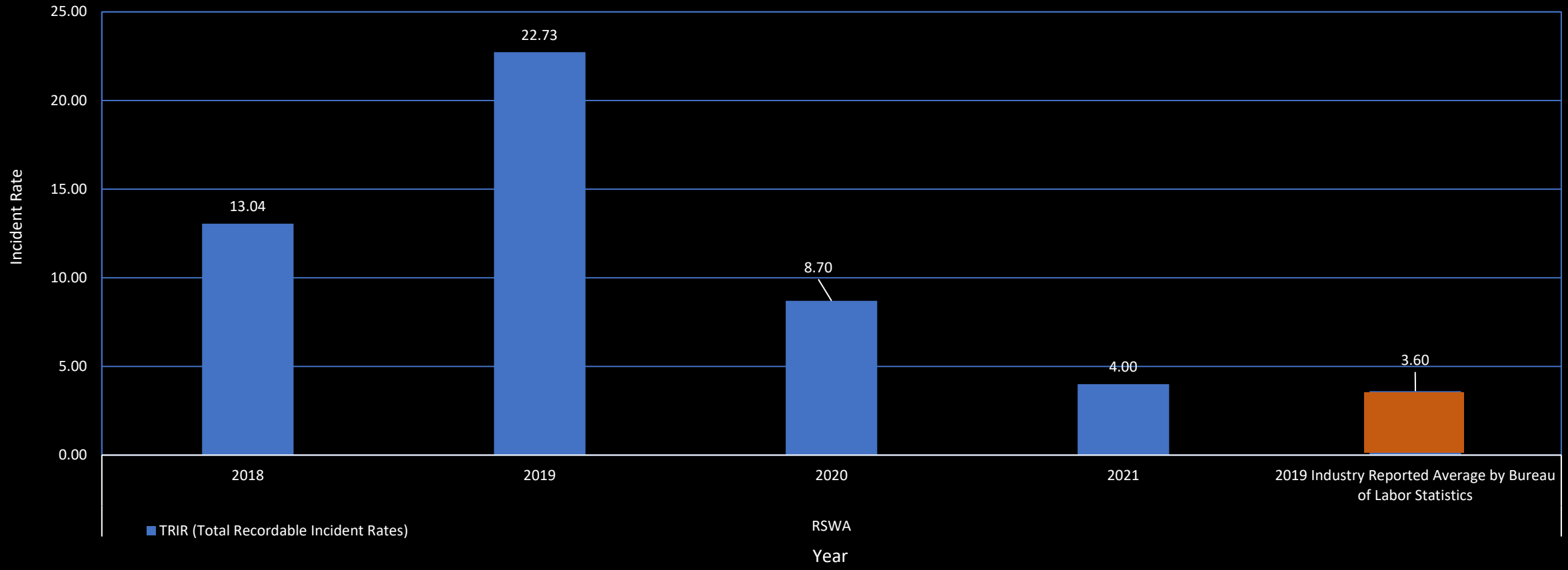
2021-2022 Grants Received: $6,000

DECLINING RWSA INCIDENT RATES



TRIR includes all incidents
In 2018 job specific training began.

DECLINING RSWA INCIDENT RATES



TRIR includes all incidents

In 2019 job specific training began.

IN SUMMARY

- Many safety program improvements have been completed.
- Continual Updates Are Needed To:
  - Protect our valuable human resources by providing a safe workplace.
  - Enhance our safety culture through safe work practices.
  - Maintain VOSH requirements and avoid noncompliance fines.

THANK YOU