

Board of Directors Meeting

May 26, 2020 2:15pm

BOARD OF DIRECTORS

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

DATE: May 26, 2020

LOCATION: Virtually via ZOOM

TIME: 2:15 p.m.

AGENDA

- 1. CALL TO ORDER
- 2. STATEMENT FROM THE CHAIR
- 3. RESOLUTION OF THE RIVANNA WATER AND SEWER AUTHORITY AUTHORIZING THE ADOPTION OF PROCEDURES FOR ELECTRONIC PUBLIC MEETINGS AND PUBLIC HEARINGS AND MODIFICATION OF PROCUREMENT PROCEDURES TO ENSURE THE CONTINUITY OF GOVERNMENT DURING THE COVID-19 PANDEMIC DISASTER
- 4. ELECTION OF CHAIR, VICE CHAIR, & SECRETARY-TREASURER
- 5. MINUTES OF PREVIOUS BOARD MEETINGS a. Minutes of Regular Board Meeting on February 25, 2020
- 6. RECOGNITION
- EXECUTIVE DIRECTOR'S REPORT
- 8. ITEMS FROM THE PUBLIC
- 9. RESPONSES TO PUBLIC COMMENTS
- 10. CONSENT AGENDA
 - a. Staff Report on Finance
 - b. Staff Report on Operations
 - Staff Report on Ongoing Projects
 - d. Staff Report on Wholesale Metering
 - e. Authorization for Engineering Services Virginia Water Protection Permit Renewal for the Urban Water System; Hazen Engineers
 - f. Award of Contract for Engineering Services Term Contract for Professional Sanitary Sewer Modeling Services; Brown and Caldwell Engineers

g. Construction Work Authorization – South Fork Rivanna Dam Mud Valve Replacement – Bander Smith, Inc

11. OTHER BUSINESS

- a. Presentation: Proposed FY 2021-2025 Capital Improvement Program Budget Update; Bill Mawyer, Executive Director
- b. Presentation: Introduction of Proposed Budget for FY 2020-2021, and Adoption of Preliminary Rate Schedule; Bill Mawyer, Executive Director

12. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA

- 13. CLOSED MEETING
- 14. 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.

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

www.rivanna.org

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 May 26, 2020 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 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(e) of the County's 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 audiovisual 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.	
Dr. Richardson: Please state your full name and location.	
Mr. Snook: Please state your full name and location.	
And I am Mike Gaffney and I am located at	

Joining us today electronically are the follow Authority staff members:

Bill Mawyer, Executive Director Lonnie Wood, Director of Finance & Administration Jennifer Whitaker, Director of Engineering and Maintenance Katie McIlwee, Communications Manager & Executive Coordinator

We are also joined electronically by Kurt Krueger, counsel to the Authority.

Our first order of business is to consider the COVID-19 Resolution in your Board packets. This Resolution (i) approves our conducting this meeting and future meetings electronically consistent with the City's Continuity of Government Ordinance adopted on March 25, the County's Continuity of Government Ordinance adopted on April 15 and Chapter 1283 of the 2020 Acts of the Virginia General Assembly effective April 24; (ii) approves our conducting the public hearings required for adoption of budgets and rate settings; and (iii) permits the Executive Director to modify the requirements or procedures for procurements not directly related to the COVID-19 disaster after giving reasonable notice to make the public aware of those modifications. I note that the public notice for this meeting was given in conformity with those ordinances. I would ask for a motion to adopt the resolution, a second to the motion and then we can have any discussion and hold the vote.

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RESOLUTION OF RIVANNA WATER AND SEWER AUTHORITY

AUTHORIZING THE ADOPTION OF PROCEDURES FOR ELECTRONIC PUBLIC MEETINGS AND PUBLIC HEARINGS AND MODIFICATION OF PROCUREMENT PROCEDURES TO ENSURE THE CONTINUITY OF GOVERNMENT DURING THE COVID-19 PANDEMIC DISASTER

WHEREAS, on March 12, 2020, Governor Ralph S. Northam issued Executive Order Fifty-One declaring a state of emergency for the Commonwealth of Virginia arising from the novel Coronavirus (COVID-19) pandemic; and

WHEREAS, Executive Order Fifty-One acknowledged the existence of a public health emergency which constitutes a disaster as defined by Virginia Code § 44-146.16 arising from the public health threat presented by a communicable disease anticipated to spread; and

WHEREAS, Executive Order Fifty-One ordered implementation of the Commonwealth of Virginia Emergency Operations Plan, activation of the Virginia Emergency Operations Center to provide assistance to local governments, and authorization for executive branch agencies to waive "any state requirement or regulation" as appropriate; and

WHEREAS, on March 13, 2020, the President of the United States declared a national emergency, beginning March 1, 2020, in response to the spread of COVID-19; and

WHEREAS, on March 11, 2020, the World Health Organization declared the COVID-19 outbreak a pandemic; and

WHEREAS, on March 12, 2020, the Charlottesville City Council approved the declaration of a local emergency and the City Manager and Director of Emergency Management issued a declaration of local emergency on March 12, 2020; and

WHEREAS, on March 17, 2020, the Albemarle County Board of Supervisors confirmed the declaration of local emergency because of the COVID-19 pandemic made by the County Executive, acting as the Director of Emergency Management on March 12, 2020; and,

WHEREAS, on March 18, 2020, the Albemarle County Board of Supervisors consented to the County Executive, acting as the Director of Emergency Management, issuing an amended declaration of local emergency to refer to the COVID-19 pandemic as not only an emergency, but also as a "disaster" as the Governor had included in Executive Order Fifty-One, and the County Executive issued the amended declaration on March 20,2020: and

WHEREAS, Virginia Code § 15.2-1413 provides that, notwithstanding any contrary provision of law, a locality may, by ordinance, provide a method to assure continuity of government in the event of a disaster for a period not to exceed six months; and

WHEREAS, on March 25, 2020, the Charlottesville City Council, pursuant to Virginia Code § 15.2-1413, adopted an Ordinance to Modify Deadlines, Modify Public Meeting and Public Hearing Practices and Procedures to Address Continuity of Operations Associated with the Pandemic Disaster (the "City Emergency Ordinance"); and

WHEREAS, on March 27, 2020, the Albemarle County Board of Supervisors, pursuant to Virginia Code § 15.2-1413, adopted an Emergency Ordinance to Ensure the Continuity of Government During the COVID-19 Disaster; and

WHEREAS, on April 15, 2020, the Albemarle County Board of Supervisors, pursuant to Virginia Code § 15.2-1413, adopted an Ordinance to Ensure the Continuity of Government During the COVID-19 Disaster, modifying its earlier ordinance adopted on March 27, 2020 (the "County Emergency Ordinance" and collectively, with the City Emergency Ordinance, the "Emergency Ordinances", and individually, the "Emergency Ordinance"); and

WHEREAS, through its respective Emergency Ordinance, the Charlottesville City

Council and the Albemarle County Board of Supervisors specifically found that COVID-19

constitutes a real and substantial threat to public health and safety and constitutes a "disaster" as

defined by Virginia Code § 44-146.16 being a "communicable disease of public health threat"

and

WHEREAS, through its respective Emergency Ordinance, the Charlottesville City

Council and the Albemarle County Board of Supervisors further found that the COVID-19

pandemic makes it unsafe to assemble in one location a quorum for public bodies including its
respective boards, commissions and authorities (collectively the "Public Entities"), or for such

Public Entities to conduct meetings in accordance with normal practices and procedures; and

WHEREAS, on April 24, 2020, Governor Northam approved an amendment to House Bill 29, the Budget Bill, enacted as Chapter 1283 of the 2020 Acts of the Virginia General Assembly, Part 4: General Provisions, Section 4-0.00 Operating Policies, subparagraph g., effective on such date, permitting any public body, including any state, local, regional, or regulatory body, or certain governing boards, to meet by electronic communication means without a quorum of the public body and any member of the governing board physically assembled at one location when the Governor has declared a state of emergency, subject to certain conditions and procedures;

WHEREAS, through its respective Emergency Ordinance, the Charlottesville City

Council and the Albemarle County Board of Supervisors adopted certain procedures to ensure
the continuity of government during the COVID-19 Pandemic disaster (such procedures together
with the Operating Policies set forth in Part 4 of Chapter 1283 of the 2020 Acts of the Virginia

General Assembly, hereinafter collectively referred to as the "Continuity Procedures"),

suspended any deadlines applicable to Public Entities and their staff during the COVID-19 disaster, and authorized Public Entitles, at their discretion, to postpone non-emergency public hearings and action items during the disaster; and

WHEREAS, the Rivanna Water and Sewer Authority, being a public body created by concurrent resolutions of the City of Charlottesville and the County of Albemarle pursuant to the Virginia Water and Waste Authorities Act (Virginia Code Section 15.2-5100 *et seq.*) and whose Board members are appointed by the City of Charlottesville and the County of Albemarle, is a Public Entity included within the scope of each of the Emergency Ordinances adopted by the City of Charlottesville and the County of Albemarle and a local body under Chapter 1283 of the 2020 Acts of the Virginia General Assembly.

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water and Sewer Authority hereby incorporates by reference and adopts the Continuity Procedures prescribed in each of the respective Emergency Ordinances adopted by the City of Charlottesville and the County of Albemarle, and in Chapter 1283 of the 2020 Acts of the Virginia General Assembly copies of which are attached hereto; and

BE IT FURTHER RESOLVED that the Rivanna Water and Sewer Authority hereby authorizes and directs its officers and staff to take all steps reasonably necessary or appropriate to implement such Continuity Procedures and to develop any specific procedures as applicable and appropriate for the Rivanna Water and Sewer Authority, provided that such specific procedures are consistent with the terms and conditions of the Emergency Ordinances, including modification of the requirements or procedures for procurements not directly related to the COVID-19 disaster, notwithstanding any provision in its Bylaws or its Procurement Manual to the contrary, and

BE IT FURTHER RESOLVED that this Resolution shall take effect immediately upon adoption and shall remain in effect during the pendency of both Emergency Ordinances including for any applicable period upon the re-adoption of the Emergency Ordinances by the Charlottesville City Council or the Albemarle County Board of Supervisors and during the pendency of the emergency declaration by the Governor of Virginia.

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RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
February 25, 2020

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> A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, February 25, 2020 at 2:32 p.m. in the 2nd floor conference room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

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Board Members Present: Lauren Hildebrand, Dr. Liz Palmer, Jeff Richardson, Lloyd Snook, 10 Dr. Tarron Richardson. 11

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Board Members Absent: Gary O'Connell, Mike Gaffney.

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Rivanna Staff Present: David Tungate, Lonnie Wood, Michelle Simpson, Austin Marrs, 15

Andrea Terry, Victoria Fort, Jennifer Whitaker, Scott Schiller, Betsy Nemeth, Liz Coleman, Bill 16

Morris, Dyon Vega, Katie McIlwee, Bill Mawyer.

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Attorney(s) Present: Kurt Krueger.

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1. CALL TO ORDER

Dr. Richardson called the February 25, 2020 regular meeting of the Rivanna Water and Sewer Authority to order at 2:32 p.m.

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2. MINUTES OF PREVIOUS BOARD MEETINGS

a. Minutes of Regular Board Meeting on January 28, 2020

Dr. Richardson asked Board members if they had comments or changes.

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Dr. Palmer moved that the Board approve the minutes of the previous Board meeting. The motion was seconded by Mr. Richardson and passed unanimously (5-0). Mr. Gaffney and Mr. O'Connell were absent from the meeting and the vote.

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3. RECOGNITIONS

Mr. Mawyer stated there were no recognitions, but that he wanted to mention that Mr. O'Connell 34

had a conflict and could not be present, and therefore, Quinn Lunsford was designated as Mr. 35

O'Connell's alternate that day. He stated Mr. Lunsford could sit in and participate, but was not 36 37

allowed to vote on any items, nor participate in a closed session (noting there were no plans to

hold one). He stated Mr. Lunsford is the Director of Finance for the Service Authority.

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4. EXECUTIVE DIRECTOR'S REPORT

- Mr. Mawyer stated he had talked in the RSWA Board meeting about employees having the new 41
- benefit of being members of the YMCA, and that he also showed a new employee orientation 42
- video. 43

- Mr. Mawyer stated Rivanna continues its work on the South Rivanna to Ragged Mountain 45
- Reservoir water line easements, and dealing with the 12 private property owners. He stated there 46
- is one that has accepted their offer, and that they have acquired one easement. He stated staff has 47

- spent a great deal of time and has worked hard to meet with the property owners over the last 4-5 48
- months. He stated appraisals and offers have been made. He stated at times, the property owners 49
- want Rivanna to come stake out the easement to show them exactly where it is located. He stated 50
- Rivanna has had tree experts come out to talk with the property owners about any damage, 51
- removal, or replacement of trees in the easement, and mentioned fences as well. 52

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- Mr. Mawyer stated at times, the project may not seem like it is moving very quickly, but that staff is doing a lot behind the scenes to bring it to a conclusion. He stated he would expect that over the next 3-6 months, they would bring many of the easements to the conclusion of
- acceptance or no acceptance. 57

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Mr. Mawyer stated the Observatory Water Treatment Plant lease continues to move forward. He 59 asked Mr. Krueger if he had any information to offer on that. 60

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Mr. Krueger replied that he had no updates since the last meeting. He stated UVA has Rivanna's response to the three document drafts that they had prepared for Rivanna's review. He stated except for the lease, the comments were relatively minor, and that they are waiting for UVA to comment on these documents.

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Mr. Mawyer stated UVA has asked Rivanna to make the leased property for the treatment plant smaller on one side, and so they need to reevaluate the survey, acreage, and details that are included in the lease language. He stated that there was nothing very significant, and that Ms. Whitaker and her staff are working with UVA to get this done.

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Mr. Mawyer stated that during the recent sustainability workshop, they heard about how sustainability can work in the water, sewer, and solid waste world.

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- 5. ITEMS FROM THE PUBLIC
- Dr. Richardson opened the meeting to the public.

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Ms. Sally Thomas stated she wanted Rivanna to know it was appreciated. She stated everyone turns on their faucets and expect to have clean water, and for the water to be well cared for. She stated what the Rivanna Authority has done from the days it was created is very important, and that it was particularly important as the area faces more stress with climate change.

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Ms. Thomas stated she was therefore very interested in the Rivanna to Ragged Mountain 83 Reservoir pipeline, and somewhat concerned about it being pushed back. She stated she realizes that money pressure was coming in the other direction, but that it would be sooner rather than 85 86 later that they find themselves needing that kind of water assurance. She wished Rivanna luck with the project.

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Dr. Richardson closed the public comment portion of the meeting.

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6. RESPONSES TO PUBLIC COMMENTS

- Mr. Mawyer stated the results of the long-awaited water demand and safe yield study would be 92
- brought to the Board next month. He stated they had thought this would happen in February, but 93

94	that they were not quite ready. He stated since Mr. O'Connell was not going to be present, they
95	decided to wait until March. He stated this will shed some light on when the community would
96	need more water, and that they have done a lot of projections of the County, City, and UVA
97	demand, as well as reservoir measurements.
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99	Mr. Mawyer stated Ms. Thomas had mentioned moving back the pipeline. He explained that they
100	haven't moved it, and that it was on the same schedule that he would mention in the CIP
101	presentation which the Board discussed two years prior, regarding schedule Options B and C.
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103	Dr. Palmer clarified that Ms. Thomas was saying that the pipeline would have already been in at
104	that point. She stated there was some very old history of when that was actually planned for.
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106	Mr. Mawyer thanked Dr. Palmer for the clarification. He stated more information would be
107	brought forward next month, and that this could be a topic for discussion at that time.
108	orought for which include, unto units course of a copie for discussion at their time.
109	Dr. Palmer asked who did the sustainability workshop.
110	Di. Tullier usked who did the sustainability workshop.
111	Mr. Mawyer replied that it was Hazen Engineers.
112	was reasons.
113	Dr. Palmer asked if the firm has someone who specifically goes to workshops.
114	21. I differ dished it the first has someone who specifically goes to workshops.
115	Mr. Mawyer stated they had several subject area experts from the East Coast to speak to topics
116	such as energy reuse, bioenergy, and different things that Rivanna can do from a sustainable
117	standpoint.
118	standpoint.
119	Dr. Palmer asked if there was an outline of the workshop.
120	Dr. Taimer asked if there was an outline of the workshop.
121	Mr. Mawyer replied that he had the handout the firm provided for the training, if Dr. Palmer
122	would like to have it.
123	World like to like it.
124	Dr. Palmer stated she would like to have the handout shared with the Board so she could see
125	what subjects were discussed.
126	what subjects were discussed.
127	Mr. Mawyer stated Rivanna intends to go to the next step with that information, now that they
128	have a better orientation on sustainability. He stated they received some more information on
129	greenhouse gases and emissions. He stated he and his staff would meet to consider where to go
130	from there, as far as a Master Plan or what projects they would pursue with a sustainability
131	initiative. He stated they were working on putting together a list of projects Rivanna was
132	working on, for the Board.
133	7. CONSENT AGENDA
134	7. CONSENT AGENDA

a. Staff Report on Finance

- b. Staff Report on Operations
- c. Staff Report on Ongoing Projects

d. Staff Report on Wholesale Metering 141 142 e. Award of Nonprofessional Services Contract for Construction Visual Documentation Services; 143 Commonwealth Documentation, LLC 144 145 Dr. Palmer moved that the Board approve the Consent Agenda. The motion was seconded 146 by Ms. Hildebrand and passed unanimously (5-0). Mr. Gaffney and Mr. O'Connell were 147 absent from the meeting and the vote. 148 149 8. OTHER BUSINESS 150 a. Presentation: Proposed FY 2021 – 2025 Capital Improvement Plan 151 152 Mr. Mawyer stated the five-year FY 21-25 CIP would be proposed to the Board. He stated the basis of the CIP is through the Strategic Plan goal, which says that they will manage 153 infrastructure and Master Planning as one of their six Strategic Plan goals so that they can deliver 154 and maintain dependable infrastructure in a financially responsible way. He stated Ms. Jennifer 155 Whitaker and her staff did a great job pulling this together, with Mr. Lonnie Wood working on 156 the financial side. 157 158 Mr. Mawyer stated the five-year CIP includes 56 projects totaling \$135.2 million. He stated they 159 have \$106 million in water projects, which is about 80% of the CIP, and so this is a CIP that is 160 heavily-dominated by water projects. He stated wastewater projects were estimated at \$24.4 161 million, and then about \$4.8 million in what they call "All Systems" for technology and security 162 projects that support both water and wastewater. 163 164 Mr. Mawyer stated he met with Mr. Lunsford, Mr. O'Connell, Ms. Hildebrand, and Mr. Chris 165 Cullinan to preview the budget, as the sub-committee. He stated one topic that came up that he 166 wanted to talk to the Board about was the difference between the budget last year (FY 20-24) 167 versus the present year (FY 21-25). He stated last year, the budget was \$97 million, and this 168 year, it is \$135 million, which is about a \$38 million increase. 169 170 Mr. Mawyer stated he had a summary of reasons why this increase transpired. He stated that 171 first, Rivanna has what he calls a "rolling budget," so that with each new year, the last year drops 172 out, and the new year comes in. He stated the FY 25 funding was for 14 existing projects that 173 174 were previously identified in other years. He stated they rolled into the budget at \$17.7 million. 175 Mr. Mawyer stated the RWSA Board approved increases to several significant projects. He 176 stated as recently as the previous month, the Board approved an increase in the budget of over \$8 177 178 million to the Observatory and South Rivanna Water Treatment Plants project that is under 179 construction. He stated part of this was adding more GAC treatment facilities at the Observatory Water Treatment Plant, as they increased from 2 million gallons per day (mgd) to 6 mgd in GAC 180 treatment capacity at Observatory. 181

- Mr. Mawyer stated there was a significant increase at the Beaver Creek Reservoir Spillway 183 Modification and Pump Station Project, of \$3 million. He stated \$1 million of that is due to the 184 restoration (with Mr. O'Connell's concurrence) of the hypolimnetic system, which is an 185 oxygenation system. He stated there are compressors that would be designed and built in the 186 187 pump station, and lines that would go out in the reservoir. He stated the lines oxygenate the water and help to improve water quality, which reduces the algae issues and the need to use 188 algaecides as frequently (particularly in Beaver Creek Reservoir). He stated the additional costs 189
- for these projects was about \$12 million. 190

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- Mr. Mawyer stated they pulled two projects forward in the CIP. He stated the first was Security 192
- Enhancements that had been scheduled for 2026. He stated this was pulled forward to 2020-193
- 2024, in large part with a renewed emphasis on security and the unfortunate incident in Virginia 194
- Beach where employees were killed at that utility. He stated they pulled \$1.7 million forward 195
- into the current five years so they can accelerate completion of those projects. 196

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- Mr. Mawyer stated they also pulled forward the Moores Creek Co-Generation Facility in which 198 they use methane gas from wastewater byproducts to power a co-generator which produces 199 electricity as well as heat, which is used in the digestion process. He stated the sludge is heated 200 in order to be more rapidly digested by microbial organisms. He stated this project was moved 201
- forward, as this facility is currently not operational, and Rivanna wishes to get it back online. 202

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Mr. Mawyer stated that many of these projects were moved out of the budget last year to reduce costs to \$97 million for the FY 20-24 budget. He stated they felt that the two projects he mentioned were priorities and they needed to be brought back into the current five year budget.

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- 208 Mr. Mawyer stated they also added 11 repair and maintenance projects totaling \$4.7 million,
- with most of them being at Moores Creek. He stated these projects were for exterior lighting, and 209
- demolition of clarifiers and a silo that are no longer used. He stated they will be upgrading the 210
- 5KV electrical system (the primary electrical system for the plant), as those cables are 50 years 211
- old and need to be replaced. He stated there would also be a few renovations at the facilities that 212
- 213 he would speak more about.

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Mr. Mawyer stated collectively, these were the four major reasons the proposed 5-year CIP 215 budget increased from \$97 million to \$135 million. 216

- Mr. Mawyer stated that on a broader scale, staff looked at the history of the CIP for Rivanna 218
- from back in 2003 up until present time. He stated Rivanna had a CIP of \$31 million in 2003, 219
- which went on a rapid trajectory for 5 years to get up to \$154 million in 2008. He stated it has 220
- been substantially level since then, with an average CIP of \$144 million per five-year CIP. He 221
- stated there was a budget spike in 2012, and that in 2019, there was a big year totaling \$154 222

- million. He stated they then decreased the budget by moving projects out of the five-year
- program to reach the 2020-2024 CIP of \$97 million.

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- Mr. Mawyer stated in the proposed 2021-2025 CIP, they were back to \$135 million, which was
- just below the 20-year average of \$144 million. He stated this is a comparable budget, compared
- to the history.

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- Dr. Palmer commented that this reflects how little was done in the earlier years, and that they
- now have a lot of catching up to do. She stated the Authority has done a wonderful job putting in
- 232 many important projects.

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- Mr. Mawyer stated he appreciated this and the Board's support. He stated that from 2008, for the
- last 12 or 13 years, they have been catching up with those projects that were deferred.

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- Mr. Mawyer stated the staff put together a 15-year construction plan, in 5-year segments. He
- stated they forecasted \$80 million for the next 5 years (FY 26-30), and almost \$60 million in FY
- 31-35. He stated it was likely that by the time they get closer to those years, they will find that
- more work is needed, and those budgets will increase. He stated they do have a significant 15-
- year CIP of \$275 million.

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- Mr. Mawyer stated the major programs they focused on are upgrading the water treatment plants.
- He stated there have been many discussions about those recently, and that there are three with
- improvements under construction (South Rivanna, Observatory, and Crozet), which represent
- \$52 million. He stated they have regulatory issues, such as the modifications to the Beaver Creek
- Dam and Spillway. He stated they are trying to make sure they do not have wastewater
- overflows, by building a flow equalization tank to support the Crozet wastewater system.

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- Mr. Mawyer stated they have been working with their colleagues at the County about exterior
- lighting at Moores Creek that currently does not comply with the County ordinance, and so there
- is a project to upgrade the exterior lighting.

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- Mr. Mawyer stated redundancy and resiliency is at the forefront, even nationally with the
- American Water Infrastructure Act of 2018, which requires all utilities Rivanna's size to submit
- a risk and resiliency plan by March. He stated they have a number of piping and pump station
- projects that support those initiatives.

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- Mr. Mawyer stated there are always operation and maintenance projects. He stated they have
- \$257 million in capital assets of building and equipment that they are responsible to maintain,
- and so there is about \$11 million scheduled in the next 5 years for that work.

Mr. Mawyer stated there is some growth aspect, and Schenks Branch Wastewater Interceptor is a project in the CIP. He stated there are discussions about getting that wastewater pipe replaced.

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- Mr. Mawyer stated Rivanna is adding more staff, and there is a renovation of what they call a
- "duty station" in the CIP, as well as a renovation and addition to the Moores Creek
- 268 Administration Building.

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Mr. Mawyer stated they continue to do a lot of master planning, and that at Moores Creek, they are trying to master plan what the next generation of wastewater facilities will include as they move from a 15 mgd plant to the next capacity increase (perhaps a 20 mgd plant).

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Mr. Mawyer stated there is an Asset Management project underway to strategically manage
Rivanna's facility assets, and that there is an IT Master Plan that is keeping IT projects on track.

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- Mr. Mawyer presented images of the South Rivanna and Observatory Water Treatment Plants,
- 278 noting that they would be under renovation. He presented an image of the solid waste side of the
- Moores Creek facility. He stated this was the building where they process solids that come out of
- the digestors, and that they are then spun in the centrifuge and loaded on a truck to be shipped to
- Waverly. He indicated on an image of the sphere where they hold the methane gas from that
- process. He indicated to a building that is the current co-generation facility where they have the
- equipment that makes electricity for the plant and heat for the digestion process.

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- Mr. Mawyer presented some of the major projects from the Community Water Supply Plan. He
- stated the Ragged Mountain Dam was completed in 2014 for about \$27 million. He stated they
- are under construction at the South Rivanna Water Treatment Plant for \$17 million over the next
- two years. He stated they have the Observatory Water Treatment Plant under construction,
- costing about \$26 million. He stated there is the Ragged Mountain Reservoir to Observatory
- 290 Treatment Plant Pipeline that needs to be replaced, and that they plan to have this completed by
- 291 2026.

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- Mr. Mawyer presented an image of the new pump station that will serve two purposes: pump raw
- water from the Ragged Mountain reservoir to the Observatory Treatment Plant, and pump raw
- water from Ragged Mountain back to the South Rivanna Reservoir and its Treatment Plant. He
- stated this pump station will support the South Rivanna to Ragged Mountain Raw Water Line
- project, which is currently in the CIP to be completed between 2027 and 2040. He stated this is
- an \$80 million project, according to the current estimate.

- Mr. Mawyer mentioned the Central Water Line project. He stated he talks frequently about the
- "three-legged stool," required to have an adequate water system, one leg being water supply. He
- stated the Authority has done a good job by adding capacity at the Ragged Mountain Reservoir.

He stated that capacity can be increased when they add 12 feet of water, and when they connect 303 the two reservoirs (SRR – RMR) with the pipeline, it results in increased water supply. He 304 stated they are now busy completing water treatment and upgrading the two major water plants 305 in the urban area (the second leg). He stated the third leg is water distribution, so they have to be 306 307 able to get the water out in the system at the proper pressures to the customers. 308 Mr. Mawyer stated the Central Water Line is a planned water distribution project, and that a 309 study would be completed this summer about where that pipeline will be located. 310 311 Dr. Palmer stated the South Fork to Ragged Mountain Raw Water Line was a project that the 312 Board of Supervisors was very interested in, and that the Albemarle County Service Authority 313 has agreed to take on the majority of that cost. She asked for the time it would actually take to 314 design and build this. 315 316 Mr. Mawyer replied that it would be 6-8 years. He stated they originally set up the four separate 317 schedule alternatives in 8-year segments, and that the project completion schedule could be 318 shorter than that, particularly after they have already built the Birdwood section of the pipeline 319 and studied the alignment so the design wouldn't take as long as starting from square one. 320 321 Dr. Palmer asked if they would have to design the sediment removal facility to provide 322 pretreatment. 323 324 Mr. Mawyer stated the pretreatment facility will need to be designed and would be located at the 325 South Rivanna Reservoir end of the system. He stated there will be a pump station there to pump 326 from Rivanna to Ragged, and then another pump station to pump water back to the South 327 328 Rivanna Treatment Plant, if needed. 329 Dr. Palmer asked Mr. Mawyer to give her an idea of how long the design would take. She stated 330 she wanted to make sure they were expressing to people that this is not something that can be 331 done right away. 332 333 Mr. Mawyer replied that they expect the design phase to take about 2 years. 334 335 Dr. Palmer asked if, at the very earliest, the RWSA Board agreed on the money issues, and they 336 337 started design in 2027, it would be a couple years before they were able to start construction. 338 Mr. Mawyer replied yes, adding that he would comment on that when he would speak to the debt 339 service curve, which is how they timed it so that the construction starts around 2030. He stated 340 the design would start 2-3 years ahead of that, and so the large costs of construction would occur 341

when the debt service is reduced and give them the debt service capacity.

343 Dr. Palmer stated this answered her question and that she wanted to be sure she was clear in 344 order to be able to communicate to people. She stated she knew a lot of people wanted to get 345 started on this sooner rather than later, which she agreed with, but that there were many factors 346 347 that needed to go in first. 348 Mr. Mawyer stated these factors included permitting, as well as property acquisition (which they 349 were currently working on). 350 351 Dr. Palmer stated other projects have to be done first, such as the pipelines they are putting in. 352 353 Mr. Mawyer stated there were two issues that they would talk more about next month. He stated 354 in the three-legged stool analogy, it was nice to have a lot of water at Ragged Mountain, but if 355 they cannot get it treated and distributed to the faucets, it has little value. 356 357 Mr. Mawyer stated the seventh and final project is to raise the Ragged Mountain Reservoir water 358 level 12 feet, which would add 600 million gallons of storage to Ragged Mountain, from 1.4 359 billion to 2 billion gallons. He stated this would add even more water supply. 360 361 Dr. Palmer stated it adds more water supply, but that it doesn't do what the pipeline is supposed 362 to do, which adds redundancy to the system and allows them to use the treatment plants in the 363 event that something happened. 364 365 Mr. Mawyer agreed. He stated they currently fill Ragged Mountain from Sugar Hollow 366 Reservoir in Free Union, and that it trickles at about 3.5 mgd. He stated with this new pipeline 367 and with the pumping capacity, they could transfer 25 mgd. 368 369 Mr. Mawyer stated South Rivanna Reservoir has the largest watershed of any of the reservoirs, at 370 259 square miles. He stated essentially all rain runoff which occurs west of Route 29 from 371 Greene County to Israel's Mountain in Batesville finds its way to the South Rivanna Reservoir. 372 373 374 Mr. Mawyer stated when it rains in the County, stormwater is captured in the South Rivanna Reservoir, but not at Ragged Mountain. He stated they have the greatest water storage capacity at 375 Ragged Mountain, and so when there is a large storm, there will be water flowing over the 376 377 Rivanna dam on its way to the Chesapeake Bay. He stated this pipeline would allow them to capture and transfer the rainwater from Rivanna to the larger Ragged Mountain Reservoir, which 378 could then be used at the upgraded water treatment plant at Observatory, as well as at the largest 379 water treatment plant (South Rivanna). 380

Dr. Palmer stated when Mr. Mawyer was talking about the mild drought that the area 382 experienced last fall, he stated it would take 90 days to fill the Ragged Mountain Reservoir from 383 the Sugar Hollow Reservoir, but that it would take 6 days to fill it with the new pipeline. 384 385 386 Mr. Mawyer stated this was correct. 387 388 Dr. Palmer stated she thought this was impressive. 389 390 Mr. Mawyer stated there is a significant difference in what their capability will be with the new pipeline and pump stations, as compared to what they currently have now to transfer water to the 391 Ragged Mountain Reservoir. 392 393 394 Mr. Mawyer stated other projects that Rivanna would be working on include the South Rivanna Dam Gate Repairs, which reflects back to 2017, when they had a low reservoir level and realized 395 that some of the dam gates were leaking. He stated they have been repaired, but that permanent 396 repairs would happen this summer. 397 398 399 Mr. Mawyer stated that next summer, the rubber crest gate on top of the Sugar Hollow Dam that was installed over 20 years ago will need to be replaced. 400 401 Mr. Mawyer stated he mentioned Security Enhancements and that this was a big project that 402 includes getting a card reader access system on all facilities, including South Rivanna and 403 Observatory while they are under construction. He stated the card system will get people in to 404 our facilities, and if they have employees leave Rivanna, they can be removed from the 405 computer system to cure the access control issue. 406 407 Mr. Mawyer stated at Crozet, they plan to construct a wastewater flow equalization tank that will 408 be located near Route 250 and Route 240. He indicated on the map to where the tank would be 409 located. He stated this will be a wastewater storage tank needed because when rainwater gets into 410 the sewer system where it is not supposed to be, it can cause the system to be overcharged, 411 412 resulting in sewage coming out of manholes. He stated they would take the water out of the pipe 413 and hold it in the tank until the peaks recede in the wastewater system. He stated construction is supposed to start this year and extend into 2021. 414 415 416 Mr. Mawyer stated Crozet wastewater is a part of the urban wastewater system, as opposed to Crozet water not being a part of the urban water system. He stated Crozet has its own water 417 treatment, but that all the wastewater comes to the Moores Creek plant. 418 419 Mr. Mawyer stated the County has given Rivanna notice that their outside lighting does not meet 420

County standards. He stated there was a drone video taken a couple weeks ago at night, which

- shows what the County is referring to. He stated there are many light fixtures that can be seen
- from above that are somewhat glaring. He presented an image of the fixture they generally have,
- which is designed to broadcast light at an angle to the ground as opposed to what the County
- requirements call for. He stated there is a project for \$1 million and is committed to be
- completed in two years to comply with County standards as well as to improve the security of
- the facilities. He stated there will be an engineered design of the lighting system.

428

- Mr. Mawyer played a video for the Board that gives a tour of the plant and Charlottesville at night. He stated that though it was nice to see the lights, the County would say that the lights
- should not be glaring as they are and do not comply with County lighting standards.

432

- As the video played, Mr. Mawyer noted that there is water in all the aeration basins. He stated
- security and safety are great concerns, as there are operators working all night taking samples.
- He stated there must be adequate lighting for safety reasons.

436

- Mr. Mawyer stated development is coming closer to the plant, which is another reason why they
- need to have secure lighting. He indicated on the video to the new Willow Tree development.

439

Mr. Mawyer stated they were able to get good photographs from the drone as well.

441

- Mr. Mawyer stated with regards to renovations at Moores Creek, there are two clarifiers that
- have been out of service for five or ten years. He stated there is a new centrifuge in the solids
- building, which serves like a dryer that takes the leftover solid residue from wastewater, spins
- and dries it, and puts it on the truck. He stated in the past, the clarifiers were necessary because
- the equipment was much slower, and they had to have storage capacity. He stated the clarifiers
- are no longer needed and have been proposed for removal.

448

- Mr. Mawyer stated there is a silo that used to store lime used to dry out the solids residuals that
- is no longer needed and will be demolished.

451

- Mr. Mawyer indicated on an image to the co-generation facility in a small building. He stated the
- generator and the building need to be replaced. He stated they have about \$1.85 million set aside
- 454 for that.

- Mr. Mawyer indicated to an image of the duty station, which is at the entrance to the plant. He
- stated it used to be a pump station with a laboratory and some administrative space. He stated it
- is now only used for electrical power for the Moores Creek pump station at the entrance of the
- facility. He indicated to some of the electrical devices that are used there now. He indicated to
- the old pumping equipment, explaining that they want to remove it, renovate the space, and put
- staff in there (likely IT staff, with their equipment).

462

Mr. Mawyer presented an image of the conference room, explaining that they are proposing a

renovation of the room that will generally include all the ceiling, wall, furniture, and floor

finishes. He stated they would improve the technology in the room with speakers and monitors to

make it more user-friendly to the Board and to the public.

466 467 468

Mr. Mawyer stated in 2021, they would get started with construction near Airport Road for a

new water pump station that will be located near the tower seen at the Hollymead Town Center.

He stated in the distant future, there will be more water storage tanks on that site as well.

470 471

475

Mr. Mawyer stated Beaver Creek Dam modifications include, per regulations, passing over the

dam probable maximum precipitation. He stated the old requirement was to be able to pass 15

inches of rain in a day, and the new requirement is to pass 31 inches of rain in a day so that the

dam doesn't wash out. He presented the engineer's drawing, and the current grass spillway by

the County park area. He stated they propose to move the spillway into the center of the dam

across Brown's Gap Turnpike. He stated there will be a bridge there, and a labyrinth spillway.

He explained from the pictures presented how the water would go down the chute of the dam. He

stated these labyrinths allow more water to pass without having a wider spillway.

479 480

Mr. Mawyer presented an image of the existing raw water pump station that pumps water up to

the Crozet Water Treatment Plant. He stated this sits in the way of the new spillway, and so they

will look on the west side of the reservoir facility to acquire property and build a new raw water

pump station. He stated this is a large project funded entirely by the Service Authority.

485 486

483

Dr. Palmer asked again for the change in the requirement on passing rainwater.

487 488

Mr. Mawyer replied that the regulatory requirement increased from 15 inches to 31 inches per

day. He stated it was a significant increase, and that one might assume that it would never rain 31

inches in a day, but that Hurricane Camille in 1969 resulted in about that number of inches. He

stated the regulators were therefore not far off in making that requirement. He noted the dam in

Lynchburg was recently washed out, as well as one in California. He stated dam safety has been

a current and rising topic, and so the regulation was changed.

493 494 495

492

Mr. Snook asked if this was a federal or state regulation.

496 497

Mr. Mawyer replied that it was a state regulation.

498

Mr. Mawyer presented financial numbers to the Board, explaining that there was \$135 million

for the five-year CIP. He stated there is \$5.4 million in work in progress, and that they are using

debt proceeds that they already borrowed, as well as cash. He stated they estimate that they will

have \$82 million in new debt that they will need to finance the proposed five-year CIP. He stated they are funding 13.5% of the CIP with cash, which exceeds Rivanna's financial policy that says they would use 10% cash, and so they are using more cash than they would necessarily need to, with 86% debt.

506507

Mr. Mawyer stated they currently have \$200 million in debt, and that he would be speaking more about this next month with the operating budget.

508509

- Mr. Mawyer stated Rivanna projects that the City charges from Rivanna will increase 5.7% in
- the upcoming fiscal year, and increase 7.1, 7.2, 6.5, and 6.5% over the next five years. He stated
- the Service Authority rates are projected to increase from 8.8 to 9.1, 8.7, 8.1, 7.6% over the next
- 513 five years. He stated their rates may be higher, in part, because of the work in Crozet. He stated,
- 80% of the pipeline from Rivanna to Ragged is funded by the Service Authority.

515

- Mr. Mawyer stated Rivanna is using some cash to support the CIP, as mentioned. He stated when
- they calculate the rates, it is not just for the proposed CIP construction projects. He stated they
- also have to include their operating expenses to come up with a comprehensive cost and charge
- to the two customers (Service Authority and City). He stated they have therefore included a 6.3%
- increase in their operating budget for next year, which he would speak more about next month
- when he presents the operating budget.

522

- Mr. Mawyer stated they do anticipate issuing a revenue bond in 2021, and possibly 2-3 years
- after that, depending on the rate of spending that occurs for construction projects.

525

- Mr. Mawyer presented the debt profile, noting that it was shown to the Board in January 2018.
- He stated the light green numbers, at that time, represented the existing debt profile, and that the
- dark green was what they projected for the proposed CIP, including the pipeline from Rivanna to
- 529 Ragged.

530

- Mr. Mawyer presented the current debt profile, noting it was very similar to that from the past.
- He stated the debt cost has risen from \$15.7 to \$17.7 million per year. He stated that cost is
- shared between the City and Service Authority.

534

- Mr. Mawyer stated that around 2031 is when the debt service starts decreasing, and that is when
- they have capacity to take on additional debt and maintain the same debt payment amount, which
- is somewhat the basis of starting design in 2027 for the pipeline project. He stated in 2030, the
- significant dollars would start to flow for construction, and they would have capacity for
- increased debt at that time.

541	Mr. Mawyer summarized that Rivanna's proposed five-year CIP included 56 projects at \$135
542	million.
543	
544	Dr. Palmer thanked Mr. Mawyer for the good work that the group does every year on the CIP.
545	She stated it was mind boggling to her how much infrastructure costs. She stated some of the
546	projects on the County side were dwarfed by Rivanna's projects.
547	
548	Mr. Mawyer stated this was by design from the County and City to put the Authority together for
549	that purpose, to complete the large utility projects. He stated next month, he would be speaking
550	about the operating budget and expenses. He stated in May, he would ask the RWSA Board to
551	have a public hearing on the budget, and that the Board would approve the budget and adopt the
552	CIP at that time.
553	
554	9. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA
555	There were none.
556	
557	10. CLOSED MEETING
558	There was no closed meeting.
559	
560	11. ADJOURNMENT
561	At 3:15 p.m., Dr. Palmer moved to adjourn the meeting of the Rivanna Water and Sewer
562	Authority. The motion was seconded by Mr. Richardson and passed unanimously (5-0).
563	Mr. Gaffney and Mr. O'Connell were absent from the meeting and the vote.
564	

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MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY

BOARD OF DIRECTORS

FROM: BILL MAWYER, EXECUTIVE DIRECTOR

EXECUTIVE DIRECTOR'S REPORT SUBJECT:

DATE: MAY 26, 2020

STRATEGIC PLAN GOAL: WORKFORCE DEVELOPMENT

Our staff have continued to provide essential drinking water and wastewater treatment services for our community throughout the virus pandemic. Our Water and Wastewater Operators have maintained safe health practices while keeping our treatment plants operational 24/7. Our laboratory, finance, human resource, administrative, IT, maintenance and construction inspection staff also continued to work regular days at their normal locations to support these essential services with testing, accounts payable, payroll, package deliveries, technical support, repairs and inspections. While teleworking, our Engineering staff have kept our construction projects moving forward with no Covidrelated delays.

We appreciate the efforts put forth by our dedicated staff during this stressful period!

STRATEGIC PLAN GOAL: INFRASTRUCTURE AND MASTER PLANNING

S. Rivanna to Ragged Mtn Reservoir Water Line Easements

Significant progress has been made since February to acquire the necessary easements. Offers have been made to 11 of 12 private property owners, and through negotiations, agreements have been reached with 8 property owners. Progress is also being made on easements from 3 public property owners (VDOT, City, County School Board).

Negotiations with two private owners, UVA, the UVA Foundation and the Virginia Department of Forestry are also ongoing for water line easements between Ragged Mtn Reservoir and the Observatory Water Treatment Plant.

Observatory Water Treatment Plant Lease

Discussions and surveying are continuing with UVA to determine the final lease boundaries and the final terms of the water line easements.

Natural Resources Conservation Service Grant

We received a \$341,000 grant from the federal NRCS to support engineering planning costs for the Beaver Creek Dam Improvements Project. Upon completion of the planning study, we will request grant funding for design and construction of these modifications, typically a cost share (60% RWSA, 40% NRCS) of the estimated \$27 M project.

STRATEGIC PLAN GOAL: COMMUNICATION AND COLLABORATION

NW Central VA Utility Managers Lunch

On February 26, 2020, Rivanna hosted the second annual NW Central Virginia Utility Managers Networking Meeting. Managers from the Amherst County Service Authority, Augusta Service Authority, Culpeper County, Louisa Water Authority, Harrisonburg Rockingham Regional Sewer Authority, and Aqua Virginia Water attended, along with managers from the City Utilities and ACSA.

Community Outreach

I gave a presentation to the Charlottesville Rotary Club on the "Long Term Drinking Water Supply Plan for the Businesses and Residents of Charlottesville and Albemarle". The Rotary Club invites speakers each month that align with a theme, and the theme for March was Water.

VWWAA

I was recently elected to a Director position with the Virginia Water and Waste Authorities Association. The VWWA is an organization of over 50 member jurisdictions and firms/consultants that have come together to promote the interests of Virginia's water and wastewater authorities.

Drinking Water Week

National Drinking Water Week, sponsored by the American Water Works Association, was May 3-9, 2020.

Biosolids Regional Meeting

David Tungate, Director of Operations, attended the regional biosolids meeting, sponsored by Virginian Association of Municipal Wastewater Agencies, Maryland Association of Municipal Wastewater Agencies, and the Metropolitan Council of Governments on March 23, 2020 at Alexandria Renew. At this meeting, biosolids generators discussed concerns about the long-term availability of land application, incineration, and landfilling.

STRATEGIC PLAN GOAL: OPERATIONAL OPTIMIZATION

IT SCADA System Recognition

Power Magazine, an online news and technology journal for the Global Energy Industry, wrote an article that recognized RWSA as a "respected environmental and industry leader in the region and uses advanced technology and processes to achieve high standards of performance", and one of the first utilities in the country to begin working with GE's newly released "Operations Hub" SCADA product. We are a long time and advanced user of GE's SCADA software. The article can be found here: https://www.powermag.com/press-releases/ge-digital-delivers-continuous-improvement-and-centralized-data-visualization-with-new-proficy-operations-hub-1-5/



MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY

BOARD OF DIRECTORS

FROM: LONNIE WOOD, DIRECTOR OF FINANCE AND

ADMINISTRATION

REVIEWED: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: APRIL MONTHLY FINANCIAL SUMMARY – FY 2020

DATE: MAY 26, 2020

Urban Water flow and rate revenues are 1% under budget estimates for the first ten months of this fiscal year, and Urban Wastewater flow and rate revenues are 6.5% over budget. Revenues and expenses are summarized in the table below:

	Urban Water	Urban Wastewater	Total Other Rate Centers	Total Authority			
Operations							
Revenues	\$ 6,405,839	\$ 7,714,358	\$ 1,900,998	\$ 16,021,195			
Expenses	(6,611,847)	(7,496,846)	(1,691,585)	(15,800,278)			
Surplus (deficit)	\$ (206,008)	\$ 217,512	\$ 209,413	\$ 220,917			
				_			
Debt Service							
Revenues	\$ 5,608,701	\$ 7,279,106	\$ 1,246,377	\$ 14,134,184			
Expenses	(5,590,611)	(7,229,984)	(1,244,083)	(14,064,678)			
Surplus (deficit)	\$ 18,090	\$ 49,122	\$ 2,294	\$ 69,506			
Total							
Revenues	\$ 12,014,540	\$ 14,993,464	\$ 3,147,375	\$ 30,155,379			
Expenses	(12,202,458)	(14,726,830)	(2,935,668)	(29,864,956)			
Surplus (deficit)	\$ (187,918)	\$ 266,634	\$ 211,707	\$ 290,423			

When reviewing the Authority as a whole, operating expenses are running \$362,500 over budget. The two Urban rate centers are seeing significant unbudgeted expenses for professional services, utility costs, and pipeline repairs. A more detailed summary is as follows:

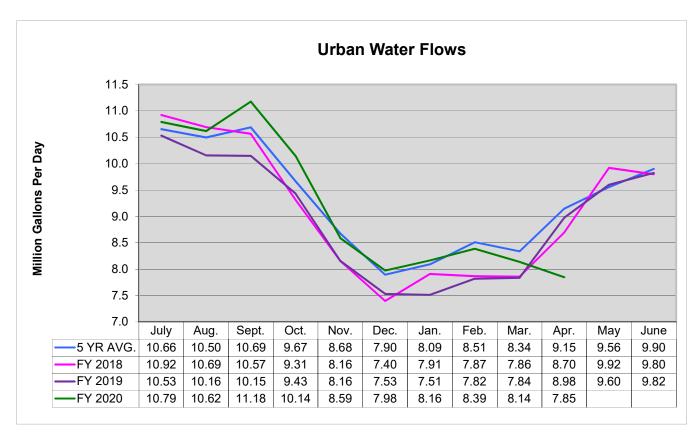
A. Annual Transactions

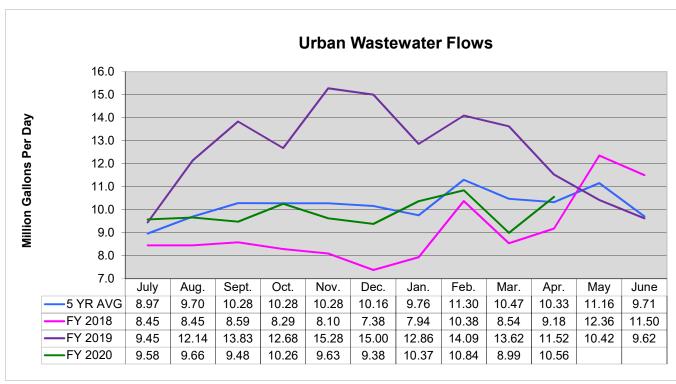
Some revenues and expenses are over the <u>prorated</u> year-to-date budget due to one-time annual payments made or revenues received for the year. These transactions appear to be significant impacts on the budget vs. actual monthly comparisons but will even out as the

- year progresses. Examples are payments made for health savings accounts, certain maintenance agreements, lease payments, intern program costs, and insurance. Revenues received annually are the Nutrient Exchange payment of \$78,763 and the annual septage receiving support of \$109,441 from the County.
- B. Professional Services (Urban Water, Urban Wastewater, Engineering pages 2, 5, 11) Urban Water legal fees are over budget related to the Observatory plant lease negotiations and Buck Mountain land issues. Engineering has incurred unbudgeted expenditures for engineering and technical services for an addition to the engineering trailer. Urban Wastewater engineering/technical services is over budget for several unbudgeted items such as temporary flow meter installation, maintenance and data analysis, an exterior lighting plan for Moores Creek AWRRF as well as for septage handling, stormwater management (SWPPP) and spill prevention (SPCC) support.
- C. Other Services and Charges (Urban Water, Urban Wastewater page 2, 5) Utilities are running high for Urban Water and Urban Wastewater. Urban Water is over budget on pipeline costs due to emergency line break repairs at Observatory, Meriwether, McIntire Park, and Georgetown/Hydraulic and Pen Park Lane, but this is currently offset by being under budget on chemical costs.
- D. Communications (Urban Water page 2) Telephone and data services are running high due to needed upgrades to data lines.
- E. Information Technology (Glenmore Wastewater, Engineering pages 6, 11) Glenmore has spent more than the annual budget on SCADA maintenance and support. Engineering is over the annual budget related to the purchase of a computer program to assist with capturing data from engineering/inspector personnel while in the field into the GIS system.
- F. Operations & Maintenance (Glenmore Wastewater, Maintenance page 6, 9) Glenmore Wastewater is over budget on equipment maintenance and repair costs for blower replacement and actuator control repairs. The Maintenance department is over budget on vehicle repairs and pipeline maintenance costs.
- G. Equipment Purchases (Maintenance, Lab pages 10, 11) The Lab made a \$42,000 unbudgeted purchase of an analyzer to be used for wastewater nutrient and drinking water quality testing. The Maintenance department also incurred some unbudgeted equipment purchases.

Attachments

Rivanna Water and Sewer Authority Flow Graphs





Rivanna Water & Sewer Authority Monthly Financial Statements - April 2020 Fiscal Year 2020

Consolidated Revenues and Expenses Summary			Budget FY 2020	Y	Budget ear-to-Date	Y	Actual ear-to-Date	V	Budget vs. Actual	Variance Percentage
Operating Budget vs. Actual										
No	otes									
Revenues Operations Rate Revenue		\$	17,381,293	\$	14,484,411	\$	14,859,069	Ф	374,659	2.59%
Lease Revenue		φ	100,000	φ	83,333	φ	94,640	Φ	11,306	13.57%
Admin., Maint. & Engineering Revenue			478,000		398,333		416,867		18,534	4.65%
Other Revenues			562,478		468,732		805,492		336,760	71.84%
Use of Reserves Interest Allocation			667,000 31,500		555,833 26,250		232,600 29,395		(323,233) 3,145	-58.15% 11.98%
Total Operating Revenues	=	\$	19,220,271	\$	16,016,893	\$	16,438,063	\$	421,171	2.63%
Evnonoso										
Expenses Personnel Cost	Α	\$	8,760,078	\$	7,137,848	\$	7,026,080	\$	111,768	1.57%
	В	۳	666,050	Ψ	555,042	Ψ	919,471	Ψ	(364,430)	-65.66%
S .	С		2,980,612		2,483,843		2,683,530		(199,687)	-8.04%
	D		142,593		118,828		138,860		(20,033)	-16.86%
Information Technology Supplies	E		352,750 46,180		293,958 38,483		236,521 27,979		57,438 10,505	19.54% 27.30%
• •	F		5,069,478		4,224,565		4,106,024		118,541	2.81%
•	G		359,550		299,625		376,181		(76,556)	-25.55%
Depreciation			843,000		702,500		702,500		-	0.00%
Reserve Transfers	_	•	-	_	-	•	-	_	(000 450)	2.22%
Total Operating Expenses	-	\$	19,220,291	\$	15,854,692	\$	16,217,146	\$	(362,453)	-2.29%
Operating Surplus/(Deficit)	=	\$	(20)	\$	162,200	\$	220,917	:		
Debt Service Budget vs. Actual										
Revenues										
Debt Service Rate Revenue		\$	15,861,022	\$	13,217,518	\$	13,217,520	\$	2	0.00%
Septage Receiving Support - County			109,440		91,200		109,441		18,241	20.00%
Buck Mountain Surcharge Buck Mountain Lease Revenue			125,900 1,600		104,917 1,333		102,500 4,747		(2,417) 3,413	-2.30% 256.00%
Trust Fund Interest			158,200		131,833		182,099		50,266	38.13%
Reserve Fund Interest			690,000		575,000		517,877		(57,123)	-9.93%
Total Debt Service Revenues	_	\$	16,946,162	\$	14,121,802	\$	14,134,184	\$	12,382	0.09%
Debt Service Costs										
Total Principal & Interest		\$	14,473,236	\$	12,061,030	\$	12,061,030	\$	-	0.00%
Reserve Additions-Interest			690,000		575,000		517,877		57,123	9.93%
Debt Service Ratio Charge			725,000		604,167		604,167		-	0.00%
Reserve Additions-CIP Growth Total Debt Service Costs	-	\$	1,057,925 16,946,161	\$	881,604 14,121,801	\$	881,604 14,064,678	\$	57,123	0.00% 0.40%
Debt Service Surplus/(Deficit)	-	\$	1	\$	1	\$	69,506	:	0.,.20	011070
			Summar	у						
Total Revenues		\$	36,166,433	\$	30,138,694	\$	30,572,247	\$	433,552	1.44%
Total Expenses		Ψ	36,166,452	Ψ	29,976,493	Ψ	30,281,823	Ψ	(305,330)	-1.02%
Surplus/(Deficit)	=	\$	(19)	\$	162,201	\$	290,423	-	,/	

<u>Urban Water Rate Center</u> Revenues and Expenses Summary			Budget FY 2020	Y	Budget ear-to-Date	,	Actual Year-to-Date		Budget vs. Actual	Variance Percentage
Operating Budget vs. Actual	Natas									
Revenues	Notes									
Operations Rate Revenue		\$	7,118,541	\$	5,932,118	\$	5,870,959	\$	(- , ,	-1.03%
Lease Revenue Miscellaneous			70,000		58,333		69,897 235,126		11,563 235,126	19.82%
Use of Reserves			600,000		500,000		217,600		(282,400)	-56.48%
Interest Allocation Total Operating Revenues		\$	13,200 7,801,741	\$	11,000 6,501,451	\$	12,258 6,405,839	\$	1,258 (95,611)	11.43% - 1.47%
, -		<u> </u>	7,001,741	Ψ	0,001,401	Ψ	0,400,000	Ψ	(55,511)	-1.47 /0
Expenses Personnel Cost		\$	1,861,134	\$	1,519,059	\$	1,481,253	\$	37,806	2.49%
Professional Services	В	Ψ	207,200	Ψ	172,667	Ψ	268,454	Ψ	(95,788)	-55.48%
Other Services & Charges	С		574,963		479,136		657,218		(178,082)	-37.17%
Communications Information Technology	D		65,100 77,000		54,250 64,167		68,484 47,392		(14,234) 16,775	-26.24% 26.14%
Supplies			6,100		5,083		4,550		533	10.48%
Operations & Maintenance			2,356,590		1,963,825		1,882,636		81,189	4.13%
Equipment Purchases	G		50,500		42,083		56,329		(14,245)	-33.85%
Depreciation Reserve Transfers			300,000		250,000		250,000		-	0.00%
Subtotal Before Allocations		\$	5,498,587	\$	4,550,270	\$	4,716,316	\$, , ,	-3.65%
Allocation of Support Departments		\$	2,303,155 7,801,742	\$	1,879,874 6,430,143	\$	1,895,531 6,611,847	\$	(15,657)	-0.83% -2.83%
Total Operating Expenses					71,307		· · · · · · · · · · · · · · · · · · ·		(181,704)	-2.03 %
Operating Surplus/(Deficit)		\$	(1)	Ф	71,307	φ	(206,008)	=		
Debt Service Budget vs. Actual										
2										
Revenues Debt Service Rate Revenue		\$	6,178,598	ф	5,148,832	ው	5,148,830	\$	(2)	0.00%
Trust Fund Interest		Φ	54,000	\$	45,000	\$	62,096	Φ	(2) 17,096	37.99%
Reserve Fund Interest			387,000		322,500		290,529		(31,971)	-9.91%
Buck Mountain Surcharge			125,900		104,917		102,500		(2,417)	-2.30%
Lease Revenue Total Debt Service Revenues		\$	1,600 6,747,098	\$	1,333 5,622,582	\$	4,747 5,608,701	\$	3,413 (13,880)	256.00% - 0.25%
		<u> </u>	-,,	•	-,,		-,,-		(12,222)	
Debt Service Costs		•	5 000 400	•	4.050.045	•	4.050.045	•		0.000/
Total Principal & Interest Reserve Additions-Interest		\$	5,223,498 387,000	\$	4,352,915 322,500	\$	4,352,915 290,529	\$	- 31,971	0.00% 9.91%
Debt Service Ratio Charge			400,000		333,333		333,333		-	0.00%
Reserve Additions-CIP Growth		_	736,600	_	613,833		613,833		<u> </u>	0.00%
Total Debt Service Costs Debt Service Surplus/(Deficit)		<u>\$</u>	6,747,098	<u>\$</u> \$	5,622,582		5,590,611 18,091	\$	31,971	0.57%
Debt del vide dal plad (Bellett)		<u></u>				_	,	=		
		Ra	te Center S	Sur	nmary					
Total Revenues		\$	14,548,839	\$	12,124,033	\$	12,014,541	\$	(109,492)	-0.90%
Total Expenses			14,548,840	·	12,052,725		12,202,458		(149,733)	-1.24%
Surplus/(Deficit)		\$	(1)	\$	71,307	\$	(187,917)			
			<u>, , , , , , , , , , , , , , , , , , , </u>		<u> </u>		· · /	=		
Costs per 1000 Gallons		\$	2.30			\$	2.36			
Operating and DS		\$	4.28			\$	4.35			
Thousand Gallons Treated			3,397,700		2,831,417		2,802,367		(29,050)	-1.03%
or Flow (MGD)			9.309				9.188			
Flow (MGD)			9.309				9.188			

Rivanna Water & Sewer Authority Monthly Financial Statements - April 2020

										1
Crozet Water Rate Center			Budget		Budget		Actual		Budget	Variance
Revenues and Expenses Summary			FY 2020	Ye	ear-to-Date	Ye	ear-to-Date	V	s. Actual	Percentage
	ī	<u> </u>								
Operating Budget vs. Actual										
Barrana	Notes									
Revenues		•	4 000 000	Φ.	057.040	Φ.	057.040	Φ.		0.000/
Operations Rate Revenue Lease Revenues		\$	1,028,808 30,000	\$	857,340 25,000	\$	857,340 24,743	\$	(257)	0.00% -1.03%
Use of Reserves			52,000		43,333		24,743		(257) (43,333)	-100.00%
Interest Allocation			1,800		1,500		1,705		205	13.66%
Total Operating Revenues		\$	1,112,608	\$	927,173	\$	883,788	\$	(43,385)	-4.68%
•			, ,		,		,		, ,	
Expenses Personnel Cost		φ	200 500	æ	245 205	¢.	226 026	Φ	9.440	2 440/
Personnel Cost Professional Services		\$	300,589 12,850	\$	245,385 10,708	Ф	236,936 1,000	\$	8,449 9,708	3.44% 90.66%
Other Services & Charges			137,816		114,847		90,044		24,803	21.60%
Communications			4,950		4,125		4,881		(756)	-18.33%
Information Technology			2,600		2,167		1,771		396	18.28%
Supplies			1,395		1,163		601		562	48.30%
Operations & Maintenance			398,400		332,000		200,986		131,014	39.46%
Equipment Purchases			6,500		5,417		9,217		(3,800)	-70.15%
Depreciation			30,000		25,000		25,000		-	0.00%
Reserve Transfers			-		-		-		-	
Subtotal Before Allocations		\$	895,100	\$	740,811	\$	570,435	\$	170,375	23.00%
Allocation of Support Departments			217,513		177,555		178,634		(1,079)	-0.61%
Total Operating Expenses		\$	1,112,613	\$	918,366	\$	749,069	\$	169,297	18.43%
Operating Surplus/(Deficit)		\$	(5)	\$	8,807	\$	134,719	•		
Debt Service Budget vs. Actual										
Dest del vice Bauget vs. Actual										
Revenues										
Debt Service Rate Revenue		\$	1,311,312	\$	1,092,760	\$	1,092,760	\$	-	0.00%
Trust Fund Interest			5,500		4,583		6,373		1,790	39.06%
Reserve Fund Interest			21,500		17,917		16,054		(1,862)	-10.40%
Total Debt Service Revenues		\$	1,338,312	\$	1,115,260	\$	1,115,188	\$	(72)	-0.01%
Debt Service Costs										
Total Principal & Interest		\$	1,230,815	Ф	1,025,679	¢	1,025,679	\$		0.00%
Reserve Additions-Interest		Ψ	21,500	Ψ	17,917	Ψ	16,054	Ψ	1,862	10.40%
Reserve Additions-CIP Growth			86,000		71,667		71,667		- 1,002	0.00%
Total Debt Service Costs		\$	1,338,315	\$	1,115,263	\$	1,113,400	\$	1,862	0.17%
Debt Service Surplus/(Deficit)		\$	(3)	\$	(3)	\$	1,788	:		
		-4-	0							
	K	ate	Center Su	mn	іагу					
Total Revenues		\$	2,450,920	\$	2,042,433	\$	1,998,975	\$	(43,458)	-2.13%
Total Expenses			2,450,928		2,033,628		1,862,469		171,159	8.42%
						_				
Surplus/(Deficit)		\$	(8)	\$	8,805	\$	136,506	=		
Costs per 1000 Gallons		\$	5.59			\$	4.15			
Operating and DS		\$	12.31			\$	10.32			
opolating and bo		Ψ	12.01			Ψ	10.02			
Thousand Gallons Treated			199,053		165,878		180,402		14,525	8.76%
Flow (MGD)			0.545				0.591			
FIOW (MIGD)			0.545				0.591			

Rivanna Water & Sewer Authority Monthly Financial Statements - April 2020

<u>Scottsville Water Rate Center</u> Revenues and Expenses Summary		Budget FY 2020		Budget Year-to-Date		Actual Year-to-Date		Budget vs. Actual		Variance Percentage
Operating Budget vs. Actual										
	Notes									
Revenues										
Operations Rate Revenue		\$	520,812	\$	434,010	\$	434,010	\$	-	0.00%
Use of Reserves			15,000		12,500		15,000	\$	2,500	20.00%
Interest Allocation	=		800		667	•	764		98	14.64%
Total Operating Revenues	-	\$	536,612	\$	447,177	\$	449,774	\$	2,598	0.58%
Expenses										
Personnel Cost		\$	197,349	\$	161,029	\$	156,919	\$	4,110	2.55%
Professional Services			20,000		16,667		1,675		14,992	89.95%
Other Services & Charges			33,318		27,765		21,074		6,691	24.10%
Communications			3,430		2,858		4,293		(1,435)	-50.20%
Information Technology			800		667		800		(134)	-20.04%
Supplies			410		342		172		170	49.67%
Operations & Maintenance			121,340		101,117		64,750		36,367	35.97%
Equipment Purchases			3,200		2,667		6,690		(4,024)	-150.88%
Depreciation Reserve Transfers			20,000		16,667		16,667		(0)	0.00%
Subtotal Before Allocations	-	\$	399,847	\$	329,777	\$	273,040	\$	56,738	17.20%
Allocation of Support Departments		Ψ	136,770	Ψ	111,684	Ψ	111,650	Ψ	33	0.03%
Total Operating Expenses	-	\$	536,617	\$	441,461	\$	384,690	\$	56.771	12.86%
Operating Surplus/(Deficit)	-	\$	(5)	\$	5,716	\$	65,084		•	
Revenues Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest	-	\$ \$	128,749 1,700 8,400 138,849 129,524 8,400	\$ \$	107,291 1,417 7,000 115,708 107,937 7,000	\$ \$	107,290 1,821 6,215 115,326 107,937 6,215	\$ \$	(1) 404 (785) (382)	0.00% 28.54% -11.22% -0.33%
Reserve Additions-CIP Growth	-	•	925	•	771	•	771 114,922	\$	785	0.699/
Total Debt Service Costs Debt Service Surplus/(Deficit)	=	\$ \$	138,849	<u>\$</u> \$	115,708	<u>\$</u> \$	403	Þ	705	0.68%
Dest dervice durpids/(Denety	=	Ψ		Ψ		<u> </u>	400	3		
	Ra	ate	Center Su	ımn	nary					
Total Revenues		\$	675,461	\$	562,884	\$	565,100	\$	2,216	0.39%
Total Expenses	-		675,466		557,168		499,612	_	57,556	10.33%
Surplus/(Deficit)	=	\$	(5)	\$	5,716	\$	65,488	=		
Costs per 1000 Gallons Operating and DS		\$ \$	29.56 37.21			\$ \$	26.36 34.24			
Thousand Gallons Treated			18,151		15,126		14,592		(534)	-3.53%
or Flow (MGD)			0.050				0.048			

<u>Urban Wastewater Rate Center</u> Revenues and Expenses Summary			Budget FY 2020	Υ	Budget ear-to-Date	Υ	Actual ear-to-Date		Budget vs. Actual	Variance Percentage
Operating Budget vs. Actual										
	Notes									
Revenues										
Operations Rate Revenue		\$	8,033,620	\$	6,694,683	\$	7,130,500	\$	435,817	6.51%
Stone Robinson WWTP Septage Acceptance			22,478 450,000		18,732 375,000		13,988 477,115		(4,744) 102,115	-25.32% 27.23%
Nutrient Credits			90,000		75,000		78,763		3,763	5.02%
Miscellaneous Revenue			-		-		500		500	0.0270
Interest Allocation			14,400		12,000		13,492		1,492	12.44%
Total Operating Revenues		\$	8,610,498	\$	7,175,415	\$	7,714,358	\$	538,943	7.51%
Expenses										
Personnel Cost		\$	1,281,463	\$	1,045,203	\$	1,033,146	\$	12,057	1.15%
Professional Services	В		175,000		145,833		395,120		(249,287)	-170.94%
Other Services & Charges	С		2,030,825		1,692,354		1,759,036		(66,682)	-3.94%
Communications			10,430		8,692		9,537		(845)	-9.72%
Information Technology			62,500		52,083 2,250		25,423		26,661 670	51.19% 29.78%
Supplies Operations & Maintenance	Α		2,700 1,724,650		1,437,208		1,580 1,547,550		(110,342)	-7.68%
Equipment Purchases	^		77,500		64,583		61,483		3,101	4.80%
Depreciation			470,000		391,667		391,667		(0)	0.00%
Reserve Transfers					<u> </u>		<u> </u>		-	
Subtotal Before Allocations		\$	5,835,068	\$	4,839,874	\$	5,224,542	\$	(384,668)	-7.95%
Allocation of Support Departments		_	2,775,430	•	2,265,890	•	2,272,305	•	(6,415)	-0.28%
Total Operating Expenses		<u>\$</u>	8,610,498 (0)	<u>\$</u>	7,105,764 69,651	<u>\$</u>	7,496,846 217,512	\$	(391,083)	-5.50%
Operating Surplus/(Deficit)		Ψ	(0)	Ψ	09,031	Ψ	217,312	=		
Debt Service Budget vs. Actual										
Debt Gervice Budget vs. Actual										
D										
Revenues		•	0.000.440	•	0.057.040	•	0.057.000	•		0.000/
Debt Service Rate Revenue Septage Receiving Support - County		\$	8,229,143 109,440	\$	6,857,619 91,200	ф	6,857,620 109,441	Ъ	1 18,241	0.00% 20.00%
Trust Fund Interest			96,900		80.750		111,627		30,877	38.24%
Reserve Fund Interest			266,900		222,417		200,418		(21,998)	-9.89%
Total Debt Service Revenues		\$	8,702,383	\$	7,251,986	\$	7,279,106	\$	27,120	0.37%
Debt Service Costs										
Total Principal & Interest		\$	7,880,079	\$	6,566,733	\$	6,566,733	\$	-	0.00%
Reserve Additions-Interest Debt Service Ratio Charge			266,900 325,000		222,417 270,833		200,418		21,998	9.89% 0.00%
Reserve Additions-CIP Growth			230,400		192,000		270,833 192,000		_	0.00%
Total Debt Service Costs		\$	8,702,379	\$	7,251,983	\$	7,229,984	\$	21,998	0.30%
Debt Service Surplus/(Deficit)		\$	4	\$	3	\$	49,122		,	
		Rat	e Center S	um	mary					
		•	17.010.001	•	44 407 404	•	4.4.000.404	•	500.004	0.000
Total Revenues		\$	17,312,881	\$	14,427,401	\$	14,993,464	\$	566,064	3.92%
Total Expenses			17,312,877		14,357,746		14,726,830	-	(369,084)	-2.57%
Surplus/(Deficit)		\$	4	\$	69,655	\$	266,634			
. , ,					· · · · · · · · · · · · · · · · · · ·		· · ·	•		
Costs per 1000 Gallons		\$	2.54			\$	2.49			
Operating and DS		\$	5.11			\$	4.89			
Thousand Gallons Treated			3,390,400		2,825,333		3,009,920		184,587	6.53%
or			5,555,400		_,5_5,555		5,555,520		70 1,007	3.55 70
Flow (MGD)			9.289				9.869			
, ,										

Glenmore Wastewater Rate Center Revenues and Expenses Summary			Budget FY 2020		Budget ear-to-Date	Υ	Actual ear-to-Date		Budget s. Actual	Variance Percentage
Operating Budget vs. Actual										
	Notes									
Revenues										
Operations Rate Revenue		\$	370,524	\$	308,770	\$	308,770	\$	_	0.00%
Interest Allocation		·	700	·	583	·	647	·	63	10.86%
Total Operating Revenues		\$	371,224	\$	309,353	\$	309,417	\$	63	0.02%
Expenses										
Personnel Cost		\$	95,340	\$	77,779	\$	76,309	\$	1,470	1.89%
Professional Services		Ψ	-	Ψ		Ψ	2,194	Ψ	(2,194)	1.0070
Other Services & Charges			35,210		29,342		27,796		1,545	5.27%
Communications			3,000		2,500		2,868		(368)	-14.72%
Information Technology	E		3,700		3,083		12,780		(9,697)	-314.49%
Supplies			100		83		-		83	100.00%
Operations & Maintenance	F		119,450		99,542		109,235		(9,693)	-9.74%
Equipment Purchases			2,900		2,417		2,000		417	17.24%
Depreciation			5,000		4,167		4,167		0	0.00%
Subtotal Before Allocations		\$	264,700	\$	218,912	\$	237,349	\$	(18,436)	-8.42%
Allocation of Support Departments		•	106,527 371,227	\$	87,018 305,930	\$	86,818 324,167	\$	200 (18,237)	0.23% - 5.96%
Total Operating Expenses Operating Surplus/(Deficit)		<u>\$</u> \$	(3)	\$	3,423	\$	(14,750)	Þ	(10,237)	-5.96%
Operating Surplus/(Dencit)		Ψ	(3)	Ψ	3,423	Ψ	(14,730)			
Revenues Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest		\$	3,778 - 3,100	\$	3,148 - 2,583	\$	3,150 - 2,589	\$	2 -	0.05% 0.23%
Total Debt Service Revenues		\$	6.878	\$	5.732	\$	5,739	\$	2	0.03%
Total Debt Service Nevenues		Ψ	0,070	Ψ	0,702	Ψ	3,733	Ψ		0.0070
Debt Service Costs										
Total Principal & Interest		\$	1,578	\$	1,315	\$	1,315	\$	_	0.00%
Reserve Additions-CIP Growth		•	2,200	*	1,833	•	1,833	•	_	0.00%
Reserve Additions-Interest			3,100		2,583		2,589		(6)	-0.23%
Total Debt Service Costs		\$	6,878	\$	5,732	\$	5,738	\$	(6)	-0.11%
Debt Service Surplus/(Deficit)		\$	-	\$	-	\$	2			
	ı	Rate	Center Su	mm	ary					
Total Revenues		\$	378,102	\$	315,085	\$	315,156	\$	71	0.02%
Total Expanses			378,105		311,662		329,905		(18,243)	-5.85%
Total Expenses					0.400	•	(4.4.740)			
Surplus/(Deficit)		\$	(3)	\$	3,423	Þ	(14,749)			
Surplus/(Deficit)				\$	3,423			:		
Surplus/(Deficit) Costs per 1000 Gallons		\$	9.31	\$	3,423	\$	11.14	:		
Surplus/(Deficit)				\$	3,423					
Surplus/(Deficit) Costs per 1000 Gallons		\$	9.31	*	33,243	\$	11.14	:	(4,142)	-12.46%

Scottsville Wastewater Rate Center Revenues and Expenses Summary			Budget FY 2020	•		Actual e Year-to-Date		Budget vs. Actual		Variance Percentage
Operating Budget vs. Actual										
	Notes									
Revenues										
Operations Rate Revenue		\$	308,988	\$	257,490	\$	257,490	\$	_	0.00%
Interest Allocation			600	·	500	·	529		29	5.82%
Total Operating Revenues		\$	309,588	\$	257,990	\$	258,019	\$	29	0.01%
Evnonene										
Expenses Personnel Cost		¢.	05.266	¢.	77 901	¢.	76 200	ď	1 402	1.92%
Professional Services		\$	95,366 2,000	\$	77,801 1,667	\$	76,309	\$	1,492 1,667	1.92%
Other Services & Charges			28,000		23,333		16,572		6,761	28.98%
Communications			3,930		3,275		2,994		281	8.59%
Information Technology			1,700		1,417		2,994		1,417	100.00%
Supplies			25		1,417		-		21	100.00%
Operations & Maintenance			58,850		49,042		40,346		8,695	17.73%
Equipment Purchases			3,200		2,667		2,000		667	25.00%
Depreciation			18,000		15,000		15,000		-	0.00%
Subtotal Before Allocations		\$	211,071	\$	174,222	\$	153,221	\$	21,000	12.05%
Allocation of Support Departments		Ψ	98,523	Ψ	80,473	Ψ	80,437	Ψ	36	0.04%
Total Operating Expenses		\$	309,594	\$	254,695	\$	233.659	\$	21,036	8.26%
Operating Surplus/(Deficit)		\$	(6)		3,295	\$	24,360	<u> </u>		0.2070
Revenues Debt Service Rate Revenue Trust Fund Interest		\$	9,442 100	\$	7,868 83	\$	7,870 182	\$	2 99 (512)	0.02% 118.57%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest			100 3,100		83 2,583		182 2,072		99 (512)	118.57% -19.81%
Debt Service Rate Revenue Trust Fund Interest		\$ \$	100	\$	83	\$	182	\$	99	118.57%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues			100 3,100		83 2,583		182 2,072		99 (512)	118.57% -19.81%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs		\$	3,100 12,642	\$	83 2,583 10,535	\$	182 2,072 10,124	\$	99 (512)	118.57% -19.81% - 3.90%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest			100 3,100 12,642 7,742	\$	83 2,583 10,535 6,452	\$	182 2,072 10,124 6,452	\$	99 (512) (411)	118.57% -19.81% -3.90%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest		\$	7,742 3,100	\$	83 2,583 10,535 6,452 2,583	\$	182 2,072 10,124 6,452 2,072	\$	99 (512)	118.57% -19.81% -3.90% 0.00% 19.81%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest		\$	7,742 3,100 1,800	\$	83 2,583 10,535 6,452 2,583 1,500	\$	182 2,072 10,124 6,452 2,072 1,500	\$	99 (512) (411) - 512	118.57% -19.81% -3.90% 0.00% 19.81% 0.00%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs		\$	7,742 3,100	\$	83 2,583 10,535 6,452 2,583	\$	182 2,072 10,124 6,452 2,072	\$	99 (512) (411)	118.57% -19.81% -3.90% 0.00% 19.81%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest		\$	7,742 3,100 1,800	\$	83 2,583 10,535 6,452 2,583 1,500 10,535	\$	182 2,072 10,124 6,452 2,072 1,500 10,023	\$	99 (512) (411) - 512	118.57% -19.81% -3.90% 0.00% 19.81% 0.00%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs		\$ \$ \$ \$	7,742 3,100 1,800	\$ \$ \$	83 2,583 10,535 6,452 2,583 1,500 10,535	\$	182 2,072 10,124 6,452 2,072 1,500 10,023	\$	99 (512) (411) - 512	118.57% -19.81% -3.90% 0.00% 19.81% 0.00%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit)		\$ \$ \$ Rate	7,742 3,100 12,642 7,742 3,100 1,800 12,642	\$ \$ \$ umn	83 2,583 10,535 6,452 2,583 1,500 10,535	\$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100	\$ \$ \$	99 (512) (411) - 512 - 512	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit) Total Revenues		\$ \$ \$ \$	7,742 3,100 12,642 7,742 3,100 1,800 12,642	\$ \$ \$ umn	83 2,583 10,535 6,452 2,583 1,500 10,535 -	\$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100	\$ \$ \$	99 (512) (411) - 512 - 512 (382)	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit)		\$ \$ \$ Rate	7,742 3,100 12,642 7,742 3,100 1,800 12,642	\$ \$ \$ umn	83 2,583 10,535 6,452 2,583 1,500 10,535	\$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100	\$ \$ \$	99 (512) (411) - 512 - 512	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit) Total Revenues		\$ \$ \$ Rate	7,742 3,100 12,642 7,742 3,100 1,800 12,642	\$ \$ \$ \$	83 2,583 10,535 6,452 2,583 1,500 10,535 -	\$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100	\$ \$ \$	99 (512) (411) - 512 - 512 (382)	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit) Total Revenues Total Expenses Surplus/(Deficit)		\$ \$ \$ \$ Rate	100 3,100 12,642 7,742 3,100 1,800 12,642 	\$ \$ \$ \$	83 2,583 10,535 6,452 2,583 1,500 10,535 - mary 268,525 265,230	\$ \$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100 268,143 243,682 24,461	\$ \$ \$	99 (512) (411) - 512 - 512 (382)	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit) Total Revenues Total Expenses Surplus/(Deficit) Costs per 1000 Gallons		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	100 3,100 12,642 7,742 3,100 1,800 12,642 	\$ \$ \$ \$	83 2,583 10,535 6,452 2,583 1,500 10,535 - mary 268,525 265,230	\$ \$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100 268,143 243,682 24,461	\$ \$ \$	99 (512) (411) - 512 - 512 (382)	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit) Total Revenues Total Expenses Surplus/(Deficit)		\$ \$ \$ \$ Rate	100 3,100 12,642 7,742 3,100 1,800 12,642 	\$ \$ \$ \$	83 2,583 10,535 6,452 2,583 1,500 10,535 - mary 268,525 265,230	\$ \$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100 268,143 243,682 24,461	\$ \$ \$	99 (512) (411) - 512 - 512 (382)	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%
Debt Service Rate Revenue Trust Fund Interest Reserve Fund Interest Total Debt Service Revenues Debt Service Costs Total Principal & Interest Reserve Additions-Interest Estimated New Principal & Interest Total Debt Service Costs Debt Service Surplus/(Deficit) Total Revenues Total Expenses Surplus/(Deficit) Costs per 1000 Gallons		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	100 3,100 12,642 7,742 3,100 1,800 12,642 	\$ \$ \$ \$	83 2,583 10,535 6,452 2,583 1,500 10,535 - mary 268,525 265,230	\$ \$ \$ \$	182 2,072 10,124 6,452 2,072 1,500 10,023 100 268,143 243,682 24,461	\$ \$ \$	99 (512) (411) - 512 - 512 (382)	118.57% -19.81% -3.90% 0.00% 19.81% 0.00% 4.86%

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Administration			Budget FY 2020	Ye	Budget ear-to-Date	Actual ear-to-Date	Budget s. Actual	Variance Percentage
Operating Budget vs. Actual		<u> </u>						
Revenues	Notes							
Payment for Services SWA		\$	466,000	\$	388,333	\$ 388,333	\$ (0)	0.00%
Miscellaneous Revenue			2,000		1,667	16,414	14,748	884.87%
Total Operating Revenues		\$	468,000	\$	390,000	\$ 404,748	\$ 14,748	3.78%
Expenses								
Personnel Cost	Α	\$	1,841,351	\$	1,497,752	\$ 1,535,349	\$ (37,597)	-2.51%
Professional Services			229,000		190,833	191,019	(186)	-0.10%
Other Services & Charges			106,400		88,667	82,906	5,761	6.50%
Communications			18,500		15,417	16,825	(1,408)	-9.13%
Information Technology			174,250		145,208	110,102	35,107	24.18%
Supplies			21,500		17,917	16,704	1,213	6.77%
Operations & Maintenance			64,500		53,750	57,090	(3,340)	-6.21%
Equipment Purchases			24,000		20,000	12,007	7,993	39.97%
Depreciation			-		-	-	-	
Total Operating Expenses		\$	2,479,501	\$	2,029,544	\$ 2,022,001	\$ 7,543	0.37%

Net Costs Allocable to Rate Centers		\$ (2,011,501)	\$ (1,639,544)	\$ (1,617,253)	\$ (22,291)	1.30
Allocations to the Rate Centers						
Urban Water	44.00%	\$ 885,060	\$ 721,399	\$ 711,591	\$ 9,808	
Crozet Water	4.00%	\$ 80,460	65,582	64,690	892	
Scottsville Water	2.00%	\$ 40,230	32,791	32,345	446	
Urban Wastewater	48.00%	\$ 965,520	786,981	776,282	10,699	
Glenmore Wastewater	1.00%	\$ 20,115	16,395	16,173	223	
Scottsville Wastewater	1.00%	\$ 20,115	16,395	16,173	223	
	100.00%	\$ 2,011,501	\$ 1,639,544	\$ 1,617,253	\$ 22,291	

Maintenance

Budget	Budget	Actual	Budget	Variance
FY 2020	Year-to-Date	Year-to-Date	vs. Actual	Percentage
FY 2020			Ū	

Operating Budget vs. Actual

Notes

Revenues							
Payment for Services SWA Miscellaneous Revenue	L		\$ 10,000	\$ 8,333	\$ 9 122	\$ 8,333	100.00%
Miscellaneous Revenue	Total Operating Revenues		\$ 10,000	\$ 8,333	\$ 8,122 8,122	\$ 8,122 16,455	
	,		 ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,	-,	-,	
Expenses							
Personnel Cost			\$ 1,345,633	\$ 1,096,284	\$ 1,019,600	\$ 76,684	6.99%
Professional Services			-	-	-	-	
Other Services & Charges			14,500	12,083	15,080	(2,997)	-24.80%
Communications			17,600	14,667	16,283	(1,617)	-11.02%
Information Technology			6,500	5,417	2,358	3,059	56.48%
Supplies			2,000	1,667	409	1,258	75.47%
Operations & Maintenance		F	77,400	64,500	90,672	(26,172)	-40.58%
Equipment Purchases		G	147,150	122,625	139,911	(17,286)	-14.10%
Depreciation			-	-	-	-	
	Total Operating Expenses		\$ 1,610,783	\$ 1,317,242	\$ 1,284,312	\$ 32,930	2.50%

Department Summary										
Net Costs Allocable to Rate Centers		\$	(1,600,783)	\$	(1,308,909)	\$	(1,276,191)	\$	(16,475)	
Allocations to the Rate Centers										
Urban Water	30.00%	\$	480,235	\$	392,673	\$	382,857	\$	9,816	
Crozet Water	3.50%		56,027		45,812		44,667		1,145	
Scottsville Water	3.50%		56,027		45,812		44,667		1,145	
Urban Wastewater	56.50%		904,442		739,534		721,048		18,486	
Glenmore Wastewater	3.50%		56,027		45,812		44,667		1,145	
Scottsville Wastewater	3.00%		48,023		39,267		38,286		982	
	100.00%	\$	1,600,783	\$	1,308,909	\$	1,276,191	\$	32,719	

Laboratory

Budget	Budget	Actual	Budget	Variance Percentage
FY 2020	Year-to-Date	Year-to-Date	vs. Actual	Percentage

Operating Budget vs. Actual

Notes

Revenues

N/A

Expenses							
Personnel Cost			\$ 394,222	\$ 320,970	\$ 308,926	\$ 12,044	3.75%
Professional Services			-	-	-	-	
Other Services & Charges			9,230	7,692	6,166	1,526	19.84%
Communications			1,153	961	1,135	(174)	
Information Technology			2,500	2,083	113	1,970	94.56%
Supplies			2,150	1,792	531	1,261	70.37%
Operations & Maintenance		F	61,500	51,250	70,061	(18,811)	-36.70%
Equipment Purchases		G	2,200	1,833	43,919	(42,085)	-2295.57%
Depreciation			-	-	-	-	
	Total Operating Expenses		\$ 472,955	\$ 386,581	\$ 430,850	\$ (44,269)	-11.45%

Department Summary										
Net Costs Allocable to Rate Centers		\$	(472,955)	\$	(386,581)	\$	(430,850)	\$	44,269	
Allocations to the Rate Centers										
Urban Water	44.00%	\$	208,100	\$	170,096	\$	189,574	\$	(19,479)	
Crozet Water	4.00%		18,918		15,463		17,234		(1,771)	
Scottsville Water	2.00%		9,459		7,732		8,617		(885)	
Urban Wastewater	47.00%		222,289		181,693		202,500		(20,807)	
Glenmore Wastewater	1.50%		7,094		5,799		6,463		(664)	
Scottsville Wastewater	1.50%		7,094		5,799		6,463		(664)	
	100.00%	\$	472,955	\$	386,581	\$	430,850	\$	(44,269)	

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<u>Engineering</u>			Budget FY 2020	Budget Year-to-Date	Actual Year-to-Date	Budget s. Actual	Variance Percentage
Operating Budget vs. Actual		<u>[</u>					
Revenues							
Payment for Services SWA		\$	_	\$ -	\$ 3,998	\$ 3,998	
Total Operating Revenues		\$	-	\$ -	\$ 3,998	\$ 3,998	
Expenses							
Personnel Cost		\$	1,347,631	\$ 1,096,586	\$ 1,101,332	\$ (4,746)	-0.43%
Professional Services	В		20,000	16,667	60,009	(43,342)	-260.05%
Other Services & Charges			10,350	8,625	7,638	987	11.45%
Communications			14,500	12,083	11,561	522	4.32%
Information Technology	E		21,200	17,667	35,783	(18,116)	-102.54%
Supplies			9,800	8,167	3,432	4,735	57.98%
Operations & Maintenance			86,798	72,332	42,699	29,633	40.97%
Equipment Purchases			42,400	35,333	42,627	(7,293)	-20.64%
Depreciation & Capital Reserve Transfers			-	-	-	=	
Total Operating Expenses		\$	1,552,679	\$ 1,267,460	\$ 1,305,079	\$ (37,620)	-2.97%

Department Summary										
Net Costs Allocable to Rate Centers		\$	(1,552,679)	\$	(1,267,460)	\$	(1,301,081)	\$	41,617	-3.28
Allocations to the Rate Centers										
Urban Water	47.00%	\$	729,759	\$	595,706	\$	611,508	\$	(15,802)	
Crozet Water	4.00%		62,107		50,698		52,043		(1,345)	
Scottsville Water	2.00%		31,054		25,349		26,022		(672)	
Urban Wastewater	44.00%		683,179		557,682		572,476		(14,794)	
Glenmore Wastewater	1.50%		23,290		19,012		19,516		(504)	
Scottsville Wastewater	1.50%		23,290		19,012		19,516		(504)	
	100.00%	\$	1,552,679	\$	1,267,460	\$	1,301,081	\$	(33,622)	

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 APRIL 2020

DATE: MAY 26, 2020

WATER OPERATIONS:

The average daily/monthly total water distributed for April 2020 was as follows:

Water Treatment Plant	Average Daily Production (MGD)	Total Monthly Production (MG)	Maximum Daily Production in the Month (MGD)
Observatory	0.56	16.95	1.01 (04/21/20)
South Rivanna	6.99	209.79	7.77 (04/30/20)
North Rivanna	0.32	<u>9.73</u>	0.43 (04/28/20)
Urban Total	7.87	236.47	8.76 (04/29/20)
Crozet	0.58	17.25	0.81 (04/05/20)
Scottsville	0.049	<u>1.47</u>	0.08 (04/02/20)
RWSA Total	8.50	255.19	

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

Status of Reservoirs (as of May 20, 2020):

- ➤ Urban Reservoirs: 100% of Total Useable Capacity
- ➤ Ragged Mountain Reservoir is (100%)
- ➤ 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 April 2020. Stone-Robinson School was closed for the month of April and had zero discharge. Performance of the WRRFs in April was as follows compared to the respective VDEQ permit limits:

Average Daily Effluent		Average (pp		Averag Suspende (pp		Average Ammonia (ppm)		
	Flow (mgd)	RESULT	LIMIT	RESULT	LIMIT	RESULT	LIMIT	
Moores Creek	10.77	<ql< th=""><th>11</th><th><ql< th=""><th>22</th><th><ql< th=""><th>7.0</th></ql<></th></ql<></th></ql<>	11	<ql< th=""><th>22</th><th><ql< th=""><th>7.0</th></ql<></th></ql<>	22	<ql< th=""><th>7.0</th></ql<>	7.0	
Glenmore	0.128	8.0	15	8.0	30	NR	NL	
Scottsville	0.069	2.0	25	1.0	30	NR	NL	
Stone Robinson	0.000	NR	30	NR	30	NR	NL	

NR = Not Required

NL = No Limit

Nutrient discharges at the Moores Creek AWRRF were as follows for April 2020.

		Average Monthly Allocation (lb./mo.) *	Moores Creek Discharge April (lb./mo.)	Performance as % of monthly average Allocation*	Year to Date Performance as % of annual allocation	
Nitrogen	282,994	23,583	8,463	36%	12%	
Phosphorous	18,525	1,544	291	19%	5%	

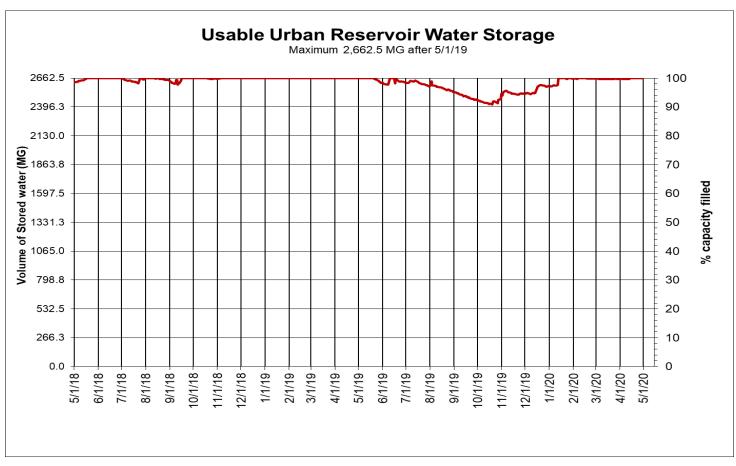
^{*}State allocations are expressed as annual amounts. One-twelfth of that allocation is an internal monthly benchmark for comparative purposes only.

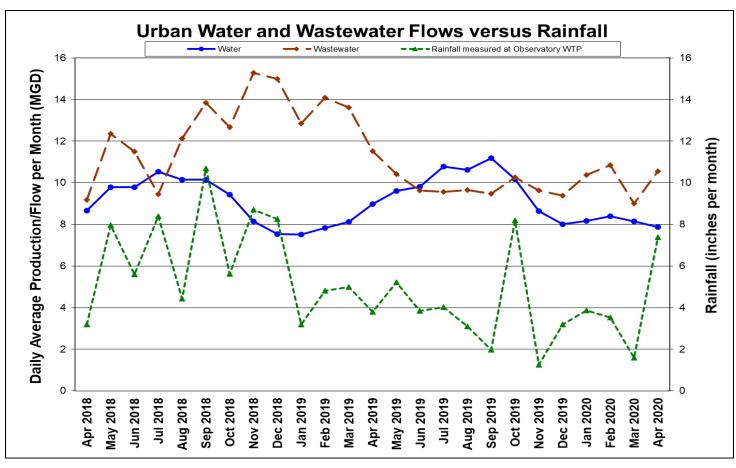
WATER AND WASTEWATER DATA:

The following graphs are provided for review:

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

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







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: MAY 26, 2020

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/2019/06/CIP-FINAL-5.28.19.pdf

Under Construction

- 1. Crozet Water Treatment Plant Expansion
- 2. Valve Repair Replacement (Phase 2)
- 3. South Rivanna and Observatory Water Treatment Plant Renovations
- 4. Albemarle-Berkley Basin Demolition

Design and Bidding

- 5. Ragged Mtn Reservoir to Observatory WTP Raw Water Line and Pump Station
- 6. Crozet Flow Equalization Tank
- 7. Beaver Creek Dam and Pump Station Improvements
- 8. MC Digester Sludge Storage Improvements
- 9. MC Aluminum Slide Gate Replacements
- 10. Sugar Hollow Dam -Gate Replacement and Intake Tower Repairs
- 11. Airport Road Water Pump Station and Piping
- 12. South Rivanna Dam Gate Repairs

Planning and Studies

- 13. South Rivanna Reservoir to Ragged Mtn Reservoir Water Line Right-of-Way
- 14. Urban Water Demand and Safe Yield Study
- 15. Urban Finished Water Infrastructure Master Plan
- 16. Upper Schenks Branch Interceptor, Phase II

- 17. Asset Management Plan
- 18. Albemarle-Berkeley PS Basin Demolition and Capacity Analysis
- 19. Buck Mountain Master Plan
- 20. MC Facilities Master Plan

Other Significant Projects

- 21. Urgent and Emergency Repairs
- 22. Interceptor Sewer & Manhole Repair
- 23. Security Enhancements

Under Construction

1. Crozet Water Treatment Plant Expansion

Design Engineer: Short Elliot Hendrickson (SEH)
Construction Contractor: Orders Construction Co. (WVA)

Construction Start: December 2018

Percent Completion: 55%

Base Construction Contract +

Change Order to Date = Current Value: \$7,170,000-\$285,000 = \$6,885,000

Expected Completion Date: May 2021 Total Capital Project Budget: \$8,500,000

<u>Current Status</u>: Work continues on the expansion of the Chemical Building, improvements to the sedimentation basins and filters, and backwash tank construction.

2. Valve Repair – Replacement (Phase 2)

Design Engineer: RWSA / Dewberry
Construction Contractor: Garney Construction

Construction Start: May 2019
Percent Complete: 15%

Base Construction Contract +

Change Orders to Date = Current Value: \$843,460.00 - \$33,525.21 + \$178,322.33 =

\$988,257.12

Expected Completion: October 2020 Total Capital Project Budget: \$1,132,914

<u>Current Status</u>: Valve replacements resumed during the week of May 18th. Ten of 12 remaining valves must be replaced.

3. South Rivanna and Observatory Water Treatment Plant Renovations

Design Engineer: Short Elliot Hendrickson, Inc. (SEH)
Construction Contractor: English Construction Company, Inc.

Construction Start: May 2020

Percent Complete: 0%

Base Construction Contract +

Change Orders to Date = Current Value: \$36,748,500 Completion: March 2023 Total Capital Project Budget: \$43,000,000

<u>Current Status</u>: Notice to Proceed was issued to English Construction on May 18, 2020. Installation of the construction trailers, yard piping modifications and other Milestone Phase 1 work is underway.

4. Albemarle-Berkley Basin Demolition

Design Engineer: Short Elliot Hendrickson (SEH)
Contractor: Pleasant View Developers, Inc

Project Start: June 2020
Project Status: 0% Complete
Completion: August 2020
Base Construction Contract \$62,645

Current Status: The concrete basin will be removed and the excavation filled with compacted soil.

Design and Bidding

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

Design Engineer: Michael Baker International (Baker)

Project Start: August 2018

Project Status: Prelim Design & Easement Acquisition in Progress

Construction Start: 2022
Completion: 2026
Approved Capital Budget: \$3,877,000
Current Project Estimate: \$18,000,000

<u>Current Status</u>: Easement acquisitions are underway.

6. Crozet Flow Equalization Tank

Design Engineer: Schnabel Engineering

Project Start:

October 2016

Project Status:

99% Design

Construction Start:

August 2020

Completion:

Approved Capital Budget:

\$4,860,000

Current Status: Permitting is being completed and construction bids will be received in July 2020.

7. Beaver Creek Dam and Pump Station Improvements

Design Engineer: Schnabel Engineering (Dam)
Design Engineer: Hazen & Sawyer (Pump Station)

Project Start: February 2018

Project Status: 5% Design and Permitting Underway

Construction Start: 2023
Completion: 2026
Approved Capital Budget: \$9,036,000
Current Project Estimate: \$27,000,000

<u>Current Status</u>: A site selection study for the new Raw Water Pump Station and Intake has been completed. Hazen is moving forward with environmental investigations required for development of a Joint Permit Application to be submitted to the VDEQ in the fall of 2020. A federal grant totaling \$341,000 was secured from the National Rural Conservation Service to cover the costs of an Environmental Assessment for the dam modifications. Staff will continue to pursue federal funding in the later phases of the project to cover final design and construction costs.

8. MC Digester Sludge Storage Improvements

Design Engineer: TBD

Project Start:

Project Status:

Construction Start:

Completion:

Approved Capital Budget:

Summer 2019

Preliminary Design

Summer 2020

Winter 2020

\$313,000

<u>Current Status</u>: Staff is reviewing the Digester No. 4 Condition Assessment and plans to evaluate the overall scope of this project pending that review and other known digester issues.

9. MC Aluminum Slide Gate Replacements

Design Engineer: Hazen and Sawyer Project Start: November 2018

Project Status:

Construction Start:

Completion:

Approved Capital Budget:

Design

August 2020

March 2021

\$470,000

<u>Current Status</u>: Construction bids will be received in June 2020 and award is anticipated at the July 2020 Board Meeting.

10. Sugar Hollow Dam –Gate Replacement and Intake Tower Repairs

Design Engineer: Schnabel Engineering

Project Start: January 2019
Project Status: Design 80%

Construction Start: 2021 Completion: 2021 Approved Capital Budget: \$1,140,000

<u>Current Status</u>: Schnabel is proceeding with design of the new rubber crest gate and anticipates advertising for construction bids in June of 2020. Construction is anticipated to begin in late spring or summer of 2021.

11. Airport Road Water Pump Station and Piping

Design Engineer: Short Elliot Hendrickson (SEH)

Project Start: July 2019

Project Status: Preliminary Design 25%

Construction Start: 2021 Completion: 2022 Approved Capital Budget: \$5,800,000

<u>Current Status</u>: Preliminary Engineering Report is being reviewed.

12. South Rivanna Dam – Gate Repairs

Design Engineer: N/A

Contractor: Bander Smith, Inc.

Project Start: July 2019

Project Status: Pre-Construction

Construction Start: Fall 2020
Completion: 2020
Approved Capital Budget: \$900,000

<u>Current Status</u>: A condition assessment of the 36" mud gates was completed earlier this month. Gate replacements are expected to be completed in the fall of 2020.

Planning and Studies

13. 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 Underway

Completion: 2021

Approved Capital Budget: \$2,295,000

<u>Current Status</u>: Acquisition efforts continue. Offers have been made to 11 of 12 private property owners, and eight easements have been accepted. Most of the remaining easements are on publicly owned property (VDOT, City, County School Board,). Negotiations with two private owners, UVA, the UVA Foundation and the Virginia Department of Forestry are also ongoing for water line easements between Ragged Mtn Reservoir and the Observatory Water Treatment Plant.

14. Urban Water Demand and Safe Yield Study

Design Engineer:
Project Start:
November 2018
Project Status:
99% complete
Completion:
June 2020
Approved Capital Budget:
\$154,000

<u>Current Status</u>: Hazen has completed a draft Demand and Safe Yield analysis and report. A presentation to the Board is anticipated in June 2020.

15. <u>Urban Finished Water Infrastructure Master Plan</u>

Design Engineer: Michael Baker International (Baker)

Project Start:

Project Status:

Completion:

Approved Capital Budget:

November 2018

60% complete

October 2020

\$253,000

<u>Current Status</u>: Baker is developing and conducting hydraulic model runs to indicate infrastructure piping and storage tank requirements at specific locations.

16. Upper Schenks Branch Interceptor, Phase II

Design Engineer: Frazier Engineering, P.A.

Project Start: TBD

Project Status: Alignment Analysis

Construction Start: TBD
Completion: TBD
Approved Capital Budget: \$3,985,000

Current Status: Discussions about the pipe alignment have been renewed with the County and the City.

17. Asset Management Plan

Design Consultant: GHD, Inc.
Project Start: July 2018

Project Status: Phase 1 – 100% Complete

Phase 2 – 20% Complete

Completion: 2020 Approved Capital Budget: \$500,000

<u>Current Status</u>: Development of an asset register, condition assessment protocols, and a pilot study of the asset management process is underway. Maintenance management software will be procured and implemented.

18. Albemarle-Berkley PS Capacity Analysis

Design Consultant: Short Elliot Hendrickson (SEH)/GHD, Inc.

Project Start: September 2019
Project Status: 10% Complete
Completion: December 2020

Approved Capital Budget: \$200,000

Current Status: Capacity analysis is underway.

19. Buck Mountain Master Plan

Design Consultant: LPDA (Charlottesville)

Project Start:

Project Status:

Completion:

Budget:

November 2019

70% Complete

June 2020

\$56,000

Current Status: Study is underway.

20. MC Facilities Master Plan

Design Consultant:
Project Start:
August 2019
Project Status:
45% Complete
Completion:
March 2021
Budget:
\$275,000

Current Status: Study is underway.

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	Project Description	Approx. Cost
No.		
2018-06	South Rivanna Dam Apron and River Bank Repairs	\$200,000
2019-03	Erosion over Urban Waterline near Albemarle Street	\$5,000
2019-07	Urban Water Line Valve and Blow-off Repair	\$80,000
2020-06	Erosion between WBI MH-22 and MH-23	TBD
2020-07	Stillhouse Waterline Exposure @ Ivy Creek	\$182,000
2020-10	Erosion along access road to South Rivanna RWPS	\$10,000

- <u>South Rivanna Dam Apron and River Bank Repairs:</u> Repairs to the north and south concrete aprons will be designed by Schnabel Engineering and those services will be procured from the on-call contractor.
- Erosion over Urban Water Line near Albemarle Street: RWSA staff identified that water runoff from Albemarle Street was causing erosion over the Urban Water Line (UWL), to the point where less than 6" of cover remained over the critical 24" waterline. Staff coordinated with the Norfolk Southern Railroad to notify them of the repair, and the RWSA Maintenance Department installed No. 21A stone and a small rip-rap v-ditch to protect the waterline on May 5, 2020.
- <u>Urban Water Line Valve and Blow-off Repair:</u> Faulconer Construction has completed the installation of a new drain valve, as well as the associated modifications to the drain line outlet and creek bank. With the installation of the new drain valve on March 18th, any leakage in this location has ceased. Staff continues to coordinate the logistics of the UWL-025 replacement near Gasoline Alley, including the appropriate location of the discharge. Staff has also been notified of a similar (slight leakage) issue at UWL-010 near Route 29. Staff will continue coordinating and planning these repairs with Faulconer Construction.
- Erosion over WBI Between MH-22 and MH-23: While performing routine line inspections in March, the RWSA Maintenance Department discovered that an adjacent creek had eroded its way over the top of RWSA's 12" Woodbrook Interceptor (WBI). While no infrastructure is exposed at this time, the sewer was not designed to run under the creek (no encasement present), and future high flow events will continue to erode cover from the top of the pipe (currently estimated at 2-4'). Staff is currently evaluating the repair and coordinating with the applicable regulatory agencies, with the goal to begin construction following the STW Exposure at Ivy Creek (see below for more information).
- STW Exposure @ Ivy Creek: While performing routine line inspections in April, the RWSA Maintenance Department identified that RWSA's 12" Stillhouse Waterline (STW) had become exposed on the bank of Ivy Creek. Maintenance Department staff was able to temporarily protect the waterline with nearly 500 sandbags, and Engineering Department staff began coordination with the U.S. Army Corps of Engineers, Virginia Marine Resources Commission, and RWSA's On-Call Maintenance Contractor, Faulconer Construction. All appropriate regulatory approvals have

- been received, and Faulconer Construction mobilized to the site to begin the placement of 175-200 LF of large rip-rap along the creek bank on May 11th.
- Erosion along access road to South Rivanna Raw Water Pump Station/Dam: Staff was notified in April that the access road to the South Rivanna Raw Water Pump Station and Dam had become undermined, caused by the lack of an armored v-ditch. RWSA Maintenance staff has been working on installing fresh fill and a rip-rap v-ditch along the road, in order to fill in the undermined locations and allow for better control of stormwater. Staff is evaluating the need for additional improvements, which may be required to ensure that the stormwater makes it to the culvert located adjacent to the pump station.

22. Interceptor Sewer and Manhole Repair

Design Engineer: Frazier Engineering
Construction Contractor: IPR Northeast
Construction Start: November 2017

Percent Complete: 40%

Base Construction Contract +

Change Orders to Date = Current Value: \$1,244,337.19 Expected Completion: June 2021

Total Capital Project Budget: \$1,088,330 (Urban) + \$625,000 (Crozet) =

\$1,713,330

<u>Current Status</u>: Repairs to the Upper Morey Creek Interceptor remain underway, with one final section of sewer remaining to be lined. Staff is continuing to coordinate in order to complete rehabilitation of this portion of MRI, as well as evaluate the current condition of the overall interceptor system and prioritize for the next round of repairs.

23. Security Enhancements

Design Engineer: N/A

Construction Contractor: Security 101 Construction Start: March 2020

Percent Complete: 20%

Based Construction Contract +

Change Orders to Date = Current Value: \$744,136.80 - \$25,708.80 = \$718,428.00 (WA #1)

Completion: 2021 Approved Capital Budget: \$1,000,000

<u>Current Status:</u> Access control is underway for all exterior doors at MCAWRRF, as well as all WTP motorized gates. Conduit and panel installation at MC began in April, with device programming ongoing in Security 101's shop.

History

Under Construction

1. Crozet Water Treatment Plant Expansion

This project was created to increase the supply capacity of the existing Crozet WTP by modernizing plant systems. The goal was to not drastically increase the plant footprint in regard to the existing filter plant, flocculation tanks, and sedimentation basins. By modernizing the outdated equipment within these treatment systems, the plant treatment capacity will be improved by approximately 100% (from 1 to 2 MGD). A Notice to Proceed was issued on December 13, 2018 and the contractor mobilized on February 26, 2019.

2. Valve Repair – Replacement (Phase 2)

This project will replace the highest-priority valves that are identified during the condition assessment as not operable and not repairable. Phase 2 will continue replacing inoperable and unrepairable valves in the North Rivanna Finished Water System, but it will also replace (and potentially repair) valves on the South Rivanna, Crozet, Pantops, and Southern Loop Finished Water Systems. Once all specified valves have been repaired/replaced in Phase 2, the focus will shift to replacing older isolation valves in subsequent phases.

A Request for Bids (RFB) was issued on November 6, 2018. RWSA staff opened bids for the project on December 11, 2018, and Garney Companies, Inc. was the apparent low bidder (\$843,460). The RWSA Board of Directors approved the bid award recommendation and Capital Improvement Plan Budget Amendment on January 22, 2019. A Notice to Proceed was issued on May 6, 2019.

Two (2) valve replacements were completed in May 2019; one (1) valve was replaced on the Crozet Waterline, and one (1) valve was replaced on the South Rivanna Waterline. Due to the unavailability of certain valves and lead times on selected materials, the contractor demobilized from the project in late May. The Capital Improvement Plan was further amended on October 22, 2019 to compensate the contractor for this extra demobilization/remobilization, as well as the installation of a necessary bypass line that will keep South Rivanna WTP in service during one of the valve replacements.

3. 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.

<u>Observatory:</u> 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.

<u>South Rivanna:</u> 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.

4. Albemarle-Berkley Basin Demolition

The Albemarle-Berkley Wastewater Pump Station was located adjacent to an open-air basin on the Albemarle County Public Schools (ACPS) Campus on Lambs Lane that occasionally collected raw sewage during power outages. With the addition of a back-up power generator in 2006, the basin no longer serves a technical purpose. Given the proximity of the deteriorating structure to school property, this project serves to demolish and fill the area of the existing basin to allow for a more beneficial use of the property. Design of the basin demolition was completed in March 2020, with demolition work scheduled for completion by Summer 2020. In addition to the demolition of the storage basins, this project also includes demolition/abandonment of existing yard piping and other smaller structures.

Design and Bidding

5. <u>Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Line and</u> 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.

6. 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.

7. Beaver Creek Dam and Pump Station Improvements

<u>Dam:</u> 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.

<u>Pump Station:</u> 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.

8. MC Digester Sludge Storage Improvements

With the second centrifuge installation, additional capacity for storage of digested sludge would provide the Authority operational flexibility it does not currently have. Additionally, the sole sludge storage tank at the MCAWRRF was constructed in 1959 of reinforced concrete and is in need of repairs. This project would convert one of the three existing anaerobic digesters (Digester No. 1) into a sludge storage tank through piping modifications, and would provide redundancy to the existing sludge storage tank so it can be removed from service, cleaned, inspected, and repaired with minimal impact to the existing sludge dewatering operations. The piping configuration would also allow flexibility for the anaerobic digester to be used as either an anaerobic digester or sludge storage tank as needed for operations. The scope of work would include piping modifications, hydraulic improvements, tank safety improvements such as handrail and lights, and structural improvements to the existing sludge storage tank roof.

9. 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.

10. 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 will include repairs to the intake gate valves and tower walls, including repair or replacement of intake trash racks, and sealing/grouting of minor concrete wall cracks.

11. 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.

12. South Rivanna Dam – Gate Repairs

The South Rivanna Dam, originally constructed in 1965, is equipped with two 36" diameter slide gates and conduits, one each on the north and south abutments of the dam, which can be utilized to dewater the facility or to meet minimum instream flow (MIF) requirements when the dam is not spilling. These gates are original to the dam and while they are operable and are exercised regularly, they are deteriorated and can no longer provide a complete seal, therefore allowing some leakage through the dam. RWSA has protocols in place to temporarily stop leakage through the gates when necessary to conserve water; however, there is a desire to repair or replace the gates and components as needed to restore full functionality. The project includes other repairs to the facility, including improvements to the concrete wall adjacent to the Raw Water Pump Station as well as improvements to the north dam tower to provide safer access by staff while still discouraging access by the general public.

Planning and Studies

13. 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.

14. Urban Water Demand and Safe Yield Study

The City of Charlottesville, Albemarle County Service Authority, and RWSA entered into the Ragged Mountain Dam Project Agreement in 2012. This Agreement included provisions to monitor the bathymetric capacity of the Urban water reservoirs as well as a requirement to conduct reoccurring demand analysis, demand forecasting and safe yield evaluations. This study will evaluate and calculate current and future demands and present safe yield. Per the project Agreement, these analyses shall be completed by calendar year 2020.

15. <u>Urban Finished Water Infrastructure Master Plan</u>

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.

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 or within McIntire Road.

17. 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 will also assist RWSA with the procurement of a software package to facilitate the overall program.

18. Albemarle-Berkeley PS Capacity Analysis

The Albemarle Berkley wastewater pump station serves the schools and other connections in the area near Albemarle High School. Due to unacceptably high run times on the pumps, a capacity analysis of the pump station, given the current and projected upstream conditions, will be completed to provide design data for replacement of the pump station.

19. Buck Mountain Master Plan

The purpose of this Master Plan is to consider alternatives for use of the 1300 acre property purchased in the 1980's for a water supply reservoir, which was never built. 600 acres are currently under deed restrictions to mitigate the environmental impacts of the expanded Ragged Mountain Dam. Development of the Buck Mountain Master Plan will consider past and current uses of the property, identify alternatives, and provide recommendations for strategic use of the property into the future.

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.

Other Significant Projects

21. <u>Urgent and Emergency Repairs</u>

• 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.

22. 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.

23. 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.



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 APRIL 2020

DATE: MAY 26, 2020

The monthly and average daily Urban water system usages by the City and the ACSA for April 2020 were as follows:

	Month	Daily Average	
City Usage (gal)	103,990,002	3,466,333	44.2%
ACSA Usage (gal)	131,466,861	4,382,229	55.8%
Total (gal)	235,456,863	7,848,562	

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 May 2019*), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA).

Notes:

*Usage data through October 2019 are based on retail metered flows due to the unavailability of wholesale metering data. Data shown from November 2019 forward represents the usage calculated through the RWSA Wholesale Metering program.

Figure 1: City of Charlottesville Monthly Water Usage

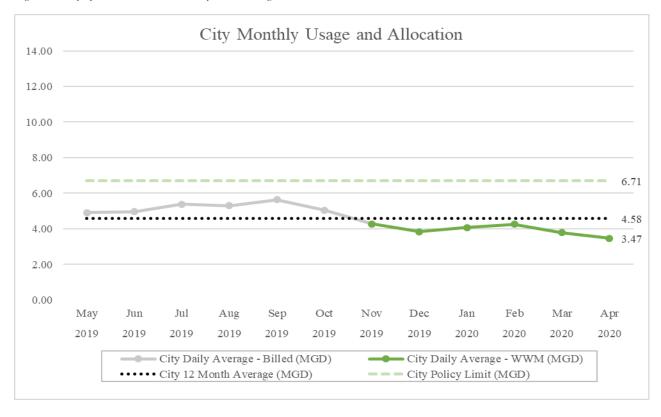
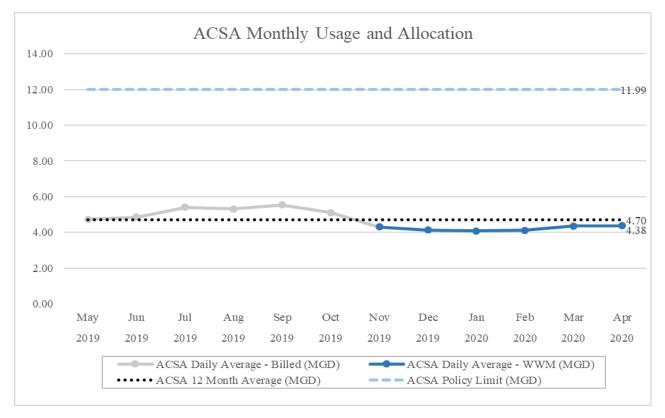


Figure 2: Albemarle County Service Authority Monthly Water Usage and Allocation



www.rivanna.org



MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY

BOARD OF DIRECTORS

FROM: JENNIFER A. WHITAKER, DIRECTOR OF ENGINEERING AND

MAINTENANCE

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: PROFESSIONAL SERVICES AUTHORIZATION – VIRGINIA

WATER PROTECTION PERMIT RENEWAL FOR THE URBAN

WATER SYSTEM; HAZEN AND SAWYER ENGINEERS

DATE: MAY 26, 2020

The Rivanna Water and Sewer Authority (RWSA) has a current Virginia Water Protection (VWP) Individual Permit for its Urban Water System (Permit No. 06-1574) and a permit from the Army Corps of Engineers, Norfolk District, under Section 404 of the Clean Water Act (CWA) for work associated with the Ragged Mountain Reservoir expansion (Permit No. 06-V1574) including the S. Rivanna to Ragged Mtn Reservoir raw water pipeline. These permits expire in February 2023, and a renewal application must be submitted in 2022. RWSA desires to begin the engineering investigations required to apply for renewal of the VWP and Army Corps of Engineers permits.

RWSA entered into a term agreement with Hazen and Sawyer on May 3, 2018 to provide professional engineering and other environmental consulting services related to RWSA's water treatment systems. The current Work Authorization will provide assistance to RWSA in obtaining renewed permits for raw water withdrawals from the Urban System reservoirs (South Fork Rivanna, Ragged Mountain, and Sugar Hollow), which will be necessary to support projected growth in our Urban Water Service areas.

Board Action Requested:

Staff requests that the Board of Directors authorize the Executive Director to execute a work authorization with Hazen and Sawyer for renewal of the permits for the Urban Water System for a not to exceed value of \$150,979.

www.rivanna.org





MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY

BOARD OF DIRECTORS

JENNIFER A. WHITAKER, DIRECTOR OF ENGINEERING AND FROM:

MAINTENANCE

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: ENGINEERING SERVICES - TERM CONTRACT FOR

PROFESSIONAL SANITARY SEWER MODELING SERVICES,

BROWN AND CALDWELL ENGINEERS

DATE: MAY 26, 2020

In April 2014, a Wastewater Projects Cost Allocation Agreement (Agreement) was signed by the City of Charlottesville (City) and Albemarle County Service Authority (ACSA) designating how the two agencies would share the costs of Rivanna Water and Sewer Authority (RWSA) capital improvements to its wastewater conveyance and treatment system. The Agreement identified terms associated with allocation of debt service to each jurisdiction based on whether the project was "capacity-related" or "non-capacity related". With regard to "capacity-related" projects, it was determined that the debt service charges would be split based upon the projected future use of that asset by each party, including dry weather and wet weather conditions, as updated by a professional engineer every five years.

In accordance with the Agreement, the flow split tables are required to be updated again in 2020, which will involve an update of the existing sanitary sewer model to account for any collection system modifications since the previous update; analysis of flow metering data that has been collected from temporary locations throughout the collection system over the past year and from permanent meters as well; determination of current dry weather flow, peaking flow and wet weather flow based on recent flow metering data; and projecting the flows over a 60-year planning horizon based on recently determined population projections for the Urban and Crozet Service Areas.

A Request for Proposals (RFP #20-04) was developed to solicit professional services for this effort, as well as other miscellaneous sanitary sewer modeling services, and was advertised on February 12, 2020. Proposals were due on March 10, 2020, and RWSA received four proposals. The selection committee interviewed two of the prospective firms on April 8, 2020 and determined that Brown and Caldwell was the most meritorious candidate. The contract would be awarded for one year, with the option for up to four additional one-year renewals for a total contract length not to exceed five years.

As part of the main work effort associated with this contract, an initial work authorization with

Brown and Caldwell has been developed to provide the 2020 update to the Wastewater Projects Cost Allocation Agreement, as mentioned above. This work authorization will include an evaluation of recent flow monitoring and rain data, an update to the model structure and operational protocols, inclusion of population projections from recent projects for updated flow projections throughout the system, model calibration, model runs to project wastewater flows over a 60-year planning horizon and then updated flow tables in accordance with the regional Agreement. This work authorization includes a base scope of work for a fixed fee of \$150,000 and a provisional services portion of the scope to cover additional stakeholder meetings and model runs for a not to exceed value of \$65,000, that will only be used if authorized by RWSA, for a total not to exceed value of \$215,000.

Board Action Requested:

Staff requests that the Board of Directors authorize the Executive Director to execute an Engineering Services Agreement with Brown and Caldwell for a Term Contract for Professional Sanitary Sewer Modeling Services, and an initial Work Authorization for the 2020 Wastewater Projects Cost Allocation Agreement Update, for a total amount not to exceed \$215,000.

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MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY

BOARD OF DIRECTORS

FROM: JENNIFER A. WHITAKER, DIRECTOR OF ENGINEERING AND

MAINTENANCE

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: CONSTRUCTION WORK AUTHORIZATION – SOUTH FORK

RIVANNA DAM MUD VALVE REPLACEMENT - BANDER

SMITH, INC

DATE: MAY 26, 2020

The South Rivanna Dam, originally constructed in 1965, is equipped with two 36-inch diameter sluice gates and conduits, which can be utilized to lower the water level in the reservoir or to release water to meet regulatory minimum instream flow requirements when the dam is not spilling. These gates are original to the dam and while they are operable and are exercised regularly, they can no longer provide a complete seal, therefore allowing some leakage through the dam. RWSA has protocols in place to temporarily stop leakage through the gates when necessary to conserve water; however, there is a desire to repair or replace the gates and components as needed to restore full functionality.

Earlier this month, Bander Smith, Inc., under the On-Call Dam Maintenance Services Term Contract, dewatered the gate chambers and performed a detailed assessment of the gates, determining that refurbishment or replacement of the gates will be necessary to significantly reduce or stop leakage through the gates. The scope of this Construction Work Authorization allows for a range of improvements to the gates, from refurbishment of the gates and replacement of the stems, stand-offs, and actuators, up to full replacement of the gates and related components with either new sluice gates or stainless steel knife gates. Staff will work with Bander Smith and the Authority's Dam Engineering Consultant, Schnabel, over the coming weeks to determine the best course of action to minimize leakage through these gates. Due to the special nature of this work (sometimes underwater), we requested Bander Smith to provide a cost proposal to complete replacement of the two gates. The contractor has provided a total not-to-exceed cost estimate for the work of \$225,000 which is within the Capital Improvement Plan (CIP) budget for the South Rivanna Dam Gate Repairs project. The work will be billed on the basis of actual time and materials required to complete the work and is anticipated to be completed in the summer or early fall of 2020, depending on lead time for materials and weather.

Board Action Requested:

Staff requests that the Board of Directors authorize the Executive Director to execute a Construction

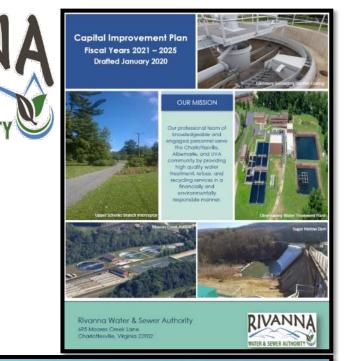
Work Authorization with Bander Smith Inc. for a total not to exceed value of \$225,000 for the South Fork Rivanna Dam Mud Valves Replacement project.

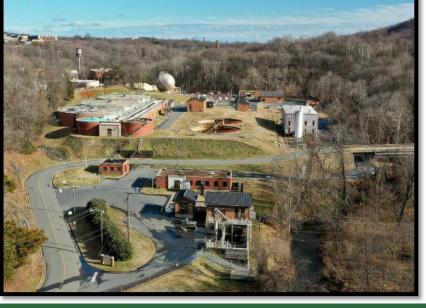
Proposed Capital Improvement Plan Update FY 2021-2025

FOR THE BOARD OF DIRECTORS

BY BILL MAWYER, EXECUTIVE DIRECTOR

MAY 26, 2020





Updated FY 21 – 25 CIP

•56 Projects; deferred 5 = <u>51 Projects</u>

•\$135.2 M; deferred \$2.7 M = \$132.5 M

<u>Water</u> <u>Wastewater</u>

Urban: \$76 <u>\$74.9 M</u> Urban: \$24 <u>\$22.7 M</u>

•\$4.8 M for "All Systems" support (technology, security)

CIP Project Deferrals

Projects which were deferred out of the 5 year FY 21-25 CIP and into FY 26:

>#12 2nd Rivanna Wate	r Line Crossing	\$45 k
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➤#16 N. Rivanna WTP Upgrades \$1 M; move from FY 23 to FY 26

►#23 Scottsville Tank Rehabilitation \$280 k

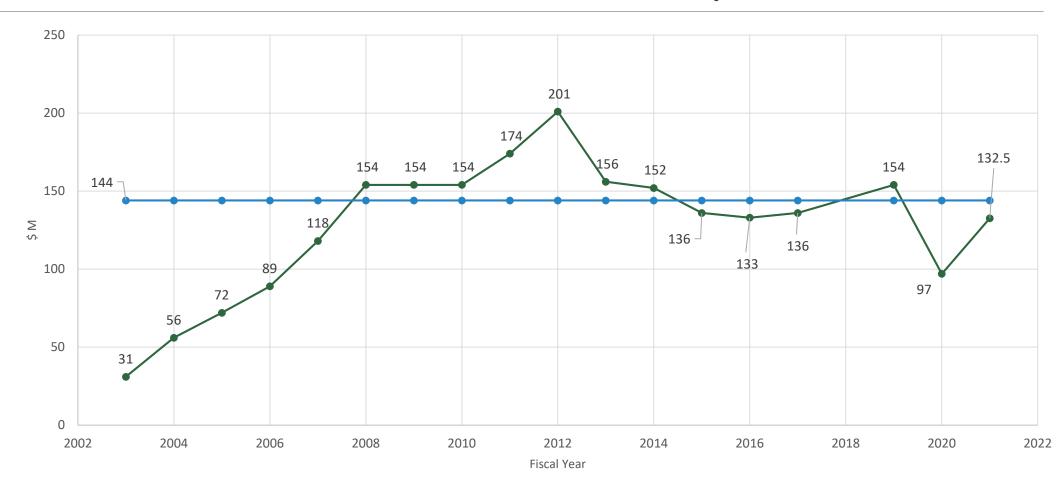
→ #28 Maury Hill Sewer Replacement \$285 k

➤#34 Administration Building Addition
\$950 k

→#47 MC Renovations: Conference Room \$100 k from FY 22 to FY 26

TOTAL \$2.7 M

RWSA CIP History



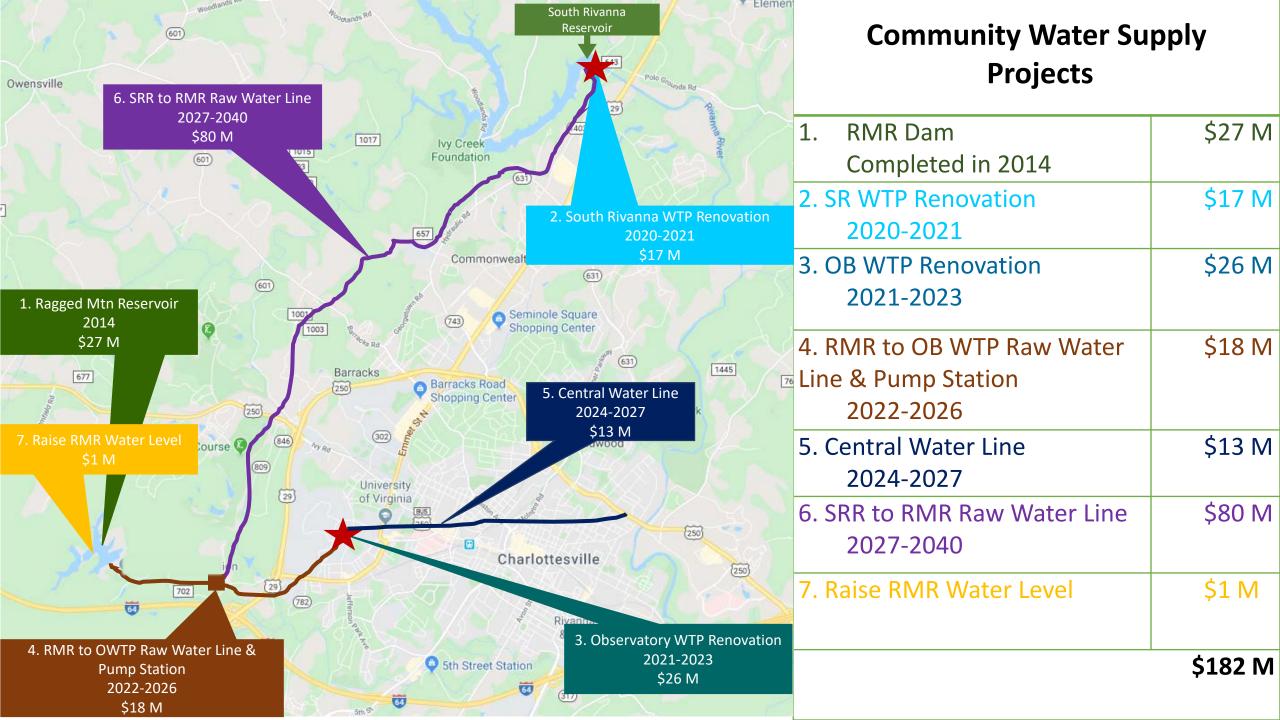
15 Year CIP Planning Forecast

• FY 21-25 \$135.2 \$132.5 M

• FY 26-30 \$ 80.3 \$83.0 M

• FY 31-35 \$ 59.8 M \$59.8 M

\$275.3 M



Five Year FY 21 – 25 CIP Summary

•51 Projects

•\$132.5 M

<u>Water</u> <u>Wastewater</u>

Urban: \$74.9 M Urban: \$22.7 M

Non-Urban: \$29.7 M Non-Urban: \$0.4 M

•\$4.8 M for "All Systems" support (technology, security)

Questions?

Capital Improvement Plan Fiscal Years 2021 – 2025 Drafted May 2020





OUR MISSION

Our professional team of knowledgeable and engaged personnel serve the Charlottesville, Albemarle, and UVA community by providing high quality water treatment, refuse, and recycling services in a financially and environmentally responsible manner.







Rivanna Water & Sewer Authority 695 Moores Creek Lane Charlottesville, Virginia 22902



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Introduction

The Capital Improvement Plan (CIP) for Fiscal Years 2021-2025 has been prepared as a strategic and financially responsible plan for the Rivanna Water and Sewer Authority (RWSA) to complete major infrastructure construction projects. The projects included in the CIP are necessary to achieve the RWSA's core mission of providing safe, high-quality drinking water and environmentally responsible wastewater treatment services for the City of Charlottesville and the Albemarle County Service Authority (ACSA). The CIP is a 5-year planning document which provides an estimated budget and schedule for projects as they advance through the design and construction process.

The infrastructure requirements of the Capital Improvement Plan are developed through our Asset Management and Master Planning programs to address water and wastewater capacity demands, regulatory mandates and rehabilitation needs. Each year, these projects are reviewed and prioritized by the RWSA management team and brought forth for review by the Board of Directors.

During the past year, several capital projects were completed, and as such are being removed from the 2021-2025 CIP. These projects account for approximately \$5.1 million or 5.2% of FY 2020-2024 CIP. These projects include:

- 5 Birdwood Golf Course Waterline
- 9 Piney Mountain Tank Rehabilitation
- 11 Water Demand Projection and Safe Yield Study
- 21 Buck's Elbow Ground Storage Tank Chlorination System
- 23 Scottsville WTP Finished Water Flow Meter
- 43 Glenmore WRRF Secondary Clarifier Coating

The total 5-year 2021-2025 CIP is approximately \$132.5 million, with the previous expenditures on active projects totaling approximately \$5.4 million, leaving a net proposed 5-year projected expenditure of \$127.1 million.

There are eleven new projects added to the CIP this year. The total estimated expenditures for the projects equal \$4.61 million from 2021-2025 and include:

- 18 Crozet Ground Storage Tank Leak Repair (\$0.1 million)
- 19 Buck's Elbow Tank and Waterball Painting (\$0.083 million)
- 21 Scottsville WTP Lagoon Liner Replacement (\$0.315 million)
- 29 Interceptor Sewer and Manhole Repair (Phase 2) (\$0.7 million)
- 41 Moores Creek AWRRF Inplant Clarifier and Lime Silo Demolition (\$0.65 million)
- 42 Moores Creek AWWRF Generator Fuel Storage Expansion (\$0.1 million)
- 43 Moores Creek AWWRF Meter and Valve Replacements (\$0.66 million)
- 44 Moores Creek AWWRF Facility Renovations (\$0.375 million)
- 45 Moores Creek AWWRF 5kV Electrical System Upgrade (\$0.5 million)
- 46 Moores Creek AWWRF Lighting Upgrade (\$1.0 million)
- 48 Scottsville WRRF Generator and ATS (\$0.13 million)

An additional seven projects that were in the previous 10-year plan that are now transitioning into the 5-year horizon. These projects equal \$3.04 million from 2021-2025 and include:

- 27 Albemarle-Berkley Pump Station Upgrade (\$0.04 million)
- 31 Moores Creek AWRRF Engineering and Administration Building (\$0.25 million)
- 35 Moores Creek AWRRF Mechanical Thickener Improvement (\$0.1 million)
- 37 Moores Creek AWRRF Gas Sphere Rehabilitation (\$0.08 million)
- 38 Moores Creek AWRRF Cogeneration Upgrades (\$1.9 million)
- 39 Moores Creek AWRRF Maintenance Building (\$0.1)
- 40 Moores Creek AWWRF Structural Modifications (\$0.57 million)

There are several projects where the proposed budgets have been modified based on the anticipated project requirements and necessitate funding adjustments. The projects with changes include:

- 5 Observatory WTP Improvements (\$19.7 million existing / \$26 million proposed)
- 6 Sugar Hollow Dam Rubber Crest Gate Replacement (\$1.14 million existing / \$1.7 million proposed)
- 7 Valve Repair and Replacement Phase 2 (\$0.883 million existing / \$1.13 million proposed)
- 9 South Rivanna River Crossing (\$5.34 million existing / \$2.8 million proposed)
- 10 Airport Road Pump Station and North Rivanna Transmission Main (\$2.3 million existing / \$5.85 million proposed)
- 13 South Rivanna WTP Improvements (\$15 million existing / \$17 million proposed)
- 15 North Rivanna WTP Upgrade (\$2.35 million existing / \$1.35 million proposed)
- 16 Beaver Creek Dam and Pump Station Improvements (\$9.04 million existing / \$20.76 million proposed)
- 20 Scottsville WTP LT2 Improvements (\$0.10 million existing / \$0.16 million proposed)
- 24 Crozet Interceptor (\$0.62 million existing / \$0.73 million proposed)
- 26 Crozet WW Pump Station 1, 2, 3 Rehabilitation (\$0.54 million existing / \$0.59 million proposed)
- 32 Moores Creek AWRRF Digester Sludge Storage Improvements (\$0.31 million existing /\$0.55 million proposed)
- 33 Moores Creek AWWRF Aluminum Slide Gate Replacement (\$0.47 million existing / \$0.675 million proposed)
- 50 Radio Upgrades (\$0.65 million existing / \$0.40 million proposed)
- 51 Asset Management (\$0.50 million existing / \$1.12 million proposed)
- 52 Security Enhancements (\$1.0 million existing / \$2.73 million proposed)

FINANCIAL SUMMARY MAJOR SYSTEM CATEGORIES

FINANCIAL SUMMARY Major System Categories – Water

	Five	e-Year Capital Prog	gram		Projecte	ed Future Expenses	by Year			
System Description	Current CIP	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in- Progress
Urban Water (UW)										
Community Water Supply Plan	\$6,182,000	\$6,160,000	\$1,710,249	\$584,751	\$535,000	\$1,506,000	\$2,216,000	\$5,790,000	\$12,342,000	\$301,054
Observatory WTP & Ragged Mountain/Sugar Hollow Reservoir System	\$20,840,000	\$6,860,000	\$3,118,198	\$5,811,802	\$15,170,000	\$3,600,000	\$0	\$0	\$27,700,000	\$618,880
Finished Water Storage/Distribution	\$10,875,914	\$4,110,000	\$2,961,914	\$1,834,000	\$4,122,000	\$2,493,000	\$725,000	\$2,850,000	\$14,985,914	\$312,274
South & North Fork Rivanna Water System	\$18,950,000	\$1,000,000	\$10,056,415	\$7,353,585	\$2,540,000	\$0	\$0	\$0	\$19,950,000	\$746,112
Subtotal (UW)	\$56,847,914	\$18,130,000	\$17,846,776	\$15,584,138	\$22,367,000	\$7,599,000	\$2,941,000	\$8,640,000	\$74,977,914	\$1,978,320
Non-Urban Water (NUW)										
Crozet Water System	\$17,536,000	\$11,905,000	\$9,051,000	\$892,000	\$1,050,000	\$6,435,000	\$6,010,000	\$6,003,000	\$29,441,000	\$1,526,851
Scottsville Water System	\$100,000	\$375,000	\$100,000	\$60,000	\$0	\$140,000	\$175,000	\$0	\$475,000	\$0
Subtotal (NUW)	\$17,636,000	\$12,280,000	\$9,151,000	\$952,000	\$1,050,000	\$6,575,000	\$6,185,000	\$6,003,000	\$29,916,000	\$1,526,851
WATER TOTAL	\$74,483,914	\$30,410,000	\$26,997,776	\$16,536,138	\$23,417,000	\$14,174,000	\$9,126,000	\$14,643,000	\$104,893,914	\$3,505,171

FINANCIAL SUMMARY Major System Categories – Wastewater

	Five	e-Year Capital Prog	ram		Projecte	d Future Expenses	s by Year		I	
System Description	Current CIP	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in- Progress
Urban Wastewater (UWW)										
Wastewater Interceptors and Pumping Stations	\$11,303,330	\$1,005,000	\$6,757,945	\$3,740,385	\$855,000	\$205,000	\$45,000	\$735,000	\$12,338,330	\$716,848
Moores Creek AWRRF	\$3,449,632	\$6,732,000	\$3,026,632	\$2,975,000	\$2,410,000	\$510,000	\$475,000	\$785,000	\$10,181,632	\$1,007,383
Subtotal (UWW)	\$14,752,962	\$7,737,000	\$9,784,577	\$6,715,385	\$3,265,000	\$715,000	\$520,000	\$1,520,000	\$22,519,962	\$1,724,231
Non-Urban Wastewater (NUWW)										
Scottsville WRRF	\$210,000	\$125,000	\$65,000	\$145,000	\$0	\$125,000	\$0	\$0	\$335,000	\$0
Glenmore WRRF	\$65,000	\$0	\$0	\$65,000	\$0	\$0	\$0	\$0	\$65,000	\$0
Subtotal (NUWW)	\$275,000	\$125,000	\$65,000	\$210,000	\$0	\$125,000	\$0	\$0	\$400,000	\$0
WASTEWATER TOTAL	\$15,027,962	\$7,862,000	\$9,849,577	\$6,925,385	\$3,265,000	\$840,000	\$520,000	\$1,520,000	\$22,919,962	\$1,724,231
All Systems Security & Technology	\$2,596,000	\$2,099,000	\$1,971,000	\$1,014,000	\$480,000	\$640,000	\$550,000	\$40,000	\$4,695,000	\$167,637
TOTAL	\$92,107,876	\$40,371,000	\$38,818,353	\$24,475,523	\$27,162,000	\$15,654,000	\$10,196,000	\$16,203,000	\$132,508,876	\$5,397,039

PROJECT DETAILS

Page	8	Completed Projects
Page	11	Urban Water
Page	23	Non-Urban Water
Page	28	Urban Wastewater
Page	39	Non-Urban Wastewater
Page	43	All Systems

Completed Projects

During fiscal year 2020, several capital improvement projects were completed, were advanced to the final phases of close-out, or were determined to be no longer necessary. As such they will be removed from consideration in future planning documents. Presented in the table below are the six (6) completed projects, pertinent information on the adopted budgets, as well as the projected final costs and any anticipated savings. There was a total completed projects cost savings of \$0.9 million.

- 5. <u>Birdwood Golf Course Waterline</u>: RWSA and the UVA Foundation chose to expedite construction of the portion of the future South Rivanna to Ragged Mountain 36-inch raw water main through the Birdwood property. This enabled pipeline work to proceed just ahead of the planned golf course reconstruction project to prevent subsequent disruption to the property and adjacent neighbors, as well as mitigate future increased water line construction costs. The golf course reconstruction project began in November 2018. This work was completed within budget in the summer of 2019 and included installation of approximately 5,900 linear feet of 36-inch raw water main along the eastern property boundary of the golf course.
- 9. Piney Mountain Tank Rehabilitation: The 700,000-gallon Piney Mountain Tank serves the North Rivanna pressure band. A routine inspection of the Piney Mountain Tank revealed several deformed roof rafters, indicating the potential for structural deficiency. An in-depth structural inspection was performed and a list of recommended roof repairs provided. This project included consultant services for design and bidding of necessary roof repairs and other ancillary items, as well as construction, construction administration, and inspection services. Long term plans for the Rt. 29 service area include the modification or elimination of this facility. The improvements included in this project are needed to maintain the existing tank in service for at least the next 10 years. The tank repairs were substantially complete in July of 2019 and the project was closed out in November 2019.
- 11. Water Demand Projection and Safe Yield Study: In January 2012, the City of Charlottesville, Albemarle County Service Authority, and RWSA entered into the Ragged Mountain Dam Project Agreement. Within the agreement are provisions to monitor the bathymetric capacity of the Urban water reservoirs as well as a requirement to conduct reoccurring demand analysis, demand forecasting and safe yield evaluations. The bathymetric survey of the South Rivanna Reservoir and the Ragged Mountain Reservoir were funded in the FY2019 O&M Budget. Subsequent to collecting the reservoir survey data, this study evaluated and calculated current and future demands and present safe yield. Per the project agreement, these analyses shall be completed by calendar year 2020.
- 21. <u>Buck's Elbow Ground Storage Tank Chlorination System:</u> The 2,000,000-gallon Buck's Elbow Ground Storage Tank provides finished water storage for the Crozet Area. Due to the water age that is currently present in the Buck's Elbow Ground Storage Tank, RWSA Water Department staff performs constant monitoring on the chlorine residuals in the tank. When chlorine residuals drop, staff must manually feed chlorine into the tank. Currently, this requires staff to bring all required pumping infrastructure to the site and climb the tank to access the injection point(s). To enhance the efficiency and safety of this process, a chemical feed station will be

installed at the Buck's Elbow Ground Storage Tank site. The need for staff to climb the tank will be negated, and all pumping infrastructure will remain on site in a secured area. An active mixing system will also be installed in order to supplement the existing passive mixing system and further decrease water age inside of the tank. Installation of the active mixing system and construction of the chlorine feed station at the Buck's Elbow Ground Storage Tank began in Fall 2019, and completed in early 2020.

- 23. Scottsville WTP Finished Water Flow Meter: The Scottsville Water Treatment Plant provides potable drinking water to Albemarle County Service Authority customers in the Scottsville service area. After water has been treated at the plant, it is collected in an existing clearwell which was constructed with the original facility. From the clearwell, the water is pumped into the distribution system by one of two high service pumps. The flow from these pumps is not metered. In order to keep a record of the total flow entering the Scottsville distribution system, plant operators must periodically conduct draw-down tests to verify the pumping rate of each of the two pumps. The total flow is then calculated based on the run time of each pump. Based on these procedures, this method of measuring flow may not be fully representative of the flow entering the system as the pumping rate will vary based on the clearwell level and the hydraulic grade line of the distribution system. In addition, the Virginia Department of Health has indicated that the flow should be metered during recent conversations related to the disinfection profile calculation throughout the plant. To resolve this issue, this project modified the high service pump discharge piping to allow for the installation of a finished water meter.
- 43. Glenmore WRRF Secondary Clarifier Coating: The secondary clarifiers at the Glenmore facility were painted over 10-years ago. The clarifier environment is a particularly harsh environment subject to corrosive gasses, grit abrasion and mechanical wear. Based on observations by operations staff, the coating system was in need of replacement to prevent deterioration and failure of the underlying metal superstructure. This project included the cleaning and full coating of the metal portions of the clarifier and installation of new sweeps.

Completed Projects

			Five-Year Capita	Program	
Line No.	Project Description	Adopted Budget Previous Expenditures (6/30/2019)		Final Projected Costs/Close Out	Savings
5	Birdwood Golf Course Waterline	\$4,000,000	\$2,714,728	\$3,086,000	\$914,000
9	Piney Mountain Tank Rehabilitation	\$570,000	\$88,585	\$484,413	\$85,587
11	Water Demand Projection and Safe Yield Study	\$167,000	\$79,106	\$167,000	\$0
21	Buck's Elbow Ground Storage Tank Chlorination System	\$239,000	\$6,643	\$230,000	\$9,000
23	Scottsville Water Treatment Plant Finished Water Flow Meter	\$145,000	\$12,128	\$134,979	\$10,021
43	Glenmore WRRF Secondary Clarifier Coating	\$160,000	\$1,100	\$138,751	\$21,249
	TOTAL	\$5,096,000	\$2,902,290	\$4,241,143	\$854,857

CIP 20-24	CIP 21-25	CIP 21-25	CIP 21-25	CIP 21-25
Total	Completed	Remaining	New Funding	New Total
\$97,203,876	\$5,096,000	\$92,107,876	\$40,371,000	\$132,508,876

Community Water Supply Plan

The Community Water Supply Plan represents the program developed with substantial community input to fulfill RWSA's contractual obligation to the City of Charlottesville (City) and the Albemarle County Service Authority (ACSA) to provide adequate drinking water for their future needs. An initiative started in 2003 to find a long-term solution that could achieve both local support and meet federal and state requirements. After multiple community meetings, updates with local officials, and frequent consultations with federal and state agencies, local support was obtained to apply for federal and state permits to expand the Ragged Mountain Reservoir and build a future pipeline between the South Rivanna and Ragged Mountain Reservoirs, with stream and wetlands mitigation to be provided through property in the Buck Mountain Creek area and property adjacent to a lower reach of Moores Creek near its confluence with the Rivanna River. Federal and state permits were granted in 2008, and amended in 2011.

The first phase of this long-term program centered around the expansion of the Ragged Mountain Reservoir, a project that would simultaneously address a legal obligation to correct safety deficiencies on the existing site. Through a combination of technical investigations, engineering evaluations, and continued public discussion, a decision was reached in February 2011 through the City Council and Board of Supervisors to build the new dam as an earthen dam, with the initial phase raising the reservoir pool height by 30 feet. The decision also outlined an objective of the further pursuit of water conservation through the City and ACSA, and the pursuit of opportunities for dredging of the South Rivanna Reservoir, with the second phase of reservoir expansion in the future as necessary.

Project Descriptions:

- 1. South Rivanna Reservoir to Ragged Mountain Reservoir Water Line Right-of-Way: The approved 50-year Community Water Supply Plan includes the future construction of a new raw water pipeline from the South Rivanna River to the Ragged Mountain Reservoir. This new pipeline will replace the Upper Sugar Hollow Pipeline along an alternative alignment to increase raw water transfer capacity in the Urban Water System. The project includes a detailed routing study to account for recent and proposed development and road projects in Albemarle County and the University of Virginia. Preliminary design, preparation of easement documents, and acquisition of water line easements along the approved route will also be completed as part of this project. Prior expenditures also covered a previous review of the 2009 conceptual design that was requested by the Board.
- 2. South Rivanna Reservoir Dredging: The South Rivanna Reservoir stores raw water for treatment at the South Rivanna Water Treatment Plant and in the future, is proposed to provide water for transfer to the enlarged Ragged Mountain Reservoir. River flow into the reservoir is from a drainage area, almost entirely within Albemarle County, of approximately 259 square miles. Soil erosion from natural events, from land use in the agricultural area, from land disturbances in the developed areas, and from re-suspension of flood plain deposits created during the 19th century (stream bank erosion), are likely the causes of sediment becoming trapped within the reservoir. The initial design of the reservoir anticipated the accumulation of

these sediments, and a significant portion of the total storage volume was designated for this purpose. Currently the sediment stored does not exceed the available sediment storage capacity.

The January 2012 Ragged Mountain Dam Project Agreement outlines that "the City and ACSA agree to direct, and RWSA agrees, to perform such dredging projects at the South Fork Rivanna Reservoir as may be specified jointly by the City and ACSA pursuant to the Water Cost Allocation Agreement." The Cost Allocation Agreement stipulates that target maintenance dredging shall be performed, and that the dredging be market driven, cost effective, and opportunistic and shall not exceed \$3.5M. In 2012 and 2013, RWSA, via the Public-Private Education Facilities and Infrastructure Act (PPEA) process, solicited proposals to provide maintenance dredging. In July 2013, the one qualified PPEA proposer withdrew its proposal, citing difficulties in obtaining necessary land agreements.

Future Board decisions on the project contracting approach will dictate the next steps. This project remains in the CIP as the fulfillment of a contractual obligation from the January 2012 Ragged Mountain Dam Cost Allocation Agreement, and RWSA counsel has offered an opinion that consent to amend the Agreement from the City and ACSA is required before the RWSA Board can amend or cancel the project. The project has been moved to FY 2026.

- 3. Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Line: Raw water is transferred from the Ragged Mountain Reservoir (RMR) to the Observatory Water Treatment Plant 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, which will have the capacity to treat 10 million gallons per day (mgd). The new pipeline is expected to be constructed of 36-inch ductile iron and approximately 14,000 feet in length.
- 4. Ragged Mountain Reservoir to Observatory Raw Water Pump Station: The Ragged Mountain Reservoir (RMR) to Observatory WTP raw water pump station is planned to replace the existing Stadium Road and Royal pump stations, which in part have exceeded their design lives or will require significant upgrades with the Observatory WTP expansion. The pump station will pump up to 10 mgd to the Observatory WTP. The new pump station will be integrated with the planned South Rivanna Reservoir (SRR) to RMR pipeline in the interest of improved operational and cost efficiencies. An integrated pump station will also include the capacity to transfer up to 16 million gallons per day (mgd) of raw water from RMR back to the SRR WTP. The location of this pump station will be determined and the required property purchased as part of the SRR to RMR raw water main preliminary design and right of way acquisition, which is currently underway.

Community Water Supply Plan

		Five-	Year Capital Pro	gram	Projected Future Expenses by Year							
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)	
1	South Rivanna Reservoir to Ragged Mountain Reservoir Water Line Right-of-Way			\$1,710,249	\$584,751					\$2,295,000	\$301,054	
2	South Rivanna Reservoir Dredging	\$10,000	(\$10,000)							\$0		
3	Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Line	\$3,217,000	\$4,280,000			\$325,000	\$1,186,000	\$1,706,000	\$4,280,000	\$7,497,000		
4	Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Pump Station	\$660,000	\$1,890,000			\$210,000	\$320,000	\$510,000	\$1,510,000	\$2,550,000		
	TOTAL	\$6,182,000	\$6,160,000	\$1,710,249	\$584,751	\$535,000	\$1,506,000	\$2,216,000	\$5,790,000	\$12,342,000	\$301,054	

Observatory WTP and Ragged Mountain/Sugar Hollow Reservoir System

The Observatory Water Treatment Plant (WTP) and Ragged Mountain/Sugar Hollow Reservoir System is comprised of the water treatment facility on Observatory Mountain and the associated raw water infrastructure that stores and conveys source water to the plant. The raw water storage system includes the new Ragged Mountain Dam (constructed in 2014, with a useable raw water storage capacity of 1.44 billion gallons) and the Sugar Hollow Dam (originally constructed in 1947, upgraded in 1999 and downstream discharge improvements completed in September 2014, with a useable raw water storage capacity of 339 million gallons as updated by a 2015 bathymetric survey). The system also includes 17.6 miles of 18-inch raw water cast-iron mains, originally installed in 1908, 1922, and 1946. The Sugar Hollow Raw Water Main historically conveyed water from the Sugar Hollow Dam to the Observatory Water Treatment Plant, however, as a result of the New Ragged Mountain Dam project, the main now discharges directly into Ragged Mountain Reservoir. The remaining downstream section of the Sugar Hollow main now conveys raw water from the Ragged Mountain Reservoir to the treatment plant. The line crosses the Mechums River (where an abandoned pumping station is sited) on its way to Ragged Mountain Reservoir, and eventually passes through the Royal Pumping Station and terminates at the Observatory WTP. The Ragged Mountain Raw Water Main conveys water from the Ragged Mountain Reservoir through the Stadium Road Pumping Station and terminates at the Observatory Water Treatment Plant.

Project Descriptions:

5. Observatory Water Treatment Plant Improvements: The Observatory Water Treatment Plant was originally constructed in the mid-1950s, and since very little has been replaced or upgraded at the facility, much of the original equipment remains. As a result, that equipment is inefficient, prone to unexpected failure, and does not have readily accessible replacement parts. Based on a Needs Assessment Study, the plant would undergo a wholesale upgrade including improvements to the flocculators, sedimentation basins, filters, and chemical feed facilities to enhance future reliability. In addition, the existing reinforced concrete flume, which conveys treated water from the sedimentation basins to the filters, is in need of replacement, filter control valves and piping will be replaced, and electrical and SCADA control systems upgraded. A portion of this project was completed during the Granular Activated Carbon (GAC) project, where the flocculator systems were upgraded with new mechanical and electrical equipment, including variable speed drives for optimal efficiency.

In addition to providing needed equipment upgrades, these improvements will increase the plant's capacity from 7.7 million gallons per day to 10 million gallons per day based on a feasibility analysis performed during the Preliminary Engineering phase of the project. It was determined that the capacity upgrades could be performed economically and would provide needed reliability and redundancy in the Urban System. As part of this capacity increase, it was also determined that the plant's GAC treatment capacity should increase as well. As a result, this project also includes efforts required for the addition of four GAC contactors.

It should be noted that the Observatory Water Treatment Plant is sited on land leased to RWSA by the University of Virginia. The terms of the existing lease expire on April 17, 2021. The new lease is currently under negotiation.

6. Sugar Hollow Dam Rubber Crest Gate Replacement: 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 evaluated as part of the project for necessary repairs and improvements. Repairs may include components of the intake gate valves and tower walls, including repair or replacement of intake trash racks, and sealing/grouting of minor concrete wall cracks.

Observatory Water Treatment Plant and Ragged Mountain/Sugar Hollow Reservoir System

		Five-	Year Capital Pro	gram	Projected Future Expenses by Year						
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
5	Observatory Water Treatment Plant Improvements	\$19,700,000	\$6,300,000	\$2,648,198	\$5,051,802	\$14,700,000	\$3,600,000			\$26,000,000	\$618,880
6	Sugar Hollow Dam Rubber Crest Gate Replacement	\$1,140,000	\$560,000	\$470,000	\$760,000	\$470,000				\$1,700,000	
	TOTAL	\$20,840,000	\$6,860,000	\$3,118,198	\$5,811,802	\$15,170,000	\$3,600,000	\$0	\$0	\$27,700,000	\$618,880

Finished Water Storage/Transmission – Urban System

The urban finished water storage and transmission system serves to provide transmission of treated water from the three RWSA water plants (Observatory, South Rivanna, and North Rivanna) to the distribution networks of the Albemarle County Service Authority, the City of Charlottesville, and the University of Virginia. The system includes approximately 40 miles of pipeline, six water storage tanks: Avon Street (2 MG), Pantops (5 MG), Piney Mountain. (0.7 MG), Stillhouse (0.7 MG), Observatory (3 MG), and Lewis Mountain (0.5 MG), and the Alderman Road and Stillhouse pumping stations.

Project Descriptions:

- 7. Valve Repair & Replacement (Phase 2): Isolation valves are critical for normal operation of the water distribution system and timely emergency response to water main breaks. Staff continuously reviews results from an ongoing valve exercising and condition assessment program performed by the RWSA Maintenance Department. This project will repair any valves identified during the condition assessment as having a repairable deficiency and replace the highest priority valves that are inoperable and/or unrepairable. This phase of the Valve Repair-Replacement Project will include the repair of an existing valve on the Southern Loop Waterline and replacement of valves on the North Rivanna, South Rivanna, Pantops, and Crozet Waterlines. Completion of Phase 2 of the Valve Repair-Replacement Project is anticipated in Summer 2020.
- 8. Central Water Line: The southern half of the Urban Area water system is currently served by the Avon Street and Pantops 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 reducing system flexibility. In 1987, the City and ASCA developed the Southern Loop Agreement, outlining project phasing and cost allocations, as envisioned at the time. The first two phases of the project were constructed shortly thereafter. The third phase, known as the "Eastern Branch" is the subject of the current project. The initial funding for this project was used for route alignment determination, hydraulic modeling, and preliminary design. Due to the complicated nature of our finished water systems, it was decided at the August 2018 Board meeting that a more comprehensive approach is warranted and we should complete the Finished Water Master Plan prior to moving forward with final design and construction of the Avon to Pantops Water Main.
- 9. South Fork 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.

10. Airport Rd. Pump Station and North Rivanna Transmission Main: The Rt. 29 Pipeline and Pump Station 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 was updated in 2018 to reflect the changes in the system and demands since 2007. This project, along with project above 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 a future low pressure condition. These facilities will also lead to future phase implementation which will include a storage tank and the creation of the Airport pressure zone.

To complete the connection between the new 24-inch water main in Rt. 29 and the pump station, construction will include two "gap" sections of 24-inch water main between the already completed sections in the vicinity of Kohl's. Much of the new water main route is within VDOT right-of-way; however, acquisition of right-of-way will be required on the Kohl's Property at Hollymead Town Center.

11. Finished Water System 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. There are asset classes where comprehensive and ongoing plans exist or are in development (e.g. wastewater collection, raw water supply, Crozet water, etc.). In the case of the urban finished water system, many of the previously identified capital projects are in design or construction. As such, staff have identified a need to develop a current and ongoing finished water master plan. This work will utilize the demand forecasting from the Water Demand Project and Safe Yield Study.

Finished Water Storage/Transmission – Urban System

		Five-	Year Capital Pro	gram			Projec	cted Future Exp	enses by Year		
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
7	Valve Repair & Replacement (Phase 2)	\$882,914	\$250,000	\$1,132,914						\$1,132,914	\$154,218
8	Central Water Line	\$2,100,000	\$2,850,000	\$1,375,000				\$725,000	\$2,850,000	\$4,950,000	\$137,749
9	South Fork Rivanna River Crossing	\$5,340,000	(\$2,540,000)		\$260,000	\$922,000	\$1,618,000			\$2,800,000	
10	Airport Rd. Pump Station and North Rivanna Transmission Main	\$2,300,000	\$3,550,000	\$201,000	\$1,574,000	\$3,200,000	\$875,000			\$5,850,000	
11	Finished Water System Master Plan	\$253,000		\$253,000						\$253,000	\$20,307
	TOTAL	\$10,875,914	\$4,110,000	\$2,961,914	\$1,834,000	\$4,122,000	\$2,493,000	\$725,000	\$2,850,000	\$14,985,914	\$312,274

South and North Rivanna Water Systems

The South Rivanna Water System is comprised of the source water, storage, conveyance and treatment infrastructure currently serving the urban area from the South Fork Rivanna River. The system includes the South Fork Rivanna Reservoir and Dam (built in 1966). The Dam is colocated with the raw water intake and pump station, as well as a small hydroelectric generation facility. The source water from the South Rivanna Reservoir is treated at the South Rivanna treatment plant (12-mgd rated capacity).

The North Rivanna Water System is comprised of a river intake and raw water pumping station on the North Fork of the Rivanna River, as well as the North Fork Water Treatment Plant (2-mgd rated capacity built in 1973). The North Rivanna System provides water to the ACSA service area located along US Route 29, between Forest Lakes subdivision and Piney Mountain Road.

Project Descriptions:

12. South Rivanna Hydropower Plant Decommissioning: The South Fork Hydropower Plant is a small hydroelectric generating facility constructed in 1987. The plant has historically operated intermittently, as river flows allow. The generated power is used at the South Rivanna Water Treatment Plant, thereby reducing power purchased off the electric grid. During an effort to troubleshoot and repair the turbine, a large rain and lightning event caused unexpected flooding into the facility. Insurance paid damages to more recent improvements, but not the pre-existing needs to repair the turbine. Engineering investigations in 2013 associated with the failed mechanical equipment and flood event confirmed the need for further disassembly and inspection of the turbine shaft and blade linkages from a remote factory location.

Due to the complexity of possible rehabilitation, the associated Federal Energy Regulatory Commission (FERC) dam permitting, and the numerous variables in the economic analysis, proposals were solicited from national hydropower experts to initiate a feasibility study to determine the cost effectiveness of rehabilitating the hydropower plant while making sure to account for FERC-related costs and issues. The feasibility study was completed in May 2016 and determined that rehabilitation of the facility had a small likelihood for a positive return on investment. This conclusion was brought to the Board of Directors along with a recommendation to initiate the surrender of the exemption to licensure and decommission the facility. The Board approved this recommendation and staff has begun the exemption surrender process. The budget includes regulatory support as well as physical improvements such as removing defunct electrical components, abandoning components of the turbine and re-establishment of the penstock as a reservoir drain.

13. <u>South Rivanna Water Treatment Plant Improvements</u>: The South Rivanna Water Treatment Plant recently completed upgrades as part of the Urban Granular Activated Carbon project. Over the course of that project, several other significant needs were identified and assembled into a single project within this Capital Plan. The project components include, but are not limited to, the following: a new alum and fluoride storage facility; installation of two additional filters to meet firm capacity needs and new filter control panels; building around the lime storage facilities; the addition of a second variable frequency drive at the Raw Water Pump Station as well as other general pump station improvements; the relocation for the

electrical gear from a sub terrain location at the Sludge Pumping Station to a new aboveground enclosure; a new administration building on site for additional office, meeting, and storage space; high service pump improvements and the addition of variable frequency drives to three of the pumps; sedimentation basin improvements; replacement of filter inlet valves and actuators; remodeling of the existing filter building for better lab and control space and painting throughout; new clarifier drives; and incoming electrical system improvements for the facility. Currently this facility operates at 80-90% of capacity and the identified upgrades will improve reliability and resiliency, particularly at higher flow rates.

- 14. <u>South Rivanna Dam Gate Repairs</u>: The South Rivanna Dam, originally constructed in 1965, is equipped with two 36-inch diameter slide gates and conduits, one each on the north and south abutments of the dam, which can be utilized to dewater the facility or to meet minimum instream flow (MIF) requirements when the dam is not spilling. These gates are original to the dam and while they are operable and are exercised regularly, they can no longer provide a complete seal, therefore allowing some leakage through the dam. RWSA has protocols in place to temporarily stop leakage through the gates when necessary to conserve water; however, there is a desire to repair or replace the gates and components as needed to restore full functionality. The project includes other repairs to the facility, including improvements to the concrete wall adjacent to the raw water pump station and improvements to the north dam tower to provide safer and more secure access by staff.
- 15. North Rivanna Water Treatment Plant Upgrade: The North Rivanna Water Treatment Plant was recently upgraded with Granular Activated Carbon (GAC) treatment. While components of the plant's electrical system were upgraded during the GAC project, the remaining equipment and process controls are original to the plant and in need of upgrades. As a result, a needs assessment for the plant was updated to identify potential improvements and the associated costs. At the same time, future regulatory impacts to the plant are being evaluated which may limit the benefit of investing those significant dollars in plant upgrades. In order to clarify this process, this project will include an abandonment and alternatives analysis which will evaluate the costs and implications of maintaining operations at the North Rivanna Water Treatment Plant versus adjusting our Urban System operational guidelines in an attempt to maintain our overall withdrawal and finished water production capabilities should the plant be taken out of service.

South and North Rivanna Water Systems

		Five-	-Year Capital Pro	gram		Projected	Future Expense	es by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
12	South Rivanna Hydropower Plant Decommissioning	\$725,000		\$725,000						\$725,000	\$127,081
13	South Rivanna Water Treatment Plan Improvements	\$15,000,000	\$2,000,000	\$8,046,415	\$7,353,585	\$1,600,000				\$17,000,000	\$619,031
14	South Rivanna Dam - Gate Repairs	\$900,000		\$900,000						\$900,000	
15	North Rivanna Water Treatment Plant Upgrade	\$2,325,000	(\$1,000,000)	\$385,000		\$940,000				\$1,325,000	
	TOTAL	\$18,950,000	\$1,000,000	\$10,056,415	\$7,353,585	\$2,540,000	\$0	\$0	\$0	\$19,950,000	\$746,112

Crozet Water System

The Crozet Water System includes the source water, raw water conveyance, finished water treatment, transmission and storage infrastructure for the Crozet community in western Albemarle County. The source water for this system is the Beaver Creek Reservoir and Garnett Dam which were built in 1964 with a current useable storage capacity of 521 million gallons. Raw water is treated at the Crozet Water Treatment Plant (1.0 mgd rated capacity) and provides finished water to the Albemarle County Service Authority. The system includes the Crozet Elevated (Waterball) Tank (0.05 MG) for water treatment plant backwash; the Crozet Ground Storage Tank (0.5 MG) and pump station, and the Buck's Elbow Storage Tank (2.0 MG).

Project Descriptions:

16. Beaver Creek Dam & Pump Station Improvements: 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. Following the completion of an updated alternatives analysis by Schnabel Engineering in 2018, staff decided to 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. Work for this project will be coordinated with the new relocated raw water pump station and intake.

The Drinking Water Infrastructure Plan for the Crozet water service area 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 as well as a Hypolimnetic Oxygenation System that will serve to enhance water quality within the reservoir.

17. <u>Crozet Water Treatment Plant Expansion</u>: The Crozet water treatment system is currently permitted and rated to supply up to 1.0 mgd of water to the ACSA distribution system. Over the past several years, average day usage of water has increased steadily, with maximum day demand approaching plant capacity. In addition, much of the existing plant systems are the same as when the plant was constructed in the 1960's.

Expanding the plant capacity at Crozet WTP will require a new Virginia Department of Environmental Quality Water Withdrawal Permit and will include possible stream release requirements. In order to fully analyze all aspects of the design required for this project a Preliminary Engineering Report (PER), plant field testing, preliminary permitting work and coordination with pertinent regulators were completed. The results of the PER stated that the current treatment plant can be upgraded, and the capacity increased, through installation of newer, and more technologically advanced equipment into the existing footprint of the filter plant. Work associated with this project includes general building rehabilitation, filter

improvements, sedimentation expansion and improvements, chemical feed improvements, flocculator expansion, alum storage/containment improvements and waste sludge handling and removal improvements.

- 18. <u>Crozet Ground Storage Tank Leak Repair</u>: The 500,000-gallon Crozet Ground Storage Tank serves as the wet well for the finished water pumps at the Crozet Water Treatment Plant as well as one of two water storage tanks in the Crozet Service Area. In late 2017, a small leak at the base of the tank was discovered, and a subsequent inspection by a remotely operated vehicle (ROV) in February of 2018 confirmed that the leak was likely in the floor of the tank near the tank inlet-outlet pipe. The tank will need to be drained and cleaned, damaged sections assessed and repaired, and floor coating restored prior to putting back in service. Repair work is anticipated to take place in fall of 2020 or spring of 2021 following the completion of upgrades to the Crozet Water Treatment Plant.
- 19. <u>Buck's Elbow Tank and Waterball Painting</u>: The 2,000,000-gallon Buck's Elbow Ground Storage Tank provides finished water storage for the Crozet Area while the 50,000-gallon Crozet Waterball Tank serves as filter backwash storage at the Crozet Water Treatment Plant (CZWTP). Routine inspections of these tanks in 2012 indicated that the tanks would require recoating by 2020. The current coating system has lasted beyond this initial prediction and as such was moved to 2025. The project includes recoating the interior and top-coating the exterior of both tanks to prevent corrosion. Minor repairs and improvements to both tanks will also be included in this work, such as foundation repairs and safety enhancements.

Crozet Water System

		Five-	Year Capital Pro	gram		Projected	Future Expense	s by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
16	Beaver Creek Dam & Pump Station Improvements	\$9,036,000	\$11,722,000	\$1,007,000	\$336,000	\$1,050,000	\$6,435,000	\$6,010,000	\$5,920,000	\$20,758,000	\$288,134
17	Crozet Water Treatment Plant Expansion	\$8,500,000		\$8,044,000	\$456,000					\$8,500,000	\$1,238,717
18	Crozet Ground Storage Tank Leak Repair		\$100,000		\$100,000					\$100,000	
19	Buck's Elbow Tank and Waterball Painting		\$83,000						\$83,000	\$83,000	
	TOTAL	\$17,536,000	\$11,905,000	\$9,051,000	\$892,000	\$1,050,000	\$6,435,000	\$6,010,000	\$6,003,000	\$29,441,000	\$1,526,851

Scottsville Water System

The Scottsville Water System is comprised of the raw water conveyance, finished water treatment, transmission and storage infrastructure for the Town of Scottsville in southern Albemarle County. The source water for this system is the Totier Creek Intake, and the backup supply is the Totier Creek Reservoir, which was built in 1971 with a current useable capacity of 182 million gallons. Raw water is treated at the Scottsville Water Treatment Plant (0.25 mgd rated capacity) and provides finished water to the Albemarle County Service Authority. The system includes the Scottsville Storage Tank (0.25 MG).

Project Description:

- 20. <u>Scottsville Water Treatment Plant LT2 Improvements</u>: RWSA conducts routine regulatory sampling of the raw water from Totier Creek and Totier Creek Reservoir for compliance with the EPA Long Term 2 Enhanced Surface Water Treatment Rule (LT2). The rule provides risk based guidance on the needed level of treatment for the deactivation of microbial pathogens. This project includes the design and construction of additional of ultraviolet (UV) disinfection to the treatment process in Scottsville.
- 21. Scottsville Water Treatment Plant Lagoon Line Replacement: The Scottsville Water Treatment Plant has two waste lagoons that receive filter backwash water, filter-to-waste water and flow from the sedimentation basin sludge collectors. These basins also receive drainage flows from the flocculator and sedimentation basins. The lagoons were initially lined in 2007, but that liner has now reached the end of its useful life and is showing sections of wear and degradation. In order to maintain the integrity of the lagoons, new HDPE liners need to be installed.

Scottsville Water System

		Five-	gram		Projected	Future Expense	s by Year				
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
20	Scottsville Water Treatment Plant LT2 Improvements	\$100,000	\$60,000	\$100,000	\$60,000					\$160,000	
21	Scottsville Water Treatment Plant Lagoon Liner Replacement		\$315,000				\$140,000	\$175,000		\$315,000	
	TOTAL	\$100,000	\$375,000	\$100,000	\$60,000	\$0	\$140,000	\$175,000	\$0	\$475,000	\$0

Wastewater Interceptors/Pumping Stations

The RWSA wastewater interceptors and pumping stations convey wastewater from the collection systems of the City of Charlottesville and Albemarle County Service Authority to the Moores Creek Advanced Water Resource Recovery Facility (MCAWRF). This grouping includes: the Crozet Interceptor and four associated pumping stations; the Moores Creek Interceptor and Relief Sewer; the Morey Creek, Maury Hills, Powell Creek, Meadow Creek, Schenks Branch, Woodbrook and Rivanna Interceptors; as well as the Albemarle-Berkley Interceptor and associated Albemarle Pumping Station. Also included in this system are the two primary pump stations into the MCAWRF, the Rivanna and Moores Creek Pump Stations.

Project Descriptions:

- 22. <u>Upper Schenks Branch Interceptor</u>: The Schenks Branch Interceptor is located in the eastern part of the City of Charlottesville and ties into the Meadowcreek Interceptor. The interceptor was constructed in the mid-1950s of 21-inch clay and concrete pipe. The existing interceptor is undersized to serve present and future wet weather flows as determined by the City, and is to be upgraded to 30-inch pipe. The Upper Schenks Branch Interceptor consists of two sections along McIntire Road. Both of these sections have been designed with the first phase of this project located in the City's Schenks Branch Greenway, completed in early 2016. The second phase of the Upper Schenks Interceptor will be replaced by RWSA in coordination with the City of Charlottesville's sewer upgrades once easement negotiations with Albemarle County are complete (or the City authorizes the second phase project be constructed under McIntire Road).
- 23. Interceptor Sewer and Manhole Repair Phase 1: This project is used to conduct assessments of various interceptors as well as rehabilitation of interceptors that do not have a separate CIP project. Planned projects to complete Phase 1 include the continuation of rehabilitation efforts along the Morey Creek Interceptor, as well as evaluation of the Upper Rivanna Interceptor. Rehabilitation of the Moores Creek, Moores Creek Relief, Powell Creek, and Upper Rivanna Interceptors will take place during subsequent phases. A sewer rehabilitation contract has been developed under this project which procured a dedicated contractor for all evaluation and rehabilitation work. The intent of this project is to complete a condition assessment of all RWSA interceptors (except those replaced during the period with new pipe) by 2021 and complete this phase of repairs as defects are identified. Such periodic assessment of all sewer pipe reflects industry best practices and the maintenance expectations of federal and state regulators as a part of avoiding sanitary sewer overflows.
- 24. <u>Crozet Interceptor</u>: The Crozet Interceptor is located in western Albemarle County and serves the Crozet area. Flow metering indicated that the interceptor experienced substantial inflow and infiltration and requires rehabilitation. In order to minimize future infrastructure improvements, ACSA and RWSA have agreed to rehabilitate this interceptor and the sewers that flow to the interceptor. The initial phase of rehabilitation to repair defects in manholes and pipelines contributing to the inflow and infiltration in the interceptor upstream of Crozet Pump Station No. 4 has been completed. The current budget accounts for rehabilitation needs for the lower portions of the interceptor based upon previously completed condition assessments. While wet weather flows have moderately improved based on the initial phase of work, the

ACSA and RWSA continue to investigate and remediate deficiencies along the entire interceptor.

The force main component of the Crozet Interceptor was installed in 1986, and it conveys wastewater from Crozet to the RWSA Urban Wastewater system through an 18" ductile iron pipeline and a series of four (4) pumping stations. Air Release Valves (ARVs) are strategically placed along the force main in order to prevent air-locking and continue conveyance of wastewater at full capacity. Over time, several of the tapping saddles that allow the ARVs to be mounted to the force main have degraded, which could lead to the ARVs becoming separated from the force main and subsequent sanitary sewer overflows. The overall goal of this project is to replace the highest-priority ARVs and/or tapping saddles along the force main. This project is slated to start immediately after the Crozet Flow Equalization Tank (FET) has come online in March 2021. The FET will allow for the force main to be taken offline for up to two (2) days, permitting the ARV assembly repairs to be performed in a safe manner and in a more feasible timeframe.

- 25. Crozet Flow Equalization Tank: Rehabilitation work in the RWSA and ACSA sewer systems is on-going to meet the Inflow and Infiltration (I/I) reduction goals in the Crozet Interceptor. This is based on the flow metering and modeling results of the Comprehensive Sanitary Sewer Model & Study conducted in 2006 and as part of the Crozet Interceptor CIP project. The results of the 2006 study were updated in 2016 to evaluate I/I reduction goals and future capital project needs. The need to proceed with construction of a flow equalization tank in the Crozet area was confirmed as a result of this study update, which took in to account recent flow monitoring data that had been collected following previous I/I reduction efforts. Based on those results, a preliminary engineering evaluation and siting analysis of a flow equalization tank upstream of Crozet Pump Station No. 4 was completed to ensure that the facility could be designed, permitted, constructed and ready for operation to meet projected two-year storm flow targets.
- 26. Crozet Pump Station 1, 2, 3 Rehabilitation: The Crozet Interceptor Pump Stations were constructed in the 1980's and many of the components are still original. This project includes the replacement of pumps and valves at Pump Station 2 in order to improve pumping capabilities at this location and provide spare parts for the pumps at Pump Station 1. It also includes roof replacements at all four pump stations, siding replacement for the wet well enclosure at Pump Station 3, and installation of new water wells at Pump Stations 3 and 4.
- 27. <u>Albemarle-Berkley Pump Station Upgrade</u>: The Albemarle-Berkeley Pump Station was constructed in 1975 and conveys flows from several Albemarle County Public Schools and other ACSA customers into RWSA's gravity Albemarle-Berkeley Interceptor. Recently, the pump station's run times have increased, with the pumps running nearly continuously for some periods. It is anticipated that much of the pumping infrastructure has reached or exceeded its expected lifespan, and that the equipment may be in need of replacement.

 Under this project, staff will work with a consultant to perform a Capacity Analysis for the pump station, which will help quantify the current and future flows into the pump station, based

formulate a set of bidding documents that will include the installation of bypass pumping, demolition of the existing pump station, and construction of a new pumping station that is sized to meet the current and future flows as determined by the Capacity Analysis.

- 28. <u>Albemarle-Berkley Pump Station Basin Demolition</u>: Historically, the Albemarle Berkley Pump Station was located adjacent to an open-air basin that occasionally collected sewage during power outages. With the addition of a back-up power generator, the basin no longer serves a technical purpose. Given the proximity of the deteriorating structure to school property, this project serves to demolish and fill the area of the existing basin to allow for a more beneficial use of the property. Preliminary design of the basin demolition began in Fall 2019, and the demolition is scheduled to be completed by Summer 2020.
- 29. Interceptor Sewer and Manhole Repair Phase 2: This project is used to conduct assessments of various interceptors as well as rehabilitation of interceptors that do not have a separate CIP project. Phase 1 of the Interceptor Sewer and Manhole Repair Project included the completion the baseline evaluation of all RWSA interceptors (except those replaced with new pipe), as well as rehabilitation of the Upper Morey Creek Interceptor, and beginning of rehabilitation on the Lower Morey Creek and Powell Creek Interceptors. Planned projects for Phase 2 include continuation of rehabilitation on the Lower Morey Creek and Powell Creek Interceptors, as well as rehabilitation along the Moores Creek, Moores Creek Relief, and Upper Rivanna Interceptors. Similar to Phase 1, a sewer rehabilitation contract will be developed under this project in order to procure a dedicated contractor for any evaluation and rehabilitation work specified. Rehabilitation of existing sanitary sewer pipe and manholes reduces Inflow & Infiltration (I & I) in the system, thus reducing the chance for sanitary sewer overflows (SSOs) during high flow events.

Urban Wastewater Interceptors/Pumping Stations

		Five-	Year Capital Pro	gram		Projected	Future Expense	s by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
22	Upper Schenks Branch Interceptor	\$3,985,000		\$120,000	\$3,180,000	\$685,000				\$3,985,000	\$11,187
23	Interceptor Sewer and Manhole Repair (Phase 1)	\$1,088,330		\$1,088,330						\$1,088,330	\$268,367
24	Crozet Interceptor	\$625,000	\$225,000	\$394,615	\$395,385	\$90,000				\$880,000	\$181,975
25	Crozet Flow Equalization Tank	\$4,860,000		\$4,860,000						\$4,860,000	\$255,319
26	Crozet Pump Station 1, 2, 3 Rehabilitation	\$545,000	\$45,000	\$295,000		\$45,000	\$205,000	\$45,000		\$590,000	
27	Alb. Berkley PS Upgrade		\$40,000						\$40,000	\$40,000	
28	Alb. Berkley PS - Basin Demolition	\$200,000			\$165,000	\$35,000				\$200,000	
29	Interceptor Sewer and Manhole Repair (Phase 2)		\$695,000						\$695,000	\$695,000	
	TOTAL	\$11,303,330	\$1,005,000	\$6,757,945	\$3,740,385	\$855,000	\$205,000	\$45,000	\$735,000	\$12,338,330	\$716,848

Moores Creek Advanced Water Resource Recovery Facility

The Moores Creek Advanced Water Resource Recovery Facility (MCAWRF) is the largest wastewater treatment facility within the RWSA system. The plant was originally constructed in 1958 and upgraded and expanded in 1981 and 1982, and currently has a rated capacity of 15 mgd. From 2009 thru 2012 the facility was upgraded to provide enhanced nutrient removal, and increased wet weather pumping and treatment capacity. This site includes the infrastructure for the wastewater treatment process as well as the RWSA administration facilities.

Project Descriptions:

- 30. Moores Creek AWRRF Odor Control Phase 2: As part of the implementation of the next phase of the 2007 Odor Control Master Plan at the MCAWRRF, operations audits were performed, liquid and vapor phase sampling was conducted, and a computerized dispersion model was developed from 2013 to 2014. Recommendations for odor control improvements that would significantly control odors from traveling beyond the MCAWRRF fence line were presented to the RWSA Board of Directors in December 2014 and the CIP project was approved at the January 2015 Meeting, with subsequent increases due to project challenges. The final design for odor control improvements includes covering the head works and screening channels, installing grit facilities, constructing a bypass line through one equalization basin, covering the primary clarifiers, building additional odor scrubbing facilities to treat the foul air from the covered sources, removing the post-digestion clarifiers from service, modifying the handling, and hauling and storage of bio solids, all of which has been recently completed in Odor Control Improvements Project. The remaining odor control work included in the current CIP budget includes cleaning the equalization basins and holding ponds which is anticipated to be bid this spring and coating the interior of the digesters which is ongoing.
- 31. Moores Creek AWWRF Engineering and Administration Building: RWSA currently has its administrative headquarters in two buildings on the grounds of the Moores Creek Advanced Water Resource Recovery Facility. The two-story Administration Building was constructed in the early 1980's and houses offices, IT server space, meeting space and a full service laboratory. The second building is a series of four trailers installed in between 2003-2010 that house the engineering department. The Administration building is located at the head of the wastewater treatment plant and is surrounded by underground piping and process functions that may conflict with existing parking and/or the building in a future plant expansion. There is currently a need to house additional staff; increase office and meeting space; plan for the replacement of the trailers; bring the IT server workrooms to modern standards; provide classroom space for education outreach. This project is currently planned to begin after the completion of the MCAWRRF Master Plan is complete.
- 32. Moores Creek AWWRF Digester Sludge Storage Improvements: The sole sludge storage tank at the MCAWRRF was constructed in 1959 of reinforced concrete and is in need of repairs. The scope of work would include piping modifications, hydraulic improvements, tank safety improvements such as handrail and lights, and structural improvements to the existing sludge storage tank roof.

- 33. Moores Creek AWWRF Aluminum Slide Gate Replacement: 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 access and repair the gates, it is now necessary to replace and modify the gate arrangement. The replacement includes new gates for greater flexibility and resiliency as well as significant flow bypass pumping. Likewise, there are several gates at the Ultraviolet disinfection facility that leak water, causing a reduced capacity of the facility. Replacement of these gates will restore the process to full capacity. Two additional gates in the holding pond pump station from the original 1977 Moores Creek facility construction are broken and non-operational and will be replaced as part of this work. In addition, motor operated valves at the headworks will improve wet weather operations related to the new grit facility.
- 34. Moores Creek AWRRF 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.
- 35. Moores Creek AWRRF Mechanical Thickener: During the design of the Moores Creek AWRRF Phase 2 Odor Control project, the consultants conducted a detailed evaluation of all facility odor sources. One of the key sources identified, was the post-digestion clarifiers. These clarifiers are two round open-topped tanks of digested wastewater sludge, located on the north side of the plant. During the ENR upgrade, the characteristics of the post-aeration sludge changed. This change has led to less predictable sludge handing through the existing gravity thickeners. This change in the post-aeration sludge characteristics has made obtaining a clear thickener overflow more difficult without chemical addition. Removing the post-digestion clarifiers from service combined with solids carryover from the existing gravity thickeners create a number of downstream consequences in primary clarification, sludge digestion and solids dewatering. Removing these facilities from service reduces the sludge thickness and therefore the plant's ability to adequately process it. This project includes the design and installation of a mechanical thickener prior to digestion that will increase plant solids processing reliability and capacity.
- 36. Moores Creek AWRRF Compost Shed Roof Rehabilitation: In the early 1980's a large metal-framed shed roof was constructed to house the biosolids composting operations. Subsequent to stopping composting at Moores Creek AWRRF, the shed serves as an equipment maintenance yard, solids handling facility and material storage lock-up. The shed roof is exhibiting signs of rafter deterioration and ongoing drainage issues. This project will evaluate and perform remediation needs at this facility.

- 37. Moores Creek AWRRF Gas Sphere Rehabilitation: The gas sphere was constructed in 1980 and is used to house pressurized methane gas as part of the boiler and cogeneration system at the plant. The sphere was inspected in 2005 and it was determined that the coating system was near the end of its serviceable life and the tank should be recoated in addition to some minor grout repairs and safety improvements. This project will include additional inspections to update the needed improvements, a recoating of the exterior of the tank, repairs to the grout around the concrete ring wall, installation of a safety climb on the exterior of the tank and other minor repairs.
- 38. Moores Creek AWRRF Cogeneration Upgrades: The MCAWRRF has an existing cogeneration facility that was constructed in 2011. The purpose of the facility was to provide a beneficial purpose for using the gas produced by the digester process at the plant, and in doing so provide both process heating fluid to the digester tanks and electrical energy to the plant's electrical distribution system. Unfortunately, the existing cogeneration facility requires expensive recurring maintenance services, has proprietary equipment which further complicates servicing needs, and has had a number of operational issues that have impeded the benefit this facility was intended to provide. As a result, a Cogeneration System Analysis was performed to determine a recommended approach for proceeding with improvements to the existing facility, installation of a new cogeneration facility without the issues of the previous facility or removing the cogeneration facility altogether and providing a backup boiler. This project includes costs of installation of a new cogeneration facility as described in the Cogeneration System Analysis.
- 39. Moores Creek AWRRF Maintenance Building Space: The Moores Creek Maintenance Department facilities are undersized to serve the current staffing; parts storage and oil and grease storage needs. The Moores Creek Master Plan is currently evaluating plant needs into the future and will provide specific recommendations for the Maintenance Department. Preliminarily, this project will increase personal spaces such as offices and a locker room. Additionally, the project will construct a new oil and grease storage facility that will meet all current best practices for safety and fire suppression. Lastly, the project will address the need for additional conditioned parts storage.
- 40. Moores Creek AWRRF Structural Modifications: The aeration basins located at Moores Creek are a series of chambers that each have uniquely controlled oxygen and nutrient loading conditions. Mid way thru the basins are ten nitrogen recycle (NCRY) pumps. Due to the corrosive atmosphere, these submersed pumps require being pulled and rebuilt frequently. To remove the pumps, staff must currently hire a long boom crane. This project will provide the means to pull, move, and load the pumps during maintenance activities.

Two of the six pumps in the New Rivanna Pump Station are smaller and were designed to be replaced if future average day flows warrant increased capacity. The current configuration resulted in several valves being located approximately 40 feet above the pump floor level. Valve maintenance activities have been challenging due to their height. A project is proposed to install a catwalk from the upper mezzanine level to each valve to provide a safer, walkable access to each valve.

- 41. Moores Creek AWRRF In-plant 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.
- 42. <u>Moores Creek AWRRF Generator Fuel Storage Expansion</u>: 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.
- 43. Moores Creek AWRRF Meter and Valve Replacements: As part of the Odor Control Phase II Project, the post digestion clarifiers were eliminated from use and the gravity thickener overflow was diverted through existing piping directly to the Moores Creek Pump Station at the head of the treatment facility. This resulted in less odor generation, however, the gravity thickener overflow lost its metering location at the post digestion clarifiers. A new metering manhole location was installed near the Moores Creek Pump Station where several plant recycle flows come together. Unfortunately, this meter location has been problematic and is subject to backwater flows from the pump station and meter fouling from grease and solids. This project involves installation of individual meters on each recycle flow at locations that will provide less operation and maintenance problems.

The circulation of Waste Activated Sludge (WAS) and Return Activated Sludge (RAS) is important in the wastewater process to maintain a healthy balance of microorganisms. The existing WAS and RAS flow meters are original to the 1980's construction of the facility and are nearly 40 years old. These meters can no longer be calibrated and replacement parts are not available. Replacement of these meters is necessary for process and operational efficiency

44. <u>Moores Creek AWWRF Facility Renovations</u>: The RWSA Administration Building Board Room finishes are generally original to the facility. The proposed project will update the wall and floor coverings, alter the shelving and update the room furnishings in order to created a more modern and useable meeting space.

The Duty Pump Station was constructed in 1958 and no longer functions as an actual pump station. It currently houses electrical equipment that serves the plant, but otherwise has available space that could be beneficially used for other purposes. RWSA has a need for additional office space and has evaluated repurposing portions of the Duty Pump Station for office and work space in order to make use of all available space at the plant before proceeding with more significant administrative expansions. This project includes demolition of a select

portion of the interior of the station, cleaning and sanitizing of the areas to be repurposed, and an interior upfit of the space to provide additional office and work space.

- 45. Moores Creek AWRRF 5kV Electrical System Upgrade: Much of the original 5kV wire at Moores Creek AWRRF was replaced with the Enhanced Nutrient Removal (ENR) Upgrades and the New Rivanna Pump Station Project and brought up to current codes. Several portions of the original 50 year old wire and switchgear remain in the blower building and feed critical portions of the facility. This project will replace the remaining 5kV wire and increase the reliability of the facility.
- 46. Moores Creek AWRRF Lighting Upgrade: 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 is currently compiling 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.

Moores Creek Advanced Water Resource Recovery Facility

		Five-	Year Capital Pro	gram		Projected	Future Expense				
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
30	Moores Creek AWRRF Odor Control - Phase 2	\$2,216,632		\$2,216,632						\$2,216,632	\$1,000,530
31	Moores Creek AWRRF Engineering and Administration Building		\$250,000					\$250,000		\$250,000	
32	Moores Creek AWRRF Digester Sludge Storage Improvements	\$313,000	\$237,000	\$265,000	\$285,000					\$550,000	
33	Moores Creek AWRRF Aluminum Slide Gate Replacements	\$470,000	\$205,000	\$470,000	\$205,000					\$675,000	\$6,853
34	Moores Creek AWRRF Master Plan	\$250,000	\$25,000	\$75,000	\$200,000					\$275,000	
35	Moores Creek AWRRF Mechanical Thickener Improvement		\$100,000						\$100,000	\$100,000	
36	Moores Creek AWRRF Compost Shed Roof Rehabiliation	\$200,000				\$200,000				\$200,000	
37	Moores Creek AWRRF Gas Sphere Rehabilitation		\$80,000						\$80,000	\$80,000	
38	Moores Creek AWRRF Cogeneration Upgrades		\$1,865,000		\$245,000	\$1,620,000				\$1,865,000	
39	Moores Creek AWRRF Maintenance Building		\$105,000						\$105,000	\$105,000	
40	Moores Creek AWRRF Structural Modifications		\$575,000				\$350,000	\$225,000		\$575,000	
41	Moores Creek AWRRF In- plant Clarifier and Lime Silo Demolition		\$655,000		\$185,000	\$470,000				\$655,000	

Moores Creek Advanced Water Resource Recovery Facility (Continued)

		Five-	Year Capital Pro	gram		Projected	Future Expense	s by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
42	Moores Creek AWRRF Generator Fuel Storage Expansion		\$100,000		\$100,000					\$100,000	
43	Moores Creek AWWRF Meter and Valve Replacements		\$660,000		\$380,000	\$120,000	\$160,000			\$660,000	
44	Moores Creek AWRRF Facility Renovations		\$375,000		\$375,000					\$375,000	
45	Moores Creek AWRRF 5kV Electrical System Upgrade		\$500,000						\$500,000	\$500,000	
46	Moores Creek AWRRF Lighting Upgrade		\$1,000,000		\$1,000,000					\$1,000,000	
	TOTAL	\$3,449,632	\$6,732,000	\$3,026,632	\$2,975,000	\$2,410,000	\$510,000	\$475,000	\$785,000	\$10,181,632	\$1,007,383

Scottsville Wastewater System

The Scottsville Wastewater System includes the influent pumping station, the water resource recovery facility constructed in 1983, and the historical treatment lagoon (now incorporated into the plant operation). The water resource recovery facility has a rated capacity of 0.2 mgd.

Project Descriptions:

- 47. <u>Scottsville WRRF Grinder and Air Control Improvements</u>: This project will evaluate methods to automate air control for the biological treatment process. The current method of air control produces inconsistent results, adversely impacting treatment and operations.
- 48. <u>Scottsville WRRF Whole Plant Generator and ATS</u>: The current back-up power generator at the Scottsville Water Treatment Plant does not power the entire plant, serving only the facilities needed to send flow to the lagoons. This project will provide for a plant-wide generator and automatic transfer switch. This project will offer greater treatment flexibility and monitoring capability for the operations staff; particularly when the plant is unmanned and monitored remotely.

Scottsville Water Resource Recovery Facility

		Five	-Year Capital Pro	gram		Projected	Future Expense	s by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
47	Scottsville WRRF Air Control Improvements	\$210,000		\$65,000	\$145,000					\$210,000	
48	Scottsville WRRF Whole Plant Generator and ATS		\$125,000				\$125,000			\$125,000	
	TOTAL	\$210,000	\$125,000	\$65,000	\$145,000	\$0	\$125,000	\$0	\$0	\$335,000	\$0

Glenmore Wastewater System

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.

Project Descriptions:

49. <u>Glenmore WRRF Influent Pump & VFD Addition</u>: 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.

Glenmore Water Resource Recovery Facility

		Five	-Year Capital Pro	gram		Projected	Future Expense	s by Year			
ine No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
49	Glenmore WRRF Influent Pump and VFD Addition	\$65,000			\$65,000					\$65,000	
	TOTAL	\$65,000	\$0	\$0	\$65,000	\$0	\$0	\$0	\$0	\$65,000	\$0

All Systems

Project Descriptions:

- 50. Radio Upgrades: The regional 800 MHz Public Safety Communication System, in which the Rivanna Water and Sewer Authority participates to provide internal and emergency radio communication, is nearing the end of its service life. Because of technology changes (software and hardware) the Charlottesville-UVA-Albemarle County Emergency Communications Center (ECC) will need to upgrade or replace the system to keep it useable. This project plans for the upgrade or replacement of major technology components and equipment of the existing system include: electronic components at all tower sites and the prime site at the ECC facility; new console equipment at the regional ECC; equipment such as tower site generators and UPS systems; an additional tower site (to improve service in southern Albemarle County); microwave backbone; and replacement of the system recording facilities. RWSA is being apportioned a part of the \$18.8M project cost proportionately based on the number of radios (2.4% of the total project cost). In addition to this assessment from the ECC, the Authority will also be required to undertake upgrades to its fleet of portable radios.
- 51. Asset Management: 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 resources 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 was 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 facility, and assistance through a full implementation process. Procurement of a software package to facilitate the overall program are also included in this project.
- 52. Security Enhancements: As required by the federal Bioterrorism Act of 2002, water utilities must conduct vulnerability assessments (VA) and have emergency response plans. RWSA recently completed a VA of its water system in collaboration with other regional partners and identified a number of security improvements that could be applied to both its water and wastewater systems. The purpose of this project will be to install security improvements at RWSA facilities such as an enhanced access control program, industrial strength door and window components, security gate and fencing modifications, an improved lock and key program, facility signage, closed circuit television (CCTV) enhancements, intrusion detection systems (IDS), additional security lighting, mass emergency notification systems, and emergency call stations/panic buttons. In order to implement an access control system at Authority-owned facilities, staff has procured an Implementer that will finalize system design/requirements, procure all necessary equipment, and install the chosen system. Implementation of the access control system at Authority-owned facilities began in Winter 2019-2020.

53. <u>IT Master Plan – Software</u>: Staff is currently updating an IT Master Plan which assessed and benchmarked current software and business practices. Work is currently underway to reconfigure the Network infrastructure and to install and implement major software initiatives. This project will continue to address those Authority wide needs.

All Systems

		Five-	Year Capital Pro	gram		Projected	Future Expense	es by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in-Progress (Prev. Expenses 6/30/2019)
50	Radio Upgrades	\$646,000	(\$246,000)	\$521,000	(\$121,000)					\$400,000	\$75,352
51	Asset Management	\$500,000	\$615,000	\$300,000	\$435,000	\$215,000	\$130,000	\$35,000		\$1,115,000	\$92,285
52	Security Enhancements	\$1,000,000	\$1,730,000	\$1,000,000	\$550,000	\$115,000	\$510,000	\$515,000	\$40,000	\$2,730,000	
53	IT Master Plan - Software	\$450,000		\$150,000	\$150,000	\$150,000				\$450,000	
	TOTAL	\$2,596,000	\$2,099,000	\$1,971,000	\$1,014,000	\$480,000	\$640,000	\$550,000	\$40,000	\$4,695,000	\$167,637

APPENDICES

CIP Financial Summary

Water System Summary

Wastewater System Summary

All Systems Summary

CIP Financial Summary

		Five-	-Year Capital Prog	gram		Projecte					
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in- Progress (Prev. Expenses 6/30/2019)
1	South Rivanna Reservoir to Ragged Mountain Reservoir Water Line Right- of-Way	\$2.295.000	\$0	\$1,710,249	\$584,751					\$2,295,000	\$301,054
2	South Rivanna Reservoir Dredging	\$10,000	(\$10,000)	\$0						\$0	\$0
3	Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Line	\$3,217,000	\$4,280,000	\$0		\$325,000	\$1,186,000	\$1,706,000	\$4,280,000	\$7,497,000	\$0
4	Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Pump Station	\$660,000	\$1,890,000	\$0		\$210,000	\$320,000	\$510,000	\$1,510,000	\$2,550,000	\$0
5	Observatory Water Treatment Plant Improvements	\$19,700,000	\$6,300,000	\$2,648,198	\$5,051,802	\$14,700,000	\$3,600,000			\$26,000,000	\$618,880
6	Sugar Hollow Dam Rubber Crest Gate Replacement	\$1,140,000	\$560,000	\$470,000	\$760,000	\$470,000				\$1,700,000	\$0
7	Valve Repair & Replacement (Phase 2)	\$882,914	\$250,000	\$1,132,914						\$1,132,914	\$154,218
8	Central Water Line	\$2,100,000	\$2,850,000	\$1,375,000				\$725,000	\$2,850,000	\$4,950,000	\$137,749
9	South Fork Rivanna River Crossing	\$5,340,000	(\$2,540,000)	\$0	\$260,000	\$922,000	\$1,618,000			\$2,800,000	\$0
10	Airport Rd. Pump Station and North Rivanna Transmission Main	\$2,300,000	\$3,550,000	\$201,000	\$1,574,000	\$3,200,000	\$875,000			\$5,850,000	\$0
11	Finished Water System Master Plan	\$253,000	\$0	\$253,000						\$253,000	\$20,307

		Five	-Year Capital Prog	gram		Projecte	d Future Expenses	s by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in- Progress (Prev. Expenses 6/30/2019)
12	South Rivanna Hydropower Plant Decomissioning	\$725,000	\$0	\$725,000						\$725,000	\$127,081
13	South Rivanna Water Treatment Plant Improvements	\$15,000,000	\$2,000,000	\$8,046,415	\$7,353,585	\$1,600,000				\$17,000,000	\$619,031
14	South Rivanna Dam - Gate Repairs	\$900,000	\$0	\$900,000						\$900,000	\$0
15	North Rivanna Water Treatment Plant Upgrade	\$2,325,000	(\$1,000,000)	\$385,000		\$940,000				\$1,325,000	\$0
16	Beaver Creek Dam & Pump Station Improvements	\$9,036,000	\$11,722,000	\$1,007,000	\$336,000	\$1,050,000	\$6,435,000	\$6,010,000	\$5,920,000	\$20,758,000	\$288,134
17	Crozet Water Treatment Plant Expansion	\$8,500,000	\$0	\$8,044,000	\$456,000					\$8,500,000	\$1,238,717
18	Crozet Ground Storage Tank Leak Repair	\$0	\$100,000	\$0	\$100,000					\$100,000	\$0
19	Buck's Elbow Tank and Waterball Painting	\$0	\$83,000	\$0					\$83,000	\$83,000	\$0
20	Scottsville Water Treatment Plant LT2 Improvements	\$100,000	\$60,000	\$100,000	\$60,000					\$160,000	\$0
21	Scottsville Water Treatment Plant Lagoon Liner Replacement	\$0	\$315,000	\$0			\$140,000	\$175,000		\$315,000	\$0
22	Upper Schenks Branch Interceptor	\$3,985,000	\$0	\$120,000	\$3,180,000	\$685,000				\$3,985,000	\$11,187

		Five	-Year Capital Prog	gram		Projecte	d Future Expenses	by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in- Progress (Prev. Expenses 6/30/2019)
23	Interceptor Sewer and Manhole Repair - Phs 1	\$1,088,330	\$0	\$1,088,330						\$1,088,330	\$268,367
24	Crozet Interceptor	\$625,000	\$225,000	\$394,615	\$395,385	\$90,000				\$880,000	\$181,975
25	Crozet Flow Equalization Tank	\$4,860,000	\$0	\$4,860,000						\$4,860,000	\$255,319
26	Crozet Pump Station 1, 2, 3 Rehabilitation	\$545,000	\$45,000	\$295,000		\$45,000	\$205,000	\$45,000		\$590,000	\$0
27	Alb. Berkley Pump Station Upgrade	\$0	\$40,000	\$0					\$40,000	\$40,000	\$0
28	Alb. Berkley Pump Station - Basin Demolition	\$200,000		\$0	\$165,000	\$35,000				\$200,000	\$0
29	Interceptor Sewer and Manhole Repair - Phs 2	\$0	\$695,000	\$0					\$695,000	\$695,000	\$0
30	Moores Creek AWRRF Odor Control Phase 2	\$2,216,632	\$0	\$2,216,632						\$2,216,632	\$1,000,530
31	Moores Creek AWWRF Engineering and Administration Building	\$0	\$250,000	\$0				\$250,000		\$250,000	\$0
32	Moores Creek AWWRF Digester Sludge Storage Improvements	\$313,000	\$237,000	\$265,000	\$285,000					\$550,000	\$0
33	Moores Creek AWWRF Aluminum Slide Gate Replacements	\$470,000	\$205,000	\$470,000	\$205,000					\$675,000	\$6,853

		Five	-Year Capital Prog	gram		Projecte	d Future Expenses	by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in- Progress (Prev. Expenses 6/30/2019)
34	Moores Creek AWRRF Master Plan	\$250,000	\$25,000	\$75,000	\$200,000					\$275,000	\$0
35	Moores Creek AWWRF Mechanical Thickener Improvement	\$0	\$100,000	\$0					\$100,000	\$100,000	\$0
36	Moores Creek AWRRF Compost Shed Roof Rehabiliation	\$200,000		\$0		\$200,000				\$200,000	\$0
37	Moores Creek AWRRF Gas Sphere Rehabilitation	\$0	\$80,000	\$0					\$80,000	\$80,000	\$0
38	Moores Creek AWRRF Cogeneration Upgrades	\$0	\$1,865,000	\$0	\$245,000	\$1,620,000				\$1,865,000	\$0
39	Moores Creek AWRRF Maintenance Building	\$0	\$105,000	\$0					\$105,000	\$105,000	\$0
40	Moores Creek AWWRF Structural Modifications	\$0	\$575,000	\$0			\$350,000	\$225,000		\$575,000	\$0
41	Moores Creek AWWRF In- plant Clarifier and Lime Silo Demolition	\$0	\$655,000	\$0	\$185,000	\$470,000				\$655,000	\$0
42	Moores Creek AWWRF Generator Fuel Storage Expansion	\$0	\$100,000	\$0	\$100,000					\$100,000	\$0
43	Moores Creek AWWRF Meter and Valve Replacements	\$0	\$660,000	\$0	\$380,000	\$120,000	\$160,000			\$660,000	\$0
44	Moores Creek AWWRF Facility Renovations	\$0	\$375,000	\$0	\$375,000					\$375,000	\$0
45	Moores Creek AWWRF 5kV Electrical System Upgrade	\$0	\$500,000	\$0					\$500,000	\$500,000	\$0

		Five-	-Year Capital Prog	ram		Projecte	d Future Expenses	by Year			
Line No.	Project Description	Current CIP Adopted 5/2019	Proposed Changes	Current Capital Budget	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Recommended CIP	Work-in- Progress (Prev. Expenses 6/30/2019)
46	Moores Creek AWWRF Lighting Upgrade	\$0	\$1,000,000	\$0	\$1,000,000					\$1,000,000	\$0
47	Scottsville WRRF Air Control Improvements	\$210,000		\$65,000	\$145,000					\$210,000	\$0
48	Scottsville WRRF Whole Plant Generator and ATS	\$0	\$125,000	\$0			\$125,000			\$125,000	\$0
49	Glenmore WRRF Influent Pump & VFD Addition	\$65,000	\$0	\$0	\$65,000					\$65,000	\$0
50	Radio Upgrades	\$646,000	(\$246,000)	\$521,000	(\$121,000)					\$400,000	\$75,352
51	Asset Management	\$500,000	\$615,000	\$300,000	\$435,000	\$215,000	\$130,000	\$35,000		\$1,115,000	\$92,285
52	Security Enhancements	\$1,000,000	\$1,730,000	\$1,000,000	\$550,000	\$115,000	\$510,000	\$515,000	\$40,000	\$2,730,000	\$0
53	IT Master Plan - Software	\$450,000	\$0	\$150,000	\$150,000	\$150,000				\$450,000	\$0
	Total	\$92,107,876	\$40,371,000	\$38,818,353	\$24,475,523	\$27,162,000	\$15,654,000	\$10,196,000	\$16,203,000	\$132,508,876	\$5,397,039

Water System Summary

		Sumi	mary	,					Project	ted I	Future Expenses	by Ye	ar					
Urban Water System	C	urrent CIP		Proposed Changes	Cu	rrent Capital Budget	FY21		FY22		FY23		FY24	FY25	Rec	commended CIP	Work-	in -Progress
PROJECT COSTS																		
Community Water Supply Plan	\$	10,182,000	\$	6,160,000	\$	1,710,249	\$ 584,751	\$	535,000	\$	1,506,000	\$	2,216,000	\$ 5,790,000	\$	12,342,000	\$	301,054
Observatory WTP/Ragged Mtn/Sugar Hollow Systems		20,840,000		6,860,000		3,118,198	5,811,802		15,170,000		3,600,000		-	-		27,700,000		618,880
Finished Water Storage/Distribution - Urban System		11,529,914		4,238,000		2,961,914	1,834,000		4,122,000		2,493,000		725,000	2,850,000		14,985,914		312,274
South & North Fork Rivanna WTP and Reservoir System		18,950,000		2,000,000		10,056,415	7,353,585		2,540,000		-		-	-		19,950,000		746,112
Total Projects Urban Water Systems	\$	61,501,914	\$	19,258,000	\$	17,846,776	\$ 15,584,138	\$	22,367,000	\$	7,599,000	\$	2,941,000	\$ 8,640,000	\$	74,977,914	\$	1,978,320
FUNDING SOURCES URBAN SYSTEM - TO DATE																		
Work-in-Progress					\$	1,978,300	\$ -	\$	-	\$	-	\$	-	\$ -	\$	1,978,300		
Debt Proceeds Available 2015B						14,838,000	-		-		-		-	-		14,838,000		
Capital Funds Available						1,030,476	2,162,524		-		-		-	-		3,193,000		
SUBTOTAL						17,846,776	2,162,524		-		-		-	-		20,009,300		
FUNDING SOURCES URBAN SYSTEM - NEEDS																		
Future Cash reserve transfer to Capital Fund							\$ 1,000,000	\$	1,500,000	\$	1,500,000	\$	1,500,000	\$ 500,000	\$	6,000,000		
New Debt Needed						-	12,421,614		20,867,000		6,099,000		1,441,000	8,140,000		48,968,614		
SUBTOTAL						-	13,421,614		22,367,000		7,599,000		2,941,000	8,640,000		54,968,614		
							, ,				, ,		, , , , , , , , , , , , , , , , , , , ,	, ,		, ,		
TOTAL URBAN WATER FUNDING					\$	17,846,776	\$ 15,584,138	\$	22,367,000	\$	7,599,000	\$	2,941,000	\$ 8,640,000	\$	74,977,914		
							, , ,		, ,		, ,		, ,			\$74,977,914		
Estimated Bond Issues								Ġ	33,288,600			Ġ	15,680,000					
Estimated Bolid Issues								,	33,238,000				15,000,000					

	Sum	mary		Projected Future Expenses by Year						
Non-Urban Water System	Current CIP	Proposed Changes	Current Capital Budget	FY21	FY22	FY23	FY24	FY25	Recommended CIP	Work-in -Progress
PROJECT COSTS										
Crozet Water System	\$ 17,723,000	\$ 11,957,000	\$ 9,051,000	\$ 892,000	\$ 1,050,000	\$ 6,435,000	\$ 6,010,000	\$ 6,003,000	\$ 29,441,000	\$ 1,526,851
Scottsville Water System	245,000	655,000	100,000	60,000	-	140,000	175,000	-	475,000	5,485
Total Rural Water Systems	\$ 17,968,000	\$ 12,612,000	\$ 9,151,000	\$ 952,000	\$ 1,050,000	\$ 6,575,000	\$ 6,185,000	\$ 6,003,000	\$ 29,916,000	\$ 1,532,336
Non-URBAN FUNDING SOURCES										
Work in Progress			\$ 1,532,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,532,300	
Capital Funds Available			\$ 334,300						334,300	
Debt Proceeds 2018 Bond			7,284,400	952,000	1,050,000	1,641,701	-	-	10,928,101	
Future Cash reserve transfer to Capital Fund				280,000	170,000	100,000	100,000	100,000	750,000	
New Debt Needed			-	(280,000)	(170,000	4,833,299	6,085,000	5,903,000	16,371,299	
TOTAL NON-URBAN WATER FUNDING			\$ 9,151,000	\$ 952,000	\$ 1,050,000	\$ 6,575,000	\$ 6,185,000	\$ 6,003,000	\$ 29,916,000	
Estimated Bond Issues				\$ (450,000)			16,821,300			

Wastewater System Summary

	Summ	nary	у	Projected Future Expenses by Year												
Urban Wastewater System	Current CIP		Proposed Changes	1	Current Capital Budget		FY21		FY22		FY23	FY24		FY25	Reco	ommended CIP
PROJECT COSTS																
Wastewater Interceptor/Pumping Stations	\$ 11,303,330	\$	1,290,000	\$	6,757,945	\$	3,740,385	\$	855,000	\$	205,000	\$ 45,000	\$	735,000	\$	12,338,330
Moores Creek WWTP	3,449,632		7,782,000		3,026,632		2,975,000		2,410,000		510,000	475,000		785,000		10,181,632
Total Urban Wastewater Systems	\$ 14,752,962	\$	9,072,000		\$9,784,577		\$6,715,385		\$3,265,000		\$715,000	\$520,000		\$1,520,000		\$22,519,962
FUNDING SOURCES URBAN SYSTEM - IN PLACEA																
Work-in-Progress				\$	1,724,231	\$	-	\$	-	\$	-	\$ -	\$	-	\$	1,724,231
Debt Proceeds - 2018					3,722,700		-		-		-	=				3,722,700
Capital Funds Available					4,089,000		-		-		-	-		-		4,089,000
SUBTOTAL					9,535,931		-		-		-	-		-		9,535,931
FUNDING SOURCES URBAN SYSTEM - NEEDS																
Future Cash Reserves				\$	-	\$	1,500,000	\$	1,000,000	\$	500,000	\$ 500,000	\$	-	\$	3,500,000
New Debt Needed					248,646		5,215,385		2,265,000		215,000	 20,000		1,520,000		9,484,031
SUBTOTAL					248,646		\$6,715,385		3,265,000		715,000	520,000		1,520,000		12,984,031
TOTAL URBAN WASTEWATER FUNDING				\$	9,784,577	\$	6,715,385	\$	3,265,000	\$	715,000	\$ 520,000	\$	1,520,000	\$	22,519,962
Estimated Bond Issues								\$	7,729,000			\$ 1,755,000			\$	9,484,000

	Summ	nary	Current Canital		Project	ed Future Expenses	by Year			
Non-Urban Wastewater System	Current CIP	Proposed Changes	Current Capital Budget	FY21	FY22	FY23	FY24	FY25	Recommended CIP	Work-in - Progress
PROJECT COSTS										
Glenmore WWTP	\$ 175,000	\$ 50,000	\$ -	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ 65,000	\$ -
Scottsville WWTP	210,000	125,000	65,000	145,000	-	125,000	-	-	335,000	-
Total Rural Wastewater Systems	\$385,000	\$175,000	\$ 65,000	\$ 210,000	\$ -	\$ 125,000	\$ -	\$ -	\$ 400,000	\$ -
FUNDING SOURCES RURAL SYSTEM - NEEDS										
Capital Funds Available			\$ 46,000	\$ -					46,000	
Future Cash Reserve			-	100,000	-	-			100,000	
New Debt Needed			19,000	110,000	-	125,000	-	-	254,000	
TOTAL RURAL WASTEWATER FUNDING			\$ 65,000	\$ 210,000	\$ -	\$ 125,000	\$ -	\$ -	\$ 400,000	
Estimated Bond Issues					\$ 254,000					

All Systems Summary

	Sum	mary			Projected	Future Expense	es by Year			
Shared Projects - All Rate Centers	Current CIP	Proposed Changes	Current Capital Budget	FY21	FY22	FY23	FY24	FY25	Recommended CIP	Work-in - Progress
PROJECT COSTS										
Asset management/Security/IT Master Plan	\$ 2,596,000	\$ 2,099,000	\$ 1,971,000	\$ 1,014,000	\$ 480,000	\$ 640,000	\$ 550,000	\$ 40,000	\$ 4,695,000	\$ 167,637
Total Projects Urban Water Systems	\$ 2,596,000	\$ 2,099,000	\$ 1,971,000	\$ 1,014,000	\$ 480,000	\$ 640,000	\$ 550,000	\$ 40,000	\$ 4,695,000	\$ 167,637
Completed or Closed Projects	-	-								
FUNDING SOURCES										
Work in Progress			\$167,637						\$ 167,637	
Possible Future Reserves			\$200,000	\$100,000					\$300,000	
New Debt Needed			\$ 1,603,363	\$ 914,000	\$ 480,000	\$ 640,000	\$ 550,000	\$ 40,000	\$ 4,227,363	
					•				-	
TOTAL URBAN WATER FUNDING			\$ 1,971,000	\$ 1,014,000	\$ 480,000	\$ 640,000	\$ 550,000	\$ 40,000	\$ 4,695,000	
			,,_,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, 122,000	, 515,300	, 222,000	, 13,300	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Estimated Bond Issues					\$4,227,363					

		2021 - 2025 raft Proposed <u>CIP</u>	2	2020 - 2024 Adopted <u>CIP</u>		Change \$
Project Cost						
Urban Water Projects Urban Wastewater Projects Non-Urban Projects & Shared Total Project Cost Estimates	\$ \$	74,977,900 22,520,000 35,011,000 132,508,900	\$ \$	61,501,900 14,753,000 20,949,000 97,203,900	_	13,476,000 7,767,000 14,062,000 35,305,000
Funding in place						
Work-in-Progress (paid for) Debt Proceeds Used Cash-Capital Available Financing Needs	\$	5,402,500 29,488,800 7,686,300 42,577,600	\$ 	2,943,110 35,354,000 6,767,470 45,064,580	\$	2,459,390 (5,865,200) 918,830 (2,486,980)
Possible Future Reserves New Debt	\$ -	10,630,000 79,301,300 89,931,300	\$	7,530,000 44,609,320 52,139,320	_ \$	3,100,000 34,691,980 37,791,980
Total Funding	\$	132,508,900	\$	97,203,900	<u>\$</u>	35,305,000
Percentage of funding in place Ratio of debt to expense Ratio of cash to expense		32.1% 86.2% 13.8%		46.4% 85.3% 14.7%		

Detail by Major Systems Project Cost	Total <i>Draft</i> <u>CIP</u>	U	Jrban Water <u>Projects</u>	١	Urban Vastewater <u>Projects</u>	Shared <u>Projects</u>		Water Non-Urban <u>Projects</u>	Wastewater Non-Urban <u>Projects</u>		
Urban Water Projects Urban Wastewater Projects Non-Urban Projects & Shared	\$ 74,977,900 22,520,000 35,011,000	\$	74,977,900 - -	\$	- 22,520,000 -		4,695,000	\$ - - 29,916,000	\$	- - 400,000	
Total Project Cost Estimates	\$ 132,508,900	\$	74,977,900	\$	22,520,000	\$	4,695,000	\$ 29,916,000	\$	400,000	
Funding in place											
Work-in-Progress (paid for) Debt Proceeds available Cash-Capital Available	\$ 29,488,800 7,686,300	\$	1,978,300 14,838,000 3,193,000	\$	1,724,300 3,722,700 4,089,000		167,600	\$ 1,532,300 10,928,100 334,300	\$	70,000	
Subtotal <u>Financing Needs</u>	\$ 42,577,600	\$	20,009,300	\$	9,536,000	\$	167,600	\$ 12,794,700	\$	70,000	
Possible Future Reserves New Debt Subtotal	\$ 10,630,000 79,301,300 89,931,300	\$	6,000,000 48,968,600 54,968,600	\$	3,500,000 9,484,000 12,984,000	\$	300,000 4,227,400 4,527,400	\$ 750,000 16,371,300 17,121,300	\$	80,000 250,000 330,000	
Total Funding	\$ 132,508,900	\$	74,977,900	\$	22,520,000	<u>\$</u>	4,695,000	\$ 29,916,000	\$	400,000	
Percentage of funding in place Ratio of debt to expense Ratio of cash to expense	32.1% 86.2% 13.8%		26.7% 85.1% 12.3%		42.3% 58.6% 33.7%		3.6% 90.0% 6.4%	42.8% 91.3% 3.6%		17.5% 62.5% 37.5%	

				<u>Urban</u>					
	<u>U</u>	Irban Water	W	<u>Vastewater</u>		Non-Urban		<u>Shared</u>	<u>Total</u>
Current Adopted CIP 2020 - 2024	\$	61,501,900	\$	14,753,000	\$	18,353,000	\$	2,596,000	\$ 97,203,900
Changes: Completed or Closed Projects		(4,654,000)		_		(442,000)		_	(5,096,000)
Adjustments on existing Projects		18,130,000		3,782,000		11,782,000		2,099,000	35,793,000
New Projects				3,985,000	_	623,000	_		 4,608,000
Total Changes		13,476,000		7,767,000		11,963,000		2,099,000	35,305,000
Total Draft CIP 2021 - 2025	\$	74,977,900	\$	22,520,000	\$	30,316,000	\$	4,695,000	\$ 132,508,900

		<u> </u>	Y 2019		FY 2020		FY 2021		FY 2022	FY 2023		FY 2024		FY 2025
City of Charlottesville Charge	<u>qes</u>													
<u>Urban Water</u>														
Operating Rate	Per 1000 gal.		2.07		2.095		2.095		2.493	2.692		2.854		3.025
	% Change				1.2%		0.0%		19.0%	8.0%		6.0%		6.0%
Debt Service Charge	Per month	\$	181,008	\$	193,580		193,580		236,827	257,545		278,220		298,856
					6.9%		0.0%		22.3%	8.7%		8.0%		7.4%
Revenue Requirements:														
Operating Rate Revenue	Annual	\$:	3.587.700	\$	3,630,500	\$	3,630,500	\$	4,320,295 \$	4,665,919	\$	4,945,874	Φ.	5,242,626
Debt Service Revenues	Annual	-	2,172,100	Ψ	2,323,000	Ψ	2,323,000	Ψ	2,841,923	3,090,542	Ψ	3,338,643	Ψ	3,586,271
Total	Annuai		5,759,800	\$	5,953,500	\$	5,953,500	\$	7,162,218 \$	7,756,461	\$	8,284,517	\$	8,828,897
Total	\$ Change	Ψ,	3,733,000	\$	193,700		3,933,300	\$	1,208,718 \$		\$	528,056		544,380
				φ	3.4%	Ψ	0.0%	φ	20.3%	8.3%	Ψ	6.8%	Ψ	6.6%
	% Change				3.4 /6		0.078		20.3 /6	0.5 /6		0.076		0.0 /6
Urban Wastewater														
Operating Rate	Per 1000 gal.		2.146		2.369		2.369		2.653	2.812		2.981		3.160
	% Change				10.4%		0.0%		12.0%	6.0%		6.0%		6.0%
Debt Service Charge	Per month	\$	408,260	\$	407,588		407,588		410,168	413,088		416,038		420,868
, and the second					-0.2%		0.0%		0.6%	0.7%		0.7%		1.2%
Revenue Requirements:														
Operating Rate Revenue	Annual	\$:	3,711,300	\$	4,016,800	\$	3,936,500	\$	4,408,880 \$	4,673,413	\$	4,953,818	\$	5,251,047
Debt Service Revenues	Annual		4,899,100	Ψ	4,891,100	Ψ	4,891,100	Ψ	4,922,015	4,957,055	Ψ	4,992,455	Ψ	5,050,415
Total	Airidai		8,610,400	\$	8,907,900	\$	8,827,600	\$	9,330,895 \$	9,630,468	\$	9,946,273	\$	10,301,462
10101	\$ Change	<u> </u>	5,515,155	\$		\$	(80,300)		503,295 \$		\$	315,805		355,189
	% Change			*	3.5%	•	-0.9%	*	5.7%	3.2%	*	3.3%	•	3.6%
	ŭ													
Total all Rate Centers								_					_	
Operating Rate Revenue			7,299,000	\$	7,647,300	\$,,	\$	8,729,175 \$, ,	\$	9,899,691	\$	10,493,673
Debt Service Revenues			7,071,200	_	7,214,100	_	7,214,100	_	7,763,938	8,047,597	_	8,331,098	_	8,636,686
Total City All Revenues		\$ 14	4,370,200	\$	14,861,400	_	14,781,100	\$	16,493,113 \$	17,386,928	_	18,230,789	\$	19,130,359
	\$ Change			\$,	\$	(80,300)	\$	1,712,013 \$,	\$	843,861	\$	899,569
	% Change				3.4%		-0.5%		11.6%	5.4%		4.9%		4.9%
Additional for 10-Year CIP									168,527	449,075		739,458		1,050,408
Total Estimated Charge		\$ 14	4,370,200	\$	14,861,400	\$	14,781,100	\$	16,661,640 \$		\$	18,970,247	\$	20,180,767
% Change					3.4%		-0.5%		12.7%	7.0%		6.4%		6.4%

ACSA Charges									FY 2022		FY 2023		FY 2024		FY 2025
<u>Jrban Water</u>															
Operating Rate	Per 1000 gal.		2.07		2.095		2.095		2.493		2.692		2.854		3.025
	% Change				1.2%		0.0%		19.0%		8.0%		6.0%		6.0%
Debt Service Charge	Per month	\$	307,598	\$	321,303		321,303		379,826		406,054		433,785		458,080
•					4.5%		0.0%		18.2%		6.9%		6.8%		5.6%
Revenue Requirements:															
Operating Rate Revenue	Annual	\$	3,447,000	\$	3,488,100	\$	3,488,100	\$	4,150,839	\$	4,482,906	\$	4,751,880	\$	5,036,993
Debt Service Revenues	Annual		3,691,200		3,855,600		3,855,600		4,557,906		4,872,642		5,205,424		5,496,963
Total		\$	7,138,200	\$	7,343,700	\$	7,343,700	\$	8,708,745	\$	9,355,548	\$	9,957,304	\$	10,533,956
	\$ Change			\$	205,500	\$	-	\$	1,365,045	\$	646,803	\$	601,756	\$	576,652
	% Change				2.9%		0.0%		18.6%		7.4%		6.4%		5.8%
Jrban Wastewater															
Operating Rate	Per 1000 gal.		2.146		2.369		2.369		2.653		2.812		2.981		3.160
	% Change				10.4%		0.0%		12.0%		6.0%		6.0%		6.0%
Debt Service Charge	Per month	\$	246,308	\$	278,174		278,174		298,484		307,364		316,274		322,674
2001 Colling Change	. or monar	Ψ	2 .0,000	*	12.9%		0.0%		7.3%		3.0%		2.9%		2.0%
Revenue Requirements:															
Operating Rate Revenue	Annual	\$	3,565,800	\$	4,016,800	\$	4,097,100	\$	4,588,752	\$	4,864,077	\$	5,155,922	\$	5,465,277
Debt Service Revenues	Annual		2,955,700		3,338,100		3,338,100		3,581,812		3,688,372		3,795,292		3,872,092
Total		\$	6,521,500	\$	7,354,900	\$	7,435,200	\$	8,170,564	\$	8,552,449	\$	8,951,214	\$	9,337,369
	\$ Change			\$	833,400	\$	80,300	\$	735,364	\$	381,885	\$	398,765	\$	386,155
	% Change				12.8%		1.1%		9.9%		4.7%		4.7%		4.3%
Non-Urban Rate Centers															
Operating Rate Revenue	Annual	\$	2,075,300	\$	2,229,100		2,229,100		2,623,428		2,780,834		2,947,684		3,124,545
Debt Service Revenues	Annual		1,134,400		1,453,300		1,453,300		1,880,800		2,101,800		2,322,800		2,543,800
Total		\$	3,209,700	\$	3,682,400	\$	3,682,400	\$	4,504,228	\$	4,882,634	\$	5,270,484	\$	5,668,345
						\$	0.0%	\$	821,828 22.3%	\$	378,406 8.4%	\$	387,850 7.9%	\$	397,861 7.5%
Total all Rate Centers							0.070		22.070		0.170		1.070		1.070
Operating Rate Revenue		\$	9,088,100	\$	9,734,000	\$	9,814,300	\$	11,363,019	\$	12,127,817	\$	12,855,486	\$	13,626,815
Debt Service Revenues		*	7,781,300	•	8,647,000	•	8,647,000	•	10,020,518	•	10,662,814	•	11,323,516	•	11,912,855
Total ACSA All Revenues		\$ 1	6,869,400	\$	18,381,000	\$	18,461,300	\$	21,383,537	\$	22,790,631	\$	24,179,002	\$	25,539,670
	\$ Change	÷		\$	1,511,600	\$	80,300	\$	2,922,237	\$	1,407,094	\$	1,388,371	\$	1,360,668
	% Change			*	9.0%	•	0.4%	*	15.8%	•	6.6%	•	6.1%	•	5.6%
Additional for 10-Year CIP									271,752		676,810		1,099,329		1,582,753
Total Estimated Charge		\$ 1	6,869,400	\$	18,381,000	\$	18,461,300	\$	21,655,289	\$	23,467,441	\$	25,278,331	\$	27,122,423
% Change					9.0%		0.4%		17.3%		8.4%		7.7%		7.3%

		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024		FY 2025
RWSA														
Operations Revenues														
Urban Water		\$ 7,034,700	\$	7,118,600	\$	7,118,600	\$	8,471,134	\$	9,148,825	\$	9,697,754	\$	10,279,619
Urban Wastewater		7,277,100		8,033,600		8,033,600		8,997,632		9,537,490		10,109,739		10,716,324
Other Rate Centers		2,075,300		2,229,100		2,229,100		2,623,428		2,780,834		2,947,684		3,124,545
	Total	\$16,387,100	\$	17,381,300	\$	17,381,300	\$	20,092,194	\$	21,467,148	\$	22,755,177	\$	24,120,488
	Change \$			994,200		-		2,710,894		1,374,954		1,288,029		1,365,311
	Change %			6.1%		0.0%		15.6%		6.8%		6.0%		6.0%
Dalet Camilia Obania Barrana														
Debt Service Charge Revenues Urban Water		E 000 000		0 470 000		C 470 COO		7 200 020		7 000 404		0.544.007		0.000.004
		5,863,300		6,178,600		6,178,600		7,399,829		7,963,184		8,544,067		9,083,234
Urban Wastewater		7,854,800		8,229,200		8,229,200		8,503,827		8,645,427		8,787,747		8,922,507
Other Rate Centers		1,134,400	Φ	1,453,300	Φ	1,453,300	Φ	1,880,800	Φ	2,101,800	Φ.	2,322,800	Φ	2,543,800
		\$ 14,852,500	\$	15,861,100	\$,,	\$	17,784,456	\$	18,710,411	\$	19,654,614	\$	20,549,541
	Change \$			1,008,600		-		1,923,356		925,955		944,203		894,927
	Change %			6.8%		0.0%		12.1%		5.2%		5.0%		4.6%
Total RWSA Customer Revenues	s	\$ 31,239,600	\$	33,242,400	\$	33,242,400	\$	37,876,650	\$	40,177,559	\$	42,409,791	\$	44,670,029
	Change \$		\$	2,002,800	\$	-	\$	4,634,250	\$	2,300,909	\$	2,232,232	\$	2,260,238
	Change %			6.4%		0.0%		13.9%		6.1%		5.6%		5.3%
Additional for 10-Year CIP								440,279		1,125,885		1,838,787		2,633,161
Total Estimated Charge		\$ 31,239,600	\$	33,242,400	\$	33,242,400	\$	38,316,929	\$	41,303,444	\$	44,248,578	\$	47,303,190
% Change				0.0%		0.0%		15.3%		8.9%		9.9%		11.1%





MEMORANDUM

TO: RIVANNA WATER & SEWER AUTHORITY

BOARD OF DIRECTORS

FROM: **BILL MAWYER, EXECUTIVE DIRECTOR**

INTRODUCTION OF PROPOSED BUDGET FOR FY 2020-2021, AND **SUBJECT:**

ADOPTION OF PRELIMINARY RATE SCHEDULE

DATE: MAY 26, 2020

The proposed FY 2020-2021 budget totaling \$37,133,000 is being submitted for your consideration. The proposed budget includes \$19,384,000 for Operating expenses and \$17,729,000 for Debt Service charges, and represents a 2.6% increase above the current budget. These cost increases will be funded from our reserves to maintain annual charges to the City and to the ACSA at FY 2019-2020 levels. The proposed budget does not include any additional programs, positions or salary increases for staff.

The Board will be asked at this meeting to adopt the attached Preliminary Rate Resolution which sets a public hearing on the proposed budget for Tuesday, June 23, 2020, and authorizes staff to advertise the attached Public Notice showing the proposed wholesale rates required to support the proposed budget. As required by Virginia law, staff will advertise the Public Notice twice in the local newspaper followed by a minimum 14-day period in advance of the scheduled public hearing. Adoption of the Preliminary Rate Resolution does not prejudice final Board actions on the budget, including amendments or changes to the proposed budget the Board may want to consider later. The Board's final deliberations and actions on the budget will not be requested until immediately after the public hearing.

The proposed budget includes resources required to manage our infrastructure, meet debt service obligations, and comply with regulatory mandates. Wholesale water and wastewater services will be provided to the City of Charlottesville and the Albemarle County Service Authority (ACSA) in a collaborative, effective, and fiscally responsible manner. Costs to the City and to the ACSA will remain at FY 2019 – 2020 levels. The proposed budget includes a \$163,000 increase in Operating expenses primarily to support increased health insurance costs and an increase in the rental cost of the Observatory Water Treatment Plant. Debt Service costs will increase \$783,000 to support ongoing renovations to our water treatment plants (Crozet, S. Rivanna and Observatory), as well as completion of the Crozet Flow Equalization Tank and the Beaver Creek Dam Improvements projects, both of which are required to meet regulatory standards for wastewater and dam safety, respectively.

Board Action Requested:

It is respectfully recommended that the Board of Directors adopt the attached Preliminary Rate Schedule, which calls for a public hearing on the budget during the Board's regular meeting on June 23, 2020, and authorize the advertising of proposed rates in the local newspaper.

Attachment

RESOLUTION

PRELIMINARY RATE SCHEDULE

WHEREAS, the Rivanna Water and Sewer Authority Board of Directors has reviewed the proposed budget and associated rate changes for Fiscal Year 2020-2021; and

WHEREAS, Section 15.2-5136 (G) of the Code of Virginia requires the adoption of the preliminary rate schedule for notification of a public hearing prior to fixing rates for water and sewer charges; of which there is at least a 14 day requirement between the date of the last of two public notices and the actual date fixed for the public hearing;

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water and Sewer Authority hereby approves the preliminary rate schedule for purposes of notification of a public hearing to be held on June 23, 2020 at 2:15 p.m. during the regularly scheduled Board of Directors meeting.

	Water Rate	s & Charge	es	Wastewater Rates & Charges							
Urban A	Area			Urban .	Area						
City &	Operating	\$2.095	Per 1,000	City &	Operating	\$2.369	Per 1,000				
ACSA			gallons	ACSA			gallons				
City	Debt Service	\$193,580	Per month	City	Debt Service	\$407,588	Per month				
ACSA	Debt Service	\$321,303	Per month	ACSA	Debt Service	\$278,174	Per month				
Crozet V	Water			Glenmo	ore Wastewater						
ACSA	Operating &	\$195,010	Per month	ACSA	Operating &	\$31,192	Per Month				
	Debt Service				Debt Service						
Scottsvi	lle Water			Scottsv	ille Wastewater						
ACSA	Operating &	\$54,130	Per month	ACSA	Operating &	\$26,536	Per month				
Debt Service					Debt Service						

PUBLIC NOTICE



RIVANNA WATER & SEWER AUTHORITY PUBLIC HEARING CONCERNING THE PROPOSED RATES FOR FY 2020 - 2021, EFFECTIVE JULY 1, 2020

Public Hearing:

Rivanna Water & Sewer Authority will hold a Public Hearing on Tuesday, June 23, 2020, at 2:15 p.m. during the regular Rivanna Water & Sewer Authority Board of Directors meeting. The public hearing is to consider the following wholesale water and wastewater rates and charges to the City of Charlottesville and the Albemarle County Service Authority. Adopted rates may or may not be what are advertised.

URBAN RATE CENTERS	FY	2020	FY 2021	\$ Change	% Change
Operating Rates (\$ per 1,000 Gallons)					
Operations Wastewa	ater \$ ater	2.095 2.369	\$ 2.095 2.369	\$ - -	0.00% 0.00%
<u>Debt Service Charges</u> (\$ Monthly Charge) Water					
Debt Service C		93,580 \$ 21,303	\$ 193,580 321,303	\$ - -	0.00% 0.00%
		07,588 \$ 78,174	\$ 407,588 278,174	\$ -	0.00% 0.00%
OTHER RATE CENTERS (Monthly)	FY	2020	FY 2021	\$ Change	% Change
Crozet Water Operations Debt Service		35,734 \$ 09,276	\$ 85,734 109,276	\$ - -	0.00% 0.00%
Scottsville Water Operations Debt Service		43,401 \$ 10,729	\$ 43,401 10,729	\$ - -	0.00% 0.00%
Water Total	\$ 24	49,140	\$ 249,140	\$ -	0.00%
Glenmore Wastewater Operations Debt Service	\$ 3	30,877 \$ 315	\$ 30,877 315	\$ - -	0.00% 0.00%
Scottsville Wastewater Operations Debt Service	\$ 2	25,749 \$ 787	\$ 25,749 787	\$ - -	0.00% 0.00%
Wastewater Total	\$ 5	57,728	\$ 57,728	\$ -	0.00%
Total Monthly Other Rate Center Charges - ACS	SA <u>\$3</u> 0	06,868	\$ 306,868	\$ -	0.00%

The Rivanna Water & Sewer Authority (Rivanna) was created by the City of Charlottesville (City) and the County of Albemarle to supply and treat water for drinking and to provide wastewater treatment. The above

fees represent Rivanna's fees and charges to the City and the Albemarle County Service Authority (ACSA) for these services and are not the same as the City and ACSA charges to individual residents and businesses. Debt Service covers capital related project costs and are different for the City and ACSA reflecting terms of contractual agreements.

The City and the ACSA distribute drinking water and collect wastewater from individual residents and businesses and charge retail rates that combine charges from the above schedule to reflect their service costs, including Rivanna's costs.

Information about the proposed budget may be obtained on the Rivanna website at rivanna.org. Please call 977-2970 ext. 0 or send e-mail to info@rivanna.org with any questions you may have.

Proposed
Operating
Budget
FY 2020 - 21



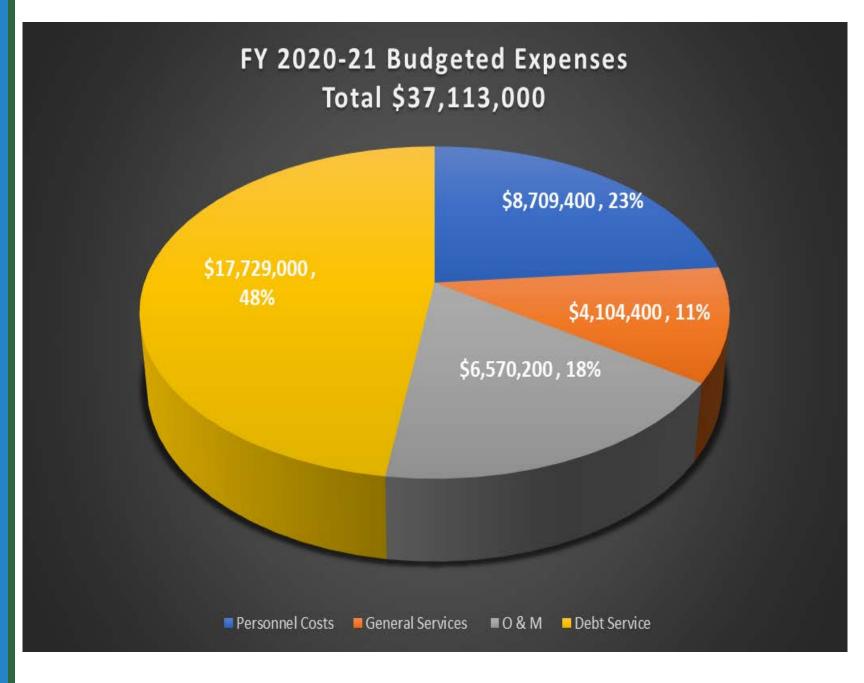
PRESENTED TO: RWSA BOARD OF DIRECTORS

MAY 26, 2020



FY 2020 – 21 Operating Budget

\$37. 1 M



Completed in FY 2020

- Wholesale Water Meter Project
- Observatory WTP Cost Sharing Agreement
- Buck Mtn Surcharge Joint Agreement
- Bathymetric Study of Lickinghole Basin
- Water Demand and Safe Yield Studies
- Urban Water <u>Risk & Resiliency Assessment</u> required by EPA
- Optimized Corrosion Control Product for Water Treatment



Annual Operational Optimization Savings

Strategic Plan Goal:

 Continually evaluate, prioritize, and improve key business and operational processes.

System	Savings
GAC Media	
Reactivated	\$174,000
Virgin	\$61,500
Bonds Refinance	\$162,200
Waste Container Service	\$74,500
Glycerin; carbon source for wastewater nutrient removal (Micro C)	\$27,800
Insurance: Property, Liability, and Workers Compensation	\$16,800
Biosolids Transportation to McGill (Waverly, VA)	\$10,700
Reduced Radios from 62 to 28	\$10,000
First Aid and Safety Supplies	\$7,000
Total Annual Savings	\$544,500

One-Time in FY 21	Savings
Reduced Radios from 62 to 28	\$97,000

Major Projects in FY 2021

- Water Treatment Plant Renovations
 Crozet, South Rivanna, and Observatory
- South Rivanna to Ragged Mtn Reservoir Pipeline Easements
- Urban Finished Water Master Plan
- •Wastewater Flows Study, 5 Year Update
- Crozet WW Flow Equalization Tank Construction
- Buck Mtn Property Master Plan
- Crozet and Urban Va Water Protection Permit Applications



FY 2020 – 21 Budget Summary

Total budget \$37.1 m \$0.94 m = 2.6% above FY 20*

1. Operating \$19.4 m \$0.163 m = 0.8%

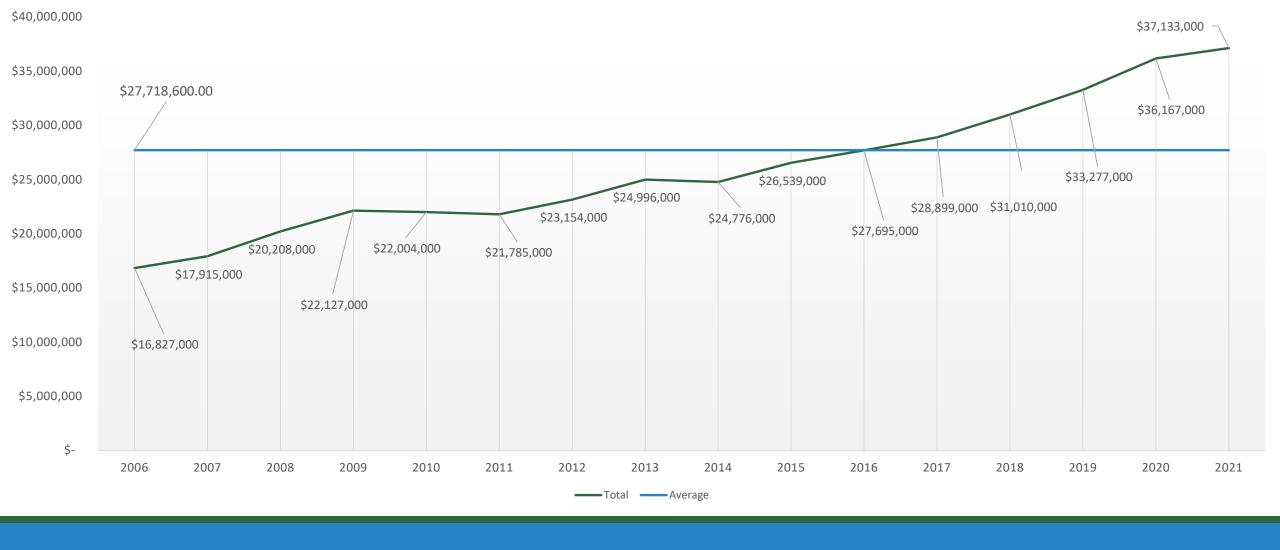
2. Debt Service \$17.7 m \$0.783 m = 4.4%

➤ City Charges \$14.8 m

➤ ACSA Charges \$18.5 m

➤ Other Charges/Revenues \$2.1 m

➤ RWSA Reserves* \$1.7 m



Operating Budget – 15 Year History

Capital Assets: Facilities and Equipment \$257,000,000

5 Water Supply Reservoirs: 3.3 billion gallons

6 Water Treatment Plants

3 Urban Area:
 21.7 > 24 MGD by 2023

3 Non-Urban Area1.25 MGD

4 Wastewater Treatment Plants

• 1 Urban Area: 15 MGD

3 Non-Urban Area: 0.588 MGD

7 Wastewater Pump Stations

11 Water Pump Stations

7 Raw Water

4 Finished Water

Water Distribution Pipe: 67 miles

Wastewater Collection Pipe: 42 miles

Stormwater Impoundment: Lickinghole Creek Basin

Employees: 93.4

Budget Increase: \$946 k

Operating: \$163 k

OMerit Pool: 4%

Additional Positions

Accounting Associate

IT Technician

Water Operator

Health Care Premiums \$120 k

Other Personnel changes \$28 k

<u>Urban Water:</u>

OB WTP Lease: \$67.5 k

<u>Debt Service for CIP Projects</u>: \$783 k

Water Treatment Plant Renovations

Crozet, S. Rivanna, Observatory

Crozet Wastewater Equalization Tank

Beaver Creek Dam and Pump Station Improvements

Lost Revenue:

OBuck Mtn Surcharge \$125 k

oWW Nutrient Credits \$45 k

Pre-Covid Budget	=	\$38.4 M
Budget Reductions	=	\$1.3 M

•Merit Increase for Staff (4%)	\$225 K
•3 Additional Positions• Benefits and Initial Costs	\$155 K \$105 K
•Consultant Services and Studies	\$265 K
•GAC Media Change-out Rate	\$165 K
•Fence Clearing, Tank Washing, General Repairs	\$145 K
•Water Treatment Equipment Replacement	\$60 K
•Sludge Hauling from Lagoons, Crozet	\$50 K
•Debt Service on Deferred CIP Projects	\$50 K
 Phone System Replacement , Admin Building 	\$20 K
Bathymetric Survey, Totier Creek	\$15 K

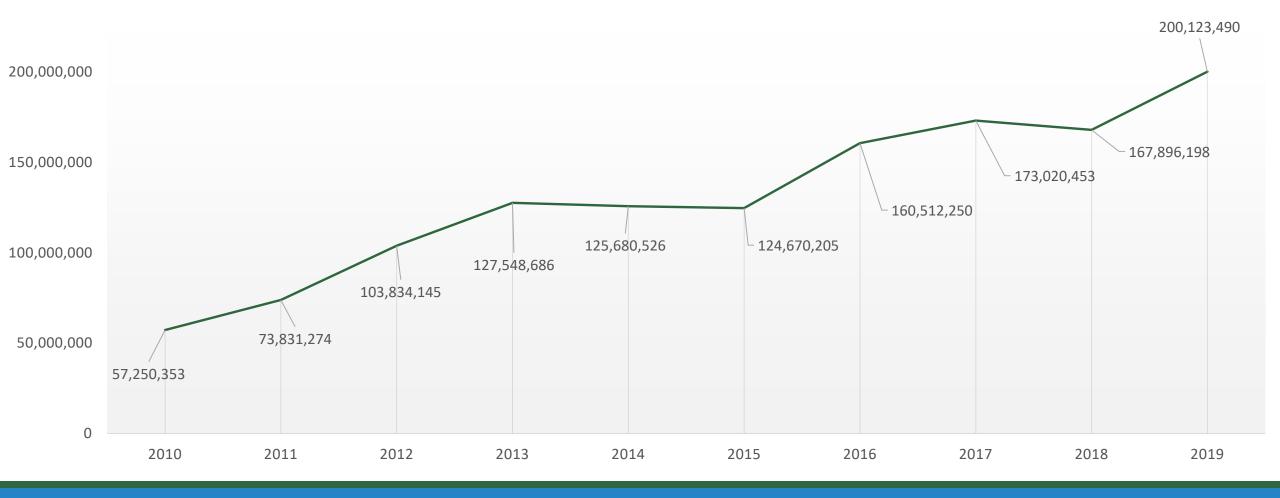
Use of Reserve Funds in FY 21

Urban Water, GAC Replacement	\$500 K	Debt Service	
•Urban Water	\$94 K	Urban Water	\$660 K
	\$ 26.14	Crozet Water	\$200 K
 Crozet Water, GAC Replacement 	\$26 K	Urban Wastewater	\$95 K
•Scottsville Water GAC Replacement	\$9 k		\$955 K
Urban Wastewater	\$121 K	Total Use of Reserves	\$1,730,000
•Glenmore Wastewater	\$25 K		
	\$775 K		

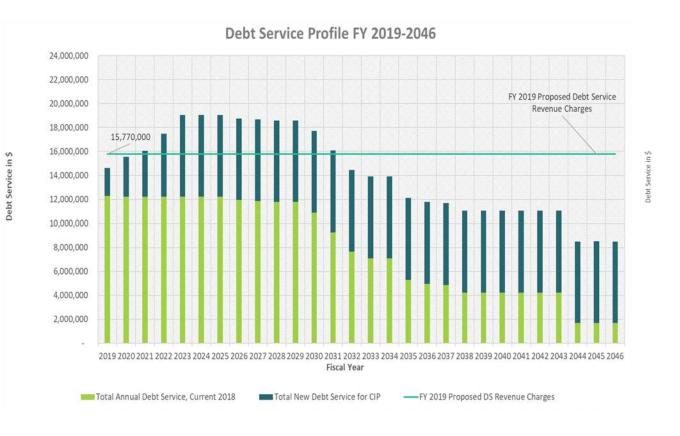
Charges and Financial Summary

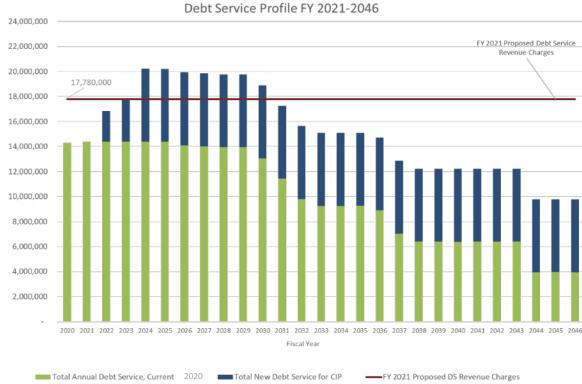
RWSA Charge Increases (%):	FY	21	22	23	24	25
• City		0	12.7	7.0	6.4	6.4
pre-covid		5.7	7.1	7.2	6.5	6.5
ACSA		0	17.3	8.4	7.7	7.3
pre-covid		8.8	9.1	8.7	8.1	7.6

- Charges include Operating and Debt Services costs
- Use of RWSA Reserves
- \$775 k for Operating Expenses in FY 21
- \$954 k for Debt Service in FY 21
- \$10.6 M over 5 year FY 21 25 CIP
- •Anticipate issuing Revenue Bond in FY 2022 to fund CIP, and 2-3 years thereafter.



Total Outstanding Debt





FY 2020 – 21 Budget Summary

>Total budget \$37.1 m, \$0.94 m = 2.6% increase*

1. Operating \$19.4 m

2. Debt Service \$17.7 m

➤ City Charges \$14.7 m

➤ ACSA Charges \$18.4 m

➤ Other Charges/Revenues \$2.1 m

➤ RWSA Reserves* \$1.7 m

Questions?

ACTION REQUESTED: APPROVAL OF THE PRELIMINARY RATE SCHEDULE, AND NOTIFICATION OF A PUBLIC HEARING TO BE HELD ON JUNE 23, 2020 DURING THE REGULARLY SCHEDULED BOARD OF DIRECTORS MEETING

Proposed Rates and Charges For FY 2021

RIVANNA WATER & SEWER AUTHORITY PUBLIC HEARING CONCERNING THE PROPOSED RATES FOR FY 2020 - 2021, EFFECTIVE JULY 1, 2020

Public Hearing:

Rivanna Water & Sewer Authority will hold a Public Hearing on Tuesday, June 23, 2020, at 2:15 p.m. during the regular Rivanna Water & Sewer Authority Board of Directors meeting. The public hearing is to consider the following wholesale water and wastewater rates and charges to the City of Charlottesville and the Albemarle County Service Authority. Adopted rates may or may not be what are advertised.

URBAN RATE C	ENTERS		 FY 2020	FY 2021	\$ 0	Change	% Change
Operating Rates		(\$ per 1,000 Gallons)					
	Operations Operations	Wate Wastewate	2.095 2.369	\$ 2.095 2.369		-	0.00% 0.00%
Debt Service Char	ges	(\$ Monthly Charge)					
D	ebt Service ebt Service	CIT ACS	193,580 321,303	\$ 193,580 321,303		-	0.00% 0.00%
	ebt Service ebt Service	CIT ACS	407,588 278,174	\$ 407,588 278,174		-	0.00% 0.00%
OTHER RATE C	ENTERS (Monthly)	 FY 2020	FY 2021	\$ (Change	% Change
	Operations ebt Service		\$ 85,734 109,276	\$ 85,734 109,276		-	0.00% 0.00%
	Operations ebt Service		\$ 43,401 10,729	\$ 43,401 10,729		-	0.00% 0.00%
V	Vater Total		\$ 249,140	\$ 249,140	\$	-	0.00%
	<u>vater</u> Operations ebt Service		\$ 30,877 315	\$ 30,877 315		- -	0.00% 0.00%
	<u>vater</u> Operations ebt Service		\$ 25,749 787	\$ 25,749 787		-	0.00% 0.00%
Wastev	vater Total		\$ 57,728	\$ 57,728	\$	-	0.00%
Total Monthly Ot	her Rate Ce	enter Charges - ACSA	\$ 306,868	\$ 306,868	\$	-	0.00%



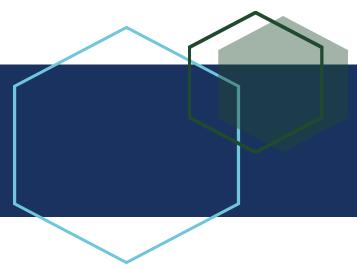




Proposed Budget

Fiscal Year 2021 - 2022

For the RWSA Board of Directors







May 26, 2020

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RIVANNA WATER & SEWER AUTHORITY FY 2021 Proposed Budget

Prepared: May 1, 2020 Adopted: Draft 4

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Budget Highlights

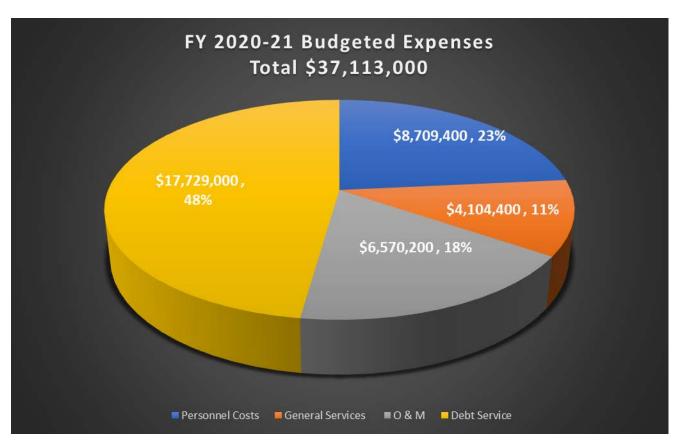
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Budget Overview

The Rivanna Water and Sewer Authority provides wholesale drinking water and wastewater treatment services for the City of Charlottesville and the Albemarle County Service Authority (ACSA). An FY 2020-2021 budget of \$37,133,000 is proposed to strategically provide these water and wastewater services in a financially responsible manner for our customers and the community. The FY 2020-2021 budget has been minimized to reflect the current economic challenges of our community, and proposes only essential increases of \$163,000 in Operating expenses and \$783,000 in scheduled Debt Service charges for our Capital Improvement Program, for a total budget increase of \$946,000, or 2.6%. These cost increases will be funded from our reserves to maintain charges to the City and to the ACSA at FY 2019-2020 levels. The proposed budget does not include any additional programs, positions or salary increases for staff.

The proposed budget includes \$19,384,000 for Operating expenses and \$17,729,000 for Debt Service charges. Operating expenses include Personnel costs (staff salaries and benefits), General Services costs (professional and nonprofessional contract services, utilities, insurance, permits, and data/voice communications), and Operation and Maintenance costs (chemicals, building repairs, equipment maintenance, technology and depreciation). Debt Service charges represent 48% of our budget, and provide funding to construct and renew our major infrastructure including water and wastewater treatment plants, pumping stations, piping systems and reservoir facilities.



In the Urban Rate Centers, Operating rates and Debt Service charges will remain unchanged from FY 2019 – 2020 levels:

- \$2.095 per 1000 gallons for water
- \$2.369 per 1000 gallons for wastewater

Monthly Debt Service charges to the City will remain unchanged from FY 2019 – 2020 levels:

- \$193,580 for Urban water
- \$407,588 for Urban wastewater

Monthly Debt Service charges to the ACSA will remain unchanged from FY 2019 – 2020 levels:

- \$321,303 for Urban water
- \$278,174 for Urban wastewater
- \$249,140 for Non-Urban water
- \$57,728 for Non-Urban wastewater

The FY 2020-2021 budget proposes an increase of \$163,000 in Operating expenses and an increase of \$783,000 in Debt Service charges for a total budget increase of \$946,000, as shown below:





A brief description of those increases includes:

A. Increase in Operating Expenses: \$163,000

1. Personnel: \$148,400

a. <u>Health Insurance:</u> \$120,400

Based on health care renewal premiums negotiated with our insurance provider, Anthem, and anticipated enrollment increases.

b. Net changes to personnel and benefits: \$28,000

Reclassification of a Maintenance position to Civil Engineer in FY 2019-2020.

2. Water and Wastewater Programs, Misc. Net Changes: \$15,000

a. Rent for the Observatory Water Treatment Plant: \$67,500

B. Increase in Debt Service Charges: \$783,000

Actual Water and Wastewater Flows

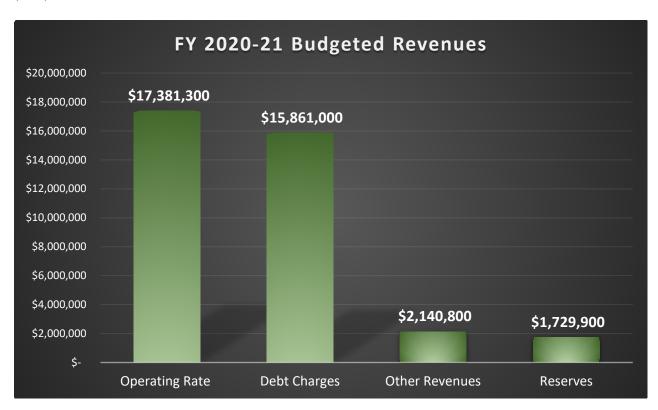
Actual water and wastewater retail flows reported by the City and ACSA are used to allocate the Urban Area operating rates and charges. Based on FY 2019 actual retail flow data, the allocation for Urban Wastewater flow shifted 1% (equals \$80,300 for Debt Service, and 2% change in allocated costs) between the two customers, while the allocation for Urban Water was unchanged.

Allocation of flows (based on retail flows):

	FY 2021	FY 2020
City Wastewater	49%	50%
ACSA Wastewater	51%	50%
City Water	51%	51%
ACSA Water	49%	49%

Revenues & Expenses

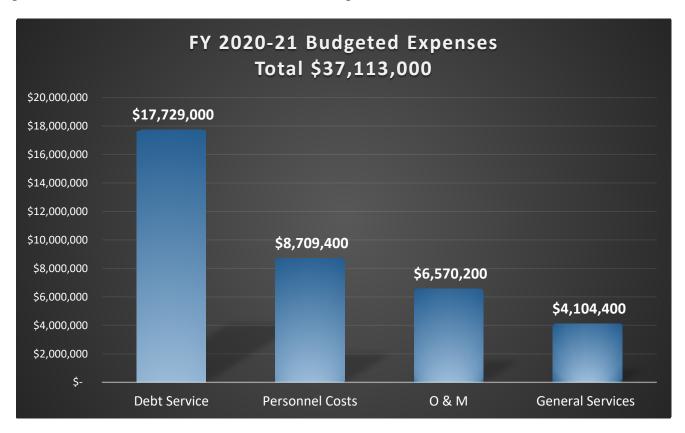
Revenues for FY 2020 - 2021 are driven by estimated Operating Rate revenues of \$17,381,300, Debt Service charges of \$15,861,000, other non-customer revenues of \$2,140,800, and use of reserves of \$1,729,900 as shown below:



The Authority's overall ratio of Operating expenses and Debt Service costs are similar to the last several years, with Operating expenses representing roughly 52% of the total budget and Debt Service costs being 48% of the total budget.

Expenses are largely allocated to four major categories. Debt Service costs related to capital expenses are \$17,729,000. These expenses are estimated to increase \$783,000 over the FY 2019 – 20 level to support major projects including the Water Treatment Plant Upgrades, Crozet Wastewater Equalization Tank and Beaver Creek Dam and Pump Station Improvements.

Personnel and Benefit costs are the second largest expense with \$8,709,400 in estimated costs. Costs for Operations and Maintenance, which includes chemicals, building repairs, equipment maintenance, IT/SCADA, supplies and materials, and depreciation, will total approximately \$6,570,200. General Service costs, which includes professional and nonprofessional contract services, utilities, insurance, permits, and data / voice communications, are anticipated to be \$4,104,400, as shown below:



A summary of the major cost changes compared to last year follows, and a detailed line-by-line comparison is provided in **Appendix 8** for the Authority as a whole.

	Line Item	N	lotable <u>Items</u>	Cha	Budget ange over rior year
Personnel cost in general					
Merit of 4.0% Deleted	11000	\$	-		
Personnel/Position changes:					
3 new positions (Finance, IT Tech, Water Operator) Deleted	11000		-		
Upgrade Maint. position to Civil Eng. (Already approved)	11000		40,000		
Benefit costs related to personnel changes	11XXX		16,000		
Health Care Benefit premium renewal and enrollment increases	12020		120,400		
All other Personnel related changes			(28,003)		
Total change in personnel and benefit costs		_	(20,000)	\$	148,400
					•
<u>General overall changes</u>					
 Professional Services - Engineering 	20300				
Urban Water - Drought Modeling		\$	15,000		
Urban Water - GAC and Corrosion support			65,700		
Scottsville Water - PER Alternative Chemical, PAC feed, ATS			50,000		
Urban Wastewater - WW Flow Agreement Consulting			50,000		
Urban Wastewater - PER Corrosion, Caustic Chemical Changes			45,000		
All Departments - ARC Flash Study and Labeling			154,000		
Total Requested FY2021			379,700		
FY 2020 Budget		\$	(512,050) (132,350)	\$	(132,350)
Urban Water					
Utilities - Hydro agreement with Dominion terminated	21400			\$	220,000
Leases - Uva Lease agreement	41150				67,500
<u>Urban Wastewater</u>					
 Rental and Leases - Temporary boiler 6 months 	81200				67,250
All other Dept and Rate Centers					
Admin. Salary Survey and Health Insurance consultant	20200				54,000
Admin. Salary Survey and Fleath insurance consultant					34,000
France wines Divilating words to work works a second	41100 &				20.000
Engineering - Building rental & roof replacement	41150				20,000
 Safety Programs - Maintenance (LOTO support) 	21253				37,500
All other changes					(318,200)
FY 2021 Total increases in estimated operating expenses				\$	164,100
					-,
Rounding Adjustment	•				(1,100)
				\$	163,000

Debt Service & Capital

Debt service needs for the Capital Improvement Plan (CIP) are included in the budget request for the coming year. The overall FY 21-25 CIP totals \$132.5 million, an increase of \$35.3 million as compared to the FY 20-24 CIP. In FY 2025, there were 14 projects totaling \$17.7 million which transitioned into the five-year CIP. In addition, there was a \$15.5 million increase in existing and reprioritized projects, as well as a \$4.7 million increase for new projects. A more detailed look at the new and adjusted costs can be found in the proposed FY 2021 – 2025 CIP, which is a separate document and can be reviewed at http://www.rivanna.org/financials-and-procurement/.

The table below shows the changes in estimated project costs reflected in the CIP:

	2020-2024				New or	2021-2025		
	Adopted		Projects		Additional	Adopted		
	CIP	(Completed	<u>P</u>	roject Costs	<u>CIP</u>	Change \$	Change %
Project Cost								
Urban Water Projects	\$ 61,501,900	\$	(4,654,000)	\$	18,130,000	\$ 74,977,900	\$ 13,476,000	22%
Urban Wastewater Projects	14,753,000		-		7,767,000	22,520,000	7,767,000	34%
Shared Projects	2,596,000		(442,000)		2,099,000	4,253,000	1,657,000	39%
Non-Urban Projects	 18,353,000				12,405,000	30,758,000	12,405,000	40%
Total Project Cost Estimates	\$ 97,203,900	\$	(5,096,000)	\$	40,401,000	\$ 132,508,900	\$ 35,305,000	27%

The Authority has programmed into the FY 2021 budget charges that fund the additional debt service anticipated by the proposed CIP. Cumulatively, the Authority has built 35% of future debt service costs into the rates and charges for all rate centers for FY 2021. This is done by using the CIP as a guide for future debt needs to include an average charge increase over that five-year period. This helps to prevent the large spikes in charges for any given year in which new debt is <u>actually</u> issued - effectively leveling the impact on charges. For example, Urban Water current charges have nearly 37% of the needed future debt service <u>revenues</u> already built into the charges to cover the total needed for the next five years (\$3.43 million in annual debt service is estimated to be needed in the next 5 years, and \$1.275 will already be programmed into the charges). This would require the remaining \$2.155 million to be included in the future debt service charge as an annual increase (2.155 / 5 = \$431,000) over the next five years to fund the Water projects within the CIP.

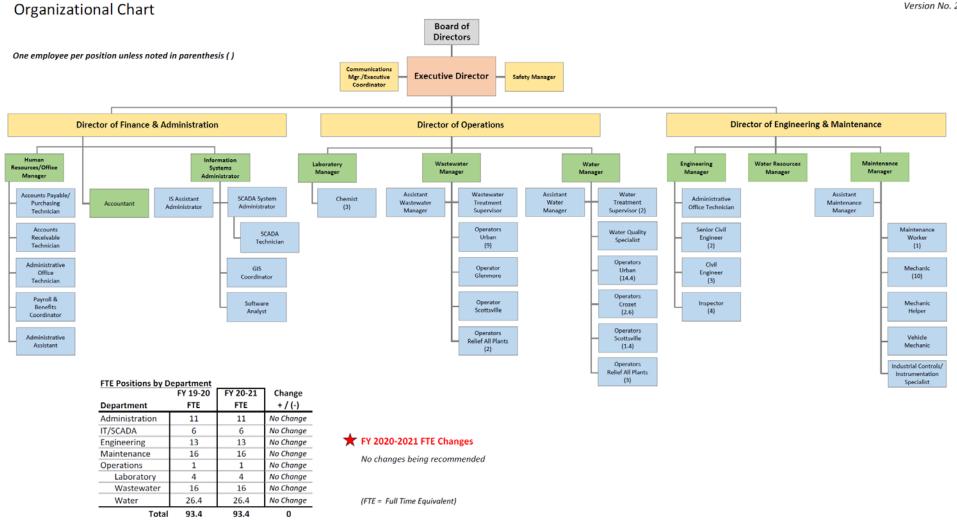
	Next Five Years						
	Annual Estimated	New Debt Service	Percentage of				
	NEW Debt Service	Cost built	Debt Service				
	related to 5-year CIP	into	in Adopted				
	New Debt	FY 2021 Rates	FY 2021 Charges				
Urban Water	\$3,430,000	\$1,275,800	37.2%				
Urban Wastewater	\$904,000	\$365,100	40.4%				
Non-Urban Rate Centers	\$1,223,900	\$311,800	25.5%				
	\$5,557,900	\$1,952,700	35.1%				

Proposed FY 2020-2021 Organization Chart

Rivanna Water & Sewer Authority

FY 2020-2021 Proposed Budget

Version No. 2



Budget Details

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Prepared: May 1, 2020 Adopted: Draft 4

Departmental Summary of Revenues and Expenses

Summary of Revenues

		FY 2020	FY 2021	\$ Change	% Change
Operations Revenues					
Urban Water	\$	7,802,000	\$ 7,802,000	-	0.00%
Crozet Water		1,113,000	1,087,000	(26,000)	-2.34%
Scottsville Water		537,000	531,000	(6,000)	-1.12%
Urban Wastewater		8,610,000	8,713,000	103,000	1.20%
Glenmore Wastewater		371,000	396,000	25,000	6.74%
Scottsville Wastewater		310,000	310,000	-	0.00%
Administration		468,000	545,000	77,000	16.45%
Maintenance		10,000	-	(10,000)	
Lab		-	-	-	
Engineering		-	-	-	
·	Total \$	19,221,000	\$ 19,384,000	\$ 163,000	0.85%
Debt Service Revenues					
Urban Water	\$	6,747,000	\$ 7,231,000	484,000	7.17%
Crozet Water		1,338,000	1,537,000	199,000	14.87%
Scottsville Water		139,000	138,000	(1,000)	-0.72%
Urban Wastewater		8,702,000	8,802,000	100,000	1.15%
Glenmore Wastewater		7,000	7,000	-	0.00%
Scottsville Wastewater		13,000	14,000	1,000	7.69%
-	Total \$	16,946,000	\$ 17,729,000	\$ 783,000	4.62%
Total Rever	nues_\$	36,167,000	\$ 37,113,000	\$ 946,000	2.62%

Summary of Expenses

	l	FY 2020	FY 2021	\$ Change	% Change
Operations Expenses					
Urban Water	\$	5,498,000	\$ 5,445,000	(53,000)	-0.96%
Crozet Water		895,000	865,000	(30,000)	-3.35%
Scottsville Water		400,000	393,000	(7,000)	-1.75%
Urban Wastewater		5,835,000	5,908,000	73,000	1.25%
Glenmore Wastewater		265,000	289,000	24,000	9.06%
Scottsville Wastewater		211,000	210,000	(1,000)	-0.47%
Administration		2,480,000	2,492,000	12,000	0.48%
Maintenance		1,611,000	1,536,000	(75,000)	-4.66%
Lab		473,000	517,000	44,000	9.30%
Engineering		1,553,000	1,729,000	176,000	11.33%
Total	\$	19,221,000	\$ 19,384,000	\$ 163,000	0.85%
Debt Service Expenses					
Urban Water	\$	6,747,000	\$ 7,231,000	484,000	7.17%
Crozet Water		1,338,000	1,537,000	199,000	14.87%
Scottsville Water		139,000	138,000	(1,000)	-0.72%
Urban Wastewater		8,702,000	8,802,000	100,000	1.15%
Glenmore Wastewater		7,000	7,000	-	0.00%
Scottsville Wastewater		13,000	14,000	1,000	7.69%
Total	\$	16,946,000	\$ 17,729,000	\$ 783,000	4.62%
Total Expenses	\$	36,167,000	\$ 37,113,000	\$ 946,000	2.62%
Total Budgetary Surplus/ (Deficit)	\$	-	\$ -	\$ -	

These figures are rounded from the detail pages of this budget model and some immaterial differences will be present.

Prepared: Adopted:

May 1, 2020 Draft 4

Summary of Itemized Rates

URBAN RATE CENTERS	FY 2020	FY 2021	\$ Change	% Change
Operating Rates (\$ per 1,000 Gallons)				
Operations Water Operations Wastewater	\$ 2.095 2.369	\$ 2.095 2.369	\$ -	0.00% 0.00%
<u>Debt Service Charges</u> (\$ Monthly Charge) <u>Water</u>				
Debt Service CITY Debt Service ACSA	\$ 193,580 321,303	\$ 193,580 321,303	\$ - -	0.00% 0.00%
Wastewater Debt Service Debt Service ACSA	\$ 407,588 278,174	\$ 407,588 278,174	\$ - -	0.00% 0.00%
OTHER RATE CENTERS (Monthly)	FY 2020	FY 2021	\$ Change	% Change
Crozet Water Operations Debt Service	\$ 85,734 109,276	\$ 85,734 109,276	\$ - -	0.00% 0.00%
Scottsville Water Operations Debt Service	\$ 43,401 10,729	\$ 43,401 10,729	\$ - -	0.00% 0.00%
Water Total	\$ 249,140	\$ 249,140	\$ -	0.00%
Glenmore Wastewater Operations Debt Service	\$ 30,877 315	\$ 30,877 315	\$ -	0.00% 0.00%
Scottsville Wastewater Operations Debt Service	\$ 25,749 787	\$ 25,749 787	\$ - -	0.00% 0.00%
Wastewater Total	\$ 57,728	\$ 57,728	\$ -	0.00%
Total Monthly Other Rate Center Charges - ACSA	\$ 306,868	\$ 306,868	\$ -	0.00%

Summary of Charges to Customers

a. y o. oa. goo to ouctoo	FY 2020	FY 2021	Change <u>\$</u>	Change <u>%</u>
City - Charges From RWSA				
Urban Water				
Operating Rate Charges	\$ 3,630,500	\$ 3,630,500	\$ -	0.0%
Debt Service Charges	2,323,000	2,323,000	-	0.0%
_	\$ 5,953,500	\$ 5,953,500	\$ -	0.0%
Urban Wastewater				
Operating Rate Charges	\$ 4,016,800	\$ 3,936,500	\$ (80,300)	-2.0%
Debt Service Charges	4,891,100	4,891,100	-	0.0%
	\$ 8,907,900	\$ 8,827,600	\$ (80,300)	-0.9%
Total City Charges	\$ 14,861,400	\$ 14,781,100	\$ (80,300)	-0.5%

5,800 \$ 3,100 \$ 4,900 \$ 9,100 \$ 3,300 \$ 2,400 \$	3,338,100 7,435,200 2,229,100 1,453,300	\$	80,300 - 80,300 - - -	2.0% 0.0% 1.1% 0.0% 0.0%
3,100 4,900 \$ 9,100 \$	3,338,100 7,435,200 2,229,100	\$	-	0.0% 1.1% 0.0% 0.0%
3,100 4,900 \$	3,338,100 7,435,200	\$	-	0.0% 1.1%
3,100	3,338,100		-	0.0%
	, ,		80,300 -	0.0%
5,800 \$	4,097,100	\$	80,300	2.0%
3,700 \$	7,343,700	\$	-	0.0%
5,600	3,855,600		-	0.0%
3,100 \$	3,488,100	\$	-	0.0%
	5,600	5,600 3,855,600	5,600 3,855,600	5,600 3,855,600 -

RWSA Customer Revenue Charges				
Operating Rate Revenues				
Urban Water	\$ 7,118,600	\$ 7,118,600	\$ -	0.0%
Urban Wastwater	8,033,600	8,033,600	-	0.0%
Other Rate Centers	2,229,100	2,229,100	-	0.0%
	\$ 17,381,300	\$ 17,381,300	\$ -	0.0%
Debt Service Rate Revenues				
Urban Water	\$ 6,178,600	\$ 6,178,600	\$ -	0.0%
Urban Wastewater	8,229,200	8,229,200	-	0.0%
Other Rate Centers	1,453,300	1,453,300	-	0.0%
	\$ 15,861,100	\$ 15,861,100	\$ -	0.0%
Total RWSA Customer Revenues	\$ 33,242,400	\$ 33,242,400	\$ -	0.0%

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Water Rate Centers

Rivanna Water and Sewer Authority

Fiscal Year 2020-2021

Urban Water Summary				F	Y 2020			ŀ	-Y 2021	
			Budgeted FY 2020		Actual for 6 months		Projected 12 months		Proposed Budget	Budget % Change
Projected Flow (MGD)			9.309						9.309	0.00%
Operations Budget										
Projected Revenues										
Operations Rate		\$	2.095					\$	2.095	0.00%
Revenue		\$	7,118,541	\$	3,809,452	\$	7,618,904	\$	7,118,541	0.00%
Lease Revenues			70,000		40,507		81,014		75,000	7.14%
Use of Reserves			600,000		-		600,000		500,000	-16.67%
Miscellaneous			-		193,294		193,294		-	
Rate Stabilization Reserves									94,254	
Interest Allocation			13,200	_	9,239	_	18,478		14,600	10.61%
Total Operations Revenues		\$	7,801,741	\$	4,052,492	\$	8,511,690	\$	7,802,395	0.01%
Projected Expenses										
Personnel Cost		\$	1,861,134	\$	927,867	\$	1,845,842	\$	1,918,361	3.07%
Professional Services		*	207,200	•	175,788	•	351,576	*	134,000	-35.33%
Other Services and Charges			574,963		385,843		755,819		738,130	28.38%
Communications			65,100		39,832		75,858		76,000	16.74%
Information Technology			77,000		22,093		74,186		85,500	11.04%
Supplies			6,100		2,799		5,598		5,745	-5.82%
Operations and Maintenance			2,375,590		1,228,512		2,787,271		2,159,300	-9.10%
Equipment Purchases			31,500		12,924		22,500		28,000	-11.11%
Depreciation & Reserves			300,000		150,000		300,000		300,000	0.00%
Subtotal Before Allocations		\$	5,498,587	\$	2,945,658	\$	6,218,650	\$	5,445,036	-0.97%
Allocation of Support Departments		Ψ	2,303,154	Ψ	1,178,594	Ψ	2,357,342	Ψ	2,357,359	2.35%
Total Operations Expenses		\$	7,801,741	\$	4,124,252	\$	8,575,992	\$	7,802,395	0.01%
Operations Cost per 1,000 gallons			\$2.296						\$2.296	0.00%
Dobt Comics Dudget										
<u>Debt Service Budget</u>	J									
Projected Revenue	O.T. (
Debt Service Rates	CITY		193,580						193,580	0.00%
	ACSA	•	321,303	•		•		•	321,303	0.00%
Debt Service Rate Revenue - CITY		\$	2,322,960	\$	1,161,480	\$	2,322,960	\$	2,323,007	0.00%
Debt Service Rate Revenue - ACSA			3,855,638		1,927,818		3,855,636		3,855,638	0.00%
Trust Fund Interest			54,000		29,468		58,936		49,000	-9.26%
Reserve Fund Interest			387,000		198,656		397,312		339,600	-12.25%
Buck Mtn. Surcharge			125,900		69,600		69,600		-	-100.00%
Use of Reserves									662,000	
Lease Revenue		_	1,600	_	4,364	•	8,728	_	1,600	0.00%
Total Debt Service Revenue		\$	6,747,098	\$	3,391,386	\$	6,713,172	\$	7,230,845	7.17%
Principal, Interest & Reserves										
Total Principal & Interest & Reserves		\$	5,223,498		2,611,749	Ф	5,223,498	\$	5,215,445	-0.15%
Reserve Additions - Interest		φ	387,000		198,656	φ	397,312	φ	339,600	-12.25%
Debt Service Ratio Charge			400,000		200,000		400,000		400,000	0.00%
Est. New Debt Service - CIP Growth			736,600		368,300		736,600		1,275,800	73.20%
Total Debt Principal and Interest		\$	6,747,098	\$	3,378,705	\$	6,757,410	\$	7,230,845	7.17%
			-,,	<u> </u>	-,,		0,101,110		1,200,000	
·					narv					
		ı	Rate Center Si	լլու	liai v					
Total Revenues		\$	Rate Center Su 14,548,839			\$	15,224,862	\$	15,033,240	3.33%
Total Revenues Total Expenses					7,443,878 7,502,957	\$	15,224,862 15,333,402	\$	15,033,240 15,033,240	
			14,548,839 14,548,839		7,443,878					3.33% 3.33%

	Contor: Urban Water			0 V	4	-41-14			2020	2020
Rate C	<u> 'enter: Urban Water</u>	Adopted		Current You	ear A	_	Proposed		vs. 2021	vs. 2021
Object		Budget		Actual		Projected Year end	Budget		Variance	Variance
Code	<u>Line Item</u>	FY 2019-2020		12/31/2019		6/30/2020	FY 2020-2021		\$	%
10000	Salaries & Benefits		_		_			_		
11000	Salaries	\$ 1,155,180	\$	603,484	\$	1,206,968	\$ 1,169,750	\$	14,570	1.26%
11010 12010	Overtime & Holiday Pay FICA	135,000 98,699		71,830 50,193		143,660 100,386	165,000 102,108		30,000 3,409	22.22% 3.45%
12010	Health Insurance	266,894		116,608		233,216	288,200		21,306	7.98%
12026	Employee Assistance Program	300		88		176	350		50	16.67%
12030	Retirement	111,128		46,654		93,308	105,278		(5,850)	-5.26%
12040	Life Insurance	15,133		7,194		14,388	15,675		542	3.58%
12050	Fitness Program	3,700		1,682		3,364	3,700		-	0.00%
12060	Worker's Comp Insurance	24,600	Φ.	14,838	•	19,784	24,600	Φ.	-	0.00%
	Subtotal	\$ 1,810,634	\$	912,571	\$	1,815,250	\$ 1,874,661	\$	64,027	3.54%
13000	Other Personnel Costs									
13100	Employee Dues & Licenses	\$ 2,000	\$	78	\$	156	\$ 1,500	\$	(500)	-25.00%
13150	Education & Training	21,700	•	5,540	•	11,080	15,700	·	(6,000)	-27.65%
13200	Travel & Lodging	7,900		94		188	5,000		(2,900)	-36.71%
13250	Uniforms	15,400		8,400		16,800	17,000		1,600	10.39%
13325	Recruiting & Medical Testing	2,000		723		1,446	2,000		-	0.00%
13350	Other Subtotal	1,500 \$ 50,500	\$	461 15,296	\$	922 30,592	\$ 2,500 \$ 43,700	\$	1,000 (6,800)	66.67% -13.47%
	Subiolai	\$ 50,500	Φ	15,290	φ	30,392	φ 43,700	Φ	(0,000)	-13.47%
	Professional Services									
20100	Legal Fees	\$ 20,000	\$	78,559	\$	157,118	\$ 20,000	\$	-	0.00%
20200	Financial & Admin. Services	· -		· -		· -	-		_	
20250	Bond Issue Costs	-		-		-	-		-	
20300	Engineering & Technical Services	187,200		97,229		194,458	114,000		(73,200)	-39.10%
	Subtotal	\$ 207,200	\$	175,788	\$	351,576	\$ 134,000	\$	(73,200)	-35.33%
	Other Services and Charges									
21100	General Liability/Property Ins.	\$ 40,400	\$	23,801	\$	31,735	\$ 35,000	\$	(5,400)	-13.37%
21150	Advertising & Communication	-	Ψ	-	Ψ	-	3,000	Ψ	3,000	10.07 70
21250	Watershed Management	87,000		42,092		84,184	55,000		(32,000)	-36.78%
21252	EMS Programs/Supplies	500		-		· -	1,000		500	100.00%
21253	Safety Programs/Supplies	43,313		19,741		39,482	32,130		(11,183)	-25.82%
21300	Authority Dues/Permits/Fees	6,000		4,677		9,354	6,000		- (4.750)	0.00%
21350 21400	Laboratory Analysis Utilities	57,750 260,000		26,901		53,802 482,336	56,000 480,000		(1,750)	-3.03% 84.62%
21420	General Other Services	80,000		241,168 27,463		54,926	70,000		220,000 (10,000)	-12.50%
21430	Governance & Strategic Support	-		21,400		54,526	- 10,000		(10,000)	12.5070
21450	Bad Debt	-		-		-	-		-	
	Subtotal	\$ 574,963	\$	385,843	\$	755,819	\$ 738,130	\$	163,167	28.38%
	•									
22000	Communication	ф 4.700	•	4.050	•	4.700	¢ 5,000	Φ	200	0.000/
22100 22150	Radio Telephone & Data Service	\$ 4,700 50,000	\$	4,253 31,737	\$	4,700 63,474	\$ 5,000 61,000	\$	300 11,000	6.38% 22.00%
22200	Cell Phones & Pagers	10,400		3,842		7,684	10,000		(400)	-3.85%
22200	Subtotal	\$ 65,100	\$	39,832	\$	75,858	\$ 76,000	\$	10,900	16.74%
		, , , , , , , , , , , , , , , , , , , ,	•	,	·	-,	, ,,,,,,	•	-,	
31000	Information Technology									
31100	Computer Hardware	\$ 12,000	\$	1,178	\$	2,356	\$ 12,000	\$	-	0.00%
31150	SCADA Maint. & Support	62,000		18,526		67,052	71,500		9,500	15.32%
31200 31250	Maintenance & Support Services Software Purchases	500 2,500		327 2,062		654 4,124	500 1,500		(1,000)	0.00% -40.00%
31230	Subtotal	\$ 77,000	\$	22,093	\$	74,186	\$ 85,500	\$	8,500	11.04%
	Gabtotai	Ψ 11,000	Ψ_		Ψ_	7 1,100	Ψ σσίσσο	Ψ_	0,000	1110170
33000	Supplies									
33100	Office Supplies	\$ 3,500	\$	547	\$	1,094	\$ 3,500	\$	-	0.00%
33150	Subscriptions/Reference Material	100		-		-	-		(100)	-100.00%
33350	Postage & Delivery	2,500		2,252		4,504	2,245		(255)	-10.20%
	Subtotal	\$ 6,100	\$	2,799	\$	5,598	\$ 5,745	\$	(355)	-5.82%
41000	Operation & Maintenance									
41100	Building & Grounds	\$ 116,800	\$	60,126	\$	120,252	\$ 116,800	\$	_	0.00%
41150	Building & Land Lease	32,500	Ψ	32,313	Ψ	32,313	100,000	Ψ	67,500	207.69%
41200	Pump Station Maintenance	5,000		2,013		4,026	5,000		· -	0.00%
41300	Dam Maintenance	140,490		65,175		130,350	98,000		(42,490)	-30.24%
41350	Pipeline/Appurtenances	104,000		197,415		250,000	130,000		26,000	25.00%
41400	Materials, Supplies & Tools	69,000		53,856		107,712	50,000		(19,000)	-27.54%
41450	Chemicals	1,520,600		349,189		1,500,000	1,128,800		(391,800)	-25.77%
41500 41550	Vehicle Maintenance Equipment Repair, Replace, Maint.	5,000 200,000		7,322 101,358		14,644 202,716	10,000 250,000		5,000 50,000	100.00% 25.00%
41600	Instrumentation & Metering	147,200		101,358		140,000	155,700		8,500	25.00% 5.77%
41650	Fuel & Lubricants	15,000		12,629		25,258	25,000		10,000	66.67%
41700	General Other Maintenance	20,000		243,971		260,000	90,000		70,000	350.00%
		-,		.,		,			,	

2020

Rate C	enter: Urban Water				Current Ye	ear Ad	ctivity				vs.	vs.
Object <u>Code</u>	Line Item	F	Adopted Budget Y 2019-2020		Six Month Actual 12/31/2019		Projected Year end 6/30/2020	<u>F</u>	Proposed Budget Y 2020-2021		2021 Variance \$	2021 Variance %
	Subtotal	\$	2,375,590	\$	1,228,512	\$	2,787,271	\$	2,159,300	\$	(216,290)	-9.10%
81000 81200	Equipment Purchases Rental & Leases	\$	2,500	\$	3,424	\$	3,500	\$	- 1	\$	(2,500)	-100.00%
81250	Equipment (over \$10,000)	Ψ	10,000	Ψ	-	Ψ	-	Ψ	10,000	Ψ	(2,000)	0.00%
81300	Vehicle Replacement Fund		19,000		9,500		19,000		18,000		(1,000)	-5.26%
	Subtotal	\$	31,500	\$	12,924	\$	22,500	\$	28,000	\$	(3,500)	-11.11%
95000	Allocations from Departments											
95100	Administrative Allocation	\$	885,060	\$	438,955	\$	888,351	\$	856,542	\$	(28,518)	-3.22%
95300	Engineering Allocation		729,759		393,409		786,745		812,821		83,062	11.38%
95150	Maintenance Allocation		480,235		225,170		454,691		460,727		(19,508)	-4.06%
95200	Laboratory Allocation		208,100		121,060		227,555		227,269		19,169	9.21%
	Subtotal	\$	2,303,154	\$	1,178,594	\$	2,357,342	\$	2,357,359	\$	54,205	2.35%
	Depreciation	\$	300,000	\$	150,000	\$	300,000	\$	300,000	\$	-	0.00%
	Subtotal	\$	300,000	\$	150,000	\$	300,000	\$	300,000	\$	-	0.00%
	Total	\$	7,801,741	\$	4,124,252	\$	8,575,992	\$	7,802,395	\$	654	0.01%

2020

Crozet Water Summary			F	Y 2020				FY 2021	
•		Budgeted FY 2020		Actual for 6 months		Projected 12 months		Proposed Budget	Budget % Change
Projected Flow (MGD)		0.545						0.545	0.00%
Operations Budget									
Projected Revenues									
Operations Rate (monthly)	\$	85,734					\$	85,734	0.00%
Revenue	\$	1,028,808	\$	514,404	\$	1,028,808	\$	1,028,808	0.00%
Leases	•	30,000	•	14,357	•	28,714	•	30,000	0.00%
Use of Reserves		52,000		-		52,000		26,000	-50.00%
Interest Allocation		1,800		1,285		2,570		2,100	16.67%
Total Operations Revenues	\$	1,112,608	\$	530,046	\$	1,112,092	\$	1,086,908	-2.31%
Projected Expenses									
Personnel Cost	\$	300,589	\$	148,216	\$	294,831	\$	302,598	0.67%
Professional Services	•	12,850	Ψ		Ψ	12,850	Ψ	15,000	16.73%
Other Services and Charges		137,816		54,837		108,496		142,360	3.30%
Communications		4,950		2,932		5,864		5,600	13.13%
Information Technology		2,600		740		2,250		2,250	-13.46%
Supplies		1,395		502		1,004		1,350	-3.23%
Operations and Maintenance		402,400		134,844		381,506		353,292	-12.20%
Equipment Purchases		2,500		1,250		2,500		3,000	20.00%
Depreciation		30,000		15,000		30,000		40,000	33.33%
Subtotal Before Allocations	\$	895,100	\$	358,321	\$	839,301	\$	865,450	-3.31%
Allocations of Support Departments		217,512		110,662		221,450		221,455	1.81%
Total Operations Expenses	\$	1,112,612	\$	468,983	\$	1,060,751	\$	1,086,905	-2.31%
Operations Cost per 1,000 gallons		\$5.593						\$5.464	-2.31%
Debt Service Budget									
Projected Revenue									
Debt Service Rates (monthly)	\$	109,276					\$	109,276	0.00%
Debt Service Rate Revenue - ACSA	\$	1,311,312	\$	655,656	\$	1,311,312	\$	1,311,312	0.00%
Trust Fund Interest	Ψ	5,500	Ψ	3,025	Ψ	6,050	Ψ	11,600	110.91%
Use of Reserves		3,300		0,020		0,000		198,252	110.517
Reserve Fund Interest		21,500		10,977		21,954		15,700	-26.98%
Total Debt Service Revenue	\$	1,338,312	\$	669,658	\$	1,339,316	\$	1,536,864	14.84%
Principal, Interest & Reserves									
Total Principal & Interest - Existing	\$	1,230,815	\$	615,408	\$	1,230,816	\$	1,217,569	-1.08%
Estimated New Principal & Interest		86,000		43,000		86,000		303,600	253.02%
Reserve Additions - Interest		21,500		10,977		21,954		15,700	-26.98%
Total Debt Principal and Interest	\$	1,338,315	\$	669,385	\$	1,338,770	\$	1,536,869	14.84%
Total Davanusa		ate Center Su			Φ.	0.454.400	Φ.	2 622 772	7.050
Total Revenues Total Expenses	\$	2,450,920 2,450,927	Ф	1,199,704 1,138,368	Ф	2,451,408 2,399,521	\$	2,623,772 2,623,774	7.05% 7.05%
Surplus/(Deficit)	\$	(7)	\$	61,336	\$	51,887	\$	(2)	
Rates - (Monthly)									
ACSA	\$	195,010					\$	195,010	0.00%

	se Detail	-	901								2020	2020
	Center: Crozet Water				Current Ye	ar A	ctivity				vs.	vs.
Object Code	Line Item		Adopted Budget 2019-2020		Six Month Actual 12/31/2019		Projected Year end 6/30/2020		Proposed Budget FY 2020-2021	,	2021 Variance \$	2021 Variance %
10000	Salaries & Benefits											
11000	Salaries	\$	184,970	\$	96,264	\$	192,528	9	185,300	\$	330	0.18%
11010	Overtime & Holiday Pay		25,000		11,753		23,506		25,000		-	0.00%
12010	FICA		16,063		8,008		16,016	-	16,088		25	0.16%
12020 12026	Health Insurance Employee Assistance Program		43,369 50		18,557 14		37,114 28	-	46,400 50		3,031	6.99% 0.00%
12030	Retirement		17,794		7,473		14,946	-	16,677		(1,117)	-6.28%
12040	Life Insurance		2,423		1,152		2,304		2,483		60	2.48%
12050	Fitness Program		600		267		534	_	600		-	0.00%
12060	Worker's Comp Insurance Subtotal	\$	4,000 294,269	\$	2,401 145,889	\$	3,201 290,177	9	4,000 3 296,598	\$	2,329	0.00% 0.79%
		Ψ	20 1,200	Ψ_	. 10,000	Ψ_	200,111	,		Ψ_	2,020	0.1.070
13000	Other Personnel Costs Employee Dues & Licenses	œ	250	¢	7	Ф	1.1	4	3 200	Ф	(50)	20.00%
13100 13150	Education & Training	\$	2,900	\$	7 716	\$	14 1,432	9	2,000	\$	(50) (900)	-20.00% -31.03%
13200	Travel & Lodging		670		8		16	-	300		(370)	-55.22%
13250	Uniforms		2,000		1,379		2,758		2,600		600	30.00%
13325	Recruiting & Medical Testing		350		119		238		300		(50)	-14.29%
13350	Other Subtotal	\$	150 6,320	\$	98 2,327	\$	196 4,654	9	600	\$	450 (320)	300.00% -5.06%
	Supiotal	φ	0,320	φ	2,321	φ	4,004	4	5 0,000	φ	(320)	-5.00%
00400	Professional Services	Φ.		Φ.		•			, 1	•		
20100 20200	Legal Fees Financial & Admin. Services	\$	-	\$	-	\$	-	9	-	\$	-	
20250	Bond Issue Costs		-		-		_	-			-	
20300	Engineering & Technical Services		12,850		-		12,850		15,000		2,150	16.73%
	Subtotal	\$	12,850	\$	-	\$	12,850	• 9	15,000	\$	2,150	
	Other Services and Charges											
21100	General Liability/Property Ins.	\$	3,000	\$	1,767	\$	2,356	9	2,500	\$	(500)	-16.67%
21150	Advertising & Communication		-		-		-	_	-		-	
21250 21252	Watershed Management EMS Programs/Supplies		25,000		-		-	-	25,000		-	0.00%
21252	Safety Programs/Supplies		3,616		1,352		2,704	<u> </u>	3,260		(356)	-9.85%
21300	Authority Dues/Permits/Fees		1,000		769		1,538	-	1,000		-	0.00%
21350	Laboratory Analysis		38,000		13,592		27,184		30,600		(7,400)	-19.47%
21400	Utilities		67,000		37,357		74,714	_	80,000		13,000	19.40%
21420 21430	General Other Services Governance & Strategic Support		200		-		-				(200)	-100.00%
21450	Bad Debt		-		-		-	-			-	
	Subtotal	\$	137,816	\$	54,837	\$	108,496	9	142,360	\$	4,544	3.30%
22000	Communication											
22100	Radio	\$	450	\$	586	\$	1,172	9	900	\$	450	100.00%
22150	Telephone & Data Service		3,300		1,832		3,664		3,500		200	6.06%
22200	Cell Phones & Pagers	•	1,200	Φ.	514	•	1,028		1,200	•	-	0.00%
	Subtotal	\$	4,950	\$	2,932	\$	5,864	9	5,600	\$	650	13.13%
31000	Information Technology											
31100	Computer Hardware	\$	1,250	\$	-	\$	1,250	9		\$	-	0.00%
31150	SCADA Maint. & Support		1,000		740		1,000	-	1,000		-	0.00%
31200 31250	Maintenance & Support Services Software Purchases		350		_		_	-			(350)	-100.00%
31230	Subtotal	\$	2,600	\$	740	\$	2,250	9	5 2,250	\$	(350)	-13.46%
00000	O											
33000 33100	Supplies Office Supplies	\$	25	\$	_	\$	_	9	-	\$	(25)	-100.00%
33150	Subscriptions/Reference Material	Ψ	20	Ψ	_	Ψ	_	4	-	Ψ	(20)	-100.00%
33350	Postage & Delivery		1,350		502		1,004		1,350		-	0.00%
	Subtotal	\$	1,395	\$	502	\$	1,004	9	1,350	\$	(45)	-3.23%
41000	Operation & Maintenance											
41100	Building & Grounds	\$	40,000	\$	6,242	\$	10,000	9	23,100	\$	(16,900)	-42.25%
41150	Building & Land Lease		-		982		1,964		-		-	
41200	Pump Station Maintenance		-		-		-	L	-		(0.500)	E0 222:
41300 41350	Dam Maintenance Pipeline/Appurtenances		5,000 5,000		3,000 6,360		6,000 12,720	\vdash	2,500 5,000		(2,500)	-50.00% 0.00%
41400	Materials, Supplies & Tools		9,000		8,760		17,520	\vdash	2,500		(6,500)	-72.22%
	,		2,300		_,. 00		,020	_	_,000		(-,-00)	

Expen	se Detail	, o						2020	2020
Rate C	Center: Crozet Water		Current Yea	ar Ac	tivity			vs.	vs.
Object Code	<u>Line Item</u>	Adopted Budget FY 2019-2020	Six Month Actual 12/31/2019		Projected Year end 6/30/2020	Proposed Budget Y 2020-2021	١	2021 /ariance \$	2021 Variance %
41450	Chemicals	256,900	75,132		250,000	225,500		(31,400)	-12.22%
41500	Vehicle Maintenance	1,000	1,061		2,122	1,500		500	50.00%
41550	Equipment Repair, Replace, Maint.	40,000	1,967		10,000	40,000		-	0.00%
41600	Instrumentation & Metering	8,500	-		8,500	12,700		4,200	49.41%
41650	Fuel & Lubricants	7,000	2,940		5,880	7,000		-	0.00%
41700	General Other Maintenance	30,000	28,400		56,800	33,492		3,492	11.64%
	Subtotal	\$ 402,400	\$ 134,844	\$	381,506	\$ 353,292	\$	(49,108)	-12.20%
81000 81200 81250 81300	Equipment Purchases Rental & Leases Equipment (over \$10,000) Vehicle Replacement Fund Subtotal	\$ - 2,500 \$ 2,500	\$ - - 1,250 1,250	\$	2,500 2,500	\$ 3,000 3,000	\$	- 500 500	20.00% 20.00%
95000	Allocations from Departments								
95100	Administrative Allocation	\$ 80,460	\$ 39,905	\$	80,759	\$ 77,867	\$	(2,593)	-3.22%
95300	Engineering Allocation	62,107	33,482		66,957	69,176		7,069	11.38%
95150	Maintenance Allocation	56,027	26,270		53,047	53,751		(2,276)	-4.06%
95200	Laboratory Allocation	18,918	 11,005		20,687	 20,661		1,743	9.21%
	Subtotal	\$ 217,512	\$ 110,662	\$	221,450	\$ 221,455	\$	3,943	1.81%
	Depreciation	30,000	15,000		30,000	\$ 40,000		10,000	33.33%
	Subtotal	\$ 30,000	\$ 15,000	\$	30,000	\$ 40,000	\$	10,000	33.33%
	Total	\$ 1,112,612	\$ 468,983	\$	1,060,751	\$ 1,086,905	\$	(25,707)	-2.31%

		FY	2020		F	Y 2021		
						-		Budget % Change
	1 2020		THOTHIS		2 1110111115		Buuger	% Change
	0.050						0.047	-6.00%
	'					'		
\$	43,401					\$	43,401	0.00%
\$	520,812	\$	260,406	\$	520,812	\$	520,812	0.00%
	15,000		-		15,000		9,220	-38.53%
	800		576		1,152		1,000	25.00%
\$	536,612	\$	260,982	\$	536,964	\$	531,032	-1.04%
¢	107 240	Ф	07 507	Ф	102 000	Ф	194 022	-6.75%
Ф		Φ		Φ		Φ	•	-6.75% 255.00%
							•	-31.63%
	•				•		•	-31.63% 34.11%
			•				•	-18.75%
								-16.75% -51.22%
								-27.87%
								-16.67%
								0.00%
\$		\$		\$		\$		-1.61%
Ψ	•	Ψ	,	Ψ	•	Ψ	•	0.61%
\$	536,617	\$	233,726	\$	516,434	\$	531,027	-1.04%
	\$29.404						\$30.955	5.27%
	, -							
•	40.700						40.700	0.000/
	•	Φ	04.074	Φ	400 740		•	0.00%
Ф	,	Ъ	•	Ф	,	Ф	,	0.00%
								-29.41%
•	•	¢		¢		¢		-1.19% -0.43%
<u> </u>	130,049	Þ	69,467	Ą	130,974	Ą	130,249	-0.43%
\$	129,524	\$	64,762	\$	129,524	\$	126,032	-2.70%
	925		463		926	-	3,917	323.46%
	8,400		4,249		8,498		8,300	-1.19%
\$	138,849	\$	69,474	\$	138,948	\$	138,249	-0.43%
				\$	675 038	\$	669 281	-0.91%
φ 	675,466	ψ	303,200	ψ	655,382	ψ	669,276	-0.91%
\$	(5)	\$	27,269	\$	20,556	\$	5_	
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 43,401 \$ 520,812 15,000 800 \$ 536,612 \$ 197,349 20,000 33,318 3,430 800 410 121,540 3,000 20,000 \$ 399,847 136,770 \$ 536,617 \$ 229.404 \$ 128,749 1,700 8,400 \$ 138,849 \$ 138,849 \$ 138,849	\$ 43,401 \$ 520,812 \$ 15,000 800 \$ 536,612 \$ \$ 197,349 \$ 20,000 33,318 3,430 800 410 121,540 3,000 20,000 \$ 399,847 \$ 136,770 \$ 536,617 \$ \$ 10,729 \$ 128,749 \$ 1,700 8,400 \$ 138,849 \$ \$ 138,849 \$ \$ Rate Center Summars \$ 675,461 \$ 675,466	Budgeted FY 2020 Actual for 6 months 0.050 0.050 \$ 43,401 \$ 520,812 \$ 260,406 15,000 - 800 576 \$ 536,612 \$ 260,982 \$ 197,349 \$ 97,507 20,000 675 33,318 9,415 3,430 2,634 800 400 410 142 121,540 42,617 3,000 1,869 20,000 10,000 \$ 399,847 165,259 136,770 68,467 \$ 536,617 \$ 233,726 \$29.404 \$ 128,749 \$ 64,374 1,700 864 8,400 4,249 \$ 138,849 \$ 69,487 \$ 129,524 \$ 64,762 925 463 8,400 4,249 \$ 138,849 \$ 69,474 Rate Center Summary \$ 675,461 \$ 330,469 675,466 303,200	\$ 43,401 \$ 520,812 \$ 260,406 \$ 15,000 \$ 576 \$ 536,612 \$ 260,982 \$ \$ \$ \$ 536,612 \$ 260,982 \$ \$ \$ \$ \$ \$ 2,000 \$ 675 \$ 33,318 \$ 9,415 \$ 3,430 \$ 2,634 \$ 800 \$ 400 \$ 410 \$ 142 \$ 121,540 \$ 42,617 \$ 3,000 \$ 1,869 \$ 20,000 \$ 10,000 \$ 399,847 \$ 165,259 \$ 136,770 \$ 68,467 \$ \$ 536,617 \$ 233,726 \$ \$ \$ \$ 128,749 \$ 64,374 \$ 1,700 \$ 864 \$ 8,400 \$ 4,249 \$ \$ 138,849 \$ 69,487 \$ \$ \$ 129,524 \$ 64,762 \$ 925 \$ 463 \$ 8,400 \$ 4,249 \$ \$ 138,849 \$ 69,487 \$ \$ \$ \$ 129,524 \$ 64,762 \$ 925 \$ 463 \$ 8,400 \$ 4,249 \$ \$ 138,849 \$ 69,474 \$ \$ \$ \$ \$ 138,849 \$ 69,474 \$ \$ \$ \$ \$ \$ 138,849 \$ 69,474 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Budgeted FY 2020 Actual for 6 months Projected 12 months 0.050 \$ 43,401 \$ 520,812 \$ 260,406 \$ 520,812 \$ 15,000 \$ 15,000 \$ 15,000 \$ 15,000 \$ 15,000 \$ 15,000 \$ 1,152 \$ 536,612 \$ 260,982 \$ 536,964 \$ 536,612 \$ 260,982 \$ 536,964 \$ 197,349 \$ 97,507 \$ 193,980 \$ 20,000 675 20,000 33,318 9,415 18,531 3,430 2,634 5,268 800 400 800 400 800 410 142 284 121,540 42,617 116,584 3,000 1,869 3,738 20,000 10,000 20,000 \$ 399,847 165,259 379,185 136,770 68,467 137,249 \$ 536,617 \$ 233,726 \$ 516,434 \$ 29.404 \$ 128,749 64,374 \$ 128,748 1,728 8,490 4,249 8,498 \$ 138,849 \$ 69,487 \$ 138,974 \$ 138,974 \$ 138,974 \$ 138,948 \$ 138,849 \$ 69,474 \$ 138,948 \$ 675,466 303,200 655,382	Budgeted FY 2020 Actual for 6 months Projected 12 months 0.050 \$ 12 months \$ 20,812 \$ 260,406 \$ 520,812 \$ 15,000 800 576 1,152 \$ 536,612 \$ 260,982 \$ 536,964 \$ \$ 197,349 \$ 97,507 \$ 193,980 \$ 20,000 \$ 20,000 \$ 675 20,000 \$ 20,000 \$ 33,318 9,415 18,531 3,430 2,634 5,268 800 400 800 400 800 400 800 410 142 284 121,540 42,617 116,584 3,000 1,869 3,738 20,000 10,000 20,000 \$ 399,847 165,259 379,185 \$ 136,770 68,467 137,249 \$ 536,617 \$ 233,726 \$ 516,434 \$ \$ 29.404 \$ 10,729 \$ 128,749 \$ 64,374 \$ 128,748 \$ 1,700 864 1,728 8,498 \$ 138,849 \$ 69,487 \$ 138,974 \$ 138,974 \$ 138,974 \$ 138,948 \$ 138,948 \$ 69,474 \$ 138,948 \$ 675,461 \$ 330,469 \$ 675,938 \$ 675,466 303,200 655,382	Budgeted FY 2020 Actual for 6 months Projected 12 months Proposed Budget 0.050 0.047 \$ 43,401 \$ 43,401 \$ 520,812 \$ 260,406 \$ 520,812 \$ 520,812 15,000 - 15,000 9,220 800 576 1,152 1,000 \$ 536,612 \$ 260,982 \$ 536,964 \$ 531,032 \$ 197,349 \$ 97,507 \$ 193,980 \$ 184,032 20,000 675 20,000 71,000 33,318 9,415 18,531 22,780 3,430 2,634 5,268 4,600 400 800 650 410 142 284 200 121,540 42,617 116,584 87,662 3,000 1,869 3,738 2,500 20,000 10,000 20,000 20,000 \$ 399,847 \$ 165,259 379,185 393,424 136,770 68,467 137,249 137,603 \$ 128,749 <t< td=""></t<>

	Se Detail			_					2020	2020
Rate C	enter: Scottsville Water			Current Ye	ear Ac	tivity			vs.	vs.
		Adopted		Six Month		Projected	Proposed		2021	2021
Object		Budget		Actual		Year end	Budget	1	Variance	Variance
<u>Code</u>	Line Item	FY 2019-2020		12/31/2019		6/30/2020	FY 2020-2021		\$	%
10000	Salaries & Benefits									
11000	Salaries	\$ 124,221	\$	63,323	\$	126,646	\$ 113,850	\$	(10,371)	-8.35%
11010	Overtime & Holiday Pay	13,000		7,778		15,556	13,000		-	0.00%
12010	FICA	10,497		5,272		10,544	9,704		(793)	-7.55%
12020	Health Insurance	29,249		12,045		24,090	28,600		(649)	-2.22%
12026	Employee Assistance Program	25		10		20	25		-	0.00%
12030	Retirement	11,950		4,991		9,982	10,247		(1,703)	-14.25%
12040	Life Insurance	1,627		771		1,542	1,526		(101)	-6.21%
12050	Fitness Program	300		178		356	300		-	0.00%
12060	Worker's Comp Insurance	2,600		1,551		2,068	2,600		-	0.00%
	Subtotal	\$ 193,469	\$	95,919	\$	190,804	\$ 179,852	\$	(13,617)	-7.04%
									·	<u>'</u>
13000	Other Personnel Costs									
13100	Employee Dues & Licenses	\$ 180	\$	3	\$	6	\$ 180	\$	-	0.00%
13150	Education & Training	1,950		483	·	966	1,950		-	0.00%
13200	Travel & Lodging	400		4		8	200		(200)	-50.00%
13250	Uniforms	1,200		930		1,860	1,400		200	16.67%
13325	Recruiting & Medical Testing	100		80		160	150		50	50.00%
13350	Other	50		88		176	300		250	500.00%
	Subtotal	\$ 3,880	\$	1,588	\$	3,176	\$ 4,180	\$	300	7.73%
	- Capitata	φ σ,σσσ	Ψ_	1,000	<u> </u>	0,	Ψ 1,100			111070
	Professional Services									
20100	Legal Fees	\$ -	\$	_	\$	_	\$ -	\$	_	
20200	Financial & Admin. Services	· .	Ψ	_	Ψ	_	<u> </u>	Ψ	_	
20250	Bond Issue Costs	_		_		_	_		_	
20300	Engineering & Technical Services	20,000		675		20,000	71,000		51,000	255.00%
20000	Subtotal	\$ 20,000	\$	675	\$	20,000	\$ 71,000	\$	51,000	200.0070
	Gubiotai	Ψ 20,000	Ψ	013	Ψ	20,000	Ψ 71,000	Ψ	31,000	
	Other Services and Charges									
21100	General Liability/Property Ins.	\$ 760	\$	448	\$	597	\$ 900	\$	140	18.42%
21150		ψ 100	Ψ	440	Ψ	331	φ 900	Ψ	140	10.42 /6
	Advertising & Communication	-		-		-	-		-	
21250	Watershed Management	-		-		-	-		-	
21252	EMS Programs/Supplies	4.050		-		- 4 400	- 4 400		(400)	00.040/
21253	Safety Programs/Supplies	1,858		584		1,168	1,430		(428)	-23.04%
21300	Authority Dues/Permits/Fees	1,000		519		1,038	500		(500)	-50.00%
21350	Laboratory Analysis	18,500		2,609		5,218	4,850		(13,650)	-73.78%
21400	Utilities	11,000		4,556		9,112	15,000		4,000	36.36%
21420	General Other Services	200		699		1,398	100		(100)	-50.00%
21430	Governance & Strategic Support	-		-		-	-		-	
21450	Bad Debt	-		-		-	-		-	
	Subtotal	\$ 33,318	\$	9,415	\$	18,531	\$ 22,780	\$	(10,538)	-31.63%
22000	Communication									
22100	Radio	\$ 430	\$	386	\$	772	\$ 500	\$	70	16.28%
22150	Telephone & Data Service	2,000		1,853		3,706	3,200		1,200	60.00%
22200	Cell Phones & Pagers	1,000		395		790	900		(100)	-10.00%
	Subtotal	\$ 3,430	\$	2,634	\$	5,268	\$ 4,600	\$	1,170	34.11%
31000	Information Technology									
31100	Computer Hardware	\$ 150	\$	-	\$	-	\$ 150	\$	-	0.00%
31150	SCADA Maint. & Support	500		400		800	500		-	0.00%
31200	Maintenance & Support Services	-		-		-	-		-	
31250	Software Purchases	150		-		-	-		(150)	0.00%
	Subtotal	\$ 800	\$	400	\$	800	\$ 650	\$	(150)	-18.75%
33000	Supplies									
33100	Office Supplies	\$ 50	\$	-	\$	-	\$ -	\$	(50)	-100.00%
33150	Subscriptions/Reference Material	10		-		-	-		(10)	-100.00%
33350	Postage & Delivery	350		142		284	200		(150)	-42.86%
	Subtotal	\$ 410	\$	142	\$	284	\$ 200	\$	(210)	-51.22%
		¥					· · ·		(= : •)	0.1.2.70
41000	Operation & Maintenance									
41100	Building & Grounds	\$ 13,000	\$	3,968	\$	7,936	\$ 5,700	\$	(7,300)	-56.15%
41150	Building & Land Lease	Ψ 10,000	Ψ	0,500	Ψ	7,500	φ 0,700	Ψ	(7,500)	00.1070
41200	Pump Station Maintenance	-		-		-	-		-	
	•	1 500		-		-	1 500		-	0.000/
41300	Dam Maintenance	1,500		400		-	1,500		(4.00)	0.00%
41350	Pipeline/Appurtenances	100		160		320			(100)	-100.00%
41400	Materials, Supplies & Tools	3,200		5,461		10,922	3,000		(200)	-6.25%
41450	Chemicals	46,440		24,217		48,434	35,550		(10,890)	-23.45%
41500	Vehicle Maintenance	700		709		1,418	800		100	14.29%

2020

Expens	se Detail								2020	2020
Rate C	enter: Scottsville Water		Current Ye	ar Act	tivity				vs.	vs.
Object <u>Code</u>	<u>Line Item</u>	Adopted Budget 2019-2020	Six Month Actual 12/31/2019		Projected Year end 6/30/2020		Proposed Budget 2020-2021	V	2021 /ariance \$	2021 Variance %
41550	Equipment Repair, Replace, Maint.	23,000	2,975		23,000	1	20,000		(3,000)	-13.04%
41600	Instrumentation & Metering	20,200	350		15,000		10,600		(9,600)	-47.52%
41650	Fuel & Lubricants	1,400	527		1,054		1,000		(400)	-28.57%
41700	General Other Maintenance	12,000	4,250		8,500		9,512		(2,488)	-20.73%
	Subtotal	\$ 121,540	\$ 42,617	\$	116,584	\$	87,662	\$	(33,878)	-27.87%
81000 81200 81250 81300	Equipment Purchases Rental & Leases Equipment (over \$10,000) Vehicle Replacement Fund	\$ 500 - 2,500	\$ 619 - 1,250	\$	1,238 - 2,500	\$	- - 2,500		(500) - -	-100.00% 0.00%
	Subtotal	\$ 3,000	\$ 1,869	\$	3,738	\$	2,500	\$	(500)	-16.67%
95000 95100 95300 95150 95200	Allocations from Departments Administrative Allocation Engineering Allocation Maintenance Allocation Laboratory Allocation	\$ 40,230 31,054 56,027 9,459	\$ 19,953 16,741 26,270 5,503	\$	40,380 33,479 53,047 10,343	\$	38,934 34,588 53,751 10,330	\$	(1,296) 3,534 (2,276) 871	-3.22% 11.38% -4.06% 9.21%
	Subtotal	\$ 136,770	\$ 68,467	\$	137,249	\$	137,603	\$	833	0.61%
	Depreciation Subtotal	\$ 20,000	\$ 10,000 10,000	\$	20,000	\$	20,000	\$		0.00% 0.00%
	Total	\$ 536,617	\$ 233,726	\$	516,434	\$	531,027	\$	(5,590)	-1.04%

Wastewater Rate Centers

Rivanna Water and Sewer Authority

Fiscal Year 2020-2021

Urban Wastewater Summary				F	Y 2020				FY 2021]
			Budgeted FY 2020		Actual for 6 months		Projected 12 months		Proposed Budget	Budget % Change
Projected Flow (MGD))		9.289						9.289	0.00%
Operations Budget	1									
Projected Revenues	-									
Operations Rate		\$	2.369					\$	2.369	0.00%
Revenue		\$	8,033,620	\$	4,213,051	\$	8,276,102	\$	8,033,620	0.00%
Stone Robinson WWTP			22,478		8,744		17,488		22,788	1.38%
Septage Acceptance			450,000		260,963		496,926		475,000	5.56%
Nutrient Credits			90,000		78,763		78,763		45,000	-50.00%
Rate Stabilization Reserve			-				-		121,233	
Miscellaneous Revenue			-		500		500		-	44.040/
Interest Allocation		_	14,400	•	10,169	•	20,338	•	16,100	11.81%
Total Operations Revenues		\$	8,610,498	\$	4,572,190	\$	8,890,117	\$	8,713,741	1.20%
Projected Expenses										
Personnel Cost		\$	1,281,463	\$	636,717	\$	1,268,970	\$	1,299,876	1.44%
Professional Services			175,000		152,763		305,526		143,400	-18.06%
Other Services and Charges			2,030,825		1,058,073		2,086,769		2,020,300	-0.52%
Communications			10,430		6,528		10,096		10,700	2.59%
Information Technology			62,500		15,233		60,758		69,500	11.20%
Supplies			2,700		204		408		1,900	-29.63%
Operations and Maintenance			1,732,150		869,234		1,832,364		1,767,000	2.01%
Equipment Purchases			70,000		33,653		67,306		125,250	78.93%
Depreciation & Reserves		_	470,000	Φ.	235,000	Φ.	470,000	Φ.	470,000	0.00%
Subtotal before allocations		\$	5,835,068	\$		\$	6,102,197	\$	5,907,926	1.25%
Allocations of Support Departments		\$	2,775,430 8,610,498	\$	1,400,543 4,407,948	\$	2,805,042 8,907,239	\$	2,805,815 8,713,741	1.09% 1.20%
Total Operations Expenses		<u> </u>	0,010,490	Ψ	4,407,340	Ψ	0,907,239	Ψ	0,713,741	1.20 /0
Operations Cost per 1,000 gallons			\$2.540						\$2.570	1.18%
	7									
Debt Service Budget										
<u>, </u>]									
Projected Revenue	CITY		407,588						407,588	0.00%
Projected Revenue	CITY ACSA		407,588 278,174						407,588 278,174	
Projected Revenue		\$		\$	2,445,528	\$	4,891,056	\$	•	0.00%
Projected Revenue Debt Service Rate		\$	278,174	\$	2,445,528 1,669,044	\$	4,891,056 3,338,088	\$	278,174	0.00% 0.00%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY		\$	278,174 4,891,055	\$		\$		\$	278,174 4,891,018	0.00% 0.00% 0.00% 0.00%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest		\$	278,174 4,891,055 3,338,088	\$	1,669,044	\$	3,338,088	\$	278,174 4,891,018 3,338,072 109,440 74,000	0.00% 0.00% 0.00% 0.00%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves		\$	278,174 4,891,055 3,338,088 109,440 96,900	\$	1,669,044 109,441 52,974	\$	3,338,088 109,441 105,948	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400	0.00% 0.00% 0.00% 0.00% -23.63%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest	ACSA		278,174 4,891,055 3,338,088 109,440 96,900 266,900		1,669,044 109,441 52,974 137,041		3,338,088 109,441 105,948 274,082		278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200	0.00% 0.00% 0.00% -23.63% 10.60%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves	ACSA	\$ \$	278,174 4,891,055 3,338,088 109,440 96,900	\$	1,669,044 109,441 52,974 137,041	\$	3,338,088 109,441 105,948	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400	0.00% 0.00% 0.00% 0.00% -23.63%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue	ACSA		278,174 4,891,055 3,338,088 109,440 96,900 266,900		1,669,044 109,441 52,974 137,041		3,338,088 109,441 105,948 274,082		278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200	0.00% 0.00% 0.00% 0.00% -23.63%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves	ACSA	\$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383	\$	1,669,044 109,441 52,974 137,041 4,414,028	\$	3,338,088 109,441 105,948 274,082 8,718,615	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% 1.15%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest	ACSA		278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383	\$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080		278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% 1.15%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest	ACSA	\$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900	\$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% -0.86% 10.60%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest Debt Service Ratio Charge	ACSA	\$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900 325,000	\$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041 162,500	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082 325,000	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200 325,000	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% -0.86% 10.60% 0.00%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest Debt Service Ratio Charge Est. New Debt Service - CIP Growth	ACSA	\$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900 325,000 230,400	\$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041 162,500 115,200	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082 325,000 230,400	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200 325,000 369,800	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% -0.86% 10.60% 0.00% 60.50%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest Debt Service Ratio Charge	ACSA	\$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900 325,000	\$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041 162,500 115,200	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082 325,000	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200 325,000	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% -0.86% 10.60% 0.00%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest Debt Service Ratio Charge Est. New Debt Service - CIP Growth	ACSA	\$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900 325,000 230,400 8,702,379	\$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041 162,500 115,200 4,354,781	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082 325,000 230,400	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200 325,000 369,800	0.00% 0.00% 0.00% -23.63% 10.60% -0.86% 10.60% 0.00% 60.50%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest Debt Service Ratio Charge Est. New Debt Service - CIP Growth Total Debt Principal and Interest	ACSA	\$ \$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900 325,000 230,400 8,702,379	\$ \$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041 162,500 115,200 4,354,781	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082 325,000 230,400 8,709,562	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200 325,000 369,800 8,802,130	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% 1.15% -0.86% 10.60% 0.00% 60.50%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest Debt Service Ratio Charge Est. New Debt Service - CIP Growth	ACSA	\$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900 325,000 230,400 8,702,379	\$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041 162,500 115,200 4,354,781	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082 325,000 230,400	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200 325,000 369,800	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% -0.86% 10.60% 0.00% 60.50%
Projected Revenue Debt Service Rate Debt Service Rate Revenue - CITY Debt Service Rate Revenue - ACSA County MOU - Septage Trust Fund Interest Use of Reserves Reserve Fund Interest Total Debt Service Revenue Principal, Interest & Reserves Total Principal & Interest Reserve Additions - Interest Debt Service Ratio Charge Est. New Debt Service - CIP Growth Total Debt Principal and Interest	ACSA	\$ \$	278,174 4,891,055 3,338,088 109,440 96,900 266,900 8,702,383 7,880,079 266,900 325,000 230,400 8,702,379 ste Center Sum 17,312,881 17,312,877	\$ \$	1,669,044 109,441 52,974 137,041 4,414,028 3,940,040 137,041 162,500 115,200 4,354,781	\$	3,338,088 109,441 105,948 274,082 8,718,615 7,880,080 274,082 325,000 230,400 8,709,562	\$	278,174 4,891,018 3,338,072 109,440 74,000 94,400 295,200 8,802,130 7,812,130 295,200 325,000 369,800 8,802,130	0.00% 0.00% 0.00% 0.00% -23.63% 10.60% 1.15% -0.86% 10.60% 0.00% 60.50% 1.15%

\$

Rivanna Water and Sewer Authority Fiscal Year 2020-2021 Proposed Budget Expense Detail Rate Center: Urban Wastewater

Rate C	enter: Urban Wastewater				Current Ye	ar Ac	tivity				vs.	vs.
	_		Adopted		Six Month		Projected		Proposed		2021	2021
Object			Budget		Actual		Year end		Budget	,	Variance	Variance
<u>Code</u>	<u>Line Item</u>	FY	2019-2020		12/31/2019		6/30/2020	FY	<u> 2020-2021</u>		\$	%
40000	Salarias & Banatita											
10000 11000	Salaries & Benefits Salaries	\$	821,784	\$	418,706	\$	837,412	\$	844,100	\$	22,316	2.72%
11010	Overtime & Holiday Pay	Ψ	80,000	Ψ	24,895	Ψ	49,790	Ψ	65,000	Ψ	(15,000)	-18.75%
12010	FICA		68,986		32,739		65,478		69,546		560	0.81%
12020	Health Insurance		180,472		105,437		210,874		193,100		12,628	7.00%
12026	Employee Assistance Program		200		61		122		250		50	25.00%
12030	Retirement		79,056		31,807		63,614		75,969		(3,087)	-3.90%
12040	Life Insurance		10,765		4,995		9,990		11,311		546	5.07%
12050	Fitness Program		700		564		1,128		1,000		300	42.86%
12060	Worker's Comp Insurance	Φ.	11,200	Φ.	6,696	•	8,928		11,500	Φ.	300	2.68%
	Subtotal	\$	1,253,163	\$	625,900	\$	1,247,336	\$	1,271,776	\$	18,613	1.49%
13000	Other Personnel Costs											
13100	Employee Dues & Licenses	\$	2,800	\$	226	\$	452	\$	2,000	\$	(800)	-28.57%
13150	Education & Training		10,900		4,362		8,724		10,900		` -	0.00%
13200	Travel & Lodging		5,300		433		866		2,500		(2,800)	-52.83%
13250	Uniforms		7,800		5,162		10,324		9,700		1,900	24.36%
13325	Recruiting & Medical Testing		1,000		403		806		1,000		-	0.00%
13350	Other	•	500	•	231	•	462		2,000	•	1,500	300.00%
	Subtotal	\$	28,300	\$	10,817	\$	21,634	\$	28,100	\$	(200)	-0.71%
	Professional Services											
20100	Legal Fees	\$	_	\$	_	\$	_	\$	5,000	\$	5,000	
20200	Financial & Admin. Services	Ψ	_	Ψ	-	Ψ	_	Ψ	-	Ψ	-	
20250	Bond Issue Costs		-		-		-		-		-	
20300	Engineering & Technical Services		175,000		152,763		305,526		138,400		(36,600)	-20.91%
	Subtotal	\$	175,000	\$	152,763	\$	305,526	\$	143,400	\$	(31,600)	
	Other Services and Charges	_				_		_				
21100	General Liability/Property Ins.	\$	74,800	\$	44,066	\$	58,755	\$	67,400	\$	(7,400)	-9.89%
21150	Advertising & Communication		225		-		-		-		(225)	
21250 21252	Watershed Management EMS Programs/Supplies		-		-		-	-	1,000		1,000	
21252	Safety Programs/Supplies		38,700		7,483		14,966		25,500		(13,200)	-34.11%
21300	Authority Dues/Permits/Fees		35,200		23,317		46,634		44,900		9,700	27.56%
21350	Laboratory Analysis		6,500		5,383		10,766		9,500		3,000	46.15%
21400	Utilities		938,000		458,327		916,654		940,000		2,000	0.21%
21420	General Other Services		932,400		519,497		1,038,994		932,000		(400)	-0.04%
21430	Governance & Strategic Support		5,000		-		-		-		(5,000)	-100.00%
21450	Bad Debt		<u>-</u>		<u>-</u>		<u>-</u>				-	
	Subtotal	\$	2,030,825	\$	1,058,073	\$	2,086,769	\$	2,020,300	\$	(10,525)	-0.52%
22000	Communication											
22100	Radio	\$	3,830	\$	3,480	\$	4,000	\$	3,900	\$	70	1.83%
22150	Telephone & Data Service	*	1,800	•	1,171	•	2,342	_	2,000	•	200	11.11%
22200	Cell Phones & Pagers		4,800		1,877		3,754		4,800		-	0.00%
	Subtotal	\$	10,430	\$	6,528	\$	10,096	\$	10,700	\$	270	2.59%
31000	Information Technology	Φ.	0.000	Φ.	4.000	•	0.000	•	0.000	Φ.		0.000/
31100 31150	Computer Hardware SCADA Maint. & Support	\$	9,000 50,500	\$	4,663 9,941	\$	9,000 50,500	\$	9,000 57,500	\$	7,000	0.00% 13.86%
31200	Maintenance & Support Services		50,500		3,341		50,500		37,300		7,000	13.00 /6
31250	Software Purchases		3,000		629		1,258		3,000		_	0.00%
	Subtotal	\$	62,500	\$	15,233	\$	60,758	\$	69,500	\$	7,000	11.20%
												•
33000	Supplies											
33100	Office Supplies	\$	2,500	\$	33	\$	66	\$	1,000	\$	(1,500)	-60.00%
33150	Subscriptions/Reference Material		-		-		- 0.40		-		-	050.000/
33350	Postage & Delivery Subtotal	\$	200 2,700	\$	171 204	\$	342 408	\$	900 1,900	\$	700 (800)	350.00% -29.63%
	Subtotal	Ψ	2,700	Ψ	204	Ψ	400	Ψ	1,900	Ψ	(000)	-29.0370
41000	Operation & Maintenance											
41100	Building & Grounds	\$	85,000	\$	38,033	\$	76,066	\$	85,000	\$	-	0.00%
41150	Building & Land Lease		-		· -		-		-		-	
41200	Pump Station Maintenance		90,000		75,803		151,606		90,000		-	0.00%
41300	Dam Maintenance		-		-		-		-		-	
41350	Pipeline/Appurtenances		195,000		79,298		158,596		114,360		(80,640)	-41.35%
41400	Materials, Supplies & Tools		35,500		31,928		63,856	-	41,000		5,500	15.49%
41450	Chemicals		837,250		433,248		866,496 10,176		848,000		10,750	1.28% 11.11%
41500 41550	Vehicle Maintenance Equipment Repair, Replace, Maint.		13,500 350,000		5,088 185,272		370,544		15,000 350,000		1,500	0.00%
41600	Instrumentation & Metering		125,900		8,052		110,000		216,640		90,740	72.07%
	and a motoring		0,500		3,002				,5 10		00,. 10	/ 0

2020

Rate C	enter: Urban Wastewater			Current Ye	ar A	ctivity			vs.	vs.
Object <u>Code</u>	<u>Line Item</u>	<u>F</u>	Adopted Budget Y 2019-2020	Six Month Actual 12/31/2019		Projected Year end 6/30/2020	<u>F</u>	Proposed Budget Y 2020-2021	2021 Variance \$	2021 Variance %
41650 41700	Fuel & Lubricants General Other Maintenance Subtotal	\$	38,000 (38,000) 1,732,150	\$ 20,160 (7,648) 869,234	\$	40,320 (15,296) 1,832,364	\$	35,000 (28,000) 1,767,000	\$ (3,000) 10,000 34,850	-7.89% 26.32% 2.01%
81000 81200 81250	Equipment Purchases Rental & Leases Equipment (over \$10,000)	\$	10,000	\$ 3,653	\$	7,306	\$	77,250	\$ 67,250	672.50%
81300	Vehicle Replacement Fund Subtotal	\$	60,000 70,000	\$ 30,000 33,653	\$	60,000 67,306	\$	48,000 125,250	\$ (12,000) 55,250	-20.00% 78.93%
95000 95100 95300 95150 95200	Allocations from Departments Administrative Allocation Engineering Allocation Maintenance Allocation Laboratory Allocation	\$	965,520 683,179 904,442 222,289	\$ 478,860 368,298 424,071 129,314	\$	969,110 736,527 856,335 243,070	\$	934,409 760,939 867,702 242,765	\$ (31,111) 77,760 (36,740) 20,476	-3.22% 11.38% -4.06% 9.21%
	Subtotal	\$	2,775,430	\$ 1,400,543	<u> </u>	2,805,042	\$	2,805,815	\$ 30,385	1.09%
	Depreciation Subtotal	\$	470,000 470,000	\$ 235,000 235,000	\$	470,000 470,000	\$	470,000 470,000	\$ -	0.00%
	Total	\$	8,610,498	\$ 4,407,948	\$	8,907,239	\$	8,713,741	\$ 103,243	1.20%

2020

Glenmore Wastewater Summary			FY	2020			F	Y 2021	
		Budgeted FY 2020		Actual for 6 months		Projected 12 months	F	Proposed Budget	Budget % Change
Projected Flow (MGD)		0.109						0.114	
Operations Budget									
Projected Revenues									
Operations Rate (monthly)	\$	30,877					\$	30,877	0.00%
Revenue	Ψ	370,524	\$	185,262	\$	370,524	Ψ	370,524	0.00%
Rate Stabilizaton		-	Ψ	-	Ψ	-		24,540	0.007
Interest Allocation		700		487		974		700	0.00%
Total Operations Revenues	\$	371,224	\$	185,749	\$	371,498	\$	395,764	6.61%
Projected Expenses		·		·		·		·	
Personnel Cost	\$	95,340	\$	46,998	\$	93,677	\$	97,804	2.58%
Professional Services	Φ	95,340	Φ	2,194	Φ	4,388	Φ		2.30%
		2F 240						24,200	4 500/
Other Services and Charges		35,210		15,989		31,860		36,800	4.52%
Communications		3,000		1,771		3,170		3,200	6.67%
Information Technology		3,700		6,590		11,000		4,050	9.46%
Supplies		100		-		-		-	-100.00%
Operations and Maintenance		119,950		79,227		158,454		109,100	-9.05%
Equipment Purchases		2,400		1,200		2,400		3,700	54.17%
Depreciation		5,000		2,500		5,000		10,000	100.00%
Subtotal before allocations	\$	264,700	\$		\$	309,949	\$	288,854	9.13%
Allocations of Support Departments		106,526		52,929		106,104		106,907	0.36%
Total Operations Expenses	\$	371,226	\$	209,398	\$	416,053	\$	395,761	6.61%
Operations Cost per 1,000 gallons		\$9.331						\$9.511	
Debt Service Budget									
Projected Revenue									
Debt Service Rate (monthly)	\$	315					\$	315	0.00%
Debt Service Rate (monthly) Debt Service Rate Revenue - ACSA	\$ \$	3,778	\$	1,890	\$	2 790		3,778	0.00%
Trust Fund Interest	Φ	3,770	Φ	1,090	Φ	3,780	Φ	3,770	0.00%
Reserve Fund Interest		2 100		- 1,771		3,542		2 000	-3.23%
	\$	3,100 6,878	\$	3,661	\$	7,322	\$	3,000 6,778	-3.23% -1.45%
Total Debt Service Revenue	Ψ	0,070	Ψ	3,001	Ψ	1,322	Ψ	0,770	-1.43 /
Principal, Interest & Reserves									
Total Principal & Interest	\$	1,578	\$	789	\$	1,578	\$	1,579	0.06%
Estimated New Principal & Interest	\$	2,200		1,100		2,200		2,199	0.007
Reserve Additions - Interest	Ψ	3,100	Ψ	1,771	Ψ	3,542	Ψ	3,000	-3.23%
Total Debt Principal and Interest	\$	6,878	\$	3,660	\$	7,320	\$	6,778	-1.45%
, otal 2001 illinoipal alla illicitott		0,0.0		0,000		.,020	<u> </u>	0,1.0	11107
	_								
Total Davanuas		e Center Sur			Φ.	270.000	Φ.	400.540	C 4C0/
Total Revenues Total Expenses	\$	378,102 378,104	Ф	189,410 213,058	Ф	378,820 423,373	Ф	402,542 402,539	6.46% 6.46%
Total Expenses		370,104		213,036		423,373		402,539	0.4070
Surplus/(Deficit)	\$	(2)	\$	(23,648)	\$	(44,553)	\$	3	
Rates (Monthly)									
ACSA	\$	31,192					\$	31,192	0.00%

	Se Detail										2020	2020
Rate C	Center: Glenmore Wastewate				Current Ye		·				vs.	vs.
			Adopted		Six Month		rojected		oposed		2021	2021
Object			Budget		Actual		ear end		udget	V	ariance	Variance
<u>Code</u>	<u>Line Item</u>	FY	<u>2019-2020</u>		12/31/2019	6/	/30/2020	FY 2	<u>020-2021</u>		\$	%
40000	Colonias & Bonofita											
10000	Salaries & Benefits	ф	CO 522	æ	20.042	•	C4 C04	Φ.	62.400	r.	4.500	0.500/
11000	Salaries	\$	60,532 6,500	\$	30,842 1,909	\$	61,684 3,818	\$	62,100 6,500	\$	1,568	2.59% 0.00%
11010 12010	Overtime & Holiday Pay FICA		5,128						5,248		120	2.34%
12010	Health Insurance		13,584		2,417 7,857		4,834		14,550		966	7.11%
12020	Employee Assistance Program		15,564		7,007 5		15,714 10		14,550		900	0.00%
12020	Retirement		5,823		2,340		4,680		5,589		(234)	-4.02%
12030	Life Insurance		793		2,340 367		734		832		39	-4.02 % 4.92%
12040	Fitness Program		793 50		38		734 76		70		20	40.00%
12060	Worker's Comp Insurance		800		479		639		800		-	0.00%
12000	Subtotal	\$	93,225	\$	46,254	\$	92,189	\$	95,704	\$	2,479	2.66%
	- Cabiotai	Ψ	00,220	Ψ_	10,201	Ψ	02,100	Ψ	00,701	Ψ	2, 170	2.0070
13000	Other Personnel Costs											
13100	Employee Dues & Licenses	\$	230	\$	14	\$	28	\$	200	\$	(30)	-13.04%
13150	Education & Training	Ψ	775	Ψ	228	*	456	Ψ	700	Ψ	(75)	-9.68%
13200	Travel & Lodging		375		3		6		200		(175)	-46.67%
13250	Uniforms		600		395		790		750		150	25.00%
13325	Recruiting & Medical Testing		100		31		62		100		-	0.00%
13350	Other		35		73		146		150		115	328.57%
.0000	Subtotal	\$	2,115	\$	744	\$	1,488	\$	2,100	\$	(15)	-0.71%
		*	, -	•		*	,	*	,	*	(- /	
	Professional Services											
20100	Legal Fees	\$	-	\$	_	\$	_	\$	-	\$	-	
20200	Financial & Admin. Services	*	_	*	_	•	_	Ť	_	*	_	
20250	Bond Issue Costs		_		_		_		-		_	
20300	Engineering & Technical Services		_		2,194		4,388		24,200		24,200	0.00%
	Subtotal	\$	-	\$	2,194	\$	4,388	\$	24,200	\$	24,200	515575
		*		•	, -	*	,	*	,	*	,	
	Other Services and Charges											
21100	General Liability/Property Ins.	\$	300	\$	177	\$	236	\$	200	\$	(100)	-33.33%
21150	Advertising & Communication	•	-	•	_	•	_	-	-	•	-	
21250	Watershed Management		_		_		_		-		_	
21252	EMS Programs/Supplies		_		_		_		-		-	
21253	Safety Programs/Supplies		2,000		1,057		2,114		1,100		(900)	-45.00%
21300	Authority Dues/Permits/Fees		3,300		3,146		6,292		3,000		(300)	-9.09%
21350	Laboratory Analysis		1,500		-		-		1,500		-	0.00%
21400	Utilities		28,000		11,382		22,764		31,000		3,000	10.71%
21420	General Other Services		110		227		454		-		(110)	-100.00%
21430	Governance & Strategic Support		-				-		-		-	
21450	Bad Debt		-		_		_		-		-	
	Subtotal	\$	35,210	\$	15,989	\$	31,860	\$	36,800	\$	1,590	4.52%
			•		,		•		•		<u>, </u>	
22000	Communication											
22100	Radio	\$	400	\$	386	\$	400	\$	400	\$	-	0.00%
22150	Telephone & Data Service		2,000		1,127		2,254		2,200		200	10.00%
22200	Cell Phones & Pagers		600		258		516		600		-	0.00%
	Subtotal	\$	3,000	\$	1,771	\$	3,170	\$	3,200	\$	200	6.67%
31000	Information Technology											
31100	Computer Hardware	\$	1,000	\$	-	\$	1,000	\$	1,000	\$	-	0.00%
31150	SCADA Maint. & Support		2,500		6,590		10,000		3,050		550	22.00%
31200	Maintenance & Support Services		-		-		-		-		-	
31250	Software Purchases		200		-		-		-		(200)	-100.00%
	Subtotal	\$	3,700	\$	6,590	\$	11,000	\$	4,050	\$	350	9.46%
33000	Supplies											
33100	Office Supplies	\$	100	\$	-	\$	-	\$	-	\$	(100)	-100.00%
33150	Subscriptions/Reference Material		-		-		-		-		-	
33350	Postage & Delivery		-		-		-		-		-	
	Subtotal	\$	100	\$	-	\$	-	\$	-	\$	(100)	-100.00%
41000	Operation & Maintenance	_				_		-		_	<i>ie</i> · ·	
41100	Building & Grounds	\$	8,500	\$	2,939	\$	5,878	\$	6,000	\$	(2,500)	-29.41%
41150	Building & Land Lease				-		-		-		-	
41200	Pump Station Maintenance		9,000		-		-		9,000		-	0.00%
41300	Dam Maintenance		-		-		-		-		-	
41350	Pipeline/Appurtenances		500		-		-		-		(500)	-100.00%

2020

	se Detail									2020	2020
Rate C	enter: Glenmore Wastewate	er_		Current Yea	ar Ac	tivity				vs.	vs.
Object <u>Code</u>	<u>Line Item</u>		Adopted Budget 2019-2020	Six Month Actual I2/31/2019		Projected Year end 6/30/2020		Proposed Budget 7 2020-2021	V	2021 /ariance \$	2021 Variance %
41400	Materials, Supplies & Tools		2,500	754		1,508	ı	3,000		500	20.00%
41450	Chemicals		2,000	-		-		2,000		-	0.00%
41500	Vehicle Maintenance		750	99		198		1,000		250	33.33%
41550	Equipment Repair, Replace, Maint.		18,000	38,819		77,638		20,000		2,000	11.11%
41600	Instrumentation & Metering		5,100	234		468		5,100		-	0.00%
41650	Fuel & Lubricants		3,600	1,144		2,288		3,000		(600)	-16.67%
41700	General Other Maintenance		70,000	35,238		70,476		60,000		(10,000)	-14.29%
	Subtotal	\$	119,950	\$ 79,227	\$	158,454	\$	109,100	\$	(10,850)	-9.05%
81000 81200 81250	Equipment Purchases Rental & Leases Equipment (over \$10,000)	\$	-	\$ - -	\$	- -	\$	- -	\$	-	
81300	Vehicle Replacement Fund		2,400	1,200		2,400		3,700		1,300	54.17%
	Subtotal	\$	2,400	\$ 1,200	\$	2,400	\$	3,700	\$	1,300	54.17%
95000	Allocations from Departments										
95100	Administrative Allocation	\$	20,115	\$ 9,976	\$	20,190	\$	19,467	\$	(648)	-3.22%
95300	Engineering Allocation		23,290	12,556		25,109		25,941		2,651	11.38%
95150	Maintenance Allocation		56,027	26,270		53,047		53,751		(2,276)	-4.06%
95200	Laboratory Allocation		7,094	 4,127		7,758	<u> </u>	7,748		654	9.22%
	Subtotal	\$	106,526	\$ 52,929	\$	106,104	\$	106,907	\$	381	0.36%
	Depreciation		5,000	2,500		5,000	\$	10,000		5,000	100.00%
	Subtotal	\$	5,000	\$ 2,500	\$	5,000	\$	10,000	\$	5,000	100.00%
	Total	\$	371,226	\$ 209,398	\$	416,053	\$	395,761	\$	24,535	6.61%

Scottsville Wastewater Summary			FY	2020			I	Y 2021	
	E	Budgeted	F	Actual for	F	Projected		Proposed	Budget
		FY 2020	6	months	1	2 months	Ш	Budget	% Change
Projected Flow (MGD)		0.059						0.063	
Operations Budget									
Projected Revenues									
Operations Rate (monthly)	\$	25,749					\$	25,749	0.00%
Revenue	\$	308,988	\$	154,494	\$	308,988	\$	308,988	0.00%
Interest Allocation	,	600	•	399	•	798	•	600	0.00%
Total Operations Revenues	\$	309,588	\$	154,893	\$	309,786	\$	309,588	0.00%
Projected Expenses									
Personnel Cost	\$	95,366	\$	46,998	\$	93,677	\$	97,317	2.05%
Professional Services	Ψ	2,000	Ψ	- 0,530	Ψ	2,000	Ψ	2,100	5.00%
Other Services and Charges		28,000		10,249		20,223		23,710	-15.32%
Communications		3,930		1,924		3,848		3,720	-5.34%
Information Technology		1,700		.,02-		5,5 .6		1,500	-11.76%
Supplies		25		_		_		500	1900.00%
Operations and Maintenance		59,350		27,163		59.220		57,812	-2.59%
Equipment Purchases		2,700		1,200		2,400		3,700	37.04%
Depreciation		18,000		9,000		18.000		20,000	11.11%
Subtotal before allocations	\$	211,071	\$	96,534	\$	199,368	\$	210,359	-0.34%
Allocations of Support Departments	*	98.522	Ψ	49,176	Ψ	98,526	Ψ	99,229	0.72%
Total Operations Expenses	\$	309,593	\$	145,710	\$	297,894	\$	309,588	0.00%
Operations Cost per 1,000 gallons		\$14.376						\$13.463	93.65%
Operations Cost per 1,000 gallons		φ14.370						φ13.403	93.03 //
Debt Service Budget									
Projected Revenue									
Debt Service Rate (monthly)	\$	787					\$	787	0.00%
Debt Service Rate Revenue - ACSA	\$	9,442	\$	4,722	\$	9,444	\$	9,442	0.00%
Trust Fund Interest		100		86		172		100	0.00%
Reserve Fund Interest		3,100		1,416		2,832		4,200	35.48%
Total Debt Service Revenue	\$	12,642	\$	6,224	\$	12,448	\$	13,742	8.70%
Principal, Interest & Reserves	_		_			_	_		
Total Principal & Interest	\$	7,742	\$	3,871	\$	7,742	\$	7,464	-3.59%
Estimated New Principal & Interest		1,800		900		1,800		2,078	15.44%
Reserve Additions - Interest	_	3,100	_	1,416		2,832		4,200	35.48%
Total Debt Principal and Interest	\$	12,642	\$	6,187	\$	12,374	\$	13,742	8.70%
	Rat	e Center Sun	nma						
Total Revenues	\$	322,230	\$	161,117	\$	322,234	\$	323,330	0.34%
Total Expenses		322,235		151,897		310,268		323,330	0.34%
Surplus/(Deficit)	\$	(5)	\$	9,220	\$	11,966	\$		
		(•)		-,		,			
Rates (Monthly)									
ACSA	\$	26,536					\$	26,536	0.00%

	se Delali								2020	2020
Rate C	enter: Scottsville Wastewat	<u>er</u> Adopted		Current Yea		rojected	Proposed		vs. 2021	vs. 2021
Object <u>Code</u>	<u>Line Item</u>	Budget FY 2019-2020		Actual 12/31/2019	Υ	/ear end /30/2020	Budget FY 2020-2021	\	/ariance \$	Variance %
	0.1.1.00 %									-
10000	Salaries & Benefits	f 60 F33	φ	20.042	¢.	64 604	¢ 62.100	¢	1 560	2.500/
11000 11010	Salaries Overtime & Holiday Pay	\$ 60,532 6,500	\$	30,842 1,909	\$	61,684 3,818	\$ 62,100 6,000	\$	1,568 (500)	2.59% -7.69%
12010	FICA	5,128		2,417		4,834	5,210		82	1.60%
12020	Health Insurance	13,584		7,857		15,714	14,550		966	7.11%
12026	Employee Assistance Program	16		5		10	16		-	0.00%
12030	Retirement	5,823		2,340		4,680	5,589		(234)	-4.02%
12040 12050	Life Insurance Fitness Program	793 50		367 38		734 76	832 70		39 20	4.92% 40.00%
12060	Worker's Comp Insurance	800		479		639	800		-	0.00%
12000	Subtotal	\$ 93,226	\$	46,254	\$	92,189	\$ 95,167	\$	1,941	2.08%
13000	Other Personnel Costs	Φ 000	Φ.	4.4	•	00	* 000	•	(00)	40.040/
13100 13150	Employee Dues & Licenses Education & Training	\$ 230 775	\$	14 228	\$	28 456	\$ 200 775	\$	(30)	-13.04% 0.00%
13200	Travel & Lodging	375		3		6	200		(175)	-46.67%
13250	Uniforms	600		395		790	750		150	25.00%
13325	Recruiting & Medical Testing	100		31		62	75		(25)	
13350	Other	60		73		146	150		90	150.00%
	Subtotal	\$ 2,140	\$	744	\$	1,488	\$ 2,150	\$	10	0.47%
	Professional Services									
20100	Legal Fees	\$ -	\$	-	\$	-	\$ -	\$	-	
20200	Financial & Admin. Services	-		-		-	-		-	
20250	Bond Issue Costs	-		-		-	-		-	
20300	Engineering & Technical Services	2,000	.	-	.	2,000	2,100	\$	100	5.00%
	Subtotal	\$ 2,000	\$	-	\$	2,000	\$ 2,100	Ф	100	
	Other Services and Charges									
21100	General Liability/Property Ins.	\$ 700	\$	412	\$	549	\$ 700	\$	-	0.00%
21150	Advertising & Communication	-		-		-	-		-	
21250	Watershed Management	-		-		-	-		-	
21252 21253	EMS Programs/Supplies Safety Programs/Supplies	2,000		1,004		2,008	1,010		(990)	-49.50%
21300	Authority Dues/Permits/Fees	3,300		3,146		6,292	3,000		(300)	-49.50% -9.09%
21350	Laboratory Analysis	4,000		-		-	2,000		(2,000)	-50.00%
21400	Utilities	18,000		5,687		11,374	17,000		(1,000)	-5.56%
21420	General Other Services	-		-		-	-		-	
21430	Governance & Strategic Support	-		-		-	-		-	
21450	Bad Debt Subtotal	\$ 28,000	\$	10,249	\$	20,223	\$ 23,710	\$	(4,290)	-15.32%
	Gustotai	Ψ 20,000	Ψ_	10,210	Ψ	20,220	Ψ 20,110	Ψ	(1,200)	10.0270
22000	Communication									
22100	Radio	\$ 430	\$	386	\$	772	\$ 650	\$	220	51.16%
22150 22200	Telephone & Data Service Cell Phones & Pagers	3,000 500		1,435 103		2,870 206	2,800 270		(200) (230)	-6.67% -46.00%
22200	Subtotal	\$ 3,930	\$	1,924	\$	3,848	\$ 3,720	\$	(210)	-5.34%
	2 5.00 2 5.00	, ,,,,,,		.,=:	-	0,010	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	(=:=)	
31000	Information Technology		_					_		
31100	Computer Hardware	\$ 1,000	\$	-	\$	-	\$ 1,000	\$	-	0.00%
31150 31200	SCADA Maint. & Support Maintenance & Support Services	500		-			500		-	0.00%
31250	Software Purchases	200		_		-	-		(200)	-100.00%
	Subtotal	\$ 1,700	\$	-	\$	-	\$ 1,500	\$	(200)	-11.76%
33000	Supplies	ф ог	Ф		Φ.		•	Ф	(05)	400.000/
33100 33150	Office Supplies Subscriptions/Reference Material	\$ 25	\$	-	\$	-	\$ -	\$	(25)	-100.00%
33350	Postage & Delivery	-		-		-	500		500	
	Subtotal	\$ 25	\$	-	\$	-	\$ 500	\$	475	1900.00%
44000	One wation & Marinton									
41000 41100	Operation & Maintenance	¢ 4.900	\$	2 002	Ф	7 766	¢ 9,000	¢	2 200	66 670/
41150	Building & Grounds Building & Land Lease	\$ 4,800	Ф	3,883	\$	7,766	\$ 8,000	\$	3,200	66.67%
41200	Pump Station Maintenance	10,500		53		5,000	1,000		(9,500)	-90.48%
41300	Dam Maintenance	-,		-		-,	-			
41350	Pipeline/Appurtenances	500		873		1,746	-		(500)	-100.00%
41400	Materials, Supplies & Tools	2,000		659		1,318	1,500		(500)	-25.00%
41450 41500	Chemicals Vehicle Maintenance	4,000 750		598 99		1,196 198	2,000 1,000		(2,000) 250	-50.00% 33.33%
71000	VOLIDIO MAIITEITATIOE	7 30		33		130	1,000		230	JJ.JJ /0

2020

Expens	se Detail										2020	2020
Rate C	enter: Scottsville Wastewate	<u>er</u>			Current Yea	r Ac	tivity				vs.	vs.
Object <u>Code</u>	<u>Line Item</u>	l	Adopted Budget 2019-2020		Six Month Actual 12/31/2019		Projected Year end 6/30/2020	F	Proposed Budget Y 2020-2021		2021 Variance \$	2021 Variance %
41550	Equipment Repair, Replace, Maint.		16,000		9,310		18,620	lacksquare	16,000		- (7.000)	0.00%
41600 41650	Instrumentation & Metering Fuel & Lubricants		10,000 800		4,765 368		9,530 736		2,100 1,100		(7,900) 300	-79.00% 37.50%
41700	General Other Maintenance		10,000		6,555		13,110		25,112		15,112	151.12%
	Subtotal	\$	59,350	\$	27,163	\$	59,220	\$	57,812	\$	(1,538)	-2.59%
81000 81200	Equipment Purchases Rental & Leases	\$	300	\$	_	\$	_	\$	-	\$	(300)	
81250 81300	Equipment (over \$10,000) Vehicle Replacement Fund	·	2,400	·	- 1,200	·	- 2,400		3,700	·	1,300	54.17%
01300	Subtotal	\$	2,700	\$	1,200	\$	2,400	\$	3,700	\$	1,000	37.04%
95000	Allocations from Departments											
95100 95300	Administrative Allocation Engineering Allocation	\$	20,115 23,290	\$	9,976 12,556	\$	20,190 25,109	\$	19,467 25,941	\$	(648) 2,651	-3.22% 11.38%
95150 95200	Maintenance Allocation Laboratory Allocation		48,023 7,094		22,517 4,127		45,469 7,758		46,073 7,748		(1,950) 654	-4.06% 9.22%
93200	Subtotal	\$	98,522	\$	49,176	\$	98,526	\$	99,229	\$	707	0.72%
	Depreciation		18,000		9,000		18,000	\$	20,000		2,000	11.11%
	Subtotal	\$	18,000	\$	9,000	\$	18,000	\$	20,000	\$	2,000	11.11%
	Total	\$	309,593	\$	145,710	\$	297,894	\$	309,588	\$	(5)	0.00%

Support Departments

Fiscal Year 2020-2021

Rivanna Water and Sewer Authority

Administration Summary

	FY 2020		FY 2021	
Budgeted	Actual for	Projected	Proposed	Budget
FY 2020	6 months	12 months	Budget	% Change

Operations Budget

Total Operations Expenses

Projected Revenues & Sources

Payment for Services SWA Miscellaneous Revenue	\$ 466,000 2,000	\$ 233,000 15,618	\$ 466,000 15,618	\$ 543,000 2,000	16.52% 0.00%
Total Operations Revenues	\$ 468,000	\$ 248,618	\$ 481,618	\$ 545,000	16.45%
Projected Expenses					
Personnel Cost	\$ 1,841,351	\$ 954,678	\$ 1,897,754	\$ 1,906,136	3.52%
Professional Services	229,000	97,122	208,254	183,000	-20.09%
Other Services and Charges	106,400	51,270	84,409	80,600	-24.25%
Communications	18,500	9,778	18,436	21,500	16.22%
Information Technology	174,250	74,962	164,876	177,000	1.58%
Supplies	21,500	7,371	14,742	24,250	12.79%
Operations and Maintenance	64,500	44,063	88,126	75,200	16.59%
Equipment Purchases	24,000	7,000	24,000	24,000	0.00%
Depreciation		· -	· -	· -	

2,479,501 \$

1,246,244 \$

2,500,597 \$

2,491,686

0.49%

Total Revenues		\$ 468,000	\$ 248,618	\$ 481,618	\$ 545,000	16.45
Total Expenses		2,479,501	1,246,244	2,500,597	2,491,686	0.49
Net Costs Allocable to Rate Centers		\$ (2,011,501)	\$ (997,626)	\$ (2,018,979)	\$ (1,946,686)	-3.22
Allocations to the Rate Centers						
Urban Water	44.00%	\$ 885,060	\$ 438,955	\$ 888,351	\$ 856,542	
Crozet Water	4.00%	80,460	39,905	80,759	77,867	
Scottsville Water	2.00%	40,230	19,953	40,380	38,934	
Urban Wastewater	48.00%	965,520	478,860	969,110	934,409	
Glenmore Wastewater	1.00%	20,115	9,976	20,190	19,467	
Scottsville Wastewater	1.00%	20,115	9,976	20,190	19,467	
	100.00%	\$ 2,011,500	\$ 997,625	\$ 2,018,980	\$ 1,946,686	

Departme	ent: Administration				Current Ye	ar Act	tivity			vs.	vs.
Departine	Mt. Administration		Adopted		Six Month		Projected	Proposed		vs. 2021	2021
Object			Budget		Actual		Year end	Budget	Ι,	Variance	Variance
Code	Line Item	FY	2019-2020		12/31/2019		6/30/2020	FY 2020-2021		\$	%
										·	
10000	Salaries & Benefits										
11000	Salaries	\$	1,329,850	\$	679,418	\$	1,358,836	\$ 1,349,200	\$	19,350	1.46%
11010	Overtime & Holiday Pay		1,500		1,766		3,532	1,500		-	0.00%
12010	FICA		101,848		44,921		89,842	103,329		1,481	1.45%
12020	Health Insurance		217,000		129,030		258,060	259,300		42,300	19.49%
12026	Employee Assistance Program		200		75		150	100		(100)	-50.00%
12030	Retirement		127,932		55,605		111,210	121,428		(6,504)	-5.08%
12040	Life Insurance		17,421		8,639		17,278	18,079		658	3.78%
12050	Fitness Program		3,000		1,817		3,634	3,000		-	0.00%
12060	Worker's Comp Insurance		4,700		2,814		3,752	7,500		2,800	59.57%
	Subtotal	\$	1,803,451	\$	924,085	\$	1,846,294	\$ 1,863,436	\$	59,985	3.33%
42000	Other Bergernel Costs										
13000	Other Personnel Costs	•		•	0.40	•		A 0.000	•		2 222/
13100	Employee Dues & Licenses	\$	2,000	\$	240	\$	2,000	\$ 2,000	\$	-	0.00%
13150	Education & Training		19,000		9,549		19,000	19,000		(500)	0.00%
13200	Travel & Lodging		4,500		6,221		12,442	4,000		(500)	-11.11%
13250	Uniforms		1,500		1,371		1,500	2,000		500	33.33%
13325	Recruiting & Medical Testing		1,000		1,259		2,518	2,400		1,400	140.00%
13350	Other	Φ.	9,900	.	11,953	Φ.	14,000	13,300	φ	3,400	34.34%
	Subtotal	\$	37,900	\$	30,593	\$	51,460	\$ 42,700	\$	4,800	12.66%
	Professional Services										
20100	Legal Fees	\$	60,000	\$	27,127	\$	54,254	\$ 60,000	\$		0.00%
20200	Financial & Admin. Services	Φ	69,000	Φ	26,219	φ	69,000	123,000	Φ	54,000	78.26%
20250	Bond Issue Costs		69,000		20,219		69,000	123,000		54,000	0.00%
20300	Engineering & Technical Services		100,000		43,776		85,000	-		(100,000)	0.00%
20300	Subtotal	\$	229,000	\$	97,122	\$	208,254	\$ 183,000	\$	(46,000)	-20.09%
	Gubiotai	Ψ	229,000	Ψ	31,122	Ψ	200,204	Ψ 100,000	Ψ	(40,000)	-20.0370
	Other Services and Charges										
21100	General Liability/Property Ins.	\$	11,200	\$	6,598	\$	8,797	\$ 12,000	\$	800	7.14%
21150	Advertising & Communication	Ψ	15,000	Ψ	5,991	Ψ	11,982	13,500	Ψ	(1,500)	-10.00%
21250	Watershed Management		13,000		5,991		11,902	13,300		(1,300)	-10.00 /6
21252	EMS Programs/Supplies		_		_		_	_		_	
21252	Safety Programs/Supplies		5,000		4,118		8,000	4,000		(1,000)	-20.00%
21300	Authority Dues/Permits/Fees		37,100		29,248		40,000	39,100		2,000	5.39%
	•		37,100		29,240		40,000	39,100		2,000	5.59%
21350 21400	Laboratory Analysis Utilities		1,100		- 568		1,136	1,100		-	0.00%
21400	General Other Services		2,000		2,180		4,360	2,400		400	20.00%
21420			30,000		2,567		5,134	6,000		(24,000)	-80.00%
21450	Governance & Strategic Support Bad Debt		5,000		2,307		5,000	2,500		(2,500)	-00.00%
21430	Subtotal	\$	106,400	\$	51,270	\$	84,409	\$ 80,600	\$	(25,800)	-24.25%
	Gaztetai	Ψ_	100,100	Ψ	0.,2.0	Ψ	0 1, 100	ψ σσ,σσσ	Ψ	(20,000)	2112070
22000	Communication										
22100	Radio	\$	1,200	\$	1,160	\$	1,200	\$ 1,300	\$	100	8.33%
22150	Telephone & Data Service		10,000		4,147		8,294	11,000		1,000	10.00%
22200	Cell Phones & Pagers		7,300		4,471		8,942	9,200		1,900	26.03%
	Subtotal	\$	18,500	\$	9,778	\$	18,436	\$ 21,500	\$	3,000	16.22%
											•
31000	Information Technology										
31100	Computer Hardware	\$	27,000	\$	8,813	\$	17,626	\$ 27,000	\$	-	0.00%
31150	SCADA Maint. & Support		21,500		4,831		21,500	29,000		7,500	
31200	Maintenance & Support Services		91,750		55,102		91,750	99,000		7,250	7.90%
31250	Software Purchases		34,000		6,216		34,000	22,000		(12,000)	-35.29%
	Subtotal	\$	174,250	\$	74,962	\$	164,876	\$ 177,000	\$	2,750	1.58%
	•										•
33000	Supplies										
33100	Office Supplies	\$	15,000	\$	5,999	\$	11,998	\$ 16,000	\$	1,000	6.67%
33150	Subscriptions/Reference Material		800		396		792	650		(150)	-18.75%
33350	Postage & Delivery		5,700		976		1,952	7,600		1,900	33.33%
	Subtotal	\$	21,500	\$	7,371	\$	14,742	\$ 24,250	\$	2,750	12.79%
41000	Operation & Maintenance										
41100	Building & Grounds	\$	53,000	\$	36,753	\$	73,506	\$ 53,000	\$	-	0.00%
41150	Building & Land Lease		4,100		2,169		4,338	4,000		(100)	-2.44%
41200	Pump Station Maintenance		-		-		-	-		-	
41300	Dam Maintenance		-		-		-	-		-	
41350	Pipeline/Appurtenances		-		-		-	-		-	
41400	Materials, Supplies & Tools		400		1,038		2,076	10,400		10,000	2500.00%
41450	Chemicals		-		-		-	-		-	
41500	Vehicle Maintenance		3,000		2,437		4,874	4,000		1,000	33.33%
41550	Equipment Repair, Replace, Maint.		-		-		-	-		-	
41600	Instrumentation & Metering		-		-		-	-		-	

2020

Rivanna Water and Sewer Authority Fiscal Year 2020-2021 Proposed Budget Expense Detail Department: Administration

Expense	Detail	J									2020	2020
Departme	ent: Administration				Current Ye	ar Ac	tivity				vs.	vs.
Object <u>Code</u>	Line Item		dopted Budget 2019-2020		Six Month Actual 12/31/2019		Projected Year end 6/30/2020	<u>F</u>	Proposed Budget Y 2020-2021		2021 Variance \$	2021 Variance %
41650 41700	Fuel & Lubricants General Other Maintenance		4,000		1,666 -		3,332	L	3,800		(200)	-5.00%
	Subtotal	\$	64,500	\$	44,063	\$	88,126	\$	75,200	\$	10,700	16.59%
81000 81200	Equipment Purchases Rental & Leases	\$		\$		\$		\$		\$		
81250	Equipment (over \$10,000)	Ф	10,000	Ф	-	Ф	10,000	Ф	10,000	Ф	_	0.00%
81300	Vehicle Replacement Fund		14,000		7,000		14,000	-	14,000		_	0.00%
0.000	Subtotal	\$	24,000	\$	7,000	\$	24,000	\$	24,000	\$	-	0.00%
95000	Allocations from Departments											
95100	Administrative Allocation	\$	-	\$	-	\$	-	\$	-	\$	-	
95300 95150	Engineering Allocation Maintenance Allocation		-		-		-	_	-		-	
95150	Laboratory Allocation		-		-		_				_	
33200	Subtotal	\$	-	\$	-	\$	-	\$	-	\$	-	
	Depreciation		-		-		-	\$	-		-	
	Subtotal	\$	-	\$	-	\$	-	\$	-	\$	-	
	Total	\$ 2	479,501	\$	1,246,244	\$	2,500,597	\$	2,491,686	\$	12,185	0.49%

Maintenance Summary		FY	2020		FY 2021	
·	Budgeted FY 2020		Actual for 6 months	Projected 12 months	Proposed Budget	Budget % Change
Operations Budget						
Projected Revenues						
Miscellaneous Revenue	\$ -	\$	6,756	\$ 6,756	\$ -	
Payment for Services SWA	10,000		-	-	-	
Total Operations Revenues	\$ 10,000	\$	6,756	\$ 6,756	\$ -	
Projected Expenses						
Personnel Cost	\$ 1,345,633	\$	631,796	\$ 1,256,730	\$ 1,233,605	-8.33%
Professional Services	-		-	-	-	
Other Services and Charges	14,500		9,648	16,351	50,700	249.66%
Communications	17,600		11,238	1,228	17,400	-1.14%
Information Technology	6,500		2,296	6,592	8,500	30.77%
Supplies	2,000		123	246	2,000	0.00%
Operations and Maintenance	92,250		56,172	112,344	84,550	-8.35%
Equipment Purchases	132,300		46,051	128,902	139,000	5.06%
Depreciation	 		-		 	
Total Operations Expenses	\$ 1,610,783	\$	757,324	\$ 1,522,393	\$ 1,535,755	-4.66%

Total Revenues		\$ 10,000	\$ 6,756	\$ 6,756	\$ -
Total Expenses		1,610,783	757,324	1,522,393	1,535,755
let Costs Allocable to Rate Centers		\$ (1,600,783)	\$ (750,568)	\$ (1,515,637)	\$ (1,535,755)
Allocations to the Rate Centers					
Urban Water	30.00%	\$ 480,235	\$ 225,170	\$ 454,691	\$ 460,727
Crozet Water	3.50%	56,027	26,270	53,047	53,751
Scottsville Water	3.50%	56,027	26,270	53,047	53,751
		-		-	
Urban Wastewater	56.50%	904,442	424,071	856,335	867,702
Glenmore Wastewater	3.50%	56,027	26,270	53,047	53,751
Scottsville Wastewater	3.00%	48,023	22,517	45,469	46,073
	100.00%	\$ 1,600,781	\$ 750,568	\$ 1,515,636	\$ 1,535,755

Rivanna Water and Sewer Authority
Fiscal Year 2020-2021 Proposed Budget
Expense Detail
Department: Maintenance

	ear 2020-2021 Proposed Budç Deteil	jet										2222
Expense Dopartm	ent: Maintenance		Cumant V	414				2020	2020			
<i>Deparun</i>	ent. Mannenance	Adopte	d	_	Current Your Six Month		_	В	ronosod		vs. 2021	vs. 2021
Object			Budget		Actual		Projected Year end		Proposed Budget		Variance	2021 Variance
<u>Code</u>	<u>Line Item</u>	FY 2019-2		1	12/31/2019		6/30/2020		2020-2021		\$	%
	0.1 : 0.5											
10000 11000	Salaries & Benefits Salaries	\$ 90	8,500	\$	434,813	\$	869,626	\$	805,900	\$	(102,600)	-11.29%
11010	Overtime & Holiday Pay		6,000	Φ	5,157	φ	10,314	φ	6,000	φ	(102,000)	0.00%
12010	FICA		9,959		32,568		65,136		62,110		(7,849)	-11.22%
12020	Health Insurance	21	7,000		101,298		202,596		229,300		12,300	5.67%
12026 12030	Employee Assistance Program Retirement	٥	250		63 32,670		126		250 72,531		(14.967)	0.00% -17.01%
12030	Life Insurance		7,398 1,901		5,115		65,340 10,230	-	10,799		(14,867) (1,102)	-17.01% -9.26%
12050	Fitness Program	•	260		389		778		400		140	53.85%
12060	Worker's Comp Insurance		7,200		10,293		13,724		15,900		(1,300)	-7.56%
	Subtotal	\$ 1,31	8,468	\$	622,366	\$	1,237,870	\$	1,203,190	\$	(115,278)	-8.74%
13000	Other Personnel Costs											
13100	Employee Dues & Licenses	\$	500	\$	186	\$	372	\$	250	\$	(250)	-50.00%
13150	Education & Training		1,000	•	2,756	•	5,512		14,500	·	3,500	31.82%
13200	Travel & Lodging		500		-		-		500		-	0.00%
13250	Uniforms	1	3,915		5,682		11,364		13,915		-	0.00%
13325 13350	Recruiting & Medical Testing Other		500 750		720 86		1,440 172	-	500 750		-	0.00% 0.00%
10000	Subtotal	\$ 2	7,165	\$	9,430	\$	18,860	\$	30,415	\$	3,250	11.96%
00400	Professional Services	¢.		•		•		Φ		Φ.		
20100 20200	Legal Fees Financial & Admin. Services	\$	-	\$	-	\$	-	\$	-	\$	-	
20250	Bond Issue Costs		-		-		-		-		-	
20300	Engineering & Technical Services		-		_		-		-		-	
	Subtotal	\$	-	\$	-	\$	-	\$	-	\$	-	
	Other Comission and Ohaman											
21100	Other Services and Charges General Liability/Property Ins.	\$	7,500	\$	4,418	\$	5,891	\$	6,200	\$	(1,300)	-17.33%
21150	Advertising & Communication	φ	7,300	φ	4,410	φ	5,091	φ	0,200	φ	(1,300)	-17.33/6
21250	Watershed Management		-		_		-		-		-	
21252	EMS Programs/Supplies		-		-		-		-		-	
21253	Safety Programs/Supplies		4,500		4,413		8,826		42,000		37,500	833.33%
21300	Authority Dues/Permits/Fees		-		-		-		-		-	
21350 21400	Laboratory Analysis Utilities		-		-		-				-	
21420	General Other Services		2,500		817		1,634		2,500		-	0.00%
21430	Governance & Strategic Support		-		-		-		-		-	
21450	Bad Debt	<u> </u>	-	•	-	•	-		-	•	-	2.12.2221
	Subtotal	\$ 1	4,500	\$	9,648	\$	16,351	\$	50,700	\$	36,200	249.66%
22000	Communication											
22100	Radio	\$	7,000	\$	6,186	\$	12,372	\$	7,000	\$	-	0.00%
22150	Telephone & Data Service		1,000		345		690		800		(200)	-20.00%
22200	Cell Phones & Pagers		9,600	•	4,707	•	9,414		9,600	•	- (000)	0.00%
	Subtotal	\$ 1	7,600	\$	11,238	\$	22,476	\$	17,400	\$	(200)	-1.14%
31000	Information Technology											
31100	Computer Hardware	\$	2,000	\$	-	\$	2,000	\$	4,000	\$	2,000	100.00%
31150	SCADA Maint. & Support		-		-		-		-		-	
31200	Maintenance & Support Services		2,500		2,296		4,592		2,500		-	0.00%
31250	Software Purchases Subtotal		2,000 6,500	\$	2,296	\$	6,592	\$	2,000 8,500	\$	2,000	0.00% 30.77%
	Castolar	Ψ	0,000	Ψ	2,200	Ψ	0,002	Ψ	0,000	Ψ	2,000	00.1170
33000	Supplies											
33100	Office Supplies	\$	2,000	\$	123	\$	246	\$	2,000	\$	-	0.00%
33150 33350	Subscriptions/Reference Material Postage & Delivery		-		-		-		-		-	
33330	Subtotal	\$	2,000	\$	123	\$	246	\$	2,000	\$	-	0.00%
	Gastetai	Ψ	_,000	Ψ	120	Ψ	2.10	Ψ	2,000	Ψ		0.0070
41000	Operation & Maintenance											
41100	Building & Grounds	\$ 1	1,000	\$	3,847	\$	7,694	\$	9,900	\$	(1,100)	-10.00%
41150	Building & Land Lease Pump Station Maintenance		-		-		-		-		-	
41200 41300	Dam Maintenance		-		-		-		-		-	
41350	Pipeline/Appurtenances		2,500		194		388		2,500		-	0.00%
41400	Materials, Supplies & Tools		6,850		22,437		44,874		20,750		(6,100)	-22.72%
41450	Chemicals				-		-		-		-	
41500	Vehicle Maintenance		4,900		16,353		32,706	-	13,800		(1,100)	-7.38%
41550 41600	Equipment Repair, Replace, Maint. Instrumentation & Metering		5,500 1,500		5,359 537		10,718 1,074		21,100 1,500		5,600	36.13% 0.00%
41650	Fuel & Lubricants		0,000		7,445		1,074	-	15,000		(5,000)	-25.00%
41700	General Other Maintenance				-		,,,,,,		-		-	
	Subtotal	\$ 9	2,250	\$	56,172	\$	112,344	\$	84,550	\$	(7,700)	-8.35%

Department: Maintenance					Current Year Activity					vs.	vs.
Object <u>Code</u>	<u>Line Item</u>	<u>F</u>	Adopted Budget Y 2019-2020		Six Month Actual 12/31/2019		Projected Year end 6/30/2020	<u>F</u>	Proposed Budget Y 2020-2021	2021 Variance \$	2021 Variance %
81000	Equipment Purchases										
81200	Rental & Leases	\$	3,500	\$	51	\$	102	\$	1,000	\$ (2,500)	-71.43%
81250	Equipment (over \$10,000)		36,800		-		36,800		15,000	(21,800)	-59.24%
81300	Vehicle Replacement Fund		92,000		46,000		92,000		123,000	31,000	33.70%
	Subtotal	\$	132,300	\$	46,051	\$	128,902	\$	139,000	\$ 6,700	5.06%
95000	Allocations from Departments										
95100	Administrative Allocation	\$	-	\$	-	\$	-	\$	-	\$ -	
95300	Engineering Allocation		-		-		-		-	-	
95150	Maintenance Allocation		-		-		-		-	-	
95200	Laboratory Allocation		-		-		-		-	-	
	Subtotal	\$	-	\$	-	\$	-	\$	-	\$ -	
	Depreciation		-		_		-	\$	-	-	
	Subtotal	\$	-	\$	-	\$	-	\$	-	\$ =	
	Total	\$	1,610,783	\$	757,324	\$	1,543,641	\$	1,535,755	\$ (75,028)	-4.66%

2020

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Laboratory Summary

	FY 2020		FY 2021
Budgeted	Actual for	Projected	Proposed
FY 2020	6 months	12 months	Budget

Budget % Change

Operations Budget Projected Revenues

N/A

Pro	ected	Expenses
-----	-------	-----------------

Total Operations Expenses	\$ 472,955	\$ 275,136	\$ 517,171	\$ 516,521	9.21%
Depreciation	 -	-	-	-	
Equipment Purchases	1,700	40,850	41,700	1,600	-5.88%
Operations and Maintenance	62,000	43,239	86,478	97,250	56.85%
Supplies	2,150	219	724	1,300	-39.53%
Information Technology	2,500	-	2,500	2,500	0.00%
Communications	1,153	614	-	2,100	82.13%
Other Services and Charges	9,230	379	5,540	7,600	-17.66%
Professional Services	-	-	-	-	
Personnel Cost	\$ 394,222	\$ 189,835	\$ 380,229	\$ 404,171	2.52%
rojected Expenses					

Total Revenues		\$	\$ -	\$ -	\$	
Total Expenses		 472,955	 275,136	 517,171	 516,521	9.21%
Net Costs Allocable to Rate Centers		\$ (472,955)	\$ (275,136)	\$ (517,171)	\$ (516,521)	
Allocations to the Rate Centers						
Urban Water	44.00%	\$ 208,100	\$ 121,060	\$ 227,555	\$ 227,269	
Crozet Water	4.00%	18,918	11,005	20,687	20,661	
Scottsville Water	2.00%	9,459	5,503	10,343	10,330	
Urban Wastewater	47.00%	222,289	129,314	243,070	242,765	
Glenmore Wastewater	1.50%	7,094	4,127	7,758	7,748	
Scottsville Wastewater	1.50%	7,094	4,127	7,758	7,748	
	100.00%	\$ 472,954	\$ 275,136	\$ 517,171	\$ 516,521	

	se Detail						2020	2020			
<u>Depart</u>	tment: Laboratory				Current Ye	ar Activ	vity			vs.	vs.
	-	Α	dopted		Six Month	Р	rojected	Proposed		2021	2021
Object			Budget		Actual		ear end	Budget	V	/ariance	Variance
Code	Line Item		2019-2020		12/31/2019		/30/2020	FY 2020-2021	"	\$	%
<u>oouc</u>	<u>Eme item</u>				12/01/2010		30/2020	1 1 2020 2021		Ψ	70
40000	Calarias & Banatita										
10000	Salaries & Benefits	•	070 405	Φ.	400.450	•	070 000	r 004 000	•	7.505	0.700/
11000	Salaries	\$	273,465	\$	138,150	\$	276,300	\$ 281,000	\$	7,535	2.76%
11010	Overtime & Holiday Pay		6,000		3,459		6,918	6,000		-	0.00%
12010	FICA		21,379		10,431		20,862	21,956		577	2.70%
12020	Health Insurance		50,429		20,226		40,452	54,000		3,571	7.08%
12026	Employee Assistance Program		50		18		36	50		-	0.00%
12030	Retirement		26,307		11,118		22,236	25,290		(1,017)	-3.87%
12040	Life Insurance		3,582		1,717		3,434	3,765		183	5.11%
12050	Fitness Program		500		260		520	500		-	0.00%
12060	Worker's Comp Insurance		5,400		3,211		4,281	5,600		200	3.70%
12000	Subtotal	\$	387,112	\$	188,590	\$	375,039	\$ 398,161	\$	11,049	2.85%
	Sublotal	Ψ	307,112	Ψ	100,590	Ψ	373,039	ψ 590,101	Ψ	11,043	2.00 /6
42000	Other Bersennel Costs										
13000	Other Personnel Costs	•		•		•			•		
13100	Employee Dues & Licenses	\$	500	\$	-	\$	500	\$ 500	\$	-	0.00%
13150	Education & Training		1,680		445		890	1,680		-	0.00%
13200	Travel & Lodging		1,930		-		1,800	1,930		-	0.00%
13250	Uniforms		2,000		621		1,242	1,000		(1,000)	-50.00%
13325	Recruiting & Medical Testing		600		179		358	500		(100)	0.00%
13350	Other		400		-		400	400		-	0.00%
	Subtotal	\$	7,110	\$	1,245	\$	5,190	\$ 6,010	\$	(1,100)	-15.47%
		-	.,		.,,_	-	0,100	Ψ 0,010		(1,100)	, .
	Professional Services										
20100	Legal Fees	\$	_	\$	_	\$	_	\$ -	\$	_	
20200	Financial & Admin. Services	Ψ	_	Ψ	_	Ψ	_	Ψ -	Ψ	_	
			-		-					-	
20250	Bond Issue Costs		-		-		-	-		-	
20300	Engineering & Technical Services	_	-	•	-		-	-	•	-	
	Subtotal	\$	-	\$	-	\$	-	\$ -	\$	-	
	Other Services and Charges										
21100	General Liability/Property Ins.	\$	530	\$	312	\$	416	\$ 400	\$	(130)	-24.53%
21150	Advertising & Communication		-		-		-	-		-	
21250	Watershed Management		-		-		-	-		-	
21252	EMS Programs/Supplies		-		-		-	-		-	
21253	Safety Programs/Supplies		700		62		124	700		-	0.00%
21300	Authority Dues/Permits/Fees		3,000		5		3,500	4,500		1,500	50.00%
21350	Laboratory Analysis		4,500		-		1,000	1,000		(3,500)	-77.78%
21400	Utilities		4,500				1,000	1,000		(3,300)	-11.1070
21400	General Other Services		500		-		500	1,000		500	100.00%
			500		-		500	1,000		500	100.00%
21430	Governance & Strategic Support		-		-		-	-		-	
21450	Bad Debt	•	-	Φ.		•	-		Φ.	(4.000)	47.000/
	Subtotal	\$	9,230	\$	379	\$	5,540	\$ 7,600	\$	(1,630)	-17.66%
00000	0										
22000	Communication	•		•		•			•		
22100	Radio	\$	-	\$	-	\$	-	\$ -	\$	-	
22150	Telephone & Data Service		-		-		-	-		-	
22200	Cell Phones & Pagers		1,153		614		1,228	2,100		947	82.13%
	Subtotal	\$	1,153	\$	614	\$	1,228	\$ 2,100	\$	947	
31000	Information Technology										
31100	Computer Hardware	\$	1,500	\$	_	\$	1,500	\$ 1,500	\$	_	0.00%
31150	SCADA Maint. & Support	*	-,	*	_	*	-,	- 1,000	*	_	
31200	Maintenance & Support Services		800		_		800	800		_	0.00%
31250	Software Purchases		200		_		200	200		-	0.00%
31230	Subtotal	\$	2,500	\$	-	\$	2,500	\$ 2,500	\$	-	0.00%
	Sublotal	φ	2,500	φ	-	φ	2,500	φ 2,500	φ	-	0.00%
22000	Cumpling										
33000	Supplies	•	4.500	Φ.	407	•	500	(000	•	(700)	40.070/
33100	Office Supplies	\$	1,500	\$	107	\$	500	\$ 800	\$	(700)	-46.67%
33150	Subscriptions/Reference Material		300		-		-	-		(300)	-100.00%
33350	Postage & Delivery		350		112		224	500		150	42.86%
	Subtotal	\$	2,150	\$	219	\$	724	\$ 1,300	\$	(850)	-39.53%
41000	Operation & Maintenance										
41100	Building & Grounds	\$	-	\$	-	\$	-	\$ -	\$	-	
41150	Building & Land Lease		-		-		-	-		-	
41200	Pump Station Maintenance		_		-		-	-		-	
41300	Dam Maintenance		_		_		_	_		_	
41350	Pipeline/Appurtenances		_		_		_			_	
41400	Materials, Supplies & Tools		30,500		15,123		30,246	33,000		2,500	8.20%
+1400	iviateriais, Supplies & 10018		30,300		10,123		30,240	33,000		2,500	0.20%

2020

2020

Expens	se Detail									2020	2020
	tment: Laboratory		<u></u>	Current Yea	ar Act	ivity				vs.	vs.
Object Code	<u>Line Item</u>	E	dopted Budget 2019-2020	Six Month Actual 12/31/2019	,	Projected Year end 6/30/2020		Proposed Budget / 2020-2021	V	2021 /ariance \$	2021 Variance %
41450	Chemicals		15,000	14,506		29,012	I	21,300		6,300	42.00%
41500	Vehicle Maintenance		, -	107		214		3,500		3,500	
41550	Equipment Repair, Replace, Maint.		6,000	3,833		7,666		23,400		17,400	290.00%
41600	Instrumentation & Metering		10,000	9,366		18,732		15,500		5,500	55.00%
41650	Fuel & Lubricants		500	304		608		550		50	10.00%
41700	General Other Maintenance		-	-		-		-		-	
	Subtotal	\$	62,000	\$ 43,239	\$	86,478	\$	97,250	\$	35,250	56.85%
81000 81200 81250 81300	Equipment Purchases Rental & Leases Equipment (over \$10,000) Vehicle Replacement Fund Subtotal	\$	1,700 1,700	\$ 40,000 850 40,850	\$	40,000 1,700 41,700	\$	- - 1,600 1,600	\$	(100) (100)	-5.88% -5.88%
95000 95100 95300 95150	Allocations from Departments Administrative Allocation Engineering Allocation Maintenance Allocation	\$		\$ - - -	\$	- - -	\$	-	\$	- - -	
95200	Laboratory Allocation Subtotal	\$		\$ 	\$		\$	- 1	\$		
	Depreciation Subtotal	\$	-	\$	\$		\$	-	\$		
	Total	\$	472,955	\$ 275,136	\$	518,399	\$	516,521	\$	43,566	9.21%

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Engineering Summary			F	Y 2020			FY 2021]	
		Budgeted FY 2020	Actual for 6 months		Projected 12 months		Proposed Budget		Budget % Change	
Operations Budget										
Projected Revenues										
Payment for Services SWA	\$	-	\$	1,868	\$	3,736	\$	-		
			•	4.000	•	2.720	•			
Total Operations Revenues	<u>*</u>		\$	1,868	\$	3,736	\$	-		
Projected Expenses										
Personnel Cost	\$	1,347,631	\$	674,112	\$	1,340,949	\$	1,469,357	9.03%	
Professional Services		20,000		49,963		124,926		30,000	50.00%	
Other Services and Charges		10,350		6,235		10,545		13,800	33.33%	
Communications		14,500		7,933		15,866		16,200	11.72%	
Information Technology		21,200		32,255		44,510		41,500	95.75%	
Supplies		9,800		2,166		8,378		9,800	0.00%	
Operations and Maintenance		110,598		56,944		113,888		127,250	15.06%	
Equipment Purchases		18,600		9,300		18,600		21,500	15.59%	
Depreciation		-		-		-		-		
Total Operations Expenses	\$	1,552,679	\$	838,908	\$	1,677,662	\$	1,729,407	11.38%	

Total Revenues		\$ -	\$ 1,868	\$ 3,736	\$ -	
Total Expenses		1,552,679	838,908	 1,677,662	1,729,407	11.389
Net Costs Allocable to Rate Centers	;	\$ (1,552,679)	\$ (837,040)	\$ (1,673,926)	\$ (1,729,407)	
Allocations to the Rate Centers						
Urban Water	47.00%	\$ 729,759	\$ 393,409	\$ 786,745	\$ 812,821	
Crozet Water	4.00%	62,107	33,482	66,957	69,176	
Scottsville Water	2.00%	31,054	16,741	33,479	34,588	
Urban Wastewater	44.00%	683,179	368,298	736,527	760,939	
Glenmore Wastewater	1.50%	23,290	12,556	25,109	25,941	
Scottsville Wastewater	1.50%	23,290	12,556	25,109	25,941	
	100.00%	\$ 1,552,679	\$ 837,042	\$ 1,673,926	\$ 1,729,406	

	monte Engineering				2						2020	2020
<u>Depart</u>	ment: Engineering		1		Current Ye		-				vs.	vs.
			dopted		Six Month		Projected	'	Proposed	١.	2021	2021
Object <u>Code</u>	Line Item		Budget 2019-2020		Actual 12/31/2019		Year end 6/30/2020		Budget ' 2020-2021	١ '	/ariance \$	Variance %
Coue	<u>Line item</u>	<u> </u>	013-2020	<u> </u>	12/31/2013		0/30/2020	<u></u>	2020-2021	<u> </u>	Ψ	70
10000	Salaries & Benefits											
11000	Salaries	\$	957,874	\$	487,222	\$	974,444	\$	1,035,480	\$	77,606	8.10%
11010	Overtime & Holiday Pay	*	6,000	Ψ	8,320	*	16,640	<u> </u>	10,000	Ψ	4,000	66.67%
12010	FICA		73,736		36,304		72,608		79,979		6,243	8.47%
12020	Health Insurance		151,286		69,454		138,908		175,300		24,014	15.87%
12026	Employee Assistance Program		150		54		108		180		30	20.00%
12030	Retirement		92,147		39,601		79,202		93,193		1,046	1.14%
12040	Life Insurance		12,548		6,146		12,292		13,875		1,327	10.58%
12050	Fitness Program		2,000		2,120		4,240		2,000		-	0.00%
12060	Worker's Comp Insurance	•	18,200	_	10,912	•	14,549		20,800		2,600	14.29%
	Subtotal	\$	1,313,941	\$	660,133	\$	1,312,991	\$	1,430,807	\$	116,866	8.89%
13000	Other Personnel Costs											
13100	Employee Dues & Licenses	\$	2,500	\$	2,465	\$	4,930	\$	2,900	\$	400	16.00%
13150	Education & Training	Ψ	12,840	Ψ	4,355	Ψ	8,710	Ψ	13,900	Ψ	1,060	8.26%
13200	Travel & Lodging		13,300		3,729		7,458		15,100		1,800	13.53%
13250	Uniforms		3,500		2,577		5,154	-	4,450		950	27.14%
13325	Recruiting & Medical Testing		550		370		740		600		50	9.09%
13350	Other		1,000		483		966		1,600		600	60.00%
	Subtotal	\$	33,690	\$		\$	27,958	\$	38,550	\$	4,860	14.43%
		,	,	•	-,-	•	,	· ·	,	· ·	,	
	Professional Services											
20100	Legal Fees	\$	5,000	\$	4,590	\$	9,180	\$	15,000	\$	10,000	200.00%
20200	Financial & Admin. Services		-		-		-		-		-	
20250	Bond Issue Costs		-		-		-		-		-	
20300	Engineering & Technical Services		15,000		45,373		115,746		15,000		-	0.00%
	Subtotal	\$	20,000	\$	49,963	\$	124,926	\$	30,000	\$	10,000	50.00%
04400	Other Services and Charges	•	4.000	•	0.007	•	0.040		0.000	•	(4.000)	00.050/
21100	General Liability/Property Ins.	\$	4,900	\$	2,887	\$	3,849	\$	3,300	\$	(1,600)	-32.65%
21150	Advertising & Communication		200		-		-		200		-	0.00%
21250	Watershed Management		-		-		-		-		-	
21252	EMS Programs/Supplies		2 000		0.444		4 000	-	2.000		-	0.000/
21253	Safety Programs/Supplies		3,000		2,141		4,282		3,000		-	0.00%
21300	Authority Dues/Permits/Fees		1,500		1,000		2,000		1,500		-	0.00%
21350	Laboratory Analysis		250		-		- 444		250		-	0.00%
21400 21420	Utilities General Other Services		500		207		414	-	550		50	10.00%
21420			-		-		-	-	5,000		5,000	
21450	Governance & Strategic Support Bad Debt		_		-		-		5,000		5,000	
21430	Subtotal	\$	10,350	\$	6,235	\$	10,545	\$	13,800	\$	3,450	33.33%
	Custotai	Ψ	10,000	Ψ	0,200	Ψ	10,010	Ψ	10,000	Ψ	0, 100	00.0070
22000	Communication											
22100	Radio	\$	4,500	\$	4,253	\$	8,506	\$	4,800	\$	300	6.67%
22150	Telephone & Data Service	•	1,500	,	700	,	1,400	,	1,500	,	-	0.00%
22200	Cell Phones & Pagers		8,500		2,980		5,960		9,900		1,400	16.47%
	Subtotal	\$	14,500	\$	7,933	\$	15,866	\$	16,200	\$	1,700	11.72%
31000	Information Technology											
31100	Computer Hardware	\$	9,000	\$	11,988	\$	13,976	\$	11,000	\$	2,000	22.22%
31150	SCADA Maint. & Support		-		-		-		-		-	
31200	Maintenance & Support Services		9,200		19,970		29,940		26,000		16,800	182.61%
31250	Software Purchases	•	3,000	_	297	•	594		4,500		1,500	50.00%
	Subtotal	\$	21,200	\$	32,255	\$	44,510	\$	41,500	\$	20,300	95.75%
22000	Supplies											
33000 33100	Office Supplies	¢	5,000	Ф	1,943	œ	3,886	\$	5,000	æ		0.00%
33150	Subscriptions/Reference Material	\$	4,200	\$	1,943 77	\$	4,200	Ф	4,300	\$	100	2.38%
33350	Postage & Delivery		600		146		292		500		(100)	-16.67%
00000	Subtotal	\$	9,800	\$		\$	8,378	\$	9,800	\$	(100)	0.00%
	Custotal	-	0,000	Ψ	2,100	Ψ	0,0.0	— 	0,000	Ψ		0.0070
41000	Operation & Maintenance											
41100	Building & Grounds	\$	29,500	\$	10,231	\$	20,462	\$	29,700	\$	200	0.68%
41150	Building & Land Lease	·	6,600	·	726	·	1,452		26,400	·	19,800	300.00%
41200	Pump Station Maintenance		-		-		, -		-		· -	
41300	Dam Maintenance		-		-		-		-			
41350	Pipeline/Appurtenances		20,698		4,774		9,548		16,350		(4,348)	-21.01%
41400	Materials, Supplies & Tools		27,800		23,792		47,584		25,300		(2,500)	-8.99%
41450	Chemicals		-		-		-				-	
41500	Vehicle Maintenance		20,000		12,964		25,928		24,000		4,000	20.00%
41550	Equipment Repair, Replace, Maint.		500		727		1,454		500		-	0.00%

2020

2020

Expen	se Detail										2020	2020
Depart	tment: Engineering				Current Ye	ar A	ctivity				vs.	vs.
Object <u>Code</u>	<u>Line Item</u>	<u>F</u>	Adopted Budget Y 2019-2020		Six Month Actual 12/31/2019		Projected Year end 6/30/2020	<u>F</u>	Proposed Budget Y 2020-2021		2021 Variance \$	2021 Variance %
41600	Instrumentation & Metering		-		-		-	<u> </u>	-		- (500)	0.000
41650 41700	Fuel & Lubricants General Other Maintenance		5,500		3,730		7,460		5,000		(500)	-9.09%
	Subtotal	\$	110,598	\$	56,944	\$	113,888	\$	127,250	\$	16,652	15.06%
81000	Equipment Purchases	•		•		•				•		
81200 81250	Rental & Leases Equipment (over \$10,000)	\$	-	\$	-	\$	-	\$	-	\$	-	
81300	Vehicle Replacement Fund		18,600		9,300		18,600		21,500		2,900	15.59%
	Subtotal	\$	18,600	\$	9,300	\$	18,600	\$	21,500	\$	2,900	15.59%
95000	Allocations from Departments	•		•		•				•		
95100 95300	Administrative Allocation Engineering Allocation	\$	-	\$	-	\$	-	\$	-	\$	-	
95150	Maintenance Allocation		-		-		-		-		-	
95200	Laboratory Allocation		-		-		-		-		-	
	Subtotal	\$	-	\$	-	\$	-	\$	-	\$	-	
	Depreciation		-		-		-	\$	-		-	
	Subtotal	\$	-	\$	-	\$	-	\$	-	\$	-	
	Total	\$	1,552,679	\$	838,908	\$	1,677,662	\$	1,729,407	\$	176,728	11.38%

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APPENDICES

Rivanna Water and Sewer Authority

Fiscal Year 2020-2021

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Flow Projections

		(1,000 GALLONS)		(MILLIC	ON GALLONS PE	R DAY)
	FY 2020	FY 2021	% Change	FY 2020	FY 2021	% Change
Water						
Urban	3,397,700	3,397,700	0.00%	9.309	9.309	0.00%
Crozet	199,053	198,830	-0.11%	0.545	0.545	0.00%
Scottsville	18,151	17,245	-4.99%	0.050	0.047	-6.00%
Total	3,614,904	3,613,775	-0.03%	9.904	9.901	-0.03%
Wastewater						
Urban	3,390,400	3,390,400	0.00%	9.289	9.289	0.00%
Glenmore	39,892	41,629	4.35%	0.109	0.114	4.59%
Scottsville	21,677	23,126	6.68%	0.059	0.063	6.78%
Total	3,451,969	3,455,155	0.09%	9.457	9.466	0.10%

Allocation (Urban Area Only)	FY 2020	FY 2021	Allocation <u>% Change</u>
Water			
City	51%	51%	0.00%
ACŚA	49%	49%	0.00%
<u>Wastewater</u>			
City	50%	49%	-2.00%
ACSA	50%	51%	2.00%

FY 2021 allocations are based on FY 2019 retail flows reported by the City and ACSA.

		(1,000 GALLONS)		(MILLIC	ON GALLONS PE	R DAY)
Allocation (Urban Area Only)	FY 2020	FY 2021	% Change	FY 2020	FY 2021	% Change
<u>Water</u>						
City	1,732,827	1,732,827	0.00%	4.747	4.747	0.00%
ACSA	1,664,873	1,664,873	0.00%	4.561	4.561	0.00%
	3,397,700	3,397,700				
<u>Wastewater</u>						
City	1,695,200	1,661,296	-2.00%	4.644	4.551	-2.00%
ACSA	1,695,200	1,729,104	2.00%	4.644	4.737	2.00%
	3,390,400	3,390,400				

<u>URBAN WATER DEBT SERVICE COSTS</u> Summary of Debt Service Budget to be included in Monthly Charges

Regional Water System Projects:	City Allocation of Debt Service Costs		Estimated Debt Service Budget FY 2021		Cit	y Amount	Aı	nnual Total
\$2,7% of 2019 Refunding Bond \$1,29,566 \$1,00% \$6,278 Revoruntazio dei 2019 Bond - New Projects (49,000) \$1,00% (24,900) Revoruntazio fina (fiber Doublo Directo Bond Doublo Dei 2019 Bond - Revoruntazio fina (fiber Doublo Directo Bond Doublo Bond - Revoruntazio fina (fiber Doublo Doublo Bond - Revoruntazio fina (fiber Doublo Bond - Revoruntazio fina (fiber Doublo Bond - Revoruntazio fileratio fiber Doublo Bond - Revoruntazio fileratio filer	ALLOCATION BASED ON FLOWS							
14.2% of 2015B Bond - New Projects 23,984 \$1,00% 122,382 188,660 Trust Fund interest (40,000) \$1,00% (24,900) (2		¢	120.056	51 00%	¢	66 279		
Revenues hat offset Death Service (49,000) 51,00% (24,990)		φ	,		φ	,		188 660
Trust Fund Interest Buck Mountain Surcharge Use of Reserves (66.2,000) FIXED (271,800) (297,600 RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Use In Main Water Agreement Water Supply Expansion (159,685%) 100% of 2012B Road Reserves (86.2,001) FIXED (271,800) (816)			200,004	31.0070		122,002		100,000
Use of Reserves (682,000) FIXED (227,600) (297,600)			(49,000)	51.00%		(24,990)		
Lease Revenues (1,600) 51,00% (816) (297,606 RATES BASED ON FINED AGREEMENTS 2003 & 2012 Uthan Water Agreement 100% of 2012B Revenues Bond 9.0% of 2012B Revenues Bond 9.0% of 2012B Revenues Bond 104,00 (2018B Bond - Rethunding 104,100 (1,00%) 201,328 104,00 (2018B Bond - Rethunding 104,100 (1,00%) 201,328 104,00 (2018B Bond - Rethunding 104,100 (2018B Bond - Rethunding 105,00 (2018B Bond - Rethunding Bond 10,75 (2018B Bond - Rethunding Bond Bond Bond - Ret	Buck Mountain Surcharge		-	FIXED		-		
### SATES BASED ON FIXED AGREEMENTS 2003 & 2012 Uthrain Water Agreement Water Supply Expansion (15%65%) 100% of 20122 Revenue Bond Water Supply Expansion (15%65%) 100% of 20122 Revenue Bond Water Supply Content Projects (16%65%) 104% of 2018 Bond - New Projects (16%65%) 104% of 2018 Bond - New Projects (16%65%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - Refunding 10.3% of 2015B Bond - Refunding	Use of Reserves		(662,000)	FIXED		(271,800)		
Auto-	Lease Revenues		(1,600)	51.00%		(816)		(297,606)
Auto-	RATES BASED ON FIXED AGREEMENTS							
100% of 20128 Revenue Bond 1,338,656 15,00% 20,738 2,007.88 9,9% of 20158 Bond - Refunding 142,140 15,00% 21,321 1								
9,0% of 2015B Bond - Refunding Water Pipeline (20%80%) 10.4% of 2015B Bond - Refunding Ann-Water Supply - Other Projects (48%52%) 47,4% of 2015B Bond - New Projects 1314,732 45,00% 6313,071 85,000 10.3% of 2015B Bond - Refunding 17,3% of 2015B Bond - Refunding 10.3% of 2015B Rond - Ref	Water Supply Expansion (15%/85%)							
Water Pipeline (20%B0%) 10.4% of 2018 Bond 234,532 20.00% 46,906 10.00% 10.00% 20.00% 24,906 24,907						,		
10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 748,602 48.00% 359,329 77.8% of 2018 Bond - New Projects 1,314,732 48.00% 631,071 37.7% of 2018 Bond - New Projects 1,314,732 48.00% 631,071 37.7% of 2018 Bond - New Projects 1,314,732 48.00% 631,071 37.7% of 2018 Bond - New Projects 1,314,732 48.00% 631,071 37.7% of 2018 Bond - New Projects 1,314,732 48.00% 631,071 37.7% of 2018 Bond - Refunding 10.3% of 2018 Bond - Refunding 10.7% 24.51% 2.641 2.641 South Rivanna Connector Main 3,0% of 2019 Refunding Bond 42,420 52.00% 22.058 22.058 22.058 22.058 22.058 22.058 22.058 22.058 22.058 22.058 22.058 22.058 22.059 22.058 22.058 22.059 22.058 22	_		142,140	15.00%		21,321		
Non-Water Supply - Other Projects (48%/62%) 47.4% of 2015B Bond - Refunding 748,602 48.00% 631,071 37.7% of 2015B Bond - New Projects 1,314,732 48.00% 631,071 37.7% of 2015B Bond - Refunding 85,997 48.00% 408,479 50.00th Rivanna Expansion of 1999 10.00% 24.51% 2.641 2.641 2.641 3.07% of 2015B Bond - Refunding 162,671 0.00% 2.651 2.641 2.641 3.07% of 2015B Bond - Refunding 10.775 24.51% 2.641 2.641 3.07% of 2015B Bond - Refunding Bond 42,420 52.00% 22,058 22,05								
### 47.4% of 2015B Bond - New Projects 77.8% of 2015B Bond - New Projects 13.14.732			234,532	20.00%		46,906		
13.14,732 48,00% 631,071 31.77.06 2018 Bond - New Projects 1,314,732 48,00% 408,479 30.04h Ryanna Expansion of 1999 162,671 0,00% - 1,667,900 0.0% 2019 Refunding Bond 10,775 24,51% 2,641 2,641 2,641 3,056 2019 Refunding Bond 42,420 52,00% 22,058 22,058 22,055 22,0	***		740.000	40.000/		050 000		
37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015 Bond - Refunding 162,671 0.0% - 1,667,90 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 3.0% of 2019 Refunding Bond 42,420 52.00% 22.058 22,056 CIP Growth Rise from 2016-2020 CIP 1,275,800 FIXED 591,350 591,350 DEBT SERVICE PROJECTED FROM S-YEAR CIP CIP Growth Rise from 2016-2020 CIP 400,000 37.00% 148,000 148,000 Total Debt Service Costs Service Buddet Fy 2021 ACSA % ACSA Amount Annual Total ALLOCATION BASED ON FLOWS Service Buddet Fy 2021 ACSA % ACSA Amount Annual Total ALLOCATION BASED ON FLOWS Service Buddet Fy 2021 ACSA % ACSA Amount Annual Total ALLOCATION BASED ON FLOWS Service Buddet Service System Projects 3.2% of 2019 Refunding Bond \$129,956 49,00% \$63,678 181,260 ALLOCATION BASED ON FLOWS Service Buddet Service Service Buddet Service			,			,		
South Rivanna Expansion of 1999 162,671 0.0% - 1,667,90% 0.0% of 2015 Bond - Refunding 162,671 0.0% - 2,641 2,641 0.0% of 2019 Refunding Bond 10,775 24,51% 2,641 2,641 2,641 3,0% of 2019 Refunding Bond 42,420 52,00% 22,058 2			, ,			,		
10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10.775 24.51% 2.641 2.641 3.0% of 2019 Refunding Bond 3.0% of 2019 Refunding Bond 42.420 52.00% 22.058 22.058 22.058 3.00% 10.00			850,997	48.00%		408,479		
Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 24.51% 2,641 2,641 2,641 3,040 2019 Refunding Bond 42,420 52.00% 22,058 22,			162 671	0.00%		_		1 667 904
0.8% of 2019 Refunding Bond 10,775 24.51% 2,641 2,641 2,641 3,0% of 2019 Refunding Bond 42,420 52,00% 22,058 22,058 22,058 3,00% of 2019 Refunding Bond 42,420 52,00% 52,00% 22,058 23,000 248,0	_		102,071	0.0078				1,007,304
South Rivanna Connector Main 42,420 52,00% 22,058			10 775	24 51%		2 641		2.641
Debt Service PROJECTED FROM 5-YEAR CIP 1,275,800 FIXED 591,350 591,350 591,350 Debt Service Coverage Ratio / Policy Charge 400,000 37,00% 148,000 148,	•					_,-,		_,
CiPF Crowth Rate from 2016-2020 CIP 1.275.800 FIXED 591,350 591,350 148,00	3.0% of 2019 Refunding Bond		42,420	52.00%		22,058		22,058
CiPF Crowth Rate from 2016-2020 CIP 1.275.800 FIXED 591,350 591,350 148,00	DEDT OFFICIAL PROJECTED FROM 5 VEAR OUR							
Debt Service Coverage Ratio / Policy Charge			1 275 900	EIVED		501 250		EQ1 2EQ
ACSA Allocation of Debt Service Costs			, ,			,		148,000
ACSA Allocation of Debt Service Costs Estimated Debt Service Budget FY 2021 ACSA % ACSA Amount Annual Total Action Actio								
Service Budget FY 2021	Total Debt Service For Rate Computation	\$	6,178,645		3	2,323,007	3	2,323,007
Regional Water System Projects: 9.2% of 2019 Refunding Bond \$ 129,956 49,00% \$ 63,678 14.2% of 2015B Bond - New Projects 239,964 49,00% 117,582 181,266 Revenues that offset Debt Service		F	Y 2021	ACSA %	ACS	SA Amount	Aı	nnual Total
1.2% of 2019 Refunding Bond 1.29, 956 49,00% 63,678 1.4.2% of 2015B Bond - New Projects 239,964 49,00% 117,582 181,260 Revenues that offset Debt Service (49,000) 49,00% (24,010) (24								
14.2% of 2015B Bond - New Projects 239,964 49.00% 117,582 181,266	ALLOCATION BASED ON FLOWS							
Revenues that offset Debt Service Trust Fund Interest (49,000 49,000 (24,010) Buck Mountain Surcharge FIXED FIXED George	Regional Water System Projects:		400.050	40.000/	•	00.070		
Trust Fund Interest Buck Mountain Surcharge Use of Reserves (662,000) FIXED (390,200) Lease Revenues (662,000) FIXED (390,200) Lease Revenues (1,600) 49.00% (784) (414,994) RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 1,338,656 85.00% 1,137,858 9.0% of 2015B Bond - Refunding 142,140 85.00% 120,819 Water Pipeline (20%/80%) 10.4% of 2018 Bond Refunding 748,602 52.00% 389,273 77.8% of 2015B Bond - Refunding 748,602 52.00% 389,273 77.8% of 2015B Bond - New Projects 1,314,732 52.00% 683,661 37.7% of 2018 Bond Sepansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP 1,275,800 FIXED 684,450 684,450 Debt Service Coverage Ratio / Policy Charge 400,000 63.00% 252,000 SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 38% ACSA SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 38% 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond	\$	-,		\$,		191 260
Buck Mountain Surcharge Use of Reserves (662,000) FIXED (390,200) (200,000) (2	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects	\$	-,		\$,		181,260
Use of Reserves	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service	\$	239,964	49.00%	\$	117,582		181,260
Lease Revenues	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest	\$	239,964	49.00% 49.00%	\$	117,582		181,260
## Supply Expansion (15%/85%) ## 100% of 2012B Revenue Bond ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,30% ## 1,338,656 ## 1,30% ## 1,30% ## 1,30% ## 1,30% ## 1,30% ## 1,30% ## 1,338,656 ## 1,30% #	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge	\$	239,964 (49,000)	49.00% 49.00% FIXED	\$	117,582 (24,010)		181,260
## Supply Expansion (15%/85%) ## 100% of 2012B Revenue Bond ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,338,656 ## 1,30% ## 1,30% ## 1,338,656 ## 1,30% ## 1,30% ## 1,30% ## 1,30% ## 1,30% ## 1,30% ## 1,338,656 ## 1,30% #	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves	\$	239,964 (49,000) - (662,000)	49.00% 49.00% FIXED FIXED	\$	117,582 (24,010) - (390,200)		·
Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 1,338,656 85.00% 1,137,858 9.0% of 2015B Bond - Refunding 142,140 85.00% 120,819 Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 748,602 52.00% 389,273 77.8% of 2015B Bond - New Projects 1,314,732 52.00% 683,661 37.7% of 2015B Bond - New Projects 1,314,732 52.00% 683,661 37.7% of 2015B Bond - Refunding 850,997 52.00% 442,518 South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 75.49% 8,134 8,134 South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 DEBT SERVICE PROJECTED FROM 5-YEAR CIP 1,275,800 FIXED 684,450 684,456 Debt Service Coverage Ratio / Policy Charge 400,000 63.00% 252,000 252,000 Total Debt Service For Rate Computation \$6,178,645 \$3,855,638 \$3,855,638 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues	\$	239,964 (49,000) - (662,000)	49.00% 49.00% FIXED FIXED	\$	117,582 (24,010) - (390,200)		
100% of 2012B Revenue Bond 1,338,656 85.00% 1,137,858 9.0% of 2015B Bond - Refunding 142,140 85.00% 120,819 120,819 Water Pipeline (20%/80%) 10.4% of 2018 Bond 234,532 80.00% 187,626 Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 748,602 52.00% 389,273 77.8% of 2015B Bond - New Projects 1,314,732 52.00% 683,661 37.7% of 2018 Bond 850,997 52.00% 442,518 South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 75.49% 8,134 8,134 South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 20,362 DEBT SERVICE PROJECTED FROM 5-YEAR CIP 1,275,800 FIXED 684,450 684,450 Debt Service Coverage Ratio / Policy Charge 400,000 63.00% 252,000 252,000 252,000 Control City Share of Total Debt Service Revenues: 2,323,007 38% ACSA SHARE OF TOTAL DEBT SERVICE \$2,323,007 ACSA SHARE OF TOTAL DEBT SERVICE \$2,323,007 ACSA SHARE OF TOTAL DEBT	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS	\$	239,964 (49,000) - (662,000)	49.00% 49.00% FIXED FIXED	\$	117,582 (24,010) - (390,200)		·
Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 748,602 52.00% 389,273 77.8% of 2015B Bond - New Projects 1,314,732 52.00% 683,661 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 75.49% 8,134 8,134 South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge 400,000 63.00% 252,000 252,000 SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 3,855,638 3,855,638	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement	\$	239,964 (49,000) - (662,000)	49.00% 49.00% FIXED FIXED	\$	117,582 (24,010) - (390,200)		·
10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 748,602 52.00% 389,273 77.8% of 2015B Bond - New Projects 1,314,732 52.00% 683,661 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 75.49% 8,134 8,134 South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP 1,275,800 FIXED 684,450 684,450 Debt Service Coverage Ratio / Policy Charge 400,000 63.00% 252,000 252,000 Total Debt Service For Rate Computation \$6,178,645 \$3,855,638 \$3,855,63	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%)	\$	239,964 (49,000) - (662,000) (1,600)	49.00% 49.00% FIXED FIXED 49.00%	\$	(24,010) (390,200) (784)		·
Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 748,602 52.00% 389,273 77.8% of 2015B Bond - New Projects 1,314,732 52.00% 683,661 37.7% of 2018 Bond 850,997 52.00% 442,518 South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 75.49% 8,134 8,134 South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2015B Bond - Refunding	\$	239,964 (49,000) - (662,000) (1,600)	49.00% 49.00% FIXED FIXED 49.00%	\$	(24,010) (390,200) (784)		·
47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 77.8% of 2015B Bond - New Projects 77.8% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 3.0% of 2019 Refunding Bond 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge Total Debt Service For Rate Computation SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE 3,855,638 \$2,323,007 38%, 389,273 389,272 389,272 389,272 389,272 389,272 389,272 389,272 389,272 389,272 389,272 389,272 389,272	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2015B Bond - Refunding Water Pipeline (20%/80%)	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140	49.00% 49.00% FIXED FIXED 49.00% 85.00%	\$	(24,010) (390,200) (784) 1,137,858 120,819		·
77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge Total Debt Service For Rate Computation SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 38% 42,420 48.00 38% 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140	49.00% 49.00% FIXED FIXED 49.00% 85.00%	\$	(24,010) (390,200) (784) 1,137,858 120,819		·
37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 50.8% of 2019 Refunding Bond 42,420 48.00% 50.8% of 2019 Refunding Bond 42,420 48.00% 50.8% of 2019 Refunding Bond 42,420 50.8% of 2019 Refunding Bond 50.8% of 2019 Refunding	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2015B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%)	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00%	\$	(24,010) (390,200) (784) 1,137,858 120,819 187,626		·
South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426 Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 75.49% 8,134 8,134 South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 20,362	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273		·
10.3% of 2015B Bond - Refunding 162,671 100.00% 162,671 3,124,426	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661		·
Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond 10,775 75.49% 8,134 8,134 South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661		·
South Rivanna Connector Main 3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518		
3.0% of 2019 Refunding Bond 42,420 48.00% 20,362 20,362 DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP 1,275,800 FIXED 684,450 684,450 Debt Service Coverage Ratio / Policy Charge 400,000 63.00% 252,000 252,000 Total Debt Service For Rate Computation \$ 6,178,645 \$ 3,855,638 \$ 3,855,638 SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 38% ACSA SHARE OF TOTAL DEBT SERVICE \$ 3,855,638 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 100.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671		(414,994) 3,124,426
DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge Total Debt Service For Rate Computation SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE ACSA SHARE OF TOTAL DEBT SERVICE \$ 1,275,800 FIXED 684,450 684,450 252,000 252,0	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 100.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671		(414,994) 3,124,426
CIP Growth Rate from 2016-2020 CIP	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 100.00% 75.49%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134		(414,994) 3,124,426 8,134
Debt Service Coverage Ratio / Policy Charge 400,000 63.00% 252,000 252,000 Total Debt Service For Rate Computation \$ 6,178,645 \$ 3,855,638 \$ 3,855,638 SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 38% ACSA SHARE OF TOTAL DEBT SERVICE 3,855,638 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 100.00% 75.49%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134		(414,994) 3,124,426
Total Debt Service For Rate Computation \$ 6,178,645 \$ 3,855,638 \$ 3,855,638	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 100.00% 75.49%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134		(414,994) 3,124,426 8,134
SUMMARY OF DEBT SERVICE REVENUES: \$ 2,323,007 38% CITY SHARE OF TOTAL DEBT SERVICE \$ 3,855,638 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775 42,420	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 100.00% 75.49% 48.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134 20,362 684,450		(414,994) 3,124,426 8,134 20,362 684,450
CITY SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 38% ACSA SHARE OF TOTAL DEBT SERVICE 3,855,638 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775 42,420	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 52.00% 100.00% 75.49% 48.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134 20,362 684,450		(414,994) 3,124,426 8,134 20,362
CITY SHARE OF TOTAL DEBT SERVICE \$ 2,323,007 38% ACSA SHARE OF TOTAL DEBT SERVICE 3,855,638 62%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge		239,964 (49,000) (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775 42,420 1,275,800 400,000	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 52.00% 100.00% 75.49% 48.00%		117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134 20,362 684,450 252,000	\$	3,124,426 8,134 20,362 684,450 252,000
	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge		239,964 (49,000) (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775 42,420 1,275,800 400,000	49.00% 49.00% FIXED FIXED 49.00% 85.00% 80.00% 52.00% 52.00% 52.00% 100.00% 75.49% 48.00%		117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134 20,362 684,450 252,000	\$	3,124,426 8,134 20,362 684,450 252,000
\$ 6,178,645 100%	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge Total Debt Service For Rate Computation	\$	239,964 (49,000) (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775 42,420 1,275,800 400,000 6,178,645	49.00% 49.00% FIXED FIXED 49.00% 85.00% 85.00% 52.00% 52.00% 52.00% 75.49% 48.00% FIXED 63.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134 20,362 684,450 252,000	\$	3,124,426 8,134 20,362 684,450 252,000
	Regional Water System Projects: 9.2% of 2019 Refunding Bond 14.2% of 2015B Bond - New Projects Revenues that offset Debt Service Trust Fund Interest Buck Mountain Surcharge Use of Reserves Lease Revenues RATES BASED ON FIXED AGREEMENTS 2003 & 2012 Urban Water Agreement Water Supply Expansion (15%/85%) 100% of 2012B Revenue Bond 9.0% of 2015B Bond - Refunding Water Pipeline (20%/80%) 10.4% of 2018 Bond Non-Water Supply - Other Projects (48%/52%) 47.4% of 2015B Bond - Refunding 77.8% of 2015B Bond - New Projects 37.7% of 2018 Bond South Rivanna Expansion of 1999 10.3% of 2015B Bond - Refunding Southern Loop Water Line, West Branch 0.8% of 2019 Refunding Bond South Rivanna Connector Main 3.0% of 2019 Refunding Bond DEBT SERVICE PROJECTED FROM 5-YEAR CIP CIP Growth Rate from 2016-2020 CIP Debt Service Coverage Ratio / Policy Charge Total Debt Service For Rate Computation	\$	239,964 (49,000) - (662,000) (1,600) 1,338,656 142,140 234,532 748,602 1,314,732 850,997 162,671 10,775 42,420 1,275,800 400,000 6,178,645 2,323,007	49.00% 49.00% FIXED FIXED 49.00% 85.00% 85.00% 52.00% 52.00% 52.00% 75.49% 48.00% FIXED 63.00%	\$	117,582 (24,010) (390,200) (784) 1,137,858 120,819 187,626 389,273 683,661 442,518 162,671 8,134 20,362 684,450 252,000	\$	(414,994) 3,124,426 8,134 20,362 684,450

URBAN WASTEWATER DEBT SERVICE COSTS Summary of Debt Service Budget to be Included in Charges

City Alloc	cation of Debt Service Costs	Estimated Debt Service Budget FY 2021	City %	City Amount	
ALLOCATION BASED ON FLO	WS				
System Projects Rate					
	22.9% of 2015B Bond Refunding	\$ 361,666	49%	\$ 177,216	
	100% 2005A Bond VRA/VRLF	159,339	49%	78,076	
	88.5% of 2009A Bond VRA/VRLF	1,419,716 192,130	49% 49%	695,661 94,144	
	37.9% of 2011 A,B Bond VRA/RLF	,		,	
	24.5% of 2019 Refunding Bond 100% of 2016 Bond	345,546 626,383	49% 49%	169,318 306,928	
	2.4% of 2018 Bond	54,401	49%	26,656	1,547,999
Revenues/Reserves that offse		34,401	4970	20,030	1,547,999
revenues/reserves that onse	County MOU - Septage	(109,440)	49%	(53,626)	
	Use of Reserves	(94,400)	Fixed	(33,020)	
	Trust Fund Interest	(74,000)	49%	(36,260)	(89,886)
ALL OCATION BASED ON FIVE	DACREMENTS				
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement	D AGREEMENTS				
Meadowcreek	97.9% of 2010A and 10.9% of 2019 Bonds	1,096,278	Segments	899,609	
Wet Weather MCWWTP	11.5% of 2009A and 62.1% of 2011 A/B Bonds	499,293	Segments	317,447	
Moores Creek Pump Stn.	100% of 2011 D/E Bond	296,945	Segments	181,964	
Rivanna Pump Stn. & F.M.	5.8% of 2019 and 100% of 2014A Bonds	1,963,640	Segments	1,229,655	
	3.4% of 2019 Refunding Bond	47,428	0%	-,===,000	
Crozet Interceptor	2.3% of 2019 and 13.8% of 2018	343,802	0%	_	
Schenks Branch Agreement	16.1% of 2019, 2.1% of 2010A, and 100%	010,002	J /0		
23 Branon Agreement	of 2015A Bonds	316,260	100%	316,260	2,944,935
Four Party Rate		510,200	10070	310,200	_,5-+,555
Regional System Projects	3.9% of 2019 Refunding Bond	54,216	N/A	17,593	
Crozet Interceptor	0.7% of 2019 Refunding Bond	10,803	N/A	3,506	
Facilities Purchase	1.4% of 2019 Refunding Bond	19,786	N/A	6,421	27,520
. someos , aronado	e. ze .ee.unumg pond	10,100	1 1// 1	O,721	2.,520
Moores Creek Relief IS, Pt 1	0.3% of 2019 Refunding Bond	4,499	30%	1,350	1,350
DEBT SERVICE PROJECTED F CIP Growth Charge from 2010 Debt Service Coverage Ratio	6-2020 CIP	369,800 325,000	Fixed 62%	257,600 201,500	257,600 201,500
Debt dervice deverage Natio	Tolley Gridige	020,000	0270	201,300	201,300
	Total	\$ 8,229,091		\$ 4,891,018 \$	4,891,018
A CS A A II	ocation of Debt Service Costs	Estimated Debt			
ACSA AIII	ocation of Debt Service Costs	Service Budget FY 2021	ACSA %	ACSA Amount	
		2021	71007170	7100717 IIII Cuint	
ALLOCATION BASED ON FLO	WS				
System Projects Rate	<u> </u>				
.,					
	22.9% of 2015B Bond Refunding	\$ 361,666	51%	\$ 184,450	
	22.9% of 2015B Bond Refunding 100% 2005A Bond VRA/VRLF	\$ 361,666 159,339	51% 51%	\$ 184,450 81,263	
		159,339		81,263	
	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF		51%	81,263 724,055	
	100% 2005A Bond VRA/VRLF	159,339 1,419,716	51% 51%	81,263	
	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF	159,339 1,419,716 192,130	51% 51% 51%	81,263 724,055 97,986	
	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546	51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455	1,611,182
Revenues/Reserves that offse	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond	159,339 1,419,716 192,130 345,546 626,383	51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228	1,611,182
Revenues/Reserves that offse	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440)	51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745	1,611,182
Revenues/Reserves that offse	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400)	51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400)	
Revenues/Reserves that offse	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440)	51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745	1,611,182
	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves Trust Fund Interest	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400)	51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400)	
ALLOCATION BASED ON FIXE	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves Trust Fund Interest	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400)	51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400)	
ALLOCATION BASED ON FIXE	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves Trust Fund Interest	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400)	51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400)	
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond at Debt Service County MOU - Septage Use of Reserves Trust Fund Interest	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000)	51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740)	
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000)	51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740)	
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.4% of 2018 Bond 2000 Debt Service County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000)	51% 51% 51% 51% 51% 51% 51% 51% 51% Segments	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740)	
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M.	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000)	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740)	
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M.	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (74,000) 1,096,278 499,293 296,945 1,963,640	51% 51% 51% 51% 51% 51% 51% 51% 51% Segments Segments Segments Segments	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740)	
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn.	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.4% of 2018 Bond 2.4% of 2018 Bond 2.4% of Pebt Service County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100%	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428	(187,954)
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of Reservice County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428	51% 51% 51% 51% 51% 51% 51% 51% 51% Segments Segments Segments Segments	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428	
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond et Debt Service County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954)
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of Reserves County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 10.0% of 2011 D/E Bond 5.8% of 2019 and 10.0% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954)
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of Reservice County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954) 1,618,710
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of Reserves County MOU - Septage Use of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 10.0% of 2011 D/E Bond 5.8% of 2019 and 10.0% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954)
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.7% of 2010 A and 10.9% of 2019 Bonds 11.5% of 2010A and 10.9% of 2019 Bonds 11.5% of 2019A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 1.3% of 2019 Refunding Bond 1.5% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 1.4% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786	51% 51% 51% 51% 51% 51% 51% 51% 51% 50% 50% 50% N/A N/A N/A	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954) 1,618,710 57,285
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.7% of 2010 A and 10.9% of 2019 Bonds 11.5% of 2010A and 10.9% of 2019 Bonds 11.5% of 2019A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 1.3% of 2019 Refunding Bond 1.5% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 1.4% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954) 1,618,710
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED F	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of 2019 Bond 2.5% of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954) 1,618,710 57,285 3,149
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED IS CIP Growth Charge from 2016	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954) 1,618,710 57,285 3,149 112,200
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED F	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954) 1,618,710 57,285 3,149
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED IS CIP Growth Charge from 2016	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of Reserves Trust Fund Interest D AGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802	(187,954) 1,618,710 57,285 3,149 112,200
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED F CIP Growth Charge from 2016	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of 2019 Bond 2.5% of Reserves Trust Fund Interest DAGREEMENTS 97.9% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond FROM 5-YEAR CIP 5-2020 CIP / Policy Charge	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499 369,800 325,000	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802 36,623 7,297 13,365 3,149	1,618,710 57,285 3,149 112,200 123,500
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED F CIP Growth Charge from 2016	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of 2019 And 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond TROM 5-YEAR CIP 6-2020 CIP / Policy Charge Total	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499 369,800 325,000 \$ 8,229,091	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802 36,623 7,297 13,365 3,149 112,200 123,500 \$ 3,338,072 \$	1,618,710 57,285 3,149 112,200 123,500
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED F CIP Growth Charge from 2016	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.7% of 2010A and 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 1.4% of 2019 Refunding Bond 1.4% of 2019 Refunding Bond TROM 5-YEAR CIP 6-2020 CIP / Policy Charge Total SUMMARY OF DEBT SERVICE REVENUES: CITY SHARE OF TOTAL DEBT SERVICE	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499 369,800 325,000 \$ 8,229,091	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802 36,623 7,297 13,365 3,149 112,200 123,500 \$ 3,338,072 \$	1,618,710 57,285 3,149 112,200 123,500
ALLOCATION BASED ON FIXE 2014 Wastewater Agreement Meadowcreek Wet Weather MCWWTP Moores Creek Pump Stn. Rivanna Pump Stn. & F.M. Albemarle Berkley Pump Stn. Crozet Interceptor Schenks Branch Agreement Four Party Rate Regional System Projects Crozet Interceptor Facilities Purchase Moores Creek Relief IS, Pt 1 DEBT SERVICE PROJECTED F CIP Growth Charge from 2016	100% 2005A Bond VRA/VRLF 88.5% of 2009A Bond VRA/VRLF 37.9% of 2011 A,B Bond VRA/RLF 24.5% of 2019 Refunding Bond 100% of 2016 Bond 2.4% of 2018 Bond 2.5% of 2019 And 10.9% of 2019 Bonds 11.5% of 2009A and 62.1% of 2011 A/B Bonds 100% of 2011 D/E Bond 5.8% of 2019 and 100% of 2014A Bonds 3.4% of 2019 Refunding Bond 2.3% of 2019 and 13.8% of 2018 16.1% of 2019, 2.1% of 2010A, and 100% of 2015A Bonds 3.9% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.7% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond 0.3% of 2019 Refunding Bond TROM 5-YEAR CIP 6-2020 CIP / Policy Charge Total	159,339 1,419,716 192,130 345,546 626,383 54,401 (109,440) (94,400) (74,000) 1,096,278 499,293 296,945 1,963,640 47,428 343,802 316,260 54,216 10,803 19,786 4,499 369,800 325,000 \$ 8,229,091	51% 51% 51% 51% 51% 51% 51% 51% 51% 51%	81,263 724,055 97,986 176,228 319,455 27,745 (55,814) (94,400) (37,740) 196,669 181,845 114,981 733,985 47,428 343,802 36,623 7,297 13,365 3,149 112,200 123,500 \$ 3,338,072 \$	1,618,710 57,285 3,149 112,200 123,500

OTHER RATE CENTERS DEBT SERVICE RATES

Summary of Debt Service Payments Due	Existing Estimated Debt Service Budget FY 2021		FY 2020		Estimated New Debt Service		Total Annual Debt Service		ACSA Monthly Rate	
WATER							Т			
Crozet Water System Upgrades										
13.9% of 2019 Refunding Bond 17.0% of 2012A Bond (new money) 7.4% of 2015B Bond Refunding 5.9% of 2015B Bond New Projects 35.7% of 2018 Bond Estimated DS - CIP Growth in Rate Revenues that offset Debt Service Use of Reserves	\$	194,693 - 116,870 99,703 806,303 - (198,252)	\$	2,830 205,894 116,763 99,911 805,417 86,000	\$	303,600				
Trust Fund Interest	\$	(11,600) 1,007,717	\$	(5,500) 1,311,315	\$	303,600	\$	1,311,317	\$	109,276
Scottsville Water System Upgrades 3.4% of 2019 Refunding Bond 4.2% of 2012A Bond (new money) 2.7% of 2015B Bond Refunding 2.1% of 2015B Bond New Projects Estimated DS - CIP Growth in Rate Revenues that offset Debt Service Trust Fund Interest	\$	47,902 - 42,642 35,488 (1,200) 124,832	\$	492 50,868 42,603 35,561 925 (1,700) 128,749	\$	3,917 3,917	\$	128,749		10,729
WASTEWATER										
Glenmore Wastewater System Upgrades 0.1% of 2015B Bond Refunding Estimated DS - CIP Growth in Rate Revenues that offset Debt Service Trust Fund Interest	\$	1,579 - -	\$	1,578 2,200	\$	2,199 <u>-</u>				
Trust I and interest	\$	1,579	\$	3,778	\$	2,199	\$	3,778	\$	315
Scottsville Wastewater Facilities Purchase 0.3% of 2012A Refunding Bond System Upgrades 0.3% of 2019 Refunding Bond 0.2% of 2015B Bond Refunding Estimated DS - CIP Growth in Rate Revenues that offset Debt Service Trust Fund Interest	\$	- 4,305 3,159 (100)	\$	953 3,633 3,156 1,800 (100)	\$	2,078 -				
	\$	7,364	\$	9,442	\$	2,078	\$	9,442	\$	787
TOTAL	\$	1,141,492	\$	1,453,284	\$	311,794	\$	1,453,286	\$	121,107

DEBT SUMMARY

	Total	Revenue Bond Debt	FY 2021 Debt Service	Total FY 2020 Debt Service		
CURRENT EXISTING DEBT						
DEBT BY BOND ISSUE						
2005 A Bond VRA/VRLF	\$	934,647	\$ 159,339	\$	159,339	
2009A Bond		14,619,868	1,604,199		1,604,199	
2010A Bond		9,051,281	962,522		962,522	
2011A Bond		4,524,226	443,608		443,608	
2011B Bond		645,899	63,332		63,332	
2011D,E Bond		3,144,686	296,944		296,944	
2012A Bond (refunding & new money)		1,970,000	706,969		1,498,556	
2012B Bond		22,065,000	1,338,656		1,338,456	
2014A Bond		24,700,501	1,882,336		1,882,336	
2015A Bond		997,835	70,593		70,593	
2015B Bond (refunding & new money)		38,980,000	3,269,216		3,271,281	
2016 Bond		8,782,000	626,383		627,265	
2018 Bond		36,295,000	2,257,288		2,254,806	
2019 Bond		17,610,000	698,836			
	\$	184,320,943	\$ 14,380,221	\$	14,473,237	
Ratio of Debt / Debt Service 7.8%						
PRINCIPAL AND INTEREST PAYMENTS BY CENTER - An	<u>nual</u>					
Urban Water			\$ 5,215,445	\$	5,223,498	
Crozet Water			1,217,569		1,230,815	
Scottsville Water			126,032		129,524	
Urban Wastewater			7,807,431		7,880,079	
Glenmore Wastewater			1,579		1,578	
Scottsville Wastewater			7,464		7,742	
			\$ 14,375,521	\$	14,473,234	

Stone Robinson School WWTP Estimated Charges

	Total	Monthly	y
Expenses			
Fixed Costs			
Wages	\$ 6,80	00	
Benefits	2,38		
Mileage	1,70		
Subtotal	\$ 10,88		
Overhead at 35%	3,80		
Overhous at 5570		<u> </u>	
Total Fixed Charge	\$ 14,68	38	
rotair ixed charge	Ψ 14,00	<u>50 </u>	
Variable Costs			
	\$ 6,00	20	
Repairs, Maintenance, Other			
Overhead at 35%	2,10	<u> </u>	
T			
Total Variable Charge	\$ 8,10	<u> </u>	
T	Φ 00 =		
Total Annual Charge Estimate	\$ 22,78	38 \$ 1,8	399

Red Hill Community Water System Estimated Costs

		Total	Monthly
Expenses			
Fixed Costs			
Wages	\$	22,360	
Benefits		7,826	
Mileage		6,400	
Subtotal	\$	36,586	
Overhead at 35%	Ψ	12,805	
Overnoud at 00%		12,000	
Total Fixed Costs	\$	49,391	
rotal rived cools	<u> </u>	10,001	
V			
Variable Costs	•		
Repairs, Maintenance, Other	\$	25,000	
Overhead at 35%		8,750	
Tatal Variable Conta	Ф.	00.750	
Total Variable Costs	\$	33,750	
Total Annual Estimated Costs		83,141	\$ 6,928
Total / Illindar Editinated Goote	\$	00,111	+ 3,020

All Rate Centers

Detailed Summary of Revenues

	٠.	FY 2020		FY 2021		\$ Change	% Change
OPERATIONS							
	Φ.	47 004 000	Φ.	17 004 000	Φ.		0.000/
Operations Rate Revenues	\$	17,381,293	\$	17,381,293	\$	-	0.00%
Other Operations Revenues							
Interest Allocation	\$	31,500	\$	•	\$	3,600	11.43%
Stone Robinson WWTP		22,478		22,788		310	1.38%
Septage/Sludge Acceptance		450,000		475,000		25,000	5.56%
Leases		100,000		105,000		5,000	5.00%
Administration		468,000		545,000		77,000	16.45%
Nutrient Credits		90,000		45,000		(45,000)	-50.00%
Use of Reserves		667,000		775,247		108,247	16.23%
Miscellaneous	_	10,000	Φ.	-	Φ.	(10,000)	-100.00%
	_\$	1,838,978	\$	2,003,135	\$	164,157	8.93%
Total Operations Revenues	\$	19,220,271	\$	19,384,428	\$	164,157	0.85%
DEBT SERVICE							
Debt Service Rate Revenues							
City	\$	7,214,015	\$	7,214,025	\$	10	0.00%
ACSA		8,647,007		8,646,991		(16)	0.00%
	\$	15,861,022	\$	15,861,016	\$	(6)	0.00%
Other Debt Service Revenues							
Interest		848,200		801,900		(46,300)	-5.46%
County MOU - Septage		109,440		109,440		-	0.00%
Buck Mountain Surcharge		125,900		-		(125,900)	-100.00%
Use of Reserves		-		954,652		954,652	
Leases		1,600		1,600		-	0.00%
	\$	1,085,140	\$	1,867,592	\$	782,452	72.11%
Total Debt Service Revenues	\$	16,946,162	\$	17,728,608	\$	782,446	4.62%
Total Revenues	\$	36,166,433	\$	37,113,036	\$	946,603	2.62%
		007.000	*	1 700 000		1 000 000	
Reserves used as revenues offset	\$		<u>\$</u>		\$	1,062,899	59%
Actual Revenues		35,499,433		35,383,137		(116,296)	

	теаг 2020-2021 Proposed Б se Detail	uuy	GL							2020	2020
	rity as a Whole				Current Ye	or Ac	stivity.				
Autilo	rity as a writing		Adopted		Six Month		Projected	Proposed		vs. 2021	vs. 2021
Object			Budget		Actual		Year end	Budget		Variance	Variance
Code	Line Item	F	/ 2019-2020		12/31/2019		6/30/2020	FY 2020-2021		\$	%
<u> </u>											<u> </u>
10000	Salaries & Benefits	•		•		•		A 5 6 6 7 6 7 6 7 6 7 6 7 8 9 9 9 9 9 9 9 9 9 9	•	04.0=0	0 = 404
11000 11010	Salaries	\$	5,876,908 285,500	\$	2,983,064 138,776	\$	5,966,128 277,552	\$ 5,908,780 304,000	\$	31,872 18,500	0.54% 6.48%
12010	Overtime Pay FICA		471,423		225,270		450,540	475,278		3,855	0.82%
12020	Health Insurance		1,182,867		588,369		1,176,738	1,303,300		120,433	10.18%
12026	Employee Assistance Program		1,256		393		786	1,286		30	2.39%
12030	Retirement		565,358		234,599		469,198	531,791		(33,567)	-5.94%
12040	Life Insurance		76,986		36,463		72,926	79,177		2,191	2.85%
12050	Fitness Program		11,160		7,353		14,706	11,640		480	4.30%
12060	Worker's Comp Insurance	Φ.	89,500	ተ	53,674	φ	71,565	94,100	•	4,600	5.14%
	Subtotal	\$	8,560,958	\$	4,267,961	\$	8,500,139	\$ 8,709,352	\$	148,394	1.73%
13000	Other Personnel Costs										
13100	Employee Dues & Licenses	\$	11,190	\$	3,233	\$	8,486	\$ 9,930	\$	(1,260)	-11.26%
13150	Education & Training		83,520		28,662		57,226	81,105		(2,415)	-2.89%
13200	Travel & Lodging		35,250		10,495		22,790	29,930		(5,320)	-15.09%
13250	Uniforms		48,515		26,912		52,582	53,565		5,050	10.41%
13325	Recruiting & Medical Testing		6,300		3,915		7,830	7,625		1,325	21.03%
13350	Other Subtotal	\$	14,345	\$	13,546	\$	17,586	\$ 203,905	\$	7,405	51.62%
	Subiolai	Φ	199,120	Ψ	86,763	Ψ	166,500	φ 203,905	Ψ	4,785	2.40%
	Professional Services										
20100	Legal Fees	\$	85,000	\$	110,276	\$	220,552	\$ 100,000	\$	15,000	17.65%
20200	Financial & Admin. Services		69,000		26,219		69,000	123,000		54,000	78.26%
20250	Bond Issue Costs		-		-		-	-		-	0.00%
20300	Engineering & Technical Services	Φ.	512,050	•	342,010	Φ.	739,968	379,700	•	(132,350)	-25.85%
	Subtotal	\$	666,050	\$	478,505	\$	1,029,520	\$ 602,700	\$	(63,350)	-9.51%
	Other Services and Charges										
21100	General Liability/Property Ins.	\$	144,090	\$	84,886	\$	113,181	\$ 128,600	\$	(15,490)	-10.75%
21150	Advertising & Communication	•	15,425	•	5,991	•	11,982	16,700	•	1,275	8.27%
21250	Watershed Management		112,000		42,092		84,184	80,000		(32,000)	-28.57%
21252	EMS Programs/Supplies		500		-		-	2,000		1,500	300.00%
21253	Safety Programs/Supplies		104,687		41,955		83,674	114,130		9,443	9.02%
21300	Authority Dues/Permits/Fees		91,400		65,827		116,648	103,500		12,100	13.24%
21350	Laboratory Analysis		131,000		48,485		97,970	105,700		(25,300)	-19.31%
21400 21420	Utilities General Other Services		1,323,600 1,017,910		759,252 550,883		1,518,504 1,102,266	1,564,650 1,008,000		241,050 (9,910)	18.21% -0.97%
21420	Governance & Strategic Support		35,000		2,567		5,134	11,000		(24,000)	-68.57%
21450	Bad Debt		5,000		_,00.		5,000	2,500		(2,500)	00.07
	Subtotal	\$	2,980,612	\$	1,601,938	\$	3,138,543	\$ 3,136,780	\$	156,168	5.24%
00000	0										
22000 22100	Communication Radio	\$	22.040	\$	21.076	\$	33,894	\$ 24,450	\$	1 510	6.58%
22100	Telephone & Data Service	Ф	22,940 74,600	Ф	21,076 44,347	Ф	33,694 88,694	88,000	Ф	1,510 13,400	17.96%
22200	Cell Phones & Pagers		45,053		19,761		39,522	48,570		3,517	7.81%
LLLUU	Subtotal	\$	142,593	\$	85,184	\$	162,110	\$ 161,020	\$	18,427	12.92%
					,						
31000	Information Technology			_		_			_		
31100	Computer Hardware	\$	63,900	\$	26,642	\$	48,708	\$ 67,900	\$	4,000	6.26%
31150	SCADA Maint. & Support		138,500		41,028		150,852	163,050		24,550	17.73%
31200	Maintenance & Support Services Software Purchases		104,750		77,695 9,204		127,736	128,800 33,200		24,050	22.96%
31250	Subtotal	\$	45,600 352,750	\$	154,569	\$	40,176 367,472	\$ 392,950	\$	(12,400) 40,200	-27.19% 11.40%
	Gubiotai	Ψ	552,750	Ψ	104,000	Ψ	501,412	ψ 552,550	Ψ	40,200	11.4070
33000	Supplies										
33100	Office Supplies	\$	29,700	\$	8,752	\$	17,790	\$ 28,300	\$	(1,400)	-4.71%
33150	Subscriptions/Reference Material		5,430		473		4,992	4,950		(480)	-8.84%
33350	Postage & Delivery	•	11,050	•	4,301	•	8,602	13,795	•	2,745	24.84%
	Subtotal	\$	46,180	\$	13,526	\$	31,384	\$ 47,045	\$	865	1.87%
41000	Operation & Maintenance										
41100	Building & Grounds	\$	361,600	\$	166,022	\$	329,560	\$ 337,200	\$	(24,400)	-6.75%
41150	Building & Land Lease	Ψ	43,200	Ψ	36,190	Ψ	40,067	130,400	Ψ	87,200	201.85%
41200	Pump Station Maintenance		114,500		77,869		160,632	105,000		(9,500)	-8.30%
41300	Dam Maintenance		146,990		68,175		136,350	102,000		(44,990)	-30.61%
41350	Pipeline/Appurtenances		328,298		289,074		433,318	268,210		(60,088)	-18.30%
41400	Materials, Supplies & Tools		206,750		163,808		327,616	190,450		(16,300)	-7.88%
41450	Chemicals		2,682,190		896,890		2,695,138	2,263,150		(419,040)	-15.62%
41500	Vehicle Maintenance		59,600		46,239		92,478	74,600		15,000	25.17%
41550	Equipment Repair, Replace, Maint.		669,000		349,620		722,356	741,000		72,000	10.76%

2020

2020

Rivanna Water and Sewer Authority Fiscal Year 2020-2021 Proposed Budget Expense Detail

Author	rity as a Whole				Current Ye	ar Ac	tivity				vs.	vs.	
Object <u>Code</u>	<u>Line Item</u>		Adopted Budget 2019-2020		Six Month Actual 12/31/2019		Projected Year end 6/30/2020	Proposed Budget FY 2020-2021			2021 Variance \$	2021 Variance %	
41600	Instrumentation		328,400		126,449		303,304	ı	419,840		91,440	27.84%	
41650	Fuel & Lubricants		95,800		50,913		101,826		96,450		650	0.68%	
41700	General Other Maintenance		104,000		310,766		393,590		190,116		86,116	82.80%	
	Subtotal	\$	5,140,328	\$	2,582,015	\$	5,736,235	\$	4,918,416	\$	(221,912)	-4.32%	
81000	Equipment Purchases												
81200	Rental & Leases	\$	16,800	\$	7,747	\$	12,146	\$	78,250	\$	61,450	365.77%	
81250	Equipment (over \$10,000)		56,800		40,000		86,800		35,000		(21,800)	-38.38%	
81300	Vehicle Replacement Fund		215,100		107,550		215,100		239,000		23,900	11.11%	
	Subtotal	\$	288,700	\$	155,297	\$	314,046	\$	352,250	\$	63,550	22.01%	
95000 95100 95300 95150 95200	Allocations from Departments Administrative Allocation Engineering Allocation Maintenance Allocation Laboratory Allocation	\$:	\$	- - -	\$	- - -	\$	- - -	\$	- - -		
95200	Subtotal	\$	-	\$	-	\$	-	\$		\$	<u> </u>		
	Subiolai	Ψ	-	φ	-	Ф	-	Ψ	-	Ф	-		
	Depreciation		843,000		421,500		843,000	\$	860,000		17,000	2.02%	
	Subtotal	\$	843,000	\$	421,500	\$	843,000	\$	860,000	\$	17,000	2.02%	
	Total	\$ 19	9,220,291	\$	9,847,258	\$ 2	20,288,949	\$ 1	19,384,418	\$	164,127	0.85%	

	(545,000)
	-
	-
\$	18,839,418
•	40.000.44=
\$	18,839,417
	\$

RWSA Staffing by Department

OPERATIONS	Approved Positions FY 2020	Changes	Positions FY 2021
Engineering & Maintenance			
Director of Engineering & Maintenance	1		1
Engineering Department			
Engineering Manager	1		1
Senior Civil, Civil Engineers	4	Note 1	5
Water Resources Manager (moved from Water)	1		1
Engineering Technician/Inspector/GIS	4		4
GIS Coordinator (moved to Admin) Administrative Office Technician	0		0
	1 I 12	0	1 13
(Director FTE included) Subtotal	1 12	U	13
Maintenance Department			
Maintenance Manager	1		1
Maintenance Supervisor	1	NI-1-4	1
Mechanics	10	Note 1	9
Industrial Controls/Instrumentation Specialist	1 1		1 1
Vehicle Equipment Mechanic Mechanic Helper	1		1
Maintenance Workers	2		2
Subtota			16
0.000			. •
Operations			
Director of Operations	1		1
Director of operations	•		•
Laboratory			
Laboratory Manager	1		1
Chemist	2		2
Lab Technician	1		1
Subtotal	l 4	0	4
Masteriata Densitivo			
Wastewater Department	4		4
Wastewater Manager	1 1		1 1
Wastewater Assistant Manager Treatment Supervisor	1		1
Plant Operators (14 total)	•		•
Operators - Relief Shift Differential all plants	2		2
Operators - Urban	9		9
Operator - Glenmore	1		1
Operator - Scottsville	1		1
Subtota	I 16		16
Water Department	_		
Water Manager	1		1
Water Assistant Manager	1		1
Water Quality Specialist	1 2		1 2
Water Treatment Plant Supervisor	2		2

RWSA Staffing by Department

OPERATIONS	Approved Positions FY 2020	Changes	Positions FY 2021			
Plant Operators						
Operators - Relief Shift Differential all plants	3	_	3			
Operators - Urban	14.4	0	14.4			
Operators - Crozet	2.6		2.6			
Operators - Scottsville	1.4		1.4			
Subtotal _	26.4	-	26.4	•		
Subtotal _	76.4	0	76.4			
				FTE Split		
Joint Administrative Staff				RWSA	SWA	
Executive Director	1		1	0.85	0.15	1.00
Communications Manager/Executive Coordinator	1		1	0.60	0.40	1.00
Director of Finance & Administration	1		1	0.80	0.20	1.00
Office/HR Manager	1		1	0.80	0.20	1.00
Senior Accountant	1		1	0.80	0.20	1.00
Accounting Associate	0	0	0	0.00	0.00	0.00
Payroll & Benefits Coordinator	1		1	0.75	0.25	1.00
Accounts Payable/Purchasing Technician	1		1	0.75	0.25	1.00
Accounts Receivable Technician	1		1	0.30	0.70	1.00
Reception/Secretary III	1		1	0.75	0.25	1.00
Administrative Office Technician	1		1	0.70	0.30	1.00
Environmental & Safety Manager <u>IT/SCADA</u>	1		1	0.70	0.30	1.00
Information Systems Administrator	1		1	0.60	0.40	1.00
Information Systems Asst. Administrator	1		1	0.60	0.40	1.00
GIS Coordinator (moved from Engineering)	1		1	1.00	0.00	1.00
Software Analyst	1		1	0.80	0.20	1.00
IT Specialist - SCADA	1		1	1.00	0.00	1.00
IT Technician Security / SCADA	0	0	0	1.00	0.00	1.00
SCADA Technician	1		1	<u>1.00</u>	<u>0.00</u>	1.00
Administration and allocation with RSWA_	17	0	17	13.80	4.20	18.00
Total all positions	93.40	0.00	93.40			
FTE Position Allocated to RSWA	<u>-4.20</u>		<u>-4.20</u>			

89.20

Total Adjusted FTEs

89.20

Data for ACSA

Data for ACSA							
		FY 2020		FY 2021		Change	
Total RWSA Expenses Water Wastewater Add Administration revenue allocation Add Maintenance revenue allocation Add Engineering revenue allocation		\$	17,675,000 18,013,000 468,000 10,000	\$	18,326,000 18,242,000 545,000	\$	651,000 229,000 77,000 (10,000)
	Total	\$	36,166,000	\$	37,113,000	\$	947,000
RWSA Rate Charges Allocated ACSA, by Service Area	to						
Water							
Urban Crozet Scottsville		\$	7,343,723 2,340,120 649,561	\$	7,343,723 2,340,120 649,561	\$	- - -
	Total	\$	10,333,404	\$	10,333,404	\$	
Wastewater							
Urban Scottsville Stone Robinson School Glenmore		\$	7,354,898 318,430 22,478 374,302	\$	7,435,218 318,430 22,788 374,302	\$	80,320 - 310 -
	Total	\$	8,070,108	\$	8,150,738	\$	80,630
Total for ACSA		\$	18,403,512	\$	18,484,142	\$	80,630