



# Board of Directors Meeting

December 17, 2024

2:15pm

## BOARD OF DIRECTORS

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

**DATE:** DECEMBER 17, 2024

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

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

### AGENDA

1. *CALL TO ORDER*
2. *AGENDA APPROVAL*
3. *MINUTES OF PREVIOUS BOARD MEETING ON NOVEMBER 19, 2024*
4. *RECOGNITION*
5. *EXECUTIVE DIRECTOR'S REPORT*
6. *ITEMS FROM THE PUBLIC*  
*Matters Not Listed for Public Hearing on the Agenda*
7. *RESPONSES TO PUBLIC COMMENTS*
8. *CONSENT AGENDA*
  - a. *Staff Report on Finance*
  - b. *Staff Report on Operations*
  - c. *Staff Report on CIP Projects*
  - d. *Staff Report on Administration and Communications*
  - e. *Staff Report on Wholesale Metering*
  - f. *Staff Report on Drought Monitoring*
  - g. *Approval of Engineering Services – South Rivanna Reservoir Intake and Pump Station: Design, Bidding, And Construction Phase Services – Kimley-Horn Engineers*

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

**9. OTHER BUSINESS**

- a. Presentation and Vote on Acceptance: FY 24 Audit Report  
Matthew McLearen, CPA, CFE, Managing Director, Robinson, Farmer, Cox Associates*
- b. Presentation: Rivanna Conservation Alliance's Rivanna Restoration Projects and Water Quality Monitoring  
Lisa Wittenborn, Ph.D., Executive Director  
Claire Sanderson, Ph.D., Monitoring Program Manager*
- c. Presentation and Vote to Consider Award of Construction Contract and Amendment to the CIP for the Crozet Wastewater Pump Stations Repairs Project – Waco, Inc.  
Dyon Vega, P.E., RWSA Civil Engineer*
- d. Presentation: Dam Safety Program Update  
Victoria Fort, P.E., Senior Civil Engineer*

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

**11. CLOSED MEETING**

**12. ADJOURNMENT**

## GUIDELINES FOR PUBLIC COMMENT AT RIVANNA BOARD OF DIRECTORS MEETINGS

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

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

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

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

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

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

Rev. September 7, 2022





**RWSA BOARD OF DIRECTORS**  
**Minutes of Regular Meeting**  
**November 19, 2024**

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, November 19, 2024 at 2:15 p.m. at Rivanna Administration Building, (2nd Floor Conference Room), 695 Moores Creek Lane, Charlottesville, VA 22902.

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

**Board Members Absent:** none

**Rivanna Staff Present:** Bill Mawyer, David Tungate, Lonnie Wood, Jennifer Whitaker, Betsy Nemeth, Scott Schiller, Austin Marrs, Victoria Fort, Michelle Simpson, Stephanie Deal, Leah Beard, Annie West, Deborah Anama, Jacob Woodson

**Attorney(s) Present:** Valerie Long

**1. CALL TO ORDER**

Mr. Gaffney convened the November 19, 2024 regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:55 p.m.

**2. AGENDA APPROVAL**

There were no comments or questions on the agenda.

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

**3. MINUTES OF PREVIOUS BOARD MEETING ON OCTOBER 22, 2024**

There were no comments on or questions regarding the minutes for the meeting held on October 22, 2024.

**Ms. Mallek moved that the Board approve the minutes from the meeting held on October 22, 2024. Mr. Pinkston seconded the motion, which carried unanimously (7-0).**

**4. RECOGNITION**

There was none.

**5. EXECUTIVE DIRECTOR'S REPORT**

47 Bill Mawyer, Executive Director, stated that he would like to introduce the new Deputy  
48 Executive Director, David Tungate. He stated that Mr. Tungate had been their Operations  
49 Director and Water Manager for the last 12 years, and after a competitive national search, in  
50 which Mr. Gaffney participated on the selection committee, David Tungate was selected to be  
51 their first Deputy Executive Director of the Rivanna Authorities.

52

53 Mr. Tungate thanked everyone and said he looked forward to serving in this position.

54

55 Mr. Mawyer stated that the Deputy Director position was supported by the Board in FY 23 as  
56 part of the proposed succession management plan and was approved in the FY 25 budget. He  
57 stated that they were moving forward with succession management planning and getting  
58 positions in place to ensure a smooth transition for those who would retire in the coming years.  
59 He stated that they were thrilled about successfully implementing the succession plan.

60

61 Mr. Mawyer stated that moving forward in their Workforce Development strategic plan priority,  
62 he would like to congratulate several of their mechanics who had invested significant time in  
63 training programs, including Steve Minnis, Matt Walker, Josh Powell, Tyrone Hughes, and  
64 Garrett Carver, all of whom had received certificates from Valley Career and Technical Center.  
65 He stated that they also recognized the efforts of Leah Beard, their HR Manager, and Betsy  
66 Nemeth, Director of Administration and Communications, who had obtained additional graduate  
67 certificates in employment and human resource management.

68

69 Mr. Mawyer stated that Ms. Beard was a SHRM Senior Certified Professional, and Ms. Nemeth  
70 held a SHRM Professional Human Resources certification. He stated that he would like to extend  
71 his appreciation to these individuals for their hard work. He stated that they also celebrated  
72 Employee Appreciation Day for their Water and Sewer staff, with lunch in the parking lot,  
73 service awards, and recognition of staff members with 5, 10, 20 (Michelle Simpson), and 25  
74 years of service (Lonnie Wood).

75

76 Mr. Mawyer stated that as part of their strategic plan Communication and Collaboration priority,  
77 they were still working on the Imagine a Day Without Water art contest with the City and the  
78 Service Authority, which closed on December 4. He stated that they would evaluate the  
79 nominations from school children on how to conserve water. He stated that Jennifer Whitaker,  
80 their Director of Engineering and Maintenance, had recently presented to the UVA fourth-year  
81 capstone class about her experiences as a public sector engineer. He stated that they appreciated  
82 her participation with that group.

83

84 Mr. Mawyer stated that he also attended the Virginia Municipal Drinking Water Association  
85 meeting in Short Pump on Thursday and served on the Board of Directors for that organization.  
86 He stated that they had a board meeting on Friday, which provided an opportunity to network  
87 with other larger utilities, including Fairfax and Newport News. He stated that they maintained  
88 close ties with regulatory issues and the politics of the General Assembly, as well as the  
89 department heads of State Agencies. He stated that Chris Pomeroy of AquaLaw kept them  
90 informed and served as their conduit to those agencies.

91

92 Mr. Mawyer stated that they had previously discussed the pipe break at Sugar Hollow as a

93 consequence of Hurricane Helene, and repair of the pipe had now been added to the Federal  
94 Emergency Management Agency (FEMA) Disaster Assistance Grant Program. He stated that  
95 they plan to apply for grant money to help restore the affected area.

96  
97 Mr. Mawyer stated that they had previously applied for a Virginia Water Protection Permit for  
98 Beaver Creek Reservoir in 2022, and last week they had concluded discussions with DEQ, and  
99 finalized all terms of the permit. He stated that this permit would allow them to withdraw 2.2  
100 million gallons per day from the Beaver Creek Reservoir and provided authorization to construct  
101 a larger spillway and a new pump station.

102  
103 Mr. Mawyer stated that the permit would be advertised in newspapers for public comment, and if  
104 no objections were received, it would be implemented. He stated that this was a 15-year permit,  
105 which was previously a grandfathered withdrawal from Beaver Creek Reservoir. He stated that  
106 they had begun withdrawing water from Beaver Creek Reservoir before 1989, so it was not  
107 under a VDEQ permit. He stated that since they wanted to increase their withdrawals, that was  
108 why a permit was required.

109  
110 Mr. Mawyer stated that the proposed project included a labyrinth spillway that would be  
111 constructed through the middle of the Beaver Creek Dam, a concrete structure with a metal  
112 bridge that would convey traffic on Browns Gap Turnpike. He stated that over the next five  
113 years, they hoped to see this project constructed, and they were expecting funding of about \$20  
114 million from the Department of Agriculture's Natural Resources Conservation Service to help  
115 fund the project.

116  
117 Mr. Gaffney asked if the 15 years was the limit for what was allowed.

118  
119 Mr. Mawyer stated that 15 years was the extent of the permit. He stated that DEQ was balancing  
120 the needs of water withdrawal with the protection of a finite resource. He stated that 15 years  
121 was the longest permit the DEQ would grant, so they were balancing the needs of the many  
122 utilities who requested water from a finite water resource. He stated that they carefully reviewed  
123 all the calculations and required justification for any withdrawal, taking into consideration the  
124 required releases to the stream, which was a major issue at Beaver Creek. He stated that this  
125 included not only the amount of water needed for the project, but also the amount that must be  
126 released for downstream uses.

127  
128 Mr. Mawyer stated that this was why they had to obtain the permit. He stated that regarding the  
129 purpose of the 15-year limit, it was a balancing act, as DEQ did not want to allocate too much  
130 water to one utility, but they also did not want to under-allocate to them. He stated that the DEQ  
131 had established this 15-year limit on permits to make withdrawals, and at the end of that period,  
132 applicants must revisit and justify their water usage for a permit renewal.

133  
134 Mr. Mawyer stated that the DEQ aimed to ensure that the allocated water was being used  
135 effectively. He stated that completion of this permit for Beaver Creek Reservoir was a significant  
136 achievement, thanks to Jennifer Whitaker and her team, who worked closely with DEQ to  
137 develop this plan. He stated that they viewed this as an adequate water supply for Crozet until a  
138 time between 2045 and 2070, when additional water supply may be needed to serve the Crozet

139 community.

140

141 Mr. Mawyer stated that every 10 years, they assessed their water supply by measuring the  
142 reservoirs to ensure they had enough water. He stated that they collaborated with Weldon  
143 Cooper, the University, the County, the City, and the Albemarle County Service Authority to  
144 assess water demand in our service area and compare it to the available water supply, ensuring  
145 they had enough water for the community in the short and long term. He stated that the next  
146 update was scheduled for 2030.

147

148 Ms. Mallek asked if 2.2 million gallons per day was the grandfathered amount that was proposed  
149 to be allowed to continue.

150

151 Mr. Mawyer stated that this was a new total amount allowed by the permit for the next 15 years.

152

153 Ms. Mallek stated that this was based upon the water demand estimated for the Crozet  
154 community.

155

156 Mr. Mawyer confirmed that was correct.

157

158 Ms. Mallek asked if afterwards, there would be a subsequent process for determining what would  
159 be released after the labyrinth project was completed. She stated that she wanted to clarify the  
160 timing of the reduction or increase in stream release. She stated that at some point, a reduction  
161 was anticipated. She stated that she was trying to determine where in the process this change  
162 occurred, whether it was currently in effect or would be implemented in the future.

163

164 Jennifer Whitaker, Director of Engineering and Maintenance, stated that the permit process  
165 involved several phases. She stated that the first phase was the current-day condition, taking into  
166 account the existing infrastructure. She stated that the second condition considered the  
167 infrastructure they currently had with the dam under construction. Ms. Whitaker stated that the  
168 third condition was when they had all the new infrastructure built, and release elements were  
169 required throughout that process, which essentially allowed them to lower the water level while  
170 building the new dam. She stated that the agency provided some relief during this process. She  
171 stated that the final phase was the implementation strategy, once the dam was built, which was  
172 all part of this program.

173

174 Ms. Mallek stated that they had essentially done the homework for the next 15 years.

175

176 Ms. Whitaker confirmed that yes, they had.

177

178 Ms. Mallek stated that she knew what to anticipate after the labyrinth was finished. She stated  
179 that currently, they were treating 800,000 to 1 million gallons per day in Crozet. She stated that  
180 there was a significant amount of cushion built in here. She stated that the Crozet residents were  
181 probably hoping that the same growth rate would not continue because there was very little  
182 available open space that had not already been developed in the growth area. She stated that they  
183 had had a very significant increase in consumption over the last 15 years. She stated that it was  
184 challenging to predict exactly how much it would continue to grow. She stated that she was very

185 hopeful that it would remain stable.

186

187 Mr. Pinkston asked what the capacity was at the Crozet Water Treatment Plant.

188

189 Mr. Mawyer stated that recent construction had increased the capacity from approximately 1 to 2  
190 million gallons per day.

191

192 Mr. Pinkston asked where the treatment plant was located.

193

194 Mr. Mawyer stated that it was on Route 240, not far from the reservoir. There was a pipe that  
195 transported water from the reservoir up Route 240 and then to the water treatment plant. He  
196 stated that they planned to build a new spillway for the reservoir dam. He stated that the area to  
197 the right was the current grass spillway, but the Department of Conservation and Recreation had  
198 determined that it was not sufficient to safely pass 31 inches of rain over 24 hours.

199

200 Mr. Mawyer stated that to address this, RWSA developed a concept for a new spillway, a  
201 labyrinth concrete structure with tooth-like devices which would allow the water to pass from out  
202 of the reservoir and then down a chute to the stream below. He stated that the current water  
203 pump station was located at the foot of the dam, but they planned to relocate it to the bank of the  
204 reservoir to allow construction of the new spillway.

205

206 Mr. Mawyer stated that they were currently working with the County to secure a lease or  
207 purchase agreement for the property for the pump station on the bank of the Beaver Creek  
208 Reservoir, which was owned by the County. He stated that the new intake structure would be  
209 placed in the water, and the water would be pumped out of the reservoir and transported thru a  
210 new pipe up Route 240 to the Crozet Water Treatment Plant.

211

212 Ms. Mallek stated that the labyrinth would not be used on a daily basis.

213

214 Ms. Whitaker stated that was correct; it would only activate at the very highest flood levels.

215

216 Ms. Mallek stated that she was examining the compression of this narrowing and thinking that  
217 there was a lot of velocity going down there.

218

219 Ms. Whitaker indicated there was an energy dissipating structure at the bottom of the spillway.

220

221 Mr. Mawyer stated that he serves on DEQ's Grandfathered Withdrawals Committee, which aims  
222 to review concerns from DEQ about over-allocated water resources in the state. He stated that  
223 the DEQ is examining watersheds and requesting that every utility disclose their current water  
224 withdrawals and projected future withdrawals. He stated that they are particularly focused on  
225 addressing the grandfathered withdrawals, which they say have increased nine-fold since 1989.

226

227 Mr. Mawyer stated that the issue is central to their efforts to regulate the amount of water  
228 authorities can take. He stated that the committee has been working to understand the  
229 grandfathering process and its implications. He stated that Rivanna had three grandfathered  
230 withdrawals to serve Crozet, Scottsville, and the North Rivanna Water Treatment Plant. He

231 stated that they intend to decommission the North Rivanna Water Treatment Plant and  
232 potentially relinquish its grandfathering. He stated that other utilities, such as the City of  
233 Richmond, have large withdrawals that are grandfathered due to their King's Grant, which  
234 allocates all water passing through the City of Richmond to the City itself.  
235

236 Mr. Mawyer stated that this raised concerns, as the DEQ is grappling with the need to balance  
237 economic development with water conservation. He stated that the Grandfathered Withdrawals  
238 Committee he works on, and Victoria Fort has been assisting with, are working with DEQ to  
239 understanding the state code and the meaning of grandfathering. He stated that they have been  
240 meeting with the DEQ to discuss their interpretation of the code and the implications of the  
241 surface water management areas provision.  
242

243 Mr. Mawyer stated that if an area is declared a "surface water management area" due to drought,  
244 it can limit grandfathered withdrawals. He stated that the DEQ has sent a survey to all utilities,  
245 requesting information on their current and 1989 water withdrawals. He stated that the  
246 committee has encouraged the DEQ to analyze this data to better understand the scope of the  
247 issue. He stated that they questioned if this issue was statewide or limited to specific watersheds.  
248 He stated that if it was the latter, conservation measures could be implemented in those  
249 watersheds to address the issue, rather than affecting the entire state.  
250

251 Mr. Gaffney stated that it was unclear whether the DEQ would ever fully comprehend that  
252 removing 10 million gallons of water per day from the system resulted in the same amount of  
253 water being reintroduced back in through Moores Creek.  
254

255 Mr. Mawyer replied that yes, they had asked about that, and DEQ stated that their calculations  
256 took that into account.  
257

258 Mr. Gaffney stated that in that case, it was kind of a wash.  
259

260 Mr. Mawyer stated that it appeared that way. He stated that it would be interesting to see the  
261 numbers from the utilities in the survey.  
262

263 Ms. Mallek stated that she was recalling the 19-agency meeting from 2006 or 2007, when it was  
264 already stated that they were not receiving James River water.  
265

266 Mr. Mawyer stated that he had previously discussed renovating the administration building, and  
267 they were continuing to pursue that project. He stated that within a month or so, they expected to  
268 issue a request for construction bids. He stated that one of the primary reasons for the renovation  
269 was that their laboratory was outdated and required updating. He stated that they analyze nearly  
270 all of their wastewater and water samples in-house.  
271

272 Mr. Mawyer stated that they had located a rental space in the City for laboratory space and  
273 intended to issue a letter of intent to rent the property. He stated that this space was currently on  
274 the market, but it was competitive, and they were hopeful of securing it. He stated that if they  
275 were successful, they planned to relocate their lab staff and operations to the rental property  
276 while the renovation took place there. He stated that they had previously considered relocating

277 the lab and staff to trailers on site, which had received a lukewarm response at times. He stated  
278 that if there were no objections, they would be pursuing a lease on that space in the City.

279  
280 Mr. Gaffney stated that they should acknowledge that their engineers had been working in  
281 trailers for 15 or 20 years.

282  
283 Mr. Mawyer stated that was right; they had been there for about 20 years. He stated that they all  
284 looked forward to the renovation, but during the renovations, it would be painful to determine  
285 where they would conduct business. He stated that they were trying to work through that.

286  
287 Mr. Pinkston asked if there would be a phasing plan.

288  
289 Mr. Mawyer stated they would as much as possible. He stated that ideally, they would build the  
290 addition, move into it, and then renovate the existing building. He stated that however, they had  
291 heating, cooling, and electrical systems that needed to be integrated, making it an inefficient and  
292 costly approach to complete in phases. He stated that instead, they were considering abandoning  
293 the building and allowing the contractors to work on it. He stated that they were currently  
294 working through the requirements of that plan, and once they awarded a construction contract,  
295 they would have more details.

296  
297 Mr. Sanders asked if they had the lease yet.

298  
299 Mr. Mawyer stated that they did not currently have one, but they would issue a letter of intent  
300 and inspect the property to ensure it met their needs. He stated that if the owner was agreeable,  
301 they would make a firm offer on the lease for the proposed site in the City.

302  
303 He stated that he wanted to address the ongoing topic of fluoride. As a reminder, their current  
304 level of fluoridation was 0.7 milligrams per liter, which was a recommended level set by the  
305 Virginia Health Department and the Environmental Protection Agency (EPA). He stated that  
306 recently, a federal court in California had ruled that it was reasonable to reassess this level, citing  
307 concerns about its impact on younger children. He stated that the court had not found evidence of  
308 injury, but rather directed the EPA to reevaluate the fluoridation level.

309  
310 Mr. Mawyer stated that this had sparked a discussion, and he recalled Mr. Lunsford receiving a  
311 comment from a customer regarding potential changes to the fluoridation level. He stated that  
312 currently, they were not planning to make any changes. He stated that they were waiting for  
313 recommendations from VDH and EPA, and if they suggested modifications, staff would be  
314 happy to implement them. He stated that they were not medical or public health professionals  
315 and therefore could not determine the correct level of chemicals, including fluoride. He stated  
316 that they relied on VDH's guidance on all chemicals, including fluoride.

317  
318 Mr. Mawyer stated that as previously discussed, they intended to sell the Morris house and 2  
319 acres at Buck Mountain Road. He stated that since then, they had conducted inspections, and  
320 found significant disrepair of the house. He stated that at this point, if there were no objections,  
321 they planned to demolish the house and sell the two-acre parcel. He stated that they were hesitant  
322 to allow prospective bidders to enter the property due to its condition.

323 Mr. Pinkston asked if the Board needed to vote on that matter.

324  
325 Mr. Mawyer stated that staff did not think it was necessary, but the Board certainly could if they  
326 thought it was appropriate.

327  
328 Mr. Mawyer stated that they had the 2025 Board meeting schedule, which was scheduled for  
329 every fourth Tuesday of the month next year, except for November and December. He stated that  
330 it was included on the consent agenda. He stated that they had proposed adding December 26 to  
331 staff holidays as the 13th holiday, as it fell on a Friday after Christmas on Thursday. He stated  
332 that otherwise, they had standing holidays, which included 12 and a half days, with some floating  
333 holidays where they were open for business, but staff could take vacation with permission or  
334 receive credit for vacation time.

335  
336 Ms. Mallek stated that she noticed during the Rivanna Solid Waste Authority meeting that there  
337 were six stars for holidays in which the facilities were closed. She stated that she would like for  
338 that information to be disseminated in a newsletter for the public's benefit.

339  
340 Mr. Mawyer stated that the six holidays when Solid Waste facilities were closed included New  
341 Year's Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas  
342 Day.

343  
344 Mr. Lunsford asked if the repairs to the Sugar Hollow transfer pipe were still on schedule.

345  
346 Mr. Mawyer stated yes; Faulconer Construction was moving forward with the work. He stated  
347 that they had ordered the pipe and secured the permits.

348  
349 Mr. Lunsford asked if the grant would slow that down.

350  
351 Mr. Mawyer stated that it would not. He stated that the grant provided after completion  
352 reimbursement for the work.

353  
354 **6. ITEMS FROM THE PUBLIC**

355 *Matters Not Listed for Public Hearing on the Agenda*

356  
357 There were none.

358  
359 **7. RESPONSES TO PUBLIC COMMENTS**

360  
361 There were no comments from the public, therefore, there were no responses.

362  
363 **8. CONSENT AGENDA**

364  
365 *a. Staff Report on Finance*

366  
367 *b. Staff Report on Operations*

368



- 369 c. *Staff Report on CIP Projects*  
370  
371 d. *Staff Report on Administration and Communications*  
372  
373 e. *Staff Report on Wholesale metering*  
374  
375 f. *Staff Report on Drought Monitoring*  
376  
377 g. *Approval of Board Meeting Schedule for Calendar Year 2025*  
378  
379 h. *Approval of the Holiday Schedule for Calendar Year 2025*  
380  
381 i. *Approval of Term Contract for Professional Commissioning Services for Utility*  
382 *Buildings and Facilities – Facility Dynamics Engineering*  
383  
384 j. *Approval of Term Contracts for Commissioning Services for Industrial Controls*  
385 *Integration, Management and Inspection Services – E-Merge and Short Elliot*  
386 *Hendrickson*  
387

388 Mr. Pinkston asked if staff could provide further information on Item J.  
389

390 Mr. Mawyer stated they would be working with two consultants: Short Elliot Hendrickson and  
391 E-Merge. E-Merge was not a professional firm as defined by the Virginia Public Procurement  
392 Act, but they possessed expertise in technology and controls. He stated that Mr. Wood and his  
393 staff planned to utilize both firms to ensure controls were installed properly and tested, and to  
394 complete post-occupancy inspections after a project was completed to verify effectiveness.  
395

396 Mr. Pinkston asked if this would apply to their Supervisory Control and Data Acquisition  
397 (SCADA) systems.  
398

399 Mr. Mawyer stated yes. He stated that the SCADA system controlled their chemical inputs and  
400 pumps, and operational status, including when they were running and when they were not.  
401

402 Mr. Pinkston asked if they had dedicated industrial controls companies they relied on.  
403

404 Mr. Mawyer stated that they had historically received the industrial installer through the  
405 competitive bid process, and it was whoever the construction contractor decided to team with. He  
406 stated that they would have a specification which would outline their requirements, including the  
407 pumps, but they did not fully detail a wiring diagram to show the exact installation process. He  
408 stated that they may specify the need for a PLC or motor control in certain locations, but it was a  
409 design-build approach that the specialty control subcontractor would wire and install.  
410

411 Mr. Pinkston asked if the commissioning agent would come after that.  
412

413 Mr. Mawyer stated that was right. He stated that they would add value by reviewing the design  
414 and installation.

415  
416 Mr. Pinkston stated that this information would be beneficial for the public to know, considering  
417 what happened with the pumping station this year. He stated that this was another response they  
418 were putting together and they were applying best practice for having someone put these systems  
419 through their paces. He thanked them for doing this.

420  
421 Ms. Mallek asked if the commissioning person looked at the plan beforehand and was not  
422 waiting until it was installed to determine its effectiveness. She asked if there would be an initial  
423 review before the system was brought online.

424  
425 Mr. Mawyer stated that they would participate in the design process, from the outset, to help  
426 determine what they specified was appropriate, including products and contract specifications.  
427 He stated that the contractor then submitted a variety of submittals, detailing what he intended to  
428 provide, and the commissioning consultant verified that these products met our requirements  
429 functionally.

430  
431 Mr. Mawyer stated that after installation, they ensured that the products worked as intended. He  
432 stated that their design engineer handled this process, but having this second or third set of expert  
433 review provided an added layer of oversight, allowing them to better support staff with  
434 specialized needs. He stated that this expansion of their program came with some costs, but  
435 avoiding pump station submergence made it well worth the investment.

436  
437 **Ms. Mallek moved that the Board approve the Consent Agenda. Mr. Pinkston seconded the**  
438 **motion, which carried unanimously (7-0).**

439  
440 **9. OTHER BUSINESS**

441  
442 *a. Presentation: Long-Range Planning for Water & Wastewater Services*  
443 *Bill Mawyer, Executive Director*

444 Bill Mawyer, Executive Director, stated that as they embarked on long-range planning, he was  
445 pleased to move beyond budgeting and facts to explore the thinking and planning aspects of their  
446 work. He stated that today, he would focus on thinking ahead. He said that as Ben Franklin once  
447 stated, "When the well is dry, we know the worth of water." He stated that he would like to thank  
448 Ms. Anama for bringing that quote to their attention. He stated that they had discussed this topic  
449 before, and he would like to revisit it.

450  
451 Mr. Mawyer stated that the earth's water was a finite resource, and they must consider its  
452 availability. He stated that interestingly, 70% of the earth's surface was covered by water, but  
453 only 3% was freshwater, and a mere 0.5% was in lakes and rivers. He stated that the majority of  
454 freshwater was tied up in ice caps and groundwater. He stated that when they looked at the water  
455 on Earth, only about 0.5% was available in lakes and rivers, which may seem small, but it was a  
456 significant amount.

457  
458 Mr. Mawyer stated that for example, the Great Lakes held six quadrillion gallons of water, a  
459 staggering amount. He stated that research by Colorado State suggested that nearly half of the

460 freshwater basins may not be able to meet monthly demand by 2070. He stated that the United  
461 Nations had also reported that two-thirds of the world would face a month of water shortage by  
462 2050. He stated that this was a serious issue, as they saw other localities and states struggling to  
463 maintain adequate drinking water supplies.

464  
465 Mr. Mawyer stated that their thinking and planning were driven by capacity, regulations,  
466 emerging contaminants, technology, sustainability, and affordability. He stated that they were  
467 fortunate to have a university in their local economy, which provided jobs and growth. He stated  
468 that in their 2020 Service Area Water Urban Demand Study, they had met with the university,  
469 Weldon Cooper, and City and County planning staff to project the community's water demand.

470  
471 Mr. Mawyer stated that by 2070, the population of Charlottesville was projected to be  
472 approximately 65,000 people. He stated that the Albemarle County Service Authority, which  
473 served the County's public water system, was expected to serve around 106,000 people. He  
474 stated that considering the County's utility customers, Rivanna needed to serve about 170,000  
475 people in 2070. He stated that by 2030, they were anticipated serving 135,000 people, which  
476 meant an additional 35,000 people would require drinking water over the next 35 years. He  
477 stated that this growth seemed reasonable.

478  
479 Mr. Mawyer stated that they also needed to consider the impact of climate change, which may  
480 lead to rising sea levels, coastal migration, and more frequent droughts. He stated that the 2002  
481 drought, lasting 18 months, was a prime example. He stated that regarding the intense rain they  
482 had experienced, it was likely they could expect more severe storms in the future. He stated that  
483 as part of their planning, they were addressing these challenges. He stated that locally, they had  
484 been working on water supply projects to ensure their community had a sufficient drinking water  
485 supply.

486  
487 Mr. Mawyer stated that recently, the Board had awarded a contract for the Ragged Mountain to  
488 Observatory raw water line project, which tied into the Birdwood line. He stated that they would  
489 be advertising for construction bids for the Central Water Line next month, which would  
490 distribute finished water along Jefferson Park Avenue and Cherry Avenue to the Long Street  
491 Bridge area. He stated that they had a smaller project planned for the following summer to clear  
492 the perimeter of the Ragged Mountain Reservoir, allowing them to add 700 million gallons of  
493 water.

494  
495 Mr. Mawyer stated that they were working on a larger project to build a pipeline from Rivanna  
496 Reservoir to Route 250 at Birdwood, completing the piping system and enabling them to transfer  
497 water between Rivanna Reservoir, Ragged Mountain Reservoir, and the South Rivanna and  
498 Observatory Water Treatment Plants. He stated that this addition would be substantial, with a  
499 price tag of at least \$200 million. He stated that they were hopeful that it would be financially  
500 feasible for the community. He stated that when he mentioned the differing costs between the  
501 County and the City, they had provided the funding formulas that were agreed upon in various  
502 past agreements.

503  
504 Mr. Mawyer stated that for example, the pump station along Reservoir Road was 80% funded by  
505 the Service Authority. He stated that these calculations had been done by Ms. Hildebrand, Mr.

506 O'Connell, and himself a few years ago. He stated that in the case of the Rivanna to Ragged  
507 pipeline, the Service Authority was funding 80% of the project, as per the terms of the Ragged  
508 Mountain Dam project agreement.

509  
510 Ms. Mallek asked if the timbering done in the next year was within the Rivanna umbrella, as far  
511 as covering the costs and generating revenue from selling the timber. Mr. Mawyer replied yes.  
512 He stated that to ensure that they could raise the water level, they needed to clear the perimeter.  
513

514 Mr. Mawyer discussed the new Regional Planning Unit that had been established, which  
515 included Greene, Louisa, Fluvanna, and Buckingham Counties, along with Albemarle County,  
516 ACSA, Town of Scottsville, and City of Charlottesville to form the Middle James area. Mr.  
517 Mawyer stated that this Middle James area represented the five counties that bordered and used  
518 water from the James River. He stated that the James River watershed spanned from West  
519 Virginia to the Bay, and their planning unit would consist of the five counties, five incorporated  
520 towns, three authorities, and one planning district, the Thomas Jefferson Planning District  
521 Commission, as well as the City.

522  
523 Mr. Mawyer stated that by December 8, each member of the planning unit was required to  
524 provide a contact to the DEQ for their representative to the water supply planning committee. He  
525 stated that they could reply directly to the DEQ or let Rivanna know, and they would respond on  
526 behalf of the entire area. He stated that Jennifer Whitaker would serve as Rivanna's  
527 representative.

528  
529 Mr. Pinkston asked if there was a request right now.

530  
531 Mr. Mawyer replied no; but they could inform Mr. Sanders or Mr. Richardson who could let him  
532 know. He stated that if they wanted to let him know their chosen representative, that was fine as  
533 well.

534  
535 Mr. Pinkston asked if he would like them to put together folks from the ACSA and City  
536 informally.

537  
538 Mr. Mawyer stated that he was letting Mr. Sanders and Mr. Richardson know that the localities  
539 needed representatives and needed to notify DEQ by December 8 who that representative and the  
540 alternate would be on this regional planning team. He stated that they could designate Rivanna if  
541 they wanted to, but they could have their own representative if they preferred.

542  
543 Mr. Gaffney asked if the Regional Planning Unit (RPU) members were representatives of these  
544 15 different entities.

545  
546 Mr. Mawyer stated that was his understanding. He stated that it included five counties, five  
547 incorporated towns, three authorities, one City, and one planning district commission.

548  
549 Mr. Gaffney asked if they joined in with them, they would get four or five votes. He asked if it  
550 made more sense for everyone to show up the first time.

551

552 Mr. Mawyer stated that he was unsure if it was a well-formulated plan, even with DEQ being  
553 involved. He stated that during his conversation with the DEQ person who would be assisting  
554 them, it became clear that they planned to set up an initial meeting, after which the group would  
555 be expected to manage itself. He stated that over the course of a five-year period, they were  
556 supposed to develop a comprehensive water supply plan for the entire water planning unit.

557  
558 Mr. Gaffney asked if there would be five individual plans.

559  
560 Mr. Mawyer stated that it depends. He stated that the theme was encouraging cross-jurisdictional  
561 projects, providing water for everyone. He stated that Albemarle, Charlottesville, and Scottsville  
562 had a water plan that expired, and it was time to renew it. He stated that the state advised them to  
563 wait until they established a new planning unit. He stated that it was assumed that every locality  
564 in the state had a water supply plan. He stated that nevertheless, it seemed to him that the theme  
565 was to empower localities with the capability of supplying water to assist those who did not, at  
566 the very least, help them develop a plan.

567  
568 Ms. Mallek stated that if she understood correctly, every one of these jurisdictions would have a  
569 designated person. She stated that they should not give up any of these seats in the planning unit  
570 by consolidating. She stated that they needed to ensure that every decision was made with one of  
571 their people in the right position.

572  
573 Mr. Mawyer stated that he would think so. He stated that if they delegated it to Rivanna, they  
574 would not take their proxy. He stated that there would still be three votes as opposed to one.

575  
576 Mr. Richardson stated that he would like to discuss the logic behind delegating the RWSA to be  
577 their representative. He stated that in terms of checks and balances, he wondered how this  
578 process would work and what safeguards were in place to ensure that their interests were being  
579 represented effectively.

580  
581 Mr. Mawyer stated that as the responsible water supplier of the County and City, they managed  
582 that issue for the community. Because this was a water supply issue, they could be at the  
583 forefront of addressing it. He stated that however, it was also a political process, particularly if it  
584 involved another County or an extension of the growth area within the County. Mr. Mawyer  
585 stated that was the County's prerogative or the City's to decide, not Rivanna's. He stated that  
586 even if they were to represent the interests of the County or City, they would still need to  
587 coordinate closely with them and determine whether the City or County supported the proposed  
588 plan. He stated that he believed the DEQ was hoping for a consensus, as the ordinance indicated.  
589 He stated that the minority or opposing views would also be expressed in the plan.

590  
591 Mr. Mawyer stated that this process was supposed to be completed over five years, and the DEQ  
592 had an extensive list of data that required the planning unit to provide, including information on  
593 their water demand, the number of houses and businesses, and the amount of public water used.  
594 He stated that DEQ stated that if they did not have this data, they did not have to create it, and  
595 instead, they should rely on existing data. He stated that this was a deference to smaller  
596 localities, allowing them to avoid spending money to gather the necessary information.

597

598 Mr. Pinkston asked if Virginia DEQ would support this initiative with project management or  
599 some type of facilitation of the process.

600  
601 Mr. Mawyer stated that DEQ had designated a person to oversee the start of the process. He  
602 stated that if they had issues or challenges, they would defer to DEQ to help them move forward.

603  
604 Mr. Pinkston stated that it seemed that there should be an assigned person to lead this effort.

605  
606 Ms. Mallek stated that in the early communications, they were offering \$20,000 and stated it  
607 would not be a financial burden on the localities. She stated that she was not sure if that was per  
608 jurisdiction.

609  
610 Mr. Mawyer stated that they were waiting for DEQ to issue further guidance regarding this  
611 committee.

612  
613 Mr. Pinkston asked if their state senators and delegates were aware of this.

614  
615 Mr. Mawyer stated that the amendment was approved by the General Assembly, so presumably,  
616 they were aware of the situation. He stated that Katrina Callsen had been made aware of what  
617 they had been asked to do, but it would not hurt to continue the discussion with those  
618 representatives.

619  
620 Ms. Mallek stated that Delegate Amy Laufer was on the State Water Control Board.

621  
622 Mr. Mawyer stated that they would deal with this committee and planning process and report  
623 back to the Board. He stated that he was certain there would be lots of questions moving  
624 forward.

625  
626 Mr. Pinkston stated that it was interesting that Louisa got stitched onto them when they were not  
627 in their actual watershed.

628  
629 Mr. Mawyer stated that the James River Water Authority had a withdrawal from the James  
630 River. He stated that they were an authority serving Louisa, and they were building an intake on  
631 the James River to serve Fluvanna and Louisa.

632  
633 Mr. Richardson asked if this work was due to begin in April of next year.

634  
635 Mr. Mawyer stated that the first meeting was supposed to occur in April.

636  
637 Mr. Richardson stated that this group would not meet again before the December 8 deadline to  
638 inform DEQ of their representatives. He asked if Ms. Mallek would be comfortable delegating  
639 their representation to Rivanna, with any updates being reported back to the Board of  
640 Supervisors for discussion.

641  
642 Mr. Gaffney stated that if Louisa County, the Town of Louisa, and James River Water Authority  
643 attended the meetings with three voting representatives, they should have five for Albemarle,

644 Charlottesville, Scottsville, ACSA, and RWSA. He stated that everyone should show up with  
645 separate representatives for the first meeting and decide how it would work, then consult further  
646 about the future delegations. He stated that Ms. Mallek would be a good County representative  
647 for this group.

648  
649 Mr. Richardson stated that he understood.

650  
651 Mr. Mawyer stated that over the next five years, PFAS issues would become more prominent. He  
652 stated that more information would be shared on the topic. He stated that moving forward, they  
653 were aware of the new regulation from the EPA on PFAS and drinking water, which was  
654 implemented in April. He stated that the American Water Works Association, the American  
655 Wastewater Association, and several other business organizations had filed a lawsuit to  
656 challenge the maximum contaminant level limits. He stated that specifically, they suggested that  
657 these current limits of 4 should be at least 10 parts per trillion.

658  
659 Mr. Mawyer stated that the challenge was that the EPA had not followed the proper  
660 administrative process to issue the regulations. He stated that this issue was ongoing, and they  
661 would see how it unfolded with the new federal administration. He stated that additionally, there  
662 was concern about wastewater. He stated that they had detected PFAS in their wastewater, and if  
663 there was ever a regulation requiring its removal, it would require an expansion of our CIP.

664  
665 Mr. Mawyer stated that biosolids were the end product of wastewater treatment, and they  
666 transported them to McGill Environmental daily. He stated that they had tested the PFAS levels  
667 in their wastewater six times in 2021 and planned to conduct further tests. He stated that  
668 currently, PFOS levels ranged from 5.9 to 8.7, while PFOA levels were at 0.6 and 0.5.

669  
670 Mr. Lunsford asked what contributed to the increase to 8.7 in period five.

671  
672 Mr. Tungate stated that they collected six samples over six different days. He stated that the data  
673 they generated, approximately five tons per night, were representative of the graph. He stated  
674 that they repeated the process six times to gather some insight.

675  
676 Mr. Mawyer stated that they made approximately 545 trips each year to transport biosolids to  
677 McGill Environmental compost facility in Waverly. He stated that land application was another  
678 option for biosolids disposal. He stated that land application was not always well-received, and  
679 landfilling was also an option, although the state and country lacked sufficient landfill space to  
680 consider this as a long-term solution. He stated that incineration was another method, but it came  
681 with the added concern of air pollution.

682  
683 Ms. Mallek stated that they would install scrubbers to clean it out. She stated that the Blue Plains  
684 facility in Northern Virginia had invested \$50 million in a 10-year cost recovery plan, which had  
685 allowed them to stop shipping high-quality materials to this area.

686  
687 Mr. Mawyer stated that when discussing emerging contaminants, the EPA required them to  
688 participate in the Unregulated Contaminant Monitoring Rule, specifically Rule #5. He stated that  
689 they were currently studying 30 unregulated contaminants, collecting samples, and reporting the

690 results to the EPA. He stated that the EPA then reviewed the national results to determine if a  
691 contaminant warranted regulation.

692

693 Mr. Mawyer stated that currently, they were monitoring 29 additional PFAS compounds, as well  
694 as lithium, fluoride, nanoparticles, microplastics, and other potential endocrine and interrupters  
695 that may pose future issues. He stated that previously, they had discussed PFAS, which were the  
696 waterproofing agents found in certain cookware, waterproof clothing, and fast food containers,  
697 preventing oils and grease from seeping through. He stated that it was worth noting that most  
698 humans had PFAS in their bodies.

699

700 Mr. Gaffney stated that he recently saw a pan in a store that stated on the packaging that it  
701 contained PFAS. He stated that they had not made anything illegal yet.

702

703 Mr. Mawyer stated that he wanted to bring up another point. He stated that they removed PFAS  
704 from their drinking water through Granular Activated Carbon (GAC) filters, and then  
705 regenerated the media with heat. He stated that he was unsure about what happened to the PFAS  
706 during the regeneration process. He stated that it would potentially become an issue in the future.  
707 He stated that the GAC filters would lose some of their effectiveness in removing PFAS,  
708 potentially diminishing their current performance. He stated that they did not currently have a  
709 clear answer to this question, but it could be a concern.

710

711 Mr. Lunsford asked if there were any plans to handle the leachate differently in the future,  
712 considering the regulations on wastewater treatment for PFAS releases.

713

714 Mr. Mawyer stated that there were no regulations in place regarding PFAS removal from  
715 wastewater. He stated that if they were to obtain a PFAS removal requirement for wastewater, it  
716 would also impact solid waste management, as they may need to limit PFAS-contaminated waste  
717 and there would be high costs to pay for the necessary filters. He stated that this would result in a  
718 significant increase to the Solid Waste Authority, as well as other industries in the community  
719 that may be contributing PFAS. He stated that if they started having high PFAS test results, they  
720 would attempt to identify the source of the contamination.

721

722 Mr. Gaffney stated that he was curious to know if there was any current information on whether  
723 the maximum allowable levels of PFAS in wastewater would be set at a higher level than those  
724 in drinking water.

725

726 Mr. Mawyer stated that PFAS levels in wastewater would be lower than those in drinking water.  
727 Although, others might debate that wastewater could become drinking water after it was  
728 processed. He stated that they had previously discussed the issue of microplastics, particularly in  
729 plastic water bottles.

730

731 Mr. Mawyer stated that technology and artificial intelligence (AI) were also emerging concerns.  
732 He stated that on the one hand, AI offered numerous benefits, such as real-time process  
733 applications and enhanced SCADA capabilities, which could enable them to operate more plants  
734 and input points. He stated that however, AI also raised cybersecurity concerns, as malicious  
735 actors could exploit AI in an attempt to breach their systems.



736  
737 Mr. Mawyer stated that he would like to provide more insight into data centers and their  
738 significant water and power consumption. He stated that data centers were among the top 10  
739 water-consuming commercial activities in the United States, with some facilities consuming  
740 millions of gallons of water per day. He stated that an average-sized data center used  
741 approximately 300,000 gallons of water daily, while large data centers could consume up to 1 to  
742 5 million gallons per day.

743  
744 Mr. Mawyer stated that furthermore, data centers often consisted of multiple buildings, which  
745 could significantly increase their water consumption. He stated that given Virginia's high  
746 concentration of data centers, particularly in Loudoun County, Prince William County, Stafford,  
747 Spotsylvania, Caroline, and other areas, there were concerning implications. He stated that the  
748 presence of multiple data centers in the state, with over 300 facilities, raised questions about their  
749 environmental impact.

750  
751 Mr. Mawyer stated that additionally, Dominion Power had reported that it would take four to  
752 seven years to generate enough power to serve these data centers, which was not a sufficient  
753 timeframe to address the issue. He stated that he came across a report suggesting that Amazon  
754 was considering bringing its own power for data centers with a small nuclear reactor.

755  
756 Mr. Mawyer stated that although Amazon had not specified how they planned to find the  
757 necessary water, they could create a strain on water systems across the state and country,  
758 including if a data center was developed here.

759  
760 Mr. Mawyer stated that sustainability was a top priority, and they were constantly working  
761 towards it. He stated that they had been coordinating with Ms. Hildebrand and the City on  
762 renewable natural gas and exploring ways to utilize wastewater biogas in the City's gas system.  
763 He stated that high-efficiency vehicles were also on their radar.

764  
765 Mr. Mawyer stated that reusing treated wastewater to produce potable water was a topic that  
766 would likely gain more attention in the future as water resources became increasingly scarce. He  
767 stated that Dominion Power had also been exploring the use of solar panels at the landfill. He  
768 stated that he would like to thank the Board for considering their Sustainability and Grants  
769 Coordinator position, which had been an asset in helping them address these issues.

770  
771 Mr. Mawyer stated that affordability would continue to be a concern as prices rose for refuse,  
772 water, and wastewater services. He stated that when examining their locality's map, they saw  
773 scattered wastewater sites and water treatment plants scattered around. He stated that he believed  
774 they should look for opportunities to consolidate services in the long term.

775  
776 Mr. Mawyer stated that they had previously proposed and the Board had approved  
777 decommissioning North Rivanna WTP and combining its services with South Rivanna and  
778 Observatory. He stated that they also planned to convert the Glenmore Wastewater Treatment  
779 Plant into a pump station and combine the small package plant at Stone Robinson Elementary  
780 School, bringing the wastewater back to Moores Creek for a better treatment process and  
781 improving those communities with consolidation. He stated that these consolidations would

782 improve their wastewater and water supply system's affordability.

783  
784 Mr. Mawyer stated that Scottsville was far away from all other facilities, so they did not have  
785 any current solutions for them, but within the water supply planning unit, Buckingham was  
786 nearby, and Scottsville had excess capacity, potentially offering opportunities for a cross-  
787 community project to supply Buckingham. He stated that Red Hill, as a groundwater system,  
788 would be a candidate for future improvements as well.

789  
790 Mr. Mawyer stated that the Board had decided to retain the Buck Mountain property. He stated  
791 that he believed that this was wise, as it would be a prime location for a future reservoir. He  
792 stated that they had discussed and approved the lease at Observatory WTP, securing a 50-year  
793 agreement. He stated that additionally, they had a 50-year lease option if it was renewed, which  
794 was in the distant future.

795  
796 Mr. Mawyer stated that they had recently expanded the Observatory and improved South  
797 Rivanna WTPs, but by 2045, they may need to expand South Rivanna from 12 to 16 million  
798 gallons per day and Observatory may require an expansion to 20 million gallons per day by  
799 2070.

800  
801 Mr. Mawyer stated that this was their long-term plan for 2050 and beyond. He stated that to  
802 summarize, population growth and the positive aspects of their community would continue to  
803 drive water and wastewater demand. He stated that regulations would necessitate more treatment.  
804 He stated that there may be opportunities for local and regional collaboration to optimize  
805 resources and minimize costs. He stated that a long-term strategic plan was essential to guide  
806 their decisions. He stated that he would like to thank the Board for their efforts and appreciated  
807 their dedication.

808  
809 Ms. Mallek stated that she had a couple of minor points to bring to their attention. She stated that  
810 in slide 12, she understood that there was a significant effort to minimize the impact of parts per  
811 trillion of PFAS in drinking water, but she believed the health consequences were something that  
812 people needed to consider, as individual families were currently bearing the health consequences  
813 of contaminants in the water across the country. She stated that she was fairly dismayed that they  
814 were not being addressed adequately.

815  
816 Ms. Mallek stated that although the amount of PFAS may be small, such extremely toxic  
817 substances could not be ignored. She stated that moving on to the data center issue, she was  
818 pleased to see that some facilities had closed-loop water systems. She stated that she hoped that  
819 as localities developed ordinances, they would require this feature, as it would be a cost-effective  
820 way to ensure safe drinking water for regular people was not made totally unaffordable.

821  
822 Ms. Mallek stated that in the future, she would like to learn more about the idea of consolidating  
823 treatment plants, as the cost of building a pipeline from Glenmore to the Moores Creek location  
824 seemed excessive, potentially saving only a fraction of the original cost. She stated that  
825 consolidating treatment plants seemed like a viable option.

826  
827 Ms. Mallek stated that additionally, she was concerned about the history of sewage sludge

828 production in the Buck Mountain area, which had a lasting impact on the environment. She  
829 stated that according to the map provided, the northwest part of the County had been used for  
830 biosolids applications, which were concentrated in steep, mountainous areas that drained directly  
831 into Buck Mountain Creek.

832  
833 Mr. Mawyer stated that they would certainly consider those points.

834  
835 Mr. Gaffney asked if the County could control the biosolids applications.

836  
837 Ms. Mallek stated that they did not have the authority to do so. Those were controlled by  
838 VDEQ.

839  
840 **10. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA**

841  
842 There were no items to discuss.

843  
844 **11. CLOSED MEETING**

845  
846 There was none.

847  
848 **12. ADJOURNMENT**

849  
850 **At 4:00 p.m., Mr. Sanders moved to adjourn the meeting of the Rivanna Water and Sewer**  
851 **Authority. Mr. Pinkston seconded the motion, which carried unanimously (7-0).**

852



## MEMORANDUM

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

**FROM: BILL MAWYER, EXECUTIVE DIRECTOR**

**SUBJECT: EXECUTIVE DIRECTOR'S REPORT**

**DATE: DECEMBER 17, 2024**

*STRATEGIC PLAN PRIORITY: EMPLOYEE DEVELOPMENT*

### **Professional Coursework**

The professional qualifications of our staff continue to improve and enhance our services. We congratulate the following Maintenance Department employees for successfully completing classes at Valley Career & Technical Center (ValleyVoTech):

- David Heintges - Pumps and Valves, Basic Plumbing
- Richard McElfresh - Pumps and Valves, Basic Welding
- Perry Herring - Basic Electrical Wiring
- Tyrone Hughes - Basic Plumbing
- Garrett Carver - Basic Plumbing
- Matt Walker - Technical Math

### **Diversity Awareness Workshop**



Our Strategic Plan Workforce Development team partnered with an external consultant to provide a diversity awareness workshop for our management staff on December 12<sup>th</sup>. Training included diversity, gender equity, mentoring, respect, dignity and trust in the workplace.

*STRATEGIC PLAN PRIORITY: COMMUNICATION AND COLLABORATION*

### **Virginia Biosolids Council**



Attended the annual meeting of the Virginia Biosolids Council (VBC) on December 11<sup>th</sup> in Richmond. This meeting provided a good opportunity to hear from VBC about regulatory updates, PFAS and trace chemicals, and future management of biosolids.

## Imagine a Day Without Water

Congratulations to the Winners of the 10th annual *Imagine a Day without Water Art Contest* sponsored by the City of Charlottesville, Albemarle County Service Authority, and Rivanna Water & Sewer Authority.



## Moore's Creek Tour



**Brian Haney, RWSA Wastewater Manager, with  
Monticello High School students**

On December 2<sup>nd</sup>, Brian Haney, RWSA Wastewater Manager, hosted a tour of Moore's Creek for students from Monticello High School studying Environmental Science. Brian discussed the general operations of our wastewater treatment plant with emphasis on optimizations that are made in the process to help minimize our footprint, such as better operation of our blowers to minimize energy consumption. Brian also shared examples with the group of how small changes are a key component to operating our facility and supporting our environment, and the same can be applied to our daily lives. One easy practice to limit our carbon footprint is to not leave our electronic devices on charge more than is needed.

## **UVA School of Public Health Presentation**

Betsy Nemeth, Director of Administration and Communications, presented utility topics to students at the School of Public Health at the University of Virginia on December 4th. Some students in the class will partner with the RWSA to develop tools for public health education as it applies to water and wastewater.

### *STRATEGIC PLAN PRIORITY: PLANNING AND INFRASTRUCTURE*

## **Sugar Hollow Reservoir Water Level**

The water level is being lowered 5 feet to complete maintenance tasks on the rubber bladder and modifications to the pneumatic piping inside the dam.

## **Replacement of Upper Schenks Branch Wastewater Piping, Phase II**

County, City and RWSA staff met on December 10 to review options and updated information about replacement of the undersized wastewater piping located along McIntire Road near the County Office Building property. Options include closing McIntire Road and diverting traffic to Harris Street for approximately 18 months or placing the piping in a proposed easement on County property. One section of the new pipe is part of RWSA's interceptor collection system and the second section of piping near Preston Avenue is part of the City's collection system. This project has been in our sewer replacement program for about 15 years. Phase I, located in the Meadowcreek Greenway, was completed in 2016.

## **Capital Improvement Plan Subcommittee Meeting**

A "subcommittee" of City and ACSA staff, including Ms. Hildebrand and Mr. Lunsford, met with RWSA staff on December 5<sup>th</sup> to review the priorities and projects included in the preliminary FY 26 – 30 CIP. We discussed the scope of work and schedules for many of the 76 projects totaling \$523 M included in the 5-year CIP. The proposed CIP will be updated and introduced to the Board in February 2025.



**MEMORANDUM**

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

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

**REVIEWED: BILL MAWYER, EXECUTIVE DIRECTOR**

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

**DATE: DECEMBER 17, 2024**

**Financial Snapshot**

The Authority’s actual operating revenues for the first four months of this fiscal year are \$985,600 more than the prorated annual budget estimates, and operating expenses are over the prorated budget by \$1,057,500, resulting in an operating deficit of \$71,900. Urban Water and flows and operating rate revenue through October are 11.7% over budget estimates. Urban Wastewater flows and operations rate revenue are 10.25% over budget.

Total revenues are \$1,063,900 over budget estimates, but total expenses are \$1,034,400 over budget, resulting in a slight overall surplus of \$29,800 through October. Revenues and expenses are summarized in the table below:

	<b>Urban Water</b>	<b>Urban Wastewater</b>	<b>Total Other Rate Centers</b>	<b>Total Authority</b>
<b>Operations</b>				
Revenues	\$ 4,334,487	\$ 4,404,998	\$ 1,056,408	\$ 9,795,893
Expenses	(4,769,419)	(3,955,981)	(1,142,410)	(9,867,810)
Surplus (deficit)	<u>\$ (434,932)</u>	<u>\$ 449,017</u>	<u>\$ (86,002)</u>	<u>\$ (71,917)</u>
<b>Debt Service</b>				
Revenues	\$ 4,511,765	\$ 3,812,004	\$ 1,002,243	\$ 9,326,012
Expenses	(4,500,264)	(3,724,400)	(999,660)	(9,224,324)
Surplus (deficit)	<u>\$ 11,501</u>	<u>\$ 87,604</u>	<u>\$ 2,583</u>	<u>\$ 101,688</u>
<b>Total</b>				
Revenues	\$ 8,846,252	\$ 8,217,002	\$ 2,058,651	\$ 19,121,905
Expenses	(9,269,683)	(7,680,381)	(2,142,070)	(19,092,134)
Surplus (deficit)	<u><u>\$ (423,431)</u></u>	<u><u>\$ 536,621</u></u>	<u><u>\$ (83,419)</u></u>	<u><u>\$ 29,771</u></u>

A more detailed financial analysis is in the following monthly report and reviews more closely actual financial performance compared to budgeted estimates. There are comments listed that will reference the applicable line items in the financial statement for each rate center and each support



department in the following pages. Please refer to the Budget vs Actual financial statements when reviewing these comments.

### **Detailed Financials**

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

- A. Annual and Quarterly Transactions - Some revenues and expenses exceed the prorated annual budget due to up-front annual receipts of revenue and quarterly or annual payments of expenses. These transactions appear to significantly impact the budget vs. actual monthly comparisons, but they usually even out as the year progresses. Septage receiving support revenue of \$109,440 is billed to the County annually in July. Annual payments are made at the beginning of the fiscal year for certain maintenance agreements and for employer contributions to employees' health savings accounts. The annual payment to UVA for the Observatory lease is made in August. Insurance premiums are paid at the beginning of each quarter.
- B. Personnel Costs (Urban Water, Crozet Water, Urban Wastewater, Finance/IT – pages 2, 3, 5, 9) – The prorated budget amounts through September are calculated as 4/12 (or 33.3%) of the annual budget on these financial statements. However, actual payroll is paid biweekly, and there have been 9 out of 26 total pay periods through September (or 34.6%). This affects the comparison of budget vs. actual payroll costs. Urban Water and Urban Wastewater salaries are also higher than budgeted due to various changes in operations.
- C. Professional Services (Urban Water, Scottsville Wastewater, Administration & Communication, Finance & IT – pages 2, 7, 8, 9) – Urban Water has incurred \$12,600 in unbudgeted legal fees and is \$116,000 over the prorated budget for engineering and technical services for Glenmore and UVA water quality and the Sugar Hollow pipe joint rehabilitation. Scottsville Wastewater has exceeded the annual budget for engineering and technical services by \$19,400 for a needs assessment, and the Administration Department is currently over budget for web page design services. Bond issuance costs totaling \$749,000 have been incurred by the Finance department to issue Bond 2024B to fund various water and wastewater capital projects and up to \$743,300 in bond issuance costs. A total of \$656,600 of issuance costs have been reimbursed so far.
- D. Other Services & Charges (Urban Water, Urban Wastewater, Administration – pages 2, 5, 7) – Urban Water paid \$20,000 to Rivanna Conservation Alliance for water quality monitoring services for the year. Urban Wastewater is currently over the monthly budget for Crozet Pump Station odor control costs. The Administration department is over budget for executive recruiting expenses.
- E. Operations & Maintenance (Urban Water, Crozet Water, Glenmore Wastewater – pages 2, 3, 6) – Crozet Water is \$26,900 over the prorated budget in this category due to a GAC exchange. Urban Water is currently \$600,200 over the prorated budget due to GAC exchanges at South Rivanna WTP and North Rivanna WTP, pipeline and appurtenances costs, and \$175,000 annual rent was paid to UVA in August as mentioned in section A. Glenmore Wastewater is \$45,700 over budget for equipment repair and replacement costs.
- F. Communication- data & voice (Administration – page 8) – Telephone and data services were inadvertently underbudgeted.



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

**Consolidated**  
**Revenues and Expenses Summary**

<i>Budget</i>	<i>Budget</i>	<i>Actual</i>	<i>Budget</i>	<i>Variance</i>
<i>FY 2025</i>	<i>Year-to-Date</i>	<i>Year-to-Date</i>	<i>vs. Actual</i>	<i>Percentage</i>

**Operating Budget vs. Actual**

Notes

**Revenues**

Operations Rate Revenue	\$ 25,533,965	\$ 8,511,322	\$ 9,333,375	\$ 822,053	9.66%
Lease Revenue	120,000	40,000	47,860	7,860	19.65%
Admin., Finance/IT, Maint. & Engineering Revenue	905,200	301,733	320,448	18,715	6.20%
Other Revenues	667,768	222,589	319,742	97,153	43.65%
Use of Reserves (Water Resources Fund)	-	-	-	-	
Interest Allocation	165,400	55,133	94,915	39,782	72.16%
<b>Total Operating Revenues</b>	<b>\$ 27,392,333</b>	<b>\$ 9,130,778</b>	<b>\$ 10,116,341</b>	<b>\$ 985,563</b>	<b>10.79%</b>

**Expenses**

Personnel Cost	<b>A, B</b> \$ 12,816,065	\$ 4,272,022	\$ 4,477,615	\$ (205,593)	-4.81%
Professional Services	<b>C</b> 492,650	164,217	417,204	(252,987)	-154.06%
Other Services & Charges	<b>A, D</b> 4,371,588	1,457,196	1,506,824	(49,628)	-3.41%
Communication	<b>F</b> 244,950	81,650	109,334	(27,684)	-33.91%
Information Technology	1,470,050	490,017	480,250	9,767	1.99%
Supplies	51,200	17,067	17,758	(691)	-4.05%
Operations & Maintenance	<b>A, E</b> 6,698,884	2,232,961	2,772,550	(539,589)	-24.16%
Equipment Purchases	316,950	105,650	96,724	8,926	8.45%
Depreciation	930,000	310,000	310,000	-	0.00%
<b>Total Operating Expenses</b>	<b>\$ 27,392,337</b>	<b>\$ 9,130,779</b>	<b>\$ 10,188,259</b>	<b>\$ (1,057,480)</b>	<b>-11.58%</b>
<b>Operating Surplus/(Deficit)</b>	<b>\$ (4)</b>	<b>\$ (1)</b>	<b>\$ (71,918)</b>		

**Debt Service Budget vs. Actual**

**Revenues**

Debt Service Rate Revenue	\$ 25,612,554	\$ 8,537,518	\$ 8,537,520	\$ 2	0.00%
Septage Receiving Support - County	109,440	36,480	109,440	72,960	200.00%
Buck Mountain Lease Revenue	10,000	3,333	1,784	(1,550)	-46.49%
Trust Fund Interest	430,300	143,433	173,434	30,001	20.92%
Reserve Fund Interest	1,580,800	526,933	503,835	(23,099)	-4.38%
<b>Total Debt Service Revenues</b>	<b>\$ 27,743,094</b>	<b>\$ 9,247,698</b>	<b>\$ 9,326,012</b>	<b>\$ 78,314</b>	<b>0.85%</b>

**Debt Service Costs**

Total Principal & Interest	\$ 16,164,506	\$ 5,388,169	\$ 6,382,755	\$ (994,586)	-18.46%
Reserve Additions-Interest	1,580,800	526,933	503,835	23,099	4.38%
Debt Service Ratio Charge	725,000	241,667	241,667	-	0.00%
Reserve Additions-CIP Growth	9,271,960	3,090,653	2,096,067	994,586	32.18%
<b>Total Debt Service Costs</b>	<b>\$ 27,742,266</b>	<b>\$ 9,247,422</b>	<b>\$ 9,224,323</b>	<b>\$ 23,099</b>	<b>0.25%</b>
<b>Debt Service Surplus/(Deficit)</b>	<b>\$ 828</b>	<b>\$ 276</b>	<b>\$ 101,689</b>		

<b>Summary</b>					
<b>Total Revenues</b>	\$ 55,135,427	\$ 18,378,476	\$ 19,442,353	\$ 1,063,878	5.79%
<b>Total Expenses</b>	55,134,603	18,378,201	19,412,582	(1,034,381)	-5.63%
<b>Surplus/(Deficit)</b>	<b>\$ 824</b>	<b>\$ 275</b>	<b>\$ 29,771</b>		

Rivanna Water & Sewer Authority  
 Monthly Financial Statements - October 2024

**Urban Water Rate Center**  
 Revenues and Expenses Summary

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

	Notes					
<b>Revenues</b>						
Operations Rate Revenue		\$ 11,425,341	\$ 3,808,447	\$ 4,254,091	\$ 445,644	11.70%
Lease Revenue		90,000	30,000	36,658	6,658	22.19%
Miscellaneous		-	-	2,735	2,735	
Use of Reserves (Water Resources Fund)		-	-	-	-	
Interest Allocation		71,500	23,833	41,003	17,170	72.04%
<b>Total Operating Revenues</b>		<b>\$ 11,586,841</b>	<b>\$ 3,862,280</b>	<b>\$ 4,334,487</b>	<b>\$ 472,207</b>	<b>12.23%</b>
<b>Expenses</b>						
Personnel Cost	B	\$ 2,570,828	\$ 856,943	\$ 972,304	\$ (115,362)	-13.46%
Professional Services	C	177,000	59,000	193,379	(134,379)	-227.76%
Other Services & Charges	A, D	1,076,746	358,915	379,525	(20,610)	-5.74%
Communications		89,700	29,900	38,621	(8,721)	-29.17%
Information Technology		109,400	36,467	22,190	14,277	39.15%
Supplies		7,900	2,633	3,312	(678)	-25.76%
Operations & Maintenance	A, E	3,334,814	1,111,605	1,711,838	(600,234)	-54.00%
Equipment Purchases		23,300	7,767	9,975	(2,208)	-28.43%
Depreciation		300,000	100,000	100,000	-	0.00%
<b>Subtotal Before Allocations</b>		<b>\$ 7,689,688</b>	<b>\$ 2,563,229</b>	<b>\$ 3,431,145</b>	<b>\$ (867,915)</b>	<b>-33.86%</b>
Allocation of Support Departments		3,897,153	1,306,715	1,338,275	(31,560)	-2.42%
<b>Total Operating Expenses</b>		<b>\$ 11,586,841</b>	<b>\$ 3,869,944</b>	<b>\$ 4,769,419</b>	<b>\$ (899,476)</b>	<b>-23.24%</b>
<b>Operating Surplus/(Deficit)</b>		<b>\$ 0</b>	<b>\$ (7,663)</b>	<b>\$ (434,932)</b>		

**Debt Service Budget vs. Actual**

<b>Revenues</b>						
Debt Service Rate Revenue		\$ 12,593,874	\$ 4,197,958	\$ 4,197,960	\$ 2	0.00%
Trust Fund Interest		185,000	61,667	74,715	13,049	21.16%
Reserve Fund Interest		744,800	248,267	237,306	(10,960)	-4.41%
Lease Revenue		10,000	3,333	1,784	(1,550)	-46.49%
<b>Total Debt Service Revenues</b>		<b>\$ 13,533,674</b>	<b>\$ 4,511,225</b>	<b>\$ 4,511,765</b>	<b>\$ 540</b>	<b>0.01%</b>
<b>Debt Service Costs</b>						
Total Principal & Interest		\$ 7,078,274	\$ 2,359,425	\$ 2,731,400	\$ (371,975)	-15.77%
Reserve Additions-Interest		744,800	248,267	237,306	10,960	4.41%
Debt Service Ratio Charge		400,000	133,333	133,333	-	0.00%
Est. New Debt Service - CIP Growth		5,310,600	1,770,200	1,398,225	371,975	21.01%
<b>Total Debt Service Costs</b>		<b>\$ 13,533,674</b>	<b>\$ 4,511,225</b>	<b>\$ 4,500,264</b>	<b>\$ 10,960</b>	<b>0.24%</b>
<b>Debt Service Surplus/(Deficit)</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11,501</b>		

Rate Center Summary						
<b>Total Revenues</b>		\$ 25,120,515	\$ 8,373,505	\$ 8,846,252	\$ 472,747	5.65%
<b>Total Expenses</b>		25,120,515	8,381,168	9,269,684	(888,515)	-10.60%
<b>Surplus/(Deficit)</b>		<b>\$ 0</b>	<b>\$ (7,663)</b>	<b>\$ (423,431)</b>		
<b>Costs per 1000 Gallons</b>		\$ 3.41		\$ 3.77		
<b>Operating and DS</b>		\$ 7.39		\$ 7.33		
<b>Thousand Gallons Treated</b>		3,397,700	1,132,567	1,264,970	132,403	11.69%
<b>or</b>						
<b>Flow (MGD)</b>		9.309		10.284		

Rivanna Water & Sewer Authority  
 Monthly Financial Statements - October 2024

**Crozet Water Rate Center**  
 Revenues and Expenses Summary

<i>Budget FY 2025</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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**Operating Budget vs. Actual**

Notes

**Revenues**

Operations Rate Revenue	\$ 1,420,644	\$ 473,548	\$ 473,548	\$ -	0.00%
Lease Revenues	30,000	10,000	11,202	1,202	12.02%
Interest Allocation	8,900	2,967	5,125	2,159	72.77%
<b>Total Operating Revenues</b>	<b>\$ 1,459,544</b>	<b>\$ 486,515</b>	<b>\$ 489,876</b>	<b>\$ 3,361</b>	<b>0.69%</b>

**Expenses**

Personnel Cost	<b>B</b> \$ 365,428	\$ 121,809	\$ 135,088	\$ (13,278)	-10.90%
Professional Services	22,900	7,633	15,270	(7,636)	-100.04%
Other Services & Charges	163,107	54,369	54,578	(209)	-0.39%
Communications	19,000	6,333	6,556	(222)	-3.51%
Information Technology	35,000	11,667	1,805	9,861	84.52%
Supplies	1,600	533	1,034	(501)	-93.95%
Operations & Maintenance	<b>E</b> 426,600	142,200	168,062	(25,862)	-18.19%
Equipment Purchases	3,300	1,100	1,426	(326)	-29.59%
Depreciation	60,000	20,000	20,000	-	0.00%
<b>Subtotal Before Allocations</b>	<b>\$ 1,096,935</b>	<b>\$ 365,645</b>	<b>\$ 403,818</b>	<b>\$ (38,173)</b>	<b>-10.44%</b>
Allocation of Support Departments	362,608	121,566	124,555	(2,989)	-2.46%
<b>Total Operating Expenses</b>	<b>\$ 1,459,543</b>	<b>\$ 487,211</b>	<b>\$ 528,373</b>	<b>\$ (41,163)</b>	<b>-8.45%</b>
<b>Operating Surplus/(Deficit)</b>	<b>\$ 1</b>	<b>\$ (696)</b>	<b>\$ (38,498)</b>		

**Debt Service Budget vs. Actual**

**Revenues**

Debt Service Rate Revenue	\$ 2,590,368	\$ 863,456	\$ 863,456	\$ -	0.00%
Trust Fund Interest	32,400	10,800	13,060	2,260	20.92%
Reserve Fund Interest	93,800	31,267	29,726	(1,540)	-4.93%
<b>Total Debt Service Revenues</b>	<b>\$ 2,716,568</b>	<b>\$ 905,523</b>	<b>\$ 906,242</b>	<b>\$ 719</b>	<b>0.08%</b>

**Debt Service Costs**

Total Principal & Interest	\$ 1,131,172	\$ 377,057	\$ 377,057	\$ -	0.00%
Reserve Additions-Interest	93,800	31,267	29,726	1,540	4.93%
Estimated New Principal & Interest	1,491,600	497,200	497,200	-	0.00%
<b>Total Debt Service Costs</b>	<b>\$ 2,716,572</b>	<b>\$ 905,524</b>	<b>\$ 903,984</b>	<b>\$ 1,540</b>	<b>0.17%</b>
<b>Debt Service Surplus/(Deficit)</b>	<b>\$ (4)</b>	<b>\$ (1)</b>	<b>\$ 2,258</b>		

<b>Rate Center Summary</b>					
<b>Total Revenues</b>	\$ 4,176,112	\$ 1,392,037	\$ 1,396,118	\$ 4,080	0.29%
<b>Total Expenses</b>	4,176,115	1,392,735	1,432,357	(39,622)	-2.84%
<b>Surplus/(Deficit)</b>	<b>\$ (3)</b>	<b>\$ (697)</b>	<b>\$ (36,239)</b>		
<b>Costs per 1000 Gallons</b>	\$ 7.20		\$ 6.02		
<b>Operating and DS</b>	\$ 20.60		\$ 16.33		
<b>Thousand Gallons Treated</b>	202,697	67,566	87,715	20,149	29.82%
<b>Flow (MGD)</b>	0.555		0.713		

Rivanna Water & Sewer Authority  
 Monthly Financial Statements - October 2024

**Scottsville Water Rate Center**  
 Revenues and Expenses Summary

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

Notes

**Revenues**

Operations Rate Revenue	\$ 741,984	\$ 247,328	\$ 247,328	\$ -	0.00%
Interest Allocation	4,600	1,533	2,658	1,124	73.32%
<b>Total Operating Revenues</b>	<b>\$ 746,584</b>	<b>\$ 248,861</b>	<b>\$ 249,986</b>	<b>\$ 1,124</b>	<b>0.45%</b>

**Expenses**

Personnel Cost	\$ 239,452	\$ 79,817	\$ 84,071	\$ (4,254)	-5.33%
Professional Services	5,000	1,667	1,171	495	29.72%
Other Services & Charges	68,490	22,830	14,398	8,432	36.93%
Communications	7,000	2,333	8,490	(6,156)	-263.84%
Information Technology	13,400	4,467	11,933	(7,466)	-167.15%
Supplies	200	67	955	(888)	-1332.44%
Operations & Maintenance	154,600	51,533	23,945	27,589	53.54%
Equipment Purchases	2,200	733	1,162	(429)	-58.50%
Depreciation	40,000	13,333	13,333	0	0.00%
<b>Subtotal Before Allocations</b>	<b>\$ 530,342</b>	<b>\$ 176,781</b>	<b>\$ 159,458</b>	<b>\$ 17,323</b>	<b>9.80%</b>
Allocation of Support Departments	216,247	72,431	73,893	(1,463)	-2.02%
<b>Total Operating Expenses</b>	<b>\$ 746,589</b>	<b>\$ 249,211</b>	<b>\$ 233,351</b>	<b>\$ 15,860</b>	<b>6.36%</b>
<b>Operating Surplus/(Deficit)</b>	<b>\$ (5)</b>	<b>\$ (350)</b>	<b>\$ 16,634</b>		

**Debt Service Budget vs. Actual**

**Revenues**

Debt Service Rate Revenue	\$ 190,416	\$ 63,472	\$ 63,472	\$ -	0.00%
Trust Fund Interest	4,000	1,333	1,596	262	19.67%
Reserve Fund Interest	7,000	2,333	2,519	186	7.97%
<b>Total Debt Service Revenues</b>	<b>\$ 201,416</b>	<b>\$ 67,139</b>	<b>\$ 67,587</b>	<b>\$ 448</b>	<b>0.67%</b>

**Debt Service Costs**

Total Principal & Interest	\$ 148,815	\$ 49,605	\$ 49,605	\$ -	0.00%
Reserve Additions-Interest	7,000	2,333	2,519	(186)	-7.97%
Estimated New Principal & Interest	45,600	15,200	15,200	-	0.00%
<b>Total Debt Service Costs</b>	<b>\$ 201,415</b>	<b>\$ 67,138</b>	<b>\$ 67,324</b>	<b>\$ (186)</b>	<b>-0.28%</b>
<b>Debt Service Surplus/(Deficit)</b>	<b>\$ 1</b>	<b>\$ 0</b>	<b>\$ 263</b>		

**Rate Center Summary**

<b>Total Revenues</b>	\$ 948,000	\$ 316,000	\$ 317,572	\$ 1,572	0.50%
<b>Total Expenses</b>	948,004	316,350	300,675	15,674	4.95%
<b>Surplus/(Deficit)</b>	<b>\$ (4)</b>	<b>\$ (350)</b>	<b>\$ 16,897</b>		
<b>Costs per 1000 Gallons</b>	\$ 43.33		\$ 32.19		
<b>Operating and DS</b>	\$ 55.02		\$ 41.47		
<b>Thousand Gallons Treated</b>	17,230	5,743	7,250	1,507	26.23%
<b>or</b>					
<b>Flow (MGD)</b>	0.047		0.059		

Rivanna Water & Sewer Authority  
 Monthly Financial Statements - October 2024

**Urban Wastewater Rate Center**  
**Revenues and Expenses Summary**

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

Notes

**Revenues**

Operations Rate Revenue	\$ 11,007,464	\$ 3,669,155	\$ 4,045,564	\$ 376,409	10.26%
Stone Robinson WWTP	17,768	5,923	4,047	(1,875)	-31.66%
Septage Acceptance	600,000	200,000	204,155	4,155	2.08%
Nutrient Credits	50,000	16,667	108,805	92,138	552.83%
Miscellaneous Revenue	-	-	-	-	
Interest Allocation	74,000	24,667	42,427	17,761	72.00%
<b>Total Operating Revenues</b>	<b>\$ 11,749,232</b>	<b>\$ 3,916,411</b>	<b>\$ 4,404,998</b>	<b>\$ 488,588</b>	<b>12.48%</b>

**Expenses**

Personnel Cost	A, B	\$ 1,615,345	\$ 538,448	\$ 582,071	\$ (43,623)	-8.10%
Professional Services		35,000	11,667	8,420	3,246	27.83%
Other Services & Charges	A, D	2,721,750	907,250	933,232	(25,982)	-2.86%
Communications		14,800	4,933	5,951	(1,017)	-20.62%
Information Technology		95,500	31,833	40,292	(8,459)	-26.57%
Supplies		2,600	867	472	394	45.50%
Operations & Maintenance		2,190,500	730,167	648,121	82,046	11.24%
Equipment Purchases		73,500	24,500	24,500	-	0.00%
Depreciation		470,000	156,667	156,667	(0)	0.00%
<b>Subtotal Before Allocations</b>		<b>\$ 7,218,995</b>	<b>\$ 2,406,332</b>	<b>\$ 2,399,726</b>	<b>\$ 6,606</b>	<b>0.27%</b>
Allocation of Support Departments		4,530,238	1,518,439	1,556,255	(37,816)	-2.49%
<b>Total Operating Expenses</b>		<b>\$ 11,749,233</b>	<b>\$ 3,924,771</b>	<b>\$ 3,955,981</b>	<b>\$ (31,210)</b>	<b>-0.80%</b>
<b>Operating Surplus/(Deficit)</b>		<b>\$ (1)</b>	<b>\$ (8,360)</b>	<b>\$ 449,017</b>		

**Debt Service Budget vs. Actual**

**Revenues**

Debt Service Rate Revenue	\$ 10,156,560	\$ 3,385,520	\$ 3,385,520	\$ -	0.00%
Septage Receiving Support - County	109,440	36,480	109,440	72,960	200.00%
Trust Fund Interest	208,200	69,400	83,769	14,369	20.70%
Reserve Fund Interest	731,800	243,933	233,276	(10,658)	-4.37%
<b>Total Debt Service Revenues</b>	<b>\$ 11,206,000</b>	<b>\$ 3,735,333</b>	<b>\$ 3,812,004</b>	<b>\$ 76,671</b>	<b>2.05%</b>

**Debt Service Costs**

Total Principal & Interest	\$ 7,780,072	\$ 2,593,357	\$ 3,215,968	\$ (622,611)	-24.01%
Reserve Additions-Interest	731,800	243,933	233,276	10,658	4.37%
Debt Service Ratio Charge	325,000	108,333	108,333	-	0.00%
Est. New Debt Service - CIP Growth	2,368,300	789,433	166,822	622,611	78.87%
<b>Total Debt Service Costs</b>	<b>\$ 11,205,172</b>	<b>\$ 3,735,057</b>	<b>\$ 3,724,400</b>	<b>\$ 10,658</b>	<b>0.29%</b>
<b>Debt Service Surplus/(Deficit)</b>	<b>\$ 828</b>	<b>\$ 276</b>	<b>\$ 87,605</b>		

**Rate Center Summary**

<b>Total Revenues</b>	\$ 22,955,232	\$ 7,651,744	\$ 8,217,002	\$ 565,258	7.39%
<b>Total Expenses</b>	22,954,405	7,659,828	7,680,381	(20,552)	-0.27%
<b>Surplus/(Deficit)</b>	<b>\$ 827</b>	<b>\$ (8,084)</b>	<b>\$ 536,622</b>		
<b>Costs per 1000 Gallons</b>	\$ 3.47		\$ 3.18		
<b>Operating and DS</b>	\$ 6.77		\$ 6.16		
<b>Thousand Gallons Treated</b>	3,390,400	1,130,133	1,245,939	115,806	10.25%
<b>or</b>					
<b>Flow (MGD)</b>	9.289		10.130		

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

<i>Budget FY 2025</i>	<i>Budget Year-to-Date</i>	<i>Actual Year-to-Date</i>	<i>Budget vs. Actual</i>	<i>Variance Percentage</i>
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**Operating Budget vs. Actual**

Notes

**Revenues**

Operations Rate Revenue	\$ 533,112	\$ 177,704	\$ 177,704	\$ -	0.00%
Interest Allocation	3,700	1,233	2,088	855	69.31%
<b>Total Operating Revenues</b>	<b>\$ 536,812</b>	<b>\$ 178,937</b>	<b>\$ 179,792</b>	<b>\$ 855</b>	<b>0.48%</b>

**Expenses**

Personnel Cost	\$ 133,566	\$ 44,522	\$ 47,677	\$ (3,155)	-7.09%
Professional Services	10,000	3,333	361	2,973	89.18%
Other Services & Charges	41,840	13,947	14,614	(667)	-4.78%
Communications	3,700	1,233	7,531	(6,298)	-510.63%
Information Technology	14,350	4,783	429	4,355	91.04%
Supplies	-	-	-	-	
Operations & Maintenance	E 130,600	43,533	89,282	(45,748)	-105.09%
Equipment Purchases	3,500	1,167	1,167	(0)	0.00%
Depreciation	40,000	13,333	13,333	0	0.00%
<b>Subtotal Before Allocations</b>	<b>\$ 377,556</b>	<b>\$ 125,852</b>	<b>\$ 174,393</b>	<b>\$ (48,541)</b>	<b>-38.57%</b>
Allocation of Support Departments	159,262	53,261	53,594	(333)	-0.62%
<b>Total Operating Expenses</b>	<b>\$ 536,818</b>	<b>\$ 179,113</b>	<b>\$ 227,987</b>	<b>\$ (48,873)</b>	<b>-27.29%</b>
<b>Operating Surplus/(Deficit)</b>	<b>\$ (6)</b>	<b>\$ (176)</b>	<b>\$ (48,194)</b>		

**Debt Service Budget vs. Actual**

**Revenues**

Debt Service Rate Revenue	\$ 48,780	\$ 16,260	\$ 16,260	\$ -	0.00%
Trust Fund Interest	500	167	208	41	24.88%
Reserve Fund Interest	-	-	-	-	
<b>Total Debt Service Revenues</b>	<b>\$ 49,280</b>	<b>\$ 16,427</b>	<b>\$ 16,468</b>	<b>\$ 41</b>	<b>0.25%</b>

**Debt Service Costs**

Total Principal & Interest	\$ 18,720	\$ 6,240	\$ 6,240	\$ -	0.00%
Estimated New Principal & Interest	30,560	10,187	10,187	-	0.00%
Reserve Additions-Interest	-	-	-	-	
<b>Total Debt Service Costs</b>	<b>\$ 49,280</b>	<b>\$ 16,427</b>	<b>\$ 16,427</b>	<b>\$ -</b>	<b>0.00%</b>
<b>Debt Service Surplus/(Deficit)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 41</b>		

<b>Rate Center Summary</b>					
<b>Total Revenues</b>	\$ 586,092	\$ 195,364	\$ 196,260	\$ 896	0.46%
<b>Total Expenses</b>	586,098	195,540	244,413	(48,873)	-24.99%
<b>Surplus/(Deficit)</b>	<b>\$ (6)</b>	<b>\$ (176)</b>	<b>\$ (48,153)</b>		
<b>Costs per 1000 Gallons</b>	\$ 12.97		\$ 16.09		
<b>Operating and DS</b>	\$ 14.16		\$ 17.25		
<b>Thousand Gallons Treated or Flow (MGD)</b>	41,401	13,800	14,166	366	<b>2.65%</b>
	0.113		0.115		

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

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

		Notes				
<b>Revenues</b>						
Operations Rate Revenue	\$ 405,420	\$ 135,140	\$ 135,140	\$ -		0.00%
Interest Allocation	2,700	900	1,614	714		79.28%
<b>Total Operating Revenues</b>	<b>\$ 408,120</b>	<b>\$ 136,040</b>	<b>\$ 136,754</b>	<b>\$ 714</b>		<b>0.52%</b>
<b>Expenses</b>						
Personnel Cost	\$ 133,636	\$ 44,545	\$ 47,677	\$ (3,132)		-7.03%
Professional Services	5,000	1,667	21,162	(19,495)		-1169.70%
Other Services & Charges	33,400	11,133	11,794	(660)		-5.93%
Communications	3,650	1,217	303	914		75.12%
Information Technology	15,150	5,050	429	4,621		91.51%
Supplies	-	-	-	-		
Operations & Maintenance	44,500	14,833	13,226	1,607		10.84%
Equipment Purchases	3,500	1,167	1,167	(0)		0.00%
Depreciation	20,000	6,667	6,667	(0)		0.00%
<b>Subtotal Before Allocations</b>	<b>\$ 258,836</b>	<b>\$ 86,279</b>	<b>\$ 102,423</b>	<b>\$ (16,145)</b>		<b>-18.71%</b>
Allocation of Support Departments	149,278	49,934	50,275	(342)		-0.68%
<b>Total Operating Expenses</b>	<b>\$ 408,114</b>	<b>\$ 136,212</b>	<b>\$ 152,698</b>	<b>\$ (16,486)</b>		<b>-12.10%</b>
<b>Operating Surplus/(Deficit)</b>	<b>\$ 6</b>	<b>\$ (172)</b>	<b>\$ (15,945)</b>			

**Debt Service Budget vs. Actual**

<b>Revenues</b>						
Debt Service Rate Revenue	\$ 32,556	\$ 10,852	\$ 10,852	\$ -		0.00%
Trust Fund Interest	200	67	87	20		30.07%
Reserve Fund Interest	3,400	1,133	1,008	(126)		-11.09%
<b>Total Debt Service Revenues</b>	<b>\$ 36,156</b>	<b>\$ 12,052</b>	<b>\$ 11,946</b>	<b>\$ (106)</b>		<b>-0.88%</b>
<b>Debt Service Costs</b>						
Total Principal & Interest	\$ 7,453	\$ 2,484	\$ 2,484	\$ -		0.00%
Reserve Additions-Interest	3,400	1,133	1,008	126		11.09%
Estimated New Principal & Interest	25,300	8,433	8,433	-		0.00%
<b>Total Debt Service Costs</b>	<b>\$ 36,153</b>	<b>\$ 12,051</b>	<b>\$ 11,925</b>	<b>\$ 126</b>		<b>1.04%</b>
<b>Debt Service Surplus/(Deficit)</b>	<b>\$ 3</b>	<b>\$ 1</b>	<b>\$ 21</b>			

Rate Center Summary						
<b>Total Revenues</b>	\$ 444,276	\$ 148,092	\$ 148,700	\$ 608		0.41%
<b>Total Expenses</b>	444,267	148,263	164,624	(16,361)		-11.03%
<b>Surplus/(Deficit)</b>	<b>\$ 9</b>	<b>\$ (171)</b>	<b>\$ (15,924)</b>			
<b>Costs per 1000 Gallons</b>	\$ 17.26		\$ 23.53			
<b>Operating and DS</b>	\$ 18.79		\$ 25.37			
<b>Thousand Gallons Treated</b>	23,643	7,881	6,490	(1,391)		<b>-17.65%</b>
or						
<b>Flow (MGD)</b>	0.065		0.053			

Rivanna Water & Sewer Authority  
 Monthly Financial Statements - October 2024

**Administration and Communication**

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

Notes

**Revenues**

Payment for Services SWA	\$	364,200	\$	121,400	\$	121,400	\$	-	0.00%
Miscellaneous Revenue		-		-		4,658		4,658	
<b>Total Operating Revenues</b>	<b>\$</b>	<b>364,200</b>	<b>\$</b>	<b>121,400</b>	<b>\$</b>	<b>126,058</b>	<b>\$</b>	<b>4,658</b>	<b>3.84%</b>

**Expenses**

Personnel Cost	\$	1,348,563	\$	449,521	\$	452,145	\$	(2,624)	-0.58%
Professional Services	<b>C</b>	153,250		51,083		63,623		(12,540)	-24.55%
Other Services & Charges	<b>D</b>	161,100		53,700		65,868		(12,168)	-22.66%
Communications	<b>F</b>	9,700		3,233		14,527		(11,294)	-349.29%
Information Technology		5,000		1,667		3,208		(1,542)	-92.49%
Supplies		14,000		4,667		5,344		(677)	-14.51%
Operations & Maintenance		57,250		19,083		17,830		1,254	6.57%
Equipment Purchases		9,000		3,000		3,000		-	0.00%
Depreciation		-		-		-		-	
<b>Total Operating Expenses</b>	<b>\$</b>	<b>1,757,863</b>	<b>\$</b>	<b>585,954</b>	<b>\$</b>	<b>625,545</b>	<b>\$</b>	<b>(39,590)</b>	<b>-6.76%</b>

**Department Summary**

<b>Net Costs Allocable to Rate Centers</b>		<b>\$</b>	<b>(1,393,663)</b>	<b>\$</b>	<b>(464,554)</b>	<b>\$</b>	<b>(499,487)</b>	<b>\$</b>	<b>34,932</b>	<b>-7.52%</b>
<b>Allocations to the Rate Centers</b>										
Urban Water	44.00%	\$	613,212	\$	204,404	\$	219,774	\$	(15,370)	
Crozet Water	4.00%	\$	55,747		18,582		19,979		(1,397)	
Scottsville Water	2.00%	\$	27,873		9,291		9,990		(699)	
Urban Wastewater	48.00%	\$	668,958		222,986		239,754		(16,768)	
Glenmore Wastewater	1.00%	\$	13,937		4,646		4,995		(349)	
Scottsville Wastewater	1.00%	\$	13,937		4,646		4,995		(349)	
	100.00%	\$	1,393,663	\$	464,554	\$	499,487	\$	(34,932)	



Rivanna Water & Sewer Authority  
 Monthly Financial Statements - October 2024

**Finance and Information Technology**

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

Notes

**Revenues**

Payment for Services SWA	\$	541,000	\$	180,333	\$	180,333	\$	0	0.00%
Miscellaneous Revenue		-		-		-		-	
<b>Total Operating Revenues</b>	<b>\$</b>	<b>541,000</b>	<b>\$</b>	<b>180,333</b>	<b>\$</b>	<b>180,333</b>	<b>\$</b>	<b>0</b>	<b>0.00%</b>

**Expenses**

Personnel Cost	<b>A, B</b>	\$	2,083,478	\$	694,493	\$	731,606	\$	(37,114)	-5.34%
Professional Services	<b>C</b>		42,000		14,000		112,543		(98,543)	-703.88%
Other Services & Charges			46,000		15,333		17,128		(1,794)	-11.70%
Communication			65,000		21,667		12,447		9,220	42.55%
Information Technology			962,850		320,950		327,412		(6,462)	-2.01%
Supplies			14,500		4,833		3,813		1,020	21.10%
Operations & Maintenance			5,000		19,083		145		18,938	99.24%
Equipment Purchases			7,500		2,500		2,500		-	0.00%
Depreciation			-		-		-		-	
<b>Total Operating Expenses</b>		<b>\$</b>	<b>3,226,328</b>	<b>\$</b>	<b>1,092,859</b>	<b>\$</b>	<b>1,207,594</b>	<b>\$</b>	<b>(114,734)</b>	<b>-10.50%</b>

**Department Summary**

<b>Net Costs Allocable to Rate Centers</b>		<b>\$</b>	<b>(2,685,328)</b>	<b>\$</b>	<b>(912,526)</b>	<b>\$</b>	<b>(1,027,260)</b>	<b>\$</b>	<b>114,734</b>	<b>-12.57%</b>
<b><u>Allocations to the Rate Centers</u></b>										
Urban Water	44.00%	\$	1,181,544	\$	401,511	\$	451,995	\$	(50,483)	
Crozet Water	4.00%	\$	107,413		36,501		41,090		(4,589)	
Scottsville Water	2.00%	\$	53,707		18,251		20,545		(2,295)	
Urban Wastewater	48.00%	\$	1,288,957		438,012		493,085		(55,072)	
Glenmore Wastewater	1.00%	\$	26,853		9,125		10,273		(1,147)	
Scottsville Wastewater	1.00%	\$	26,853		9,125		10,273		(1,147)	
	100.00%	<b>\$</b>	<b>2,685,328</b>	<b>\$</b>	<b>912,526</b>	<b>\$</b>	<b>1,027,260</b>	<b>\$</b>	<b>(114,734)</b>	

Rivanna Water & Sewer Authority  
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**Maintenance**

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

Notes

**Revenues**

Payment for Services SWA	\$	-	\$	-	\$	-
Miscellaneous Revenue		-		-	6,858	6,858
<b>Total Operating Revenues</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$ 6,858</b>	<b>\$ 6,858</b>

**Expenses**

Personnel Cost	\$	1,645,860	\$	548,620	\$	553,229	\$	(4,609)	-0.84%
Professional Services		10,000		3,333		-		3,333	100.00%
Other Services & Charges		29,140		9,713		11,962		(2,248)	-23.15%
Communications		16,200		5,400		8,380		(2,980)	-55.19%
Information Technology		7,500		2,500		466		2,034	81.34%
Supplies		3,500		1,167		-		1,167	100.00%
Operations & Maintenance		138,800		46,267		53,244		(6,977)	-15.08%
Equipment Purchases		145,750		48,583		43,333		5,250	10.81%
Depreciation		-		-		-		-	
<b>Total Operating Expenses</b>	<b>\$</b>	<b>1,996,750</b>	<b>\$</b>	<b>665,583</b>	<b>\$</b>	<b>670,614</b>	<b>\$</b>	<b>(5,031)</b>	<b>-0.76%</b>

**Department Summary**

<b>Net Costs Allocable to Rate Centers</b>		<b>\$ (1,996,750)</b>	<b>\$ (665,583)</b>	<b>\$ (663,756)</b>	<b>\$ 11,889</b>	<b>-1.79%</b>
<b>Allocations to the Rate Centers</b>						
Urban Water	30.00%	\$ 599,025	\$ 199,675	\$ 199,127	\$ 548	
Crozet Water	3.50%	69,886	23,295	23,231	64	
Scottsville Water	3.50%	69,886	23,295	23,231	64	
Urban Wastewater	56.50%	1,128,164	376,055	375,022	1,032	
Glenmore Wastewater	3.50%	69,886	23,295	23,231	64	
Scottsville Wastewater	3.00%	59,903	19,968	19,913	55	
	100.00%	\$ 1,996,750	\$ 665,583	\$ 663,756	\$ 1,827	

Rivanna Water & Sewer Authority  
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**Laboratory**

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

Notes

**Revenues**

N/A

**Expenses**

Personnel Cost	\$ 463,225	\$ 154,408	\$ 159,402	\$ (4,994)	-3.23%
Professional Services	-	-	-	-	
Other Services & Charges	9,550	3,183	333	2,850	89.54%
Communications	1,050	350	234	116	33.08%
Information Technology	-	-	508	(508)	
Supplies	1,300	433	32	401	92.62%
Operations & Maintenance	133,600	44,533	24,922	19,611	44.04%
Equipment Purchases	23,900	7,967	1,328	6,638	83.33%
Depreciation	-	-	-	-	
<b>Total Operating Expenses</b>	<b>\$ 632,625</b>	<b>\$ 210,875</b>	<b>\$ 186,760</b>	<b>\$ 24,115</b>	<b>11.44%</b>

**Department Summary**

<b>Net Costs Allocable to Rate Centers</b>		<b>\$ (632,625)</b>	<b>\$ (210,875)</b>	<b>\$ (186,760)</b>	<b>\$ (24,115)</b>	<b>11.44%</b>
<b>Allocations to the Rate Centers</b>						
Urban Water	44.00%	\$ 278,355	\$ 92,785	\$ 82,174	\$ 10,611	
Crozet Water	4.00%	25,305	8,435	7,470	965	
Scottsville Water	2.00%	12,653	4,218	3,735	482	
Urban Wastewater	47.00%	297,334	99,111	87,777	11,334	
Glenmore Wastewater	1.50%	9,489	3,163	2,801	362	
Scottsville Wastewater	1.50%	9,489	3,163	2,801	362	
	100.00%	\$ 632,625	\$ 210,875	\$ 186,760	\$ 24,115	

Rivanna Water & Sewer Authority  
 Monthly Financial Statements - October 2024

**Engineering**

Budget FY 2025	Budget Year-to-Date	Actual Year-to-Date	Budget vs. Actual	Variance Percentage
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**Operating Budget vs. Actual**

Notes

**Revenues**

Payment for Services SWA	\$	-	\$	-	\$	7,199	\$	7,199
<i>Total Operating Revenues</i>	\$	-	\$	-	\$	<b>7,199</b>	\$	<b>7,199</b>

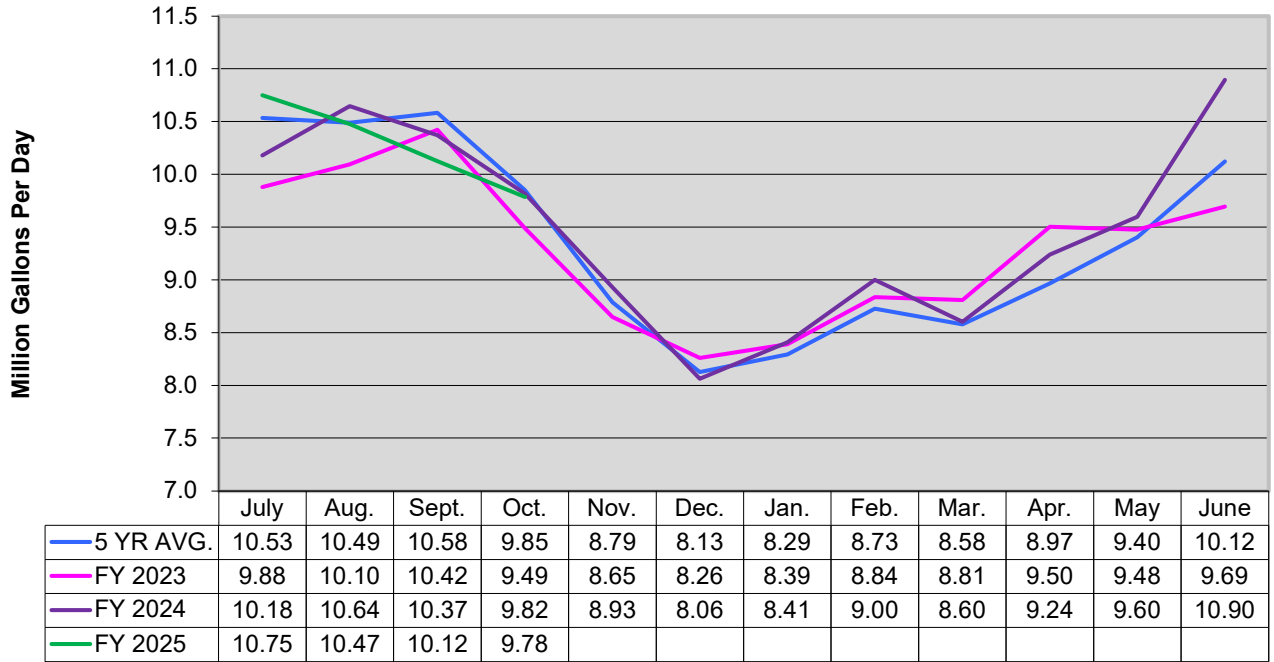
**Expenses**

Personnel Cost	\$	2,216,684	\$	738,895	\$	712,344	\$	26,550	3.59%
Professional Services		32,500		10,833		1,275		9,558	88.23%
Other Services & Charges		20,465		6,822		3,393		3,429	50.26%
Communications		15,150		5,050		6,295		(1,245)	-24.66%
Information Technology		211,900		70,633		71,578		(944)	-1.34%
Supplies		5,600		1,867		2,795		(929)	-49.74%
Operations & Maintenance		82,620		27,540		21,936		5,604	20.35%
Equipment Purchases		21,500		7,167		7,167		0	0.00%
Depreciation		-		-		-		-	
<i>Total Operating Expenses</i>	\$	<b>2,606,419</b>	\$	<b>868,806</b>	\$	<b>826,783</b>	\$	<b>42,023</b>	<b>4.84%</b>

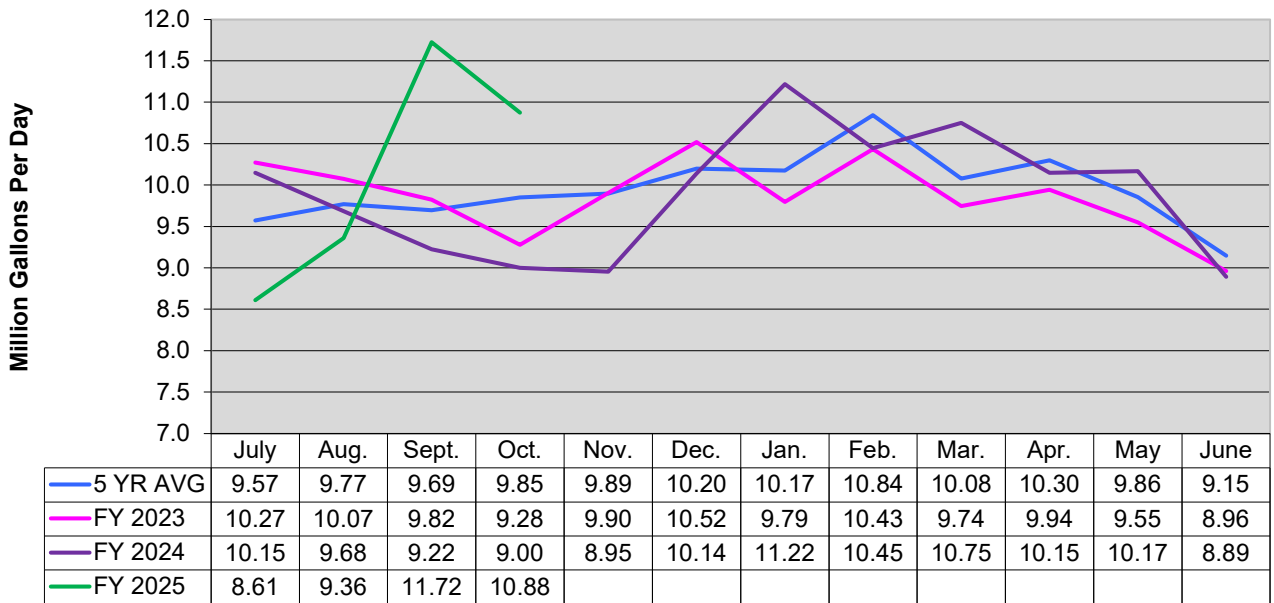
Department Summary										
<b>Net Costs Allocable to Rate Centers</b>		\$	(2,606,419)	\$	(868,806)	\$	(819,584)	\$	(34,824)	4.01%
<b>Allocations to the Rate Centers</b>										
Urban Water	47.00%	\$	1,225,017	\$	408,339	\$	385,205	\$	23,134	
Crozet Water	4.00%		104,257		34,752		32,783		1,969	
Scottsville Water	2.00%		52,128		17,376		16,392		984	
Urban Wastewater	44.00%		1,146,824		382,275		360,617		21,658	
Glenmore Wastewater	1.50%		39,096		13,032		12,294		738	
Scottsville Wastewater	1.50%		39,096		13,032		12,294		738	
100.00%		\$	<b>2,606,419</b>	\$	<b>868,806</b>	\$	<b>819,584</b>	\$	<b>49,222</b>	

**Rivanna Water and Sewer Authority  
Flow Graphs**

**Urban Water Flows**



**Urban Wastewater Flows**





**MEMORANDUM**

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

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

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

**SUBJECT: OPERATIONS REPORT FOR NOVEMBER 2024**

**DATE: DECEMBER 17, 2024**

**WATER OPERATIONS:**

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

<i>Water Treatment Plant</i>	<i>Average Daily Production (MGD)</i>	<i>Maximum Daily Production in the Month (MGD)</i>
South Rivanna	8.06	9.22 (11/6/2024)
Observatory	0.79	2.14 (11/7/2024)
North Rivanna	<u>0.19</u>	<u>0.45 (11/19/2024)</u>
<b><i>Urban Total</i></b>	9.04	11.14 (11/7/2024)
Crozet	0.65	0.87 (11/11/2024)
Scottsville	0.05	0.073 (11/8/2024)
Red Hill	<u>0.0020</u>	0.005 (11/1/2024)
<b><i>RWSA Total</i></b>	9.74	-

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

**Status of Reservoirs (as of December 10, 2024):**

- Urban Reservoirs are 96% of Total Useable Capacity
  - South Rivanna Reservoir is 100% full
  - Ragged Mountain Reservoir is 95% full (water level lowered to complete an inspection)
  - Sugar Hollow Reservoir is 87% full
- Beaver Creek Reservoir (Crozet) is 100% full

➤ Totier Creek Reservoir (Scottsville) is 100% full

**WASTEWATER OPERATIONS:**

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

<i>WRRF</i>	<i>Average Daily Effluent Flow (MGD)</i>	<i>Average CBOD<sub>5</sub> (ppm)</i>		<i>Average Total Suspended Solids (ppm)</i>		<i>Average Ammonia (ppm)</i>	
		<i>RESULT</i>	<i>LIMIT</i>	<i>RESULT</i>	<i>LIMIT</i>	<i>RESULT</i>	<i>LIMIT</i>
<b>Moore's Creek</b>	8.78	<QL	9	<QL	22	0.13	2.2
<b>Glenmore</b>	0.119	<QL	15	2.9	30	NR	NL
<b>Scottsville</b>	0.042	<QL	25	3.2	30	NR	NL
<b>Stone Robinson</b>	0.002	N/A	30	NA	30	NR	NL

NR = Not Required

NL = No Limit

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

Nutrient discharges at the Moore's Creek AWRRF were as follows for November 2024.

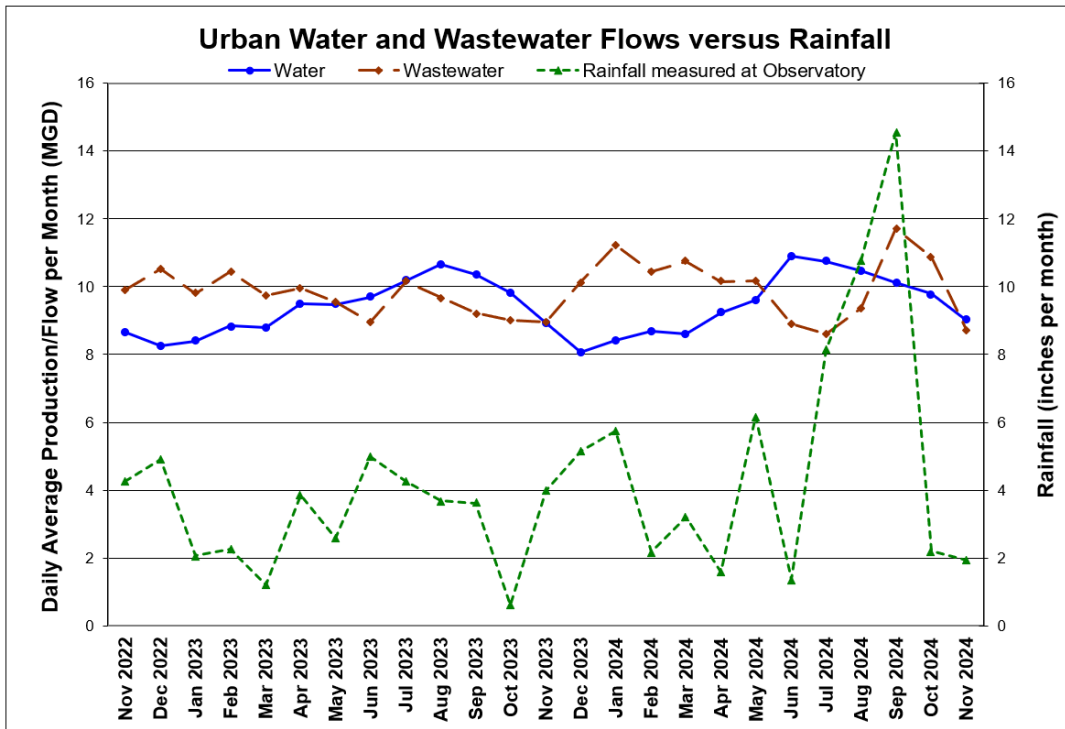
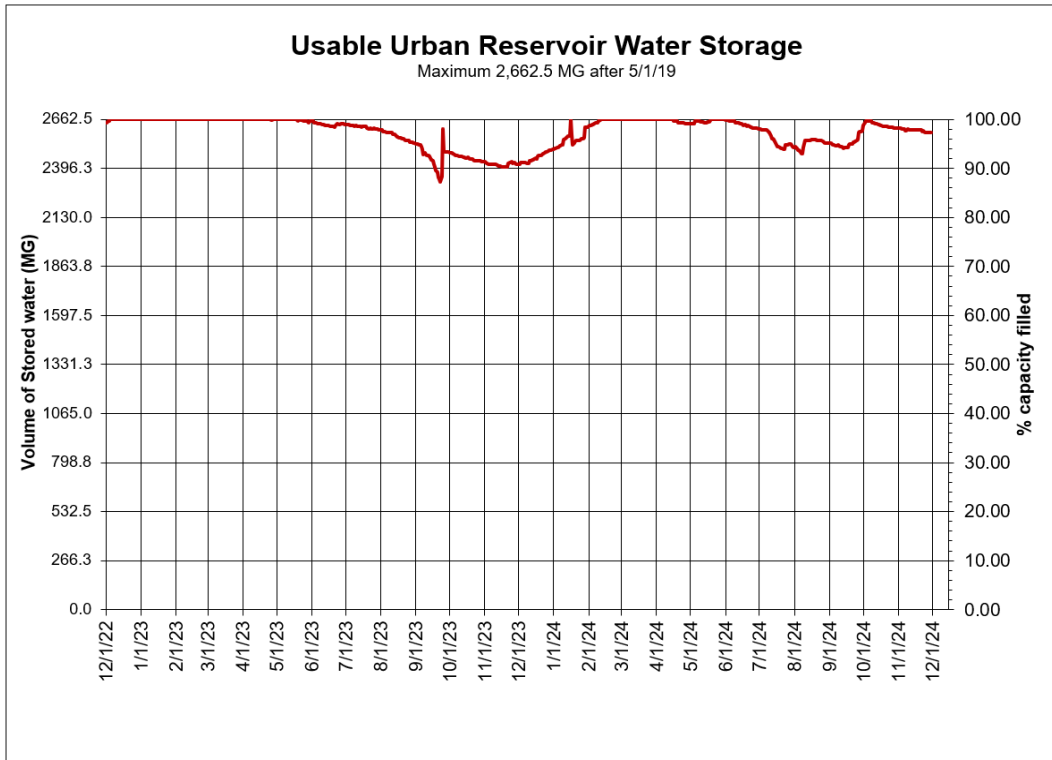
<i>State Annual Allocation (lb./yr.) Permit</i>	<i>Average Monthly Allocation (lb./mo.) *</i>	<i>Moore's Creek Discharge November (lb./mo.)</i>	<i>Performance as % of monthly average Allocation*</i>	<i>Year to Date Performance as % of annual allocation</i>
<b>Nitrogen</b>	282,994	23,583	47%	36%
<b>Phosphorous</b>	18,525	1,636	24%	22%

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

**WATER AND WASTEWATER DATA:**

The following graphs are provided for review:

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







## MEMORANDUM

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

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

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

**SUBJECT: CIP PROJECTS REPORT**

**DATE: DECEMBER 17, 2024**

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

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

### Summary

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

Under Construction

- 1. MC 5kV Electrical System Upgrades
- 2. Rivanna Pump Station Restoration
- 3. Red Hill Water Treatment Plant Upgrades
- 4. South Fork Rivanna River Crossing
- 5. RMR to OBWTP Raw Water Line and Pump Station
- 6. Crozet Pump Stations Rehabilitation

Design and Bidding

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

Planning and Studies

- 18. MCAWRRF Biogas Upgrades
- 19. Flood Protection Resiliency Study

Other Significant Projects

- 20. Urgent and Emergency Repairs
- 21. Security Enhancements

**Under Construction**

**1. MCAWRRF 5kV Electrical System Upgrades**

Design Engineer:	Hazen and Sawyer
Construction Contractor:	Pyramid Electrical Contractors (Richmond, VA)
Construction Start:	May 2022
Percent Complete:	80%
Base Construction Contract +	
Change Order to Date = Current Value:	\$5,180,000 - \$800,127 = \$4,379,873
Completion:	June 2025
Budget:	\$6,200,000

Current Status: The Contractor completed replacement of the low-voltage switchboard in the Grit Building, as well as 5kV cable replacement to the Moores Creek Pump Station, and is currently working on 5kV cable and transformer replacement at the Grit Building.

**2. Rivanna Pump Station Restoration**

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

Current Status: Contractor continues to order equipment/materials and complete interior piping modifications in advance of rebuilt pump deliveries. Rebuilt pumps will be installed and bypass pumping system removed by March 2025 with full restoration completed by May 2025.

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

Design Engineer:	Short Elliot Hendrickson (SEH)
Construction Contractor:	Anderson Construction (Lynchburg)
Construction Start:	January 2025
Percent Complete:	0%
Base Construction Contract + Change Order to Date = Current Value:	\$1,742,375
Completion:	June 2026
Budget:	\$2,050,000

Current Status: Work on-site is expected to begin in January after finalizing site plan details with the County. Submittals are being reviewed so materials can be ordered. This project received partial grant funding from Albemarle County.

**4. South Fork Rivanna River Crossing**

Design Engineer:	Michael Baker International (Baker)
Construction Contractor:	Faulconer (Charlottesville)
Construction Start:	December 2024
Percent Complete:	0%
Base Construction Contract + Change Order to Date = Current Value:	\$4,916,940
Completion:	January 2027
Budget:	\$7,300,000

Current Status: The contractor is submitting shop drawings for approval.

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

Design Engineer:	Kimley-Horn
Construction Contractor:	Thalle Construction (North Carolina)
Construction Start:	January 2025

Percent Complete:	0%
Base Construction Contract +	
Change Order to Date = Current Value:	\$53,908,400
Completion:	June 2029
Budget:	\$61,490,000

Current Status: The Notice of Award was provided to Thalle Construction Company, Inc. on October 23<sup>rd</sup>. Construction contracts have been signed by both parties, and an introductory meeting was held with the Contractor on December 4<sup>th</sup>. A Pre-Construction Conference and NTP are anticipated in the coming weeks.

**6. Crozet Pump Stations Rehabilitation**

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

Current Status: One bid was received for this project on October 31<sup>st</sup> which exceeded our budget by approximately 10% (\$1.5 M). The bid was reviewed with the contractor for cost reductions. A recommendation for award is being presented to the Board this month after successfully completing negotiations.

**Design and Bidding**

**7. MCAWRRF Building Upfits and Gravity Thickener Improvements**

Design Engineer:	Short Elliot Hendrickson (SEH)
Project Start:	March 2023
Project Status:	Bidding
Construction Start:	April 2025
Completion:	May 2027
Budget:	\$7,500,000

Current Status: Bids are due on December 19, 2024.

**8. MCAWRRF Structural and Concrete Rehabilitation**

Design Engineer:	Hazen and Sawyer (Hazen)
Project Start:	April 2023
Project Status:	Bidding
Construction Start:	April 2025
Completion:	May 2027

Budget: \$11,300,000

Current Status: Bids are due on December 18, 2024.

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

Design Engineer: SEH  
Project Start: October 2022  
Project Status: 95% Design  
Construction Start: June 2025  
Completion: December 2027  
Budget: \$25,000,000

Current Status: Contract documents are being finalized. Revised exterior and interior renderings have been submitted to the County ARB for approval and the exhibit design process continues.

**10. Central Water Line**

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

Current Status: **Phase 1 Contract (west end):** All private easements have been acquired and the easement with UVA along Hereford Drive is ready for execution. Bids will be received in January 2025. **Phase 2 Contract (east end):** Redesign efforts in the E. High Street area are in process and survey work is complete. An additional private easement will be required with the redesign as well as new easements on two City parcels. Phase 2 design will be completed in summer 2025.

**11. Crozet GAC Expansion – Phase I**

Design Engineer: SEH  
Project Start: July 2023  
Project Status: 100% Design  
Construction Start: August 2025  
Completion: March 2027  
Budget: \$6,550,000

Current Status: 100% documents have been completed and are under review. \$6.24 M in grant funds from VDH have been awarded for this project.

**12. SRWTP – PAC Upgrades**

Design Engineer: SEH  
Project Start: November 2023  
Project Status: 100% Design  
Construction Start: October 2025

Completion: February 2027  
Budget: \$1,100,000

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

**13. RMR Pool Raise**

Design Engineer: Schnabel Engineering  
Project Start: April 2024  
Project Status: 40% Design  
Construction Start: September 2025  
Completion: September 2026  
Budget: \$5,000,000

Current Status: Design Engineer has developed clearing plans around the reservoir and initiated permitting efforts with ACOE, VDCR and Albemarle County.

**14. SRR to RMR Pipeline, Intake, and Facilities**

Design Engineer: Kimley Horn/SEH  
Project Start: July 2023  
Project Status: 57% Design  
Construction Start: February 2026  
Completion: December 2030  
Budget: \$79,000,000

Current Status: Design Engineer continues to work on both the new reservoir intake and the pipe between SRR and RMR. A workshop on the new intake and pump station at SRR was held, and staff has provided comments on the draft PER. The nutrient report has also been submitted for review.

**15. Beaver Creek Dam, Pump Station and Piping Improvements**

Design Engineer: Schnabel Engineering (Dam)  
Design Engineer: Hazen & Sawyer (Pump Station)  
Project Start: February 2018  
Project Status: 65% Design  
Construction Start: May 2026  
Completion: January 2030  
Budget: \$47,100,000

Current Status: Hazen has submitted the PER for the new raw water pump station, intake, raw water main, and hypolimnetic oxygenation system for review. Design work by Schnabel Engineering for the dam spillway upgrades, temporary detour, and spillway bridge is ongoing. Preliminary design submittals for the dam are currently under review by internal staff and NRCS. Discussions with the County have been initiated for acquisition or lease of property for the Pump Station. A significant construction grant from the NRCS is anticipated.

**16. Upper Schenks Branch Interceptor, Phase II**

Design Engineer:	CHA Consulting
Project Start:	July 2021
Project Status:	Design
Construction Start:	2026
Completion:	2027
Budget:	\$4,725,000

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

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

Design Engineer:	Hazen and Sawyer (Hazen)
Project Start:	June 2023
Project Status:	70% Design
Construction Start:	June 2025
Completion:	September 2026
Budget:	\$3,600,000

Current Status: Staff has been interviewing software vendors for additional improvements to the current septage receiving equipment and billing software, and Hazen is completing a flood resiliency evaluation.

**Planning and Studies**

**18. MCAWRRF Biogas Upgrades**

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

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

**19. Flood Protection Resiliency Study**

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

Current Status: This project will identify individualized flood mitigation measures of six facilities to increase their resiliency from a 1% to a 0.2% flooding event. Facilities include: Mechums River Raw Water PS, Glenmore WW PS, Moores Creek AWRRF, Scottsville WRRF, Crozet FET, and Crozet WW PS #2. A consultant is being selected to perform this study and the specific scope of the evaluation

is being confirmed. This project received \$198,930 in grant funding from FEMA and VDEM.

## **Other Significant Projects**

### **20. Urgent and Emergency Repairs**

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

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

- **RWSA Finished Water ARV Repairs:** RWSA Engineering staff recently met with Maintenance staff to identify a list of Air Release Valves (ARVs) that need to be repaired, replaced, or abandoned. Several of these locations will require assistance from RWSA On-Call Maintenance Contractors, due to the complexity of the sites (proximity to roadways, depth, etc.). The initial round will include seven (7) sites, all along the South Rivanna Waterline. Three replacements have been completed at this time, with a fourth site in progress. This in progress site included abandonment of an existing manual ARV located in the middle of the Route 29-Hydraulic intersection, which has been completed, and was a major coordination effort with VDOT, as they intend to pave this area in the coming weeks. The Contractor is working with VDOT on permits for the final sites. The remaining replacements will likely be scheduled starting in Spring 2025.
- **Sugar Hollow Raw Waterline Break at Mechums River:** On October 8<sup>th</sup>, it was discovered that the Sugar Hollow Raw Waterline had failed at its aerial crossing of the Mechums River, due to the impacts associated with Hurricane Helene. RWSA will be utilizing its On-Call Maintenance Contractor, Faulconer Construction, along with its Design Engineer, SEH, to help design and construct the repairs to the aerial crossing. Mobilization occurred on November 5<sup>th</sup> to address concerns with the existing access road to the site initially. Repairs are now underway, with installation of concrete piers and preparation for pipe installation complete. The goal remains to have the pipeline back in service prior to the end of the year, pending availability of materials and weather/site conditions. Funding opportunities are being pursued through FEMA/VDEM.

### **21. Security Enhancements**

Design Engineer:	Hazen & Sawyer
Construction Contractor:	Security 101 (Richmond, VA)
Construction Start:	March 2020
Percent Complete:	90% (WA9)
Based Construction Contract +	
Change Orders to Date = Current Value:	\$718,428 (WA1) + \$834,742 (WA2-10)
Completion:	June 2024 (WA9), August 2024 (WA10)
Budget:	\$2,810,000

**Current Status:** WA9 will include installation of card access on all exterior doors at the South Rivanna WTP and has been amended to include interior doors at the new IT data center. Design of MCAWRRF entrance modifications with Hazen & Sawyer continues, with discussions with Dominion Energy also ongoing, as relocation of existing electrical infrastructure will be required. This relocation process will need to be finalized prior to the project proceeding to the bidding phase. Relocation of existing



electrical infrastructure will require coordination with the adjacent landowner, as the infrastructure must be completely relocated from the entrance area. As these discussions are ongoing, staff have submitted appropriate permitting documents to Albemarle County.



## MEMORANDUM

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

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

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

**SUBJECT: ADMINISTRATION AND COMMUNICATIONS REPORT**

**DATE: DECEMBER 17, 2024**

### **Human Resources**

Fiscal year-to-date turnover for the Rivanna Water and Sewer Authority, for the fiscal year beginning on July 1, 2024, is **5.8%** through December 3, 2024.

We are pleased to welcome Juan Martes to our Water Department team as a Water Operator Trainee.

On December 12, 2024, our managers and directors participated in a Diversity Awareness Workshop presented by the Diversity Training Group, LLC.

### **Safety**

We have continued to train our team on our new incident reporting system through Paychex. Training is expected to continue through the end of the year with the new system going live in January.

### **Community Outreach**

On December 2, 2024, we had students from Monticello High School's AP Environmental Science class take a tour of the Moores Creek Advanced Water Resource Recovery facility. The tour was led by our new Wastewater Manager, Brian Haney.

On December 4, 2024, Betsy Nemeth presented to students at the University of Virginia, School of Public Health. Some of the students will be completing their Applied Practice Experience requirements by partnering with the Rivanna Water & Sewer Authority to develop different tools for public health education as it applies to water and wastewater.



## MEMORANDUM

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

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

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

**SUBJECT: WHOLESALE METERING REPORT FOR NOVEMBER 2024**

**DATE: DECEMBER 17, 2024**

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

	<i>Month</i>	<i>Daily Average</i>	
City Usage (gal)	149,037,059	4,807,647	<b>49.1%</b>
ACSA Usage (gal)	154,279,598	4,976,761	<b>50.9%</b>
<b>Total (gal)</b>	<b>303,316,657</b>	<b>9,784,408</b>	

The *RWSA Wholesale Metering Administrative and Implementation Policy* requires that water use be measured based upon the annual average daily water demand of the City and ACSA over the trailing twelve (12) consecutive month period. The *Water Cost Allocation Agreement (2012)* established a maximum water allocation for each party. If the annual average water usage of either party exceeds this value, a financial true-up would be required for the debt service charges related to the Ragged Mountain Dam and the SRR-RMR Pipeline projects. Below are graphs showing the calculated monthly water usage by each party dating back to the beginning of FY 21, the trailing twelve-month average (extended back to December 2023), and that usage relative to the maximum allocation for each party (6.71 MGD for the City and 11.99 MGD for ACSA). Completed in 2019 for a cost of about \$3.2 M, our Wholesale Metering Program consists of 25 remote meter locations around the City boundary and 3 finished water flow meters at treatment plants.

Note 1: Due to the early Board meeting, last month’s values are being used. November and December data will be updated for the January Board meeting.





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

**FROM: BETHANY HOUCHENS, WATER RESOURCES COORDINATOR  
DAVE TUNGATE, DIRECTOR OF OPERATIONS &  
ENVIRONMENTAL SERVICES**

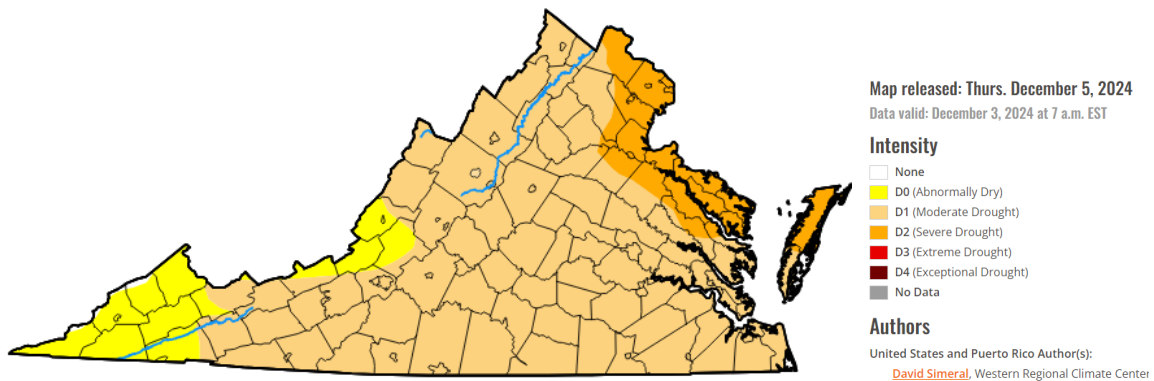
**REVIEWED: BILL MAWYER, EXECUTIVE DIRECTOR**

**SUBJECT: DROUGHT MONITORING REPORT**

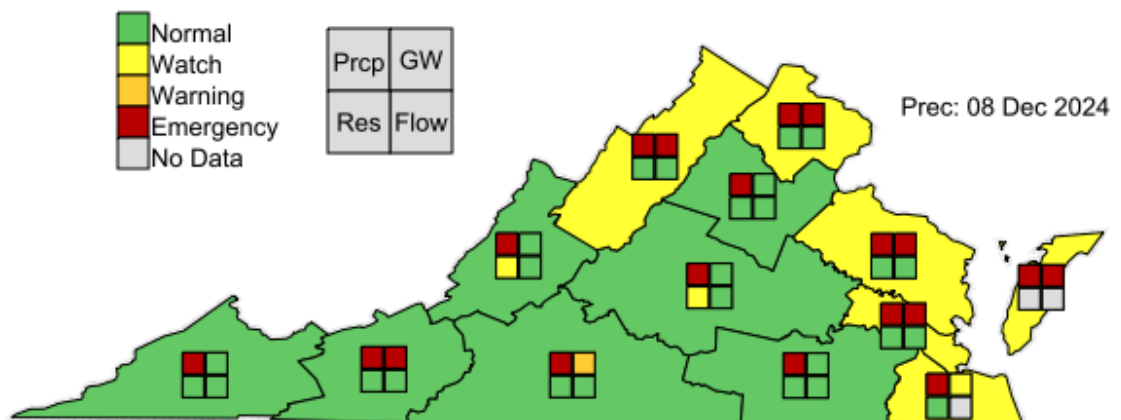
**DATE: DECEMBER 17, 2024**

**State and Federal Drought Monitoring as of December 10, 2024:**

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



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



## **Precipitation & Stream Flows**

<b>Charlottesville Precipitation</b>					
Year	Month	Observed (in.)	Normal (in.)	Departure (in.)	Comparison to Normal (%)
2021	Jan - Dec	33.82	41.61	-7.79	-19
2022	Jan - Dec	43.53	41.61	+1.92	+5
2023	Jan - Dec	26.95	41.61	-14.66	-35
2024	Jan - Nov	36.73	38.57	-1.84	-4.89

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

<b>USGS Stream Gaging Station Near the Urban Area (Dec 4-Dec 10)</b>				
Gage Name	Rolling 7-day Avg. Stream Flow		Median Daily Streamflow	
	cfs	mgd	cfs	mgd
Mechums River	43.1	27.8	81	52.4
Moormans River	30.2	19.5	59	38.1
NF Rivanna River	35.7	23.1	89	57.5
SF Rivanna River	93.3	60.3	210	135.7

Median daily flow: December 10<sup>th</sup> for the period of record (approx. 30 - 80 years)

## **Status of Reservoirs as of December 10, 2024**

- Urban Reservoirs are 95.53% of Total Useable Capacity
- Beaver Creek Reservoir (Crozet) is 100% of Total Useable Capacity
- Totier Creek Reservoir (Scottsville) is 100% of Total Useable Capacity

## **Drought History in Central Virginia**

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



## MEMORANDUM

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

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

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

**SUBJECT: APPROVAL OF ENGINEERING SERVICES — SOUTH RIVANNA  
RESERVOIR INTAKE AND PUMP STATION DESIGN, BIDDING,  
AND CONSTRUCTION PHASE SERVICES – KIMLEY-HORN  
ENGINEERS**

**DATE: DECEMBER 17, 2024**

This request is to authorize design, bidding, and construction phase services for the new South Rivanna Reservoir Raw Water Intake and Pump Station as part of the SRR to RMR Pipeline, Intake & Facilities Project, for an amount not to exceed \$2,166,144.

### **Background**

The South Rivanna Reservoir (SRR) to Ragged Mountain Reservoir (RMR) Pipeline, Intake & Facilities project is a part of the community's approved and permitted Water Supply Plan. The SRR intake, pump station, and associated facilities are a part of this project and will give RWSA the ability to move water between the two reservoirs and two water treatment plants in conjunction with the soon to be constructed Ragged Mountain Raw Water Pump Station. This flexibility will enhance the operational capabilities of the Urban Water System and provide increased drinking water supply to support our community during drought conditions. The new raw water intake and pump station will be sized to transfer up to 25 MGD from SRR to fill RMR as well as to provide water to both SRWTP and OBWTP from deeper levels in SRR previously unavailable with the current intake. The new intake and pump station will be capable of transferring up to 25 MGD to RMR and/or OBWTP, while also being capable of sending up to 16 MGD independently to SRWTP. The preliminary engineering report (PER) is currently being finalized by Kimley-Horn and confirmed the location and layout of the new intake and pump station and the associated hydraulic requirements. A 30% set of preliminary plans was provided with this effort as well.

RWSA entered into a term agreement with Kimley-Horn and Associates on May 4, 2021, for Professional Water & Sewer Engineering Services. Under this requested Work Authorization, Kimley-Horn will provide final design, bidding, and construction phase services for the new SRR Intake and Pump Station under the SRR to RMR Pipeline, Intake & Facilities project.

**Board Action Requested:**

Authorize the Executive Director to execute a Work Authorization with Kimley-Horn and Associates for Professional Engineering services to provide design, bidding, and construction phase services for the SRR to RMR Pipeline, Intake & Facilities Project, for an amount not to exceed \$2,166,144, and any amendments needed to complete the tasks identified above, not to exceed 25% of the original contract amount, provided the resulting total cost is within the approved CIP project budget.





## 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: CAPITAL IMPROVEMENT PLAN AMENDMENT – SOUTH  
RIVANNA WATER TREATMENT PLANT – SODIUM  
PERMANGANATE SYSTEM IMPROVEMENTS**

**DATE: DECEMBER 17, 2024**

This request is to authorize an amendment to the FY 25 - 29 Capital Improvement Plan to include a project to provide sodium permanganate system improvements at the South Rivanna Water Treatment Plant. These improvements will include chemical storage and feed system changes, addition of a tempered water emergency eyewash, and associated electrical system upgrades for a total CIP budget of \$400,000. This project will provide important safety and spill containment measures.

### Background

As part of the treatment process, raw water is dosed with sodium permanganate to remove iron and manganese which causes discolored water. The existing sodium permanganate feed system is in a pre-engineered metal building located near the existing South Rivanna Raw Water Pump Station. Several improvements were identified for the project including extending the existing concrete containment curb around the chemical storage tanks and modifications to existing piping and control valves to better prevent chemical spills and overflows. Based on the initial estimated cost of these efforts, the use of O&M funds was anticipated. As design began, it became evident that the existing emergency eyewash within the chemical storage building was not in compliance with current OSHA regulations. This deficiency was evaluated, and it was determined that a new emergency eyewash with tempered water would be required to meet those regulations. To provide tempered water, a new hot water heater and upgraded electrical service to the chemical storage building from the existing Raw Water Pump Station would be needed. These changes required significant electrical improvements and design efforts, and as a result, the total project budget increased to a level requiring funding through our CIP.

We are proposing to amend the Capital Improvement Plan for FY 25 - 29 with a project to provide chemical storage and feed improvements including an improved emergency eyewash and other associated components. Our design engineer, Short Elliot Hendrickson, reviewed these various needs and provided cost estimates for construction. Based on these estimates and the design work authorizations already approved, we established a total estimated CIP budget of \$400,000.

**Board Action Requested:**

Amend the Capital Improvement Plan for FY25 to FY29 to include the South Rivanna Water Treatment Plant – Sodium Permanganate Improvements Project with a total budget of \$400,000.



## MEMORANDUM

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

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

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

**SUBJECT: APPROVAL OF CONSTRUCTION CONTRACT AWARD AND  
CAPITAL IMPROVEMENT PLAN AMENDMENT– CROZET  
WASTEWATER PUMP STATION REPAIRS – WACO, INC.**

**DATE: DECEMBER 17, 2024**

This request is to authorize the award of a contract to Waco, Inc. for replacement of pumps in four Crozet wastewater pump stations for a total contract value of \$9,583,350. An amendment to increase the FY 25-29 CIP funding for this project totaling \$1,450,000 is also requested. The total budget for this project will be \$12,350,000.

### Background

RWSA operates four sewage pumping stations that convey wastewater from the Crozet area to the Moores Creek Wastewater Treatment Plant. These pump stations were built in the 1980's and many of the essential pumps and parts have exceeded their useful lifespan and need to be replaced to maintain reliability and functionality. The project generally includes the replacement of existing pumps, valves and piping headers, electrical motor control center replacement, automatic transfer switch replacement, the addition of manual transfer switches, and emergency generator and fuel tank replacements. Also included are architectural improvements such as roof replacements and interior coatings and SCADA panel and instrumentation replacement.

Construction bids were opened for the project on October 31, 2024, and only one bid was received. Waco, Inc. from Sandston, Virginia was the sole bidder with a total base bid of \$10,341,000. Waco, Inc.'s bid was 32% higher than the Engineer's estimate of \$7,833,000. As a result, RWSA and Wiley Wilson worked with Waco, Inc. to identify areas for potential cost reductions. Through this process, Waco, Inc. was able to reduce its bid by \$757,650 to \$9,583,350. Waco, Inc. has performed several successful projects in the past for RWSA.

Wiley Wilson and RWSA recommend an award to Waco, Inc. in the amount of \$9,583,350 as a fair and reasonable cost of the work in the current construction market. The current CIP budget for the Crozet Pump Station Improvement project is \$10,900,000. Incorporating Waco, Inc.'s bid along with design and other costs would represent an increase to the CIP budget of \$1,450,000 for a total of \$12,350,000.

**Board Action Requested:**

Staff requests the Board of Directors to approve the following:

1. Authorization for the Executive Director to award a construction contract to Waco, Inc. for a total amount of \$9,853,350 (\$10,341,000 bid amount less \$757,650 in reductions) and to approve any change orders to the construction contract necessary for completion of the work not exceed 10% of the original construction contract award.
2. An amendment to the FY 25 – 29 CIP for the Crozet Wastewater Pump Station Improvement project to increase the budget by \$1,450,000. This amendment would bring the total budget for this project to \$12,350,000.



## MEMORANDUM

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

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

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

**SUBJECT: ANNUAL COMPREHENSIVE FINANCIAL REPORT  
FISCAL YEAR ENDING JUNE 30, 2024**

**DATE: DECEMBER 17, 2024**

The Authority's Annual Comprehensive Financial Report for the fiscal year ending June 30, 2024 is included with your Board packet. A large part of preparing the financial statements involves having the financial reports audited for the purpose of obtaining an opinion from an independent Certified Public Accountant as to the accuracy of the information presented in the report.

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

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

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

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

### **Board Action Requested**

Accept the FY 2024 Annual Comprehensive Financial Report from Robinson, Farmer, Cox Associates.

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





**RIVANNA**  
CONSERVATION ALLIANCE

# **Rivanna Restoration Projects and Water Quality Monitoring**

Presentation to the Rivanna Water & Sewer  
Authority Board of Directors

December 17, 2024





# Rivanna Conservation Alliance

RCA formed in 2016 by merger of Rivanna Conservation Society (RCS) and StreamWatch

**Mission:** Working with the community to conserve the Rivanna River and its tributaries through monitoring, restoration, education, and advocacy

**Our Vision:** We envision a healthy Rivanna River and watershed that benefits an engaged community



# RCA's Core Program Areas

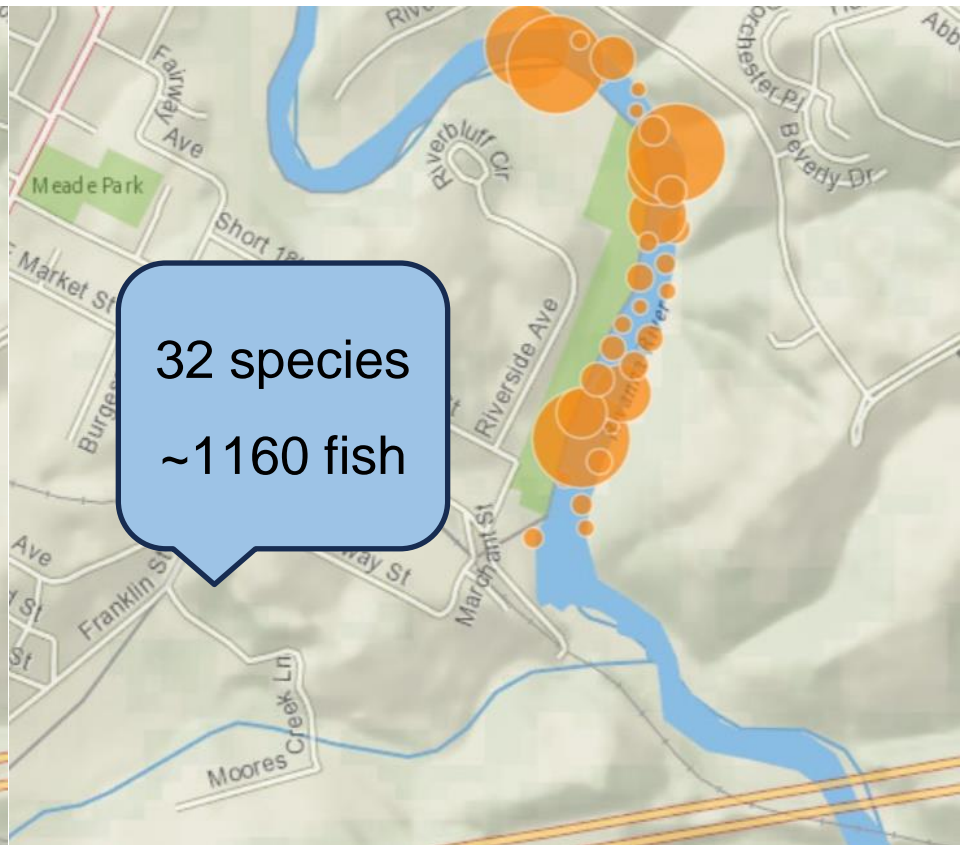
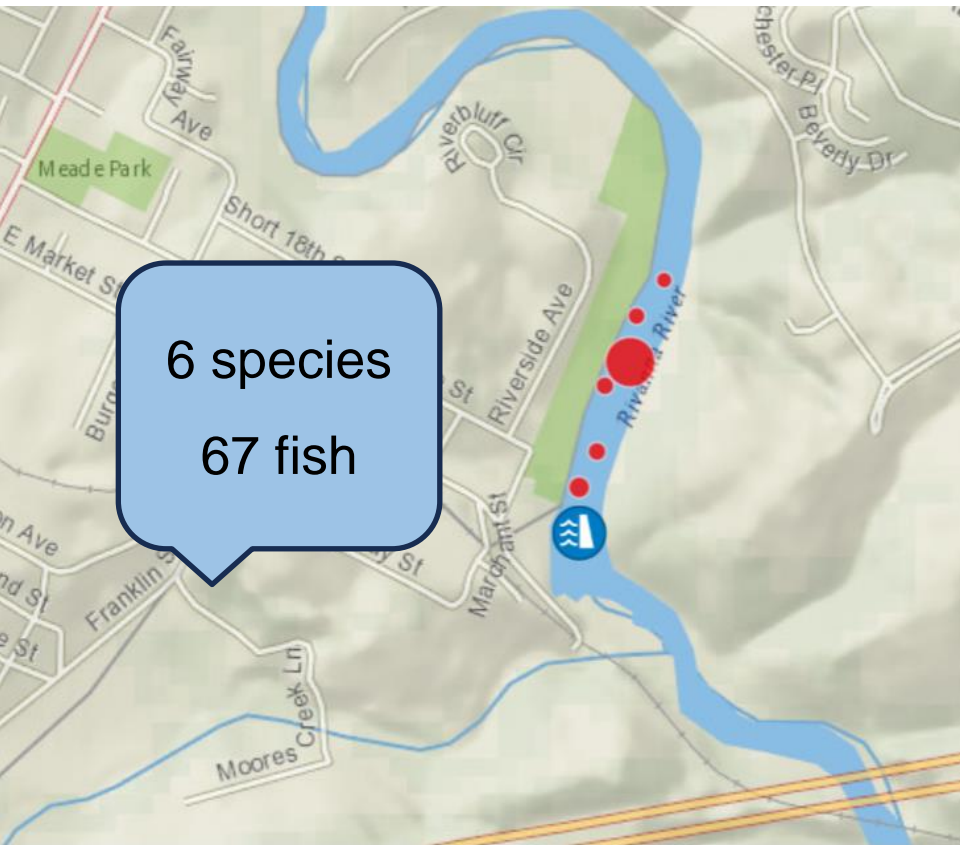




# Benefits of 2007 Woolen Mills Dam Removal

2006 Fish Survey

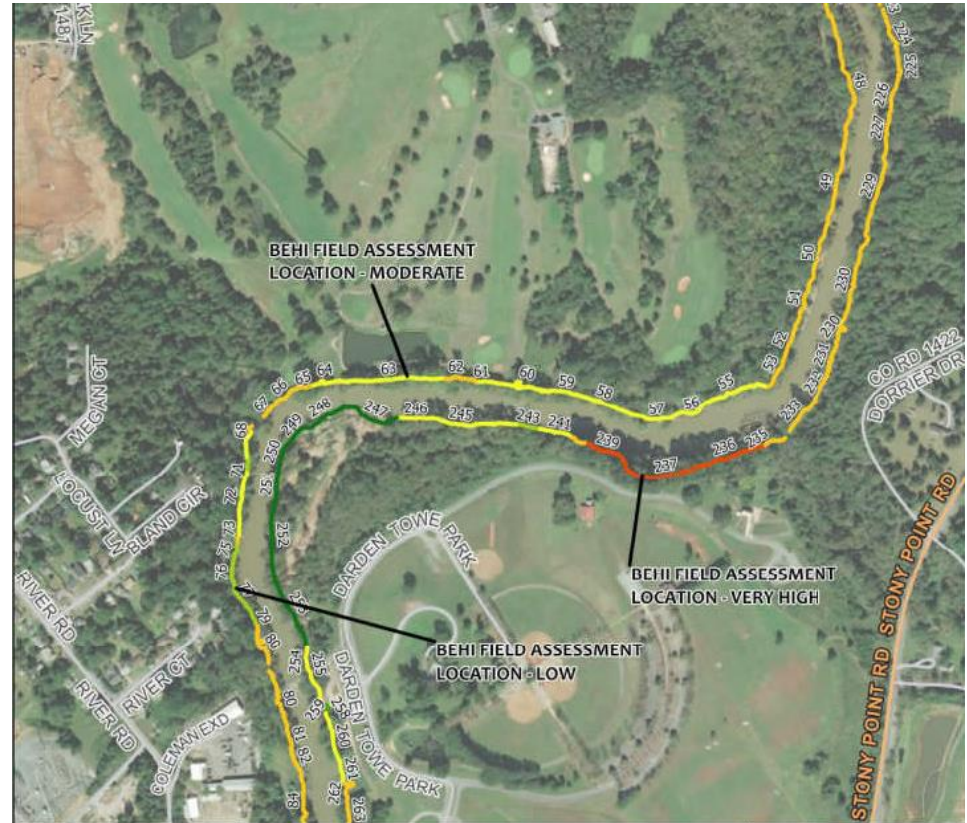
2019 Fish Survey



# 2019-2020 Rivanna Prioritization Study with Ecosystem Services



This area near Darden Towe Park required emergency repairs with riprap when erosion exposed utility lines in 2019



	<h2>BEHI RATINGS MAP</h2> <h3>Rivanna River Prioritization Study</h3>		
	<b>ECOSYSTEM SERVICES</b>	MAP 3 OF 5	
1739A Allied Street Charlottesville, VA 22903   540.739.1428   <a href="http://www.ecosystems-services.us">www.ecosystems-services.us</a>			



# Rivanna Restoration at Riverview Park Project

Riverview Park selected because it will generate the most significant environmental and community benefits:

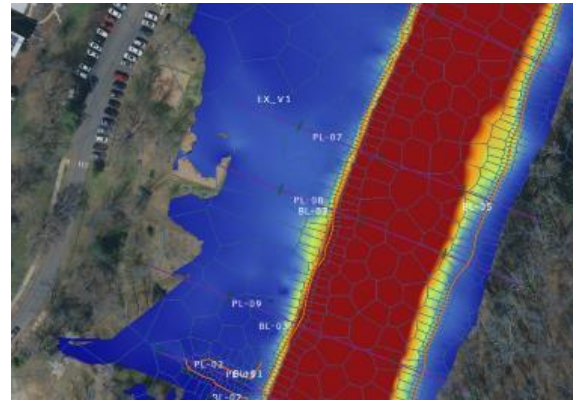
- Will improve water quality and habitat
- Has highest concentration of active public use
- Has many important community amenities and infrastructure that would be protected and improved
- Most likely to bring together partners and funders



# Designing the Riverview Restoration Project

Conceptual design supported by National Fish and Wildlife Foundation Planning Grant in 2022

- Ecosystem Services evaluated technical feasibility
- RCA engaged community to determine if a project was desired and what it should look like
- Wolf Josey Landscape Architects pulled design concept together





# RIVERVIEW RESTORATION: CONCEPT DESIGN

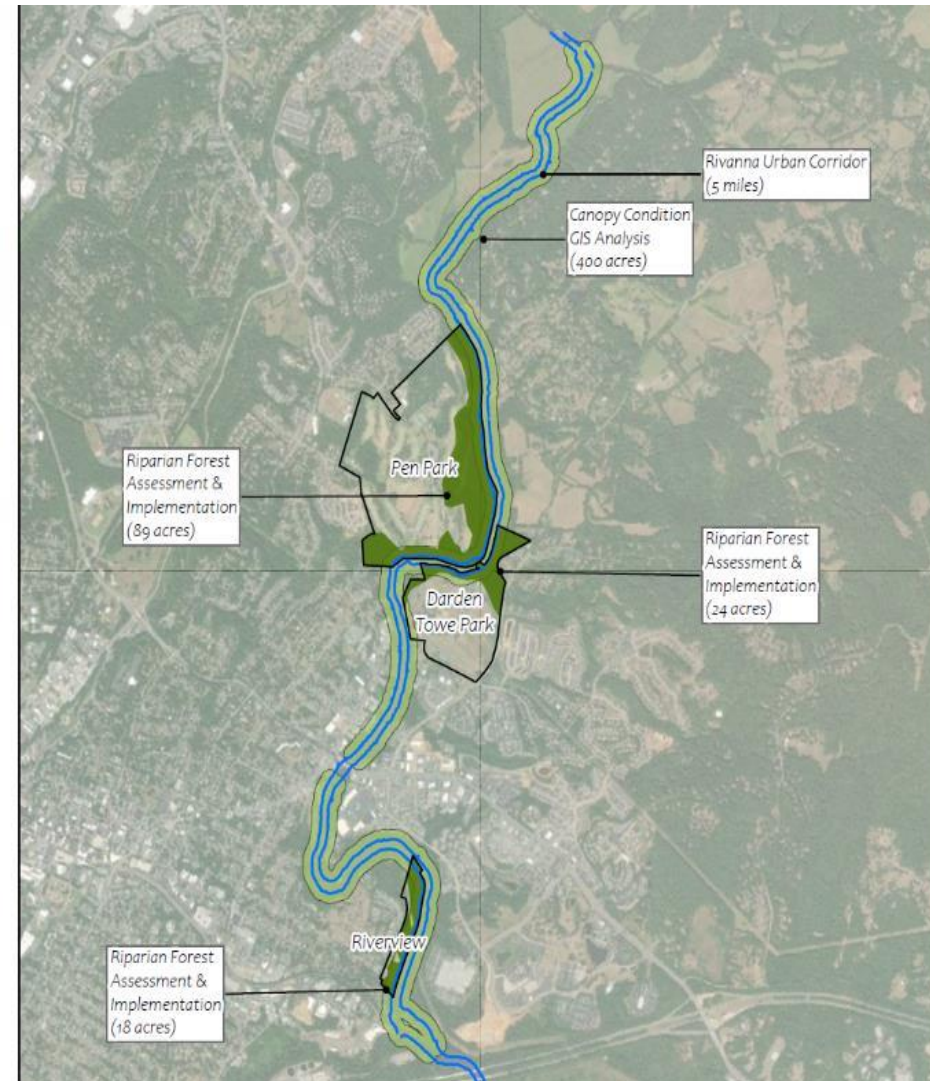




# Rivanna River Forest Health and Resilience Project

Project underway and funded through April 2025:

- 134 acres of forest assessed by 35 trained volunteers
- Targeted forest management plans being developed for three parks
- Invasive management and tree planting work begins fall and winter 2024-25
- Volunteer and workforce training, community outreach, and targeted education
- Rivanna River Resilience Partnership



# Riverview Park—City of Charlottesville

11  
Management  
units

11.3  
Acres  
Assessed



	<h2>RIVERVIEW PARK INVASIVE SPECIES COVER - CANOPY</h2>	
	<p><b>ECOSYSTEM SERVICES</b> 1102 Carlton Ave. Charlottesville, VA 22902   540.239.1428   www.ecosystems-services.us</p>	<p>1909 Chesapeake St. Charlottesville, VA 22902</p>



# Darden Towe Park - Albemarle Co.

**18**  
Management  
units

**25.7**  
Acres  
Assessed

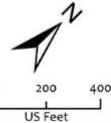


## DARDEN TOWE PARK INVASIVE SPECIES COVER - CANOPY

 **ECOSYSTEM SERVICES**

1102 Carlton Ave. Charlottesville, VA 22902 | 540.239.1428 | www.ecosystems-services.us

1445 Darden Towe Park  
Charlottesville, VA 22911

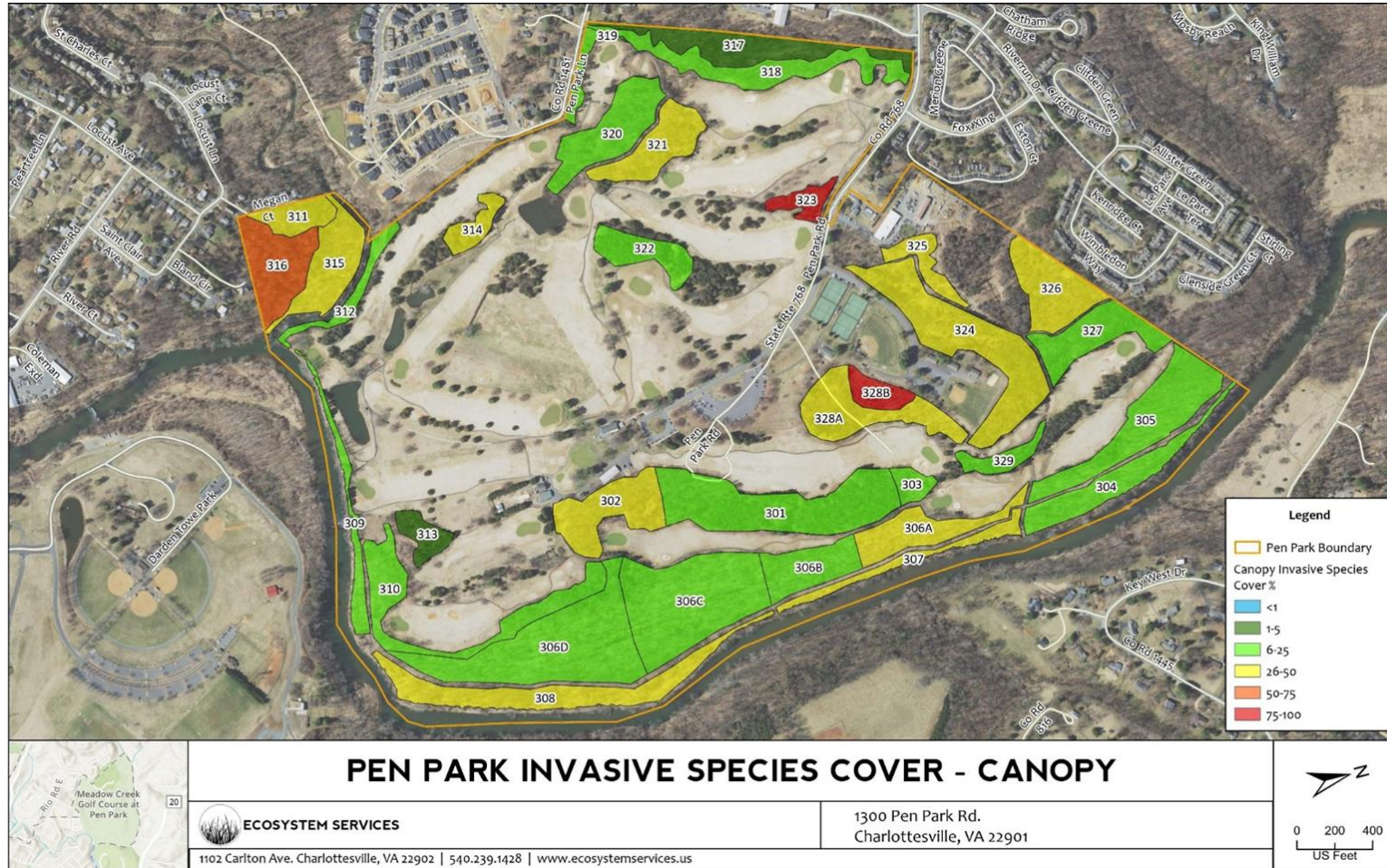




# Pen Park – City of Charlottesville

**33**  
Management  
units

**97.2**  
Acres  
Assessed







# BUILDING HEALTHY FORESTS ALONG THE RIVANNA RIVER

learn more  
and join in



[www.rivannariver.org/ForestHealth](http://www.rivannariver.org/ForestHealth)

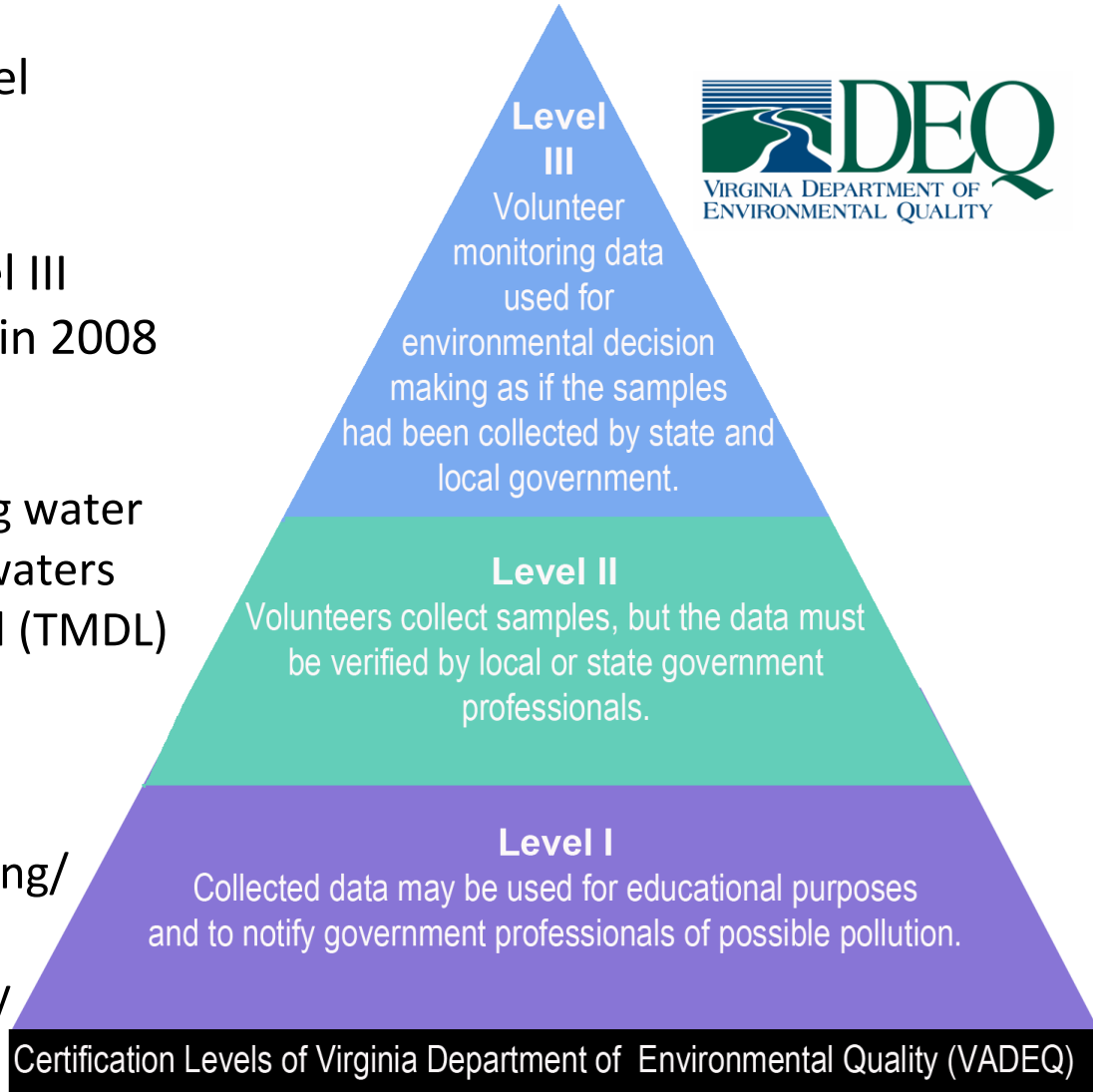


# RCA's Water Quality Monitoring Programs

Bacteria program achieved Level III certification in 2017

Benthic program achieved Level III certification (as StreamWatch) in 2008

- Assist DEQ and EPA with assessing water quality and identifying impaired waters
- Inform Total Maximum Daily Load (TMDL) assessments
- Inform and educate the public
- Identify pollution hotspots
- Guide local water resource planning/protection efforts
- Evaluating impact of water quality improvement efforts



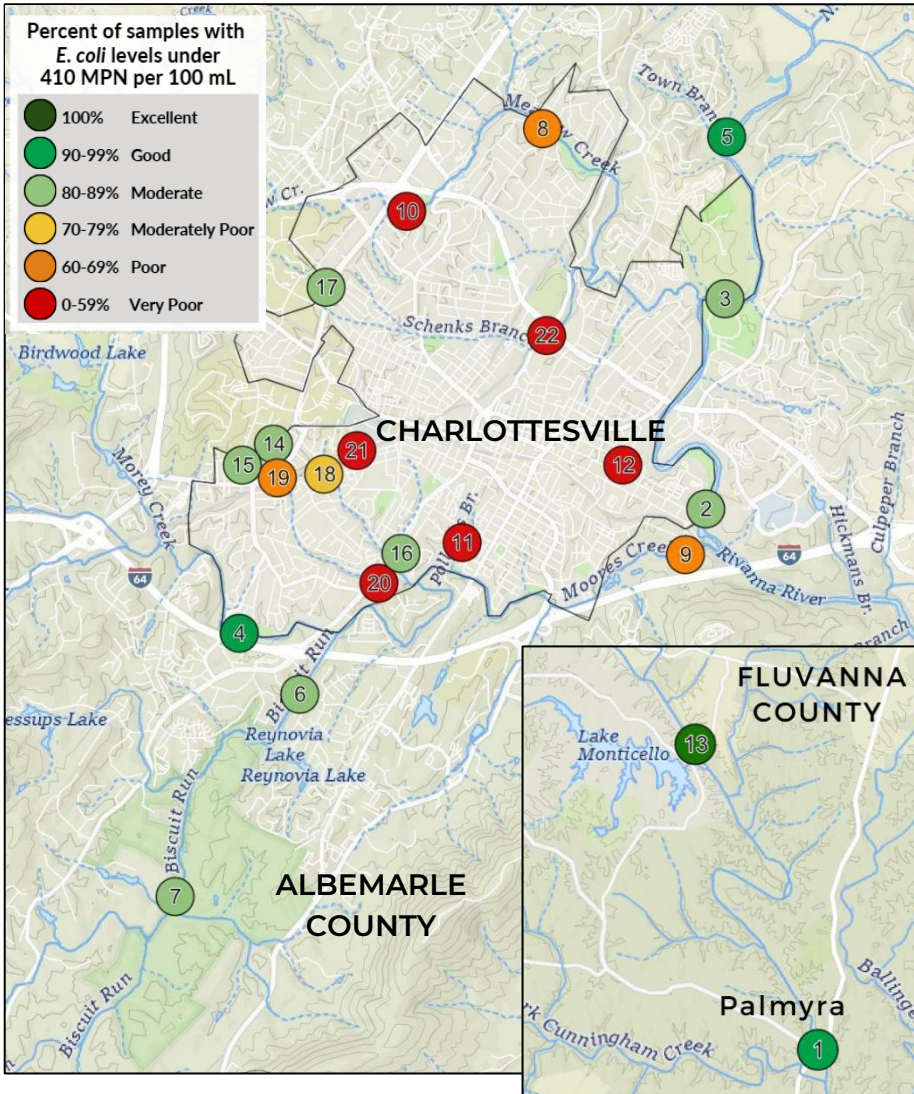
# RCA's Bacteria Monitoring Program

- Volunteers collect water samples to test for *E. coli* levels and turbidity
- 19 urban sites sampled monthly
- 9 potential recreational sites sampled weekly in spring (to meet revised VA water quality standard)
- 3 high recreational sites tested weekly in summer (Darden Towe Park, Riverview Park, Palmyra boat launch)
- Add on source tracking for sites with unusually high *E. coli* levels





# 2023 Bacteria Monitoring Results

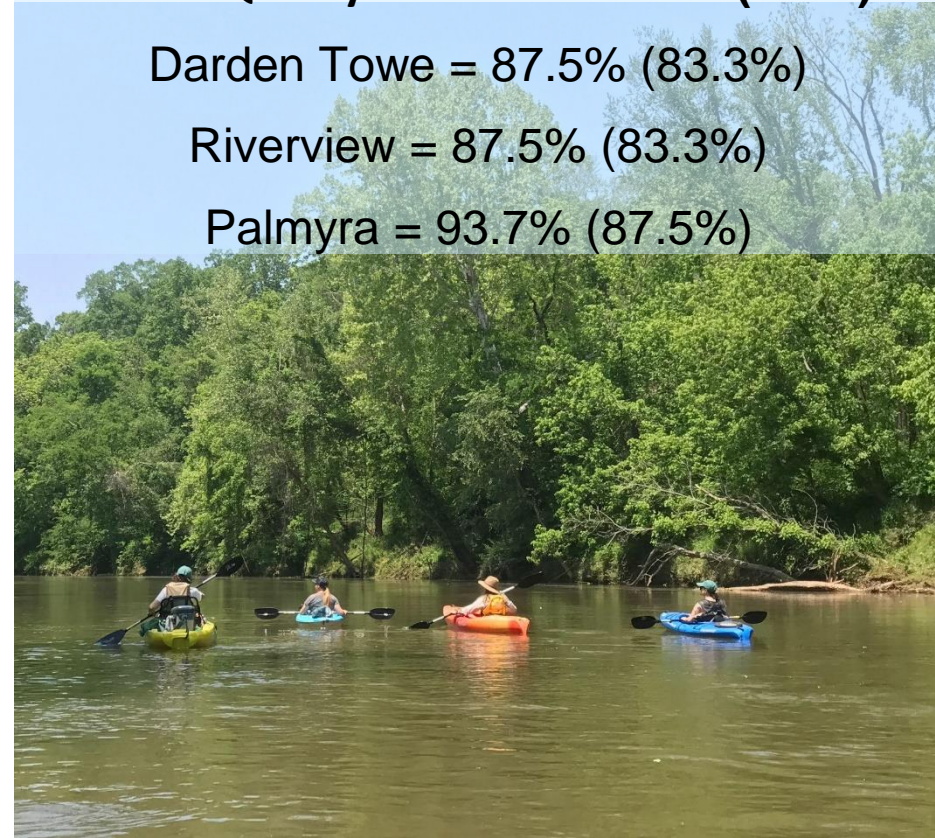


## Percent of Samples Meeting Recreational Water Quality Standard in 2023 (2022)

Darden Towe = 87.5% (83.3%)

Riverview = 87.5% (83.3%)

Palmyra = 93.7% (87.5%)





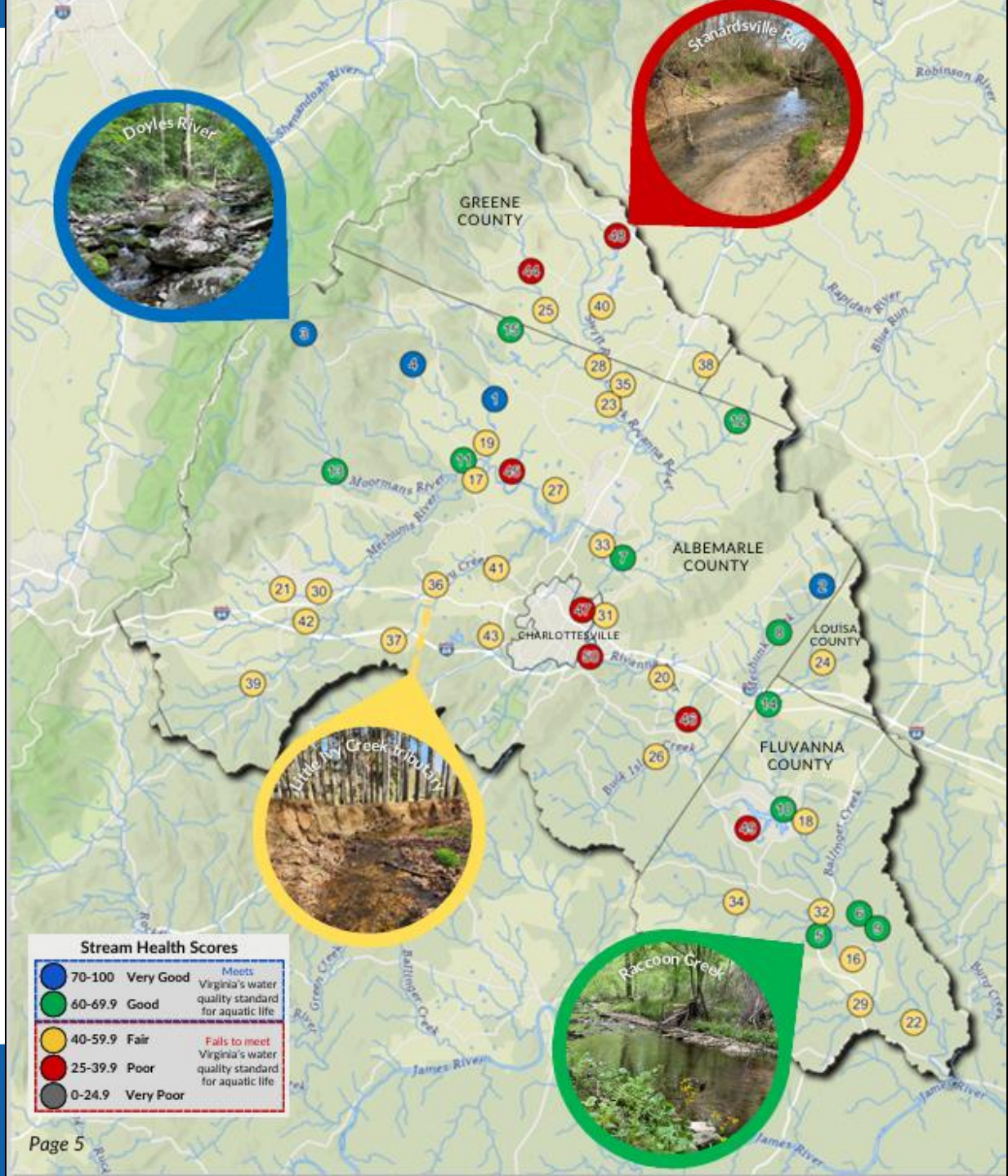
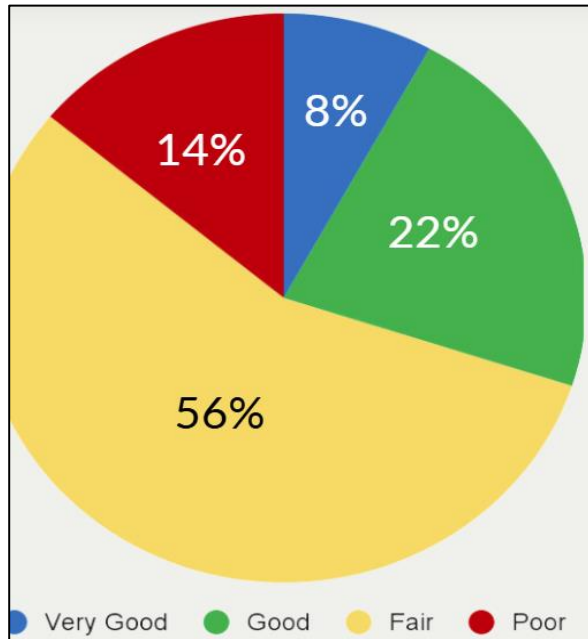




# 2021 - 2023 Biological Monitoring Results

Percent of Sites Failing to Meet Water Quality Standard for Aquatic Life = 70%

(2020-2022 = 74%)





Thank you for everything you do  
to support RCA's work!







# Crozet Wastewater Pump Station Repairs Project Construction Award and CIP Amendment

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**Presented to the Board of Directors by:**

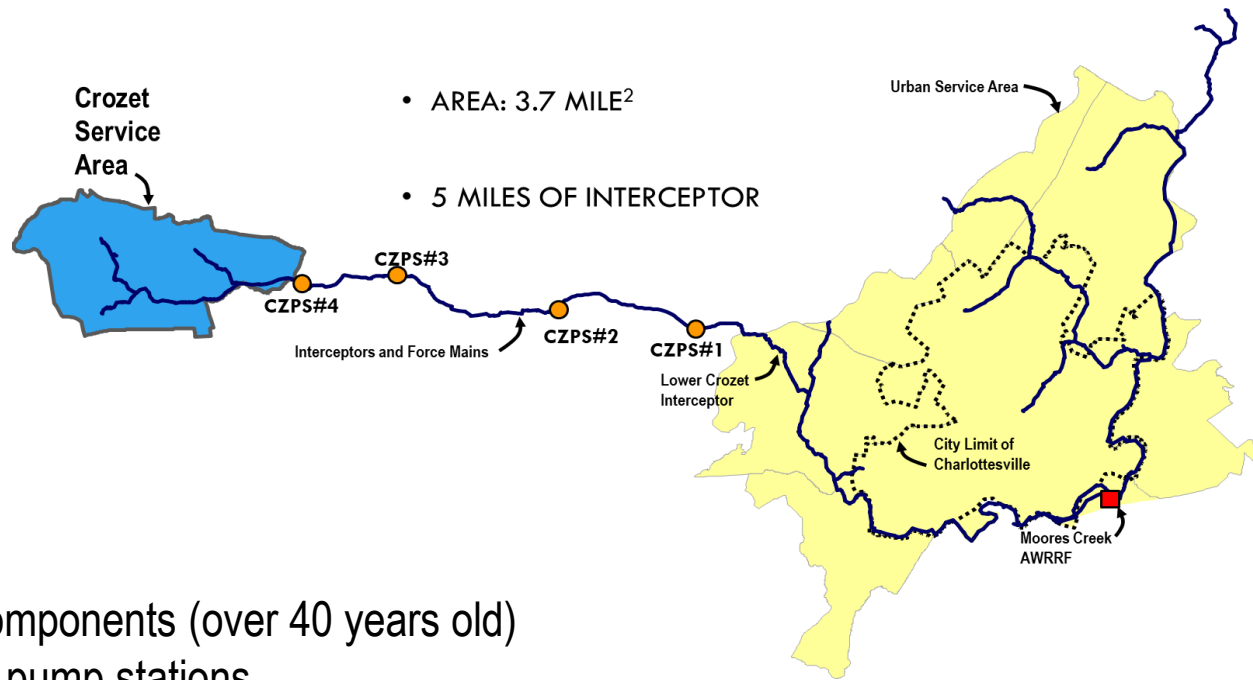
Dyon Vega, Civil Engineer

December 17, 2024





CZPS #3 Pumps



- Constructed in 1980's
- Original Pumps and Large Components (over 40 years old)
- Variable design flow between pump stations
- Recent Flow Equalization Tank (FET) upgrade - dampens peak flows from Crozet during storm events
- Crozet Sanitary Sewer flows by gravity to CZPS #4
- The flow travels downstream through force mains and pumping stations to the lower Crozet Interceptor and then is conveyed to MCAWRRF by gravity for treatment



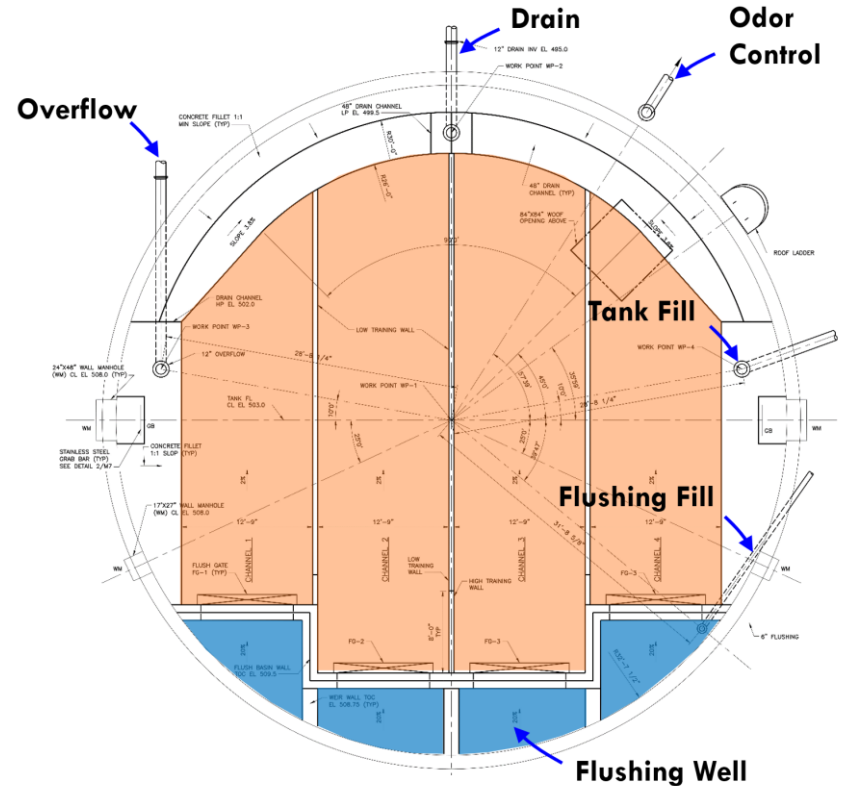
CZPS #4

# BACKGROUND AND SERVICE AREA

# CROZET FLOW EQUALIZATION TANK FUNCTION



- Designed to store wastewater during high intensity wet weather events and trim peak flows to the Urban Service Area
- Tank activates when wet well at Pump Station #4 reaches a high level
- Pumps 3 and 4 were added to CZPS #4 and are used to fill the tank during a storm event. They can also be used to convey flow downstream during normal conditions
- Tank can store up to 1 MG of wastewater and was sized to handle a 2-year design storm
- After storm event, wastewater is gradually drained from the tank and then automatic flushing occurs to clean the tank





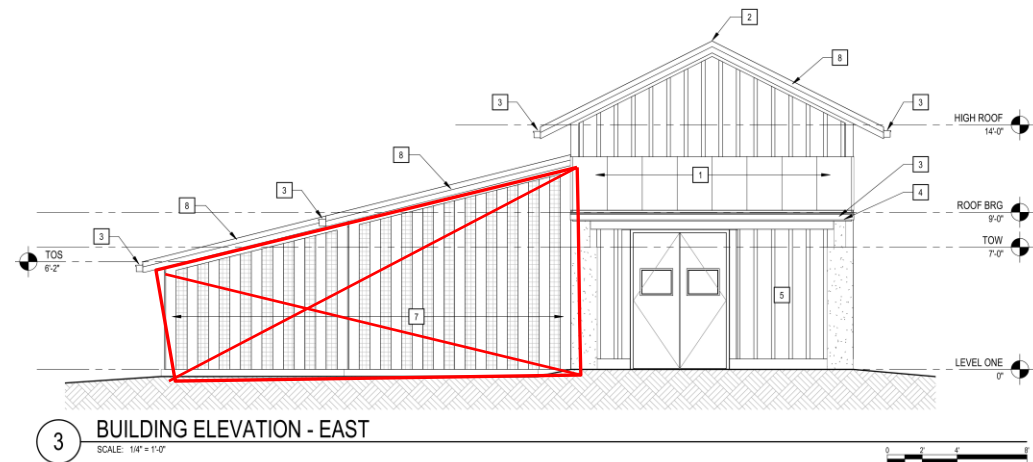
# BUDGET AND MODIFICATIONS



- Pump station 3 has a unique design based on the request of the original property owner
  - This pump station is the only station with a covering over the wet well
  - The Waco bid included replacing the covering
  - Discussions with the Contractor and Property Owner identified that elimination of this item would be a significant cost savings.
- Likewise, the Waco bid included 2 temporary diesel generators for bypass pumping, with one as a backup.
  - To save costs, they will use an electric generator with a diesel generator as a backup. This will save on fuel costs.

## CONSTRUCTION BID:

	Waco Inc.	Engineer Estimate	
	\$10.34 M	\$7.83M	
Cost Savings	\$0.76 M		
	\$9.58 M		
FY 25-29 CIP Budget:			
	Current	Amendment	Total
	\$10.9 M	+ \$1.45M	= \$ 12.35M



# QUESTIONS?

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## **Board Action Requested:**

1. Authorize the Executive Director to award a construction contract to WACO Construction Company, Inc. for a total amount of \$9,583,350 (\$10,341,000 bid amount less \$757,650 in reductions) and to approve any change orders to the construction contract necessary for completion of the work not to exceed 10% of the original construction contract award.
2. Amend the FY 25 – 29 CIP for the Crozet Wastewater Pump Station Repairs project to increase the budget by \$1,450,000. This amendment would bring the total budget for this project to \$12,350,000.





# DAM SAFETY PROGRAM OVERVIEW

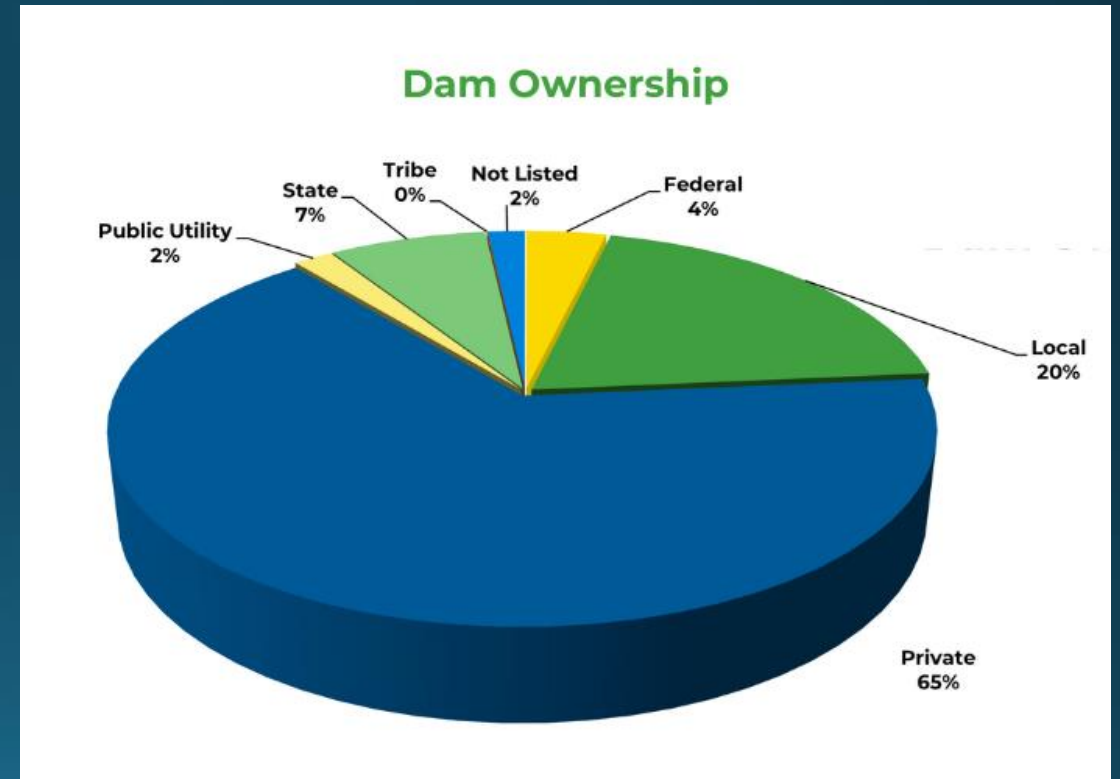
Presented to the Board of Directors by:  
**Victoria Fort**  
Senior Civil Engineer

December 17, 2024



# Why is Dam Safety Important?

- >92,000 dams in the United States
  - Average age = 61 years
- >3,700 dams in VA
  - >1,700 unknown hazard classification
- 240 dams in Albemarle County
  - 20 high hazard
  - 118 Unknown Hazard Potential Classification
- 31 dam incidents have been recorded in Virginia since 2019, 12 of which were classified as dam failures  
(Source: ASDSO Dam Incident Database)



Source: <https://damsafety.org/media/statistics>

# Why is Dam Safety Important?



- Dam failures can have catastrophic flooding consequences and cause loss of life and significant economic damage.
- Failure by overtopping due to extreme rainfall is one of the most common forms of dam failure.
- January 2024: Sugar Hollow Dam Bladder Malfunction
  - Large rapid release of water caused by failure of air piping coupling
  - Air piping modifications, additional sensors and alarms, and an audible warning system are planned for improved safety, monitoring, and public warning capabilities.
- In September 2024, Hurricane Helene brought heavy rainfall from Florida to Virginia, leading to catastrophic flooding, landslides, and widespread damage due to overflowing rivers and streams



# Virginia Dam Safety Regulations

- The Virginia Department of Conservation and Recreation (VA DCR) is Virginia's regulatory authority ensuring that Virginia's dams have proper and safe design, construction, operation, and maintenance to protect public safety.
- All dams in Virginia are subject to the VA DCR Dam Safety Regulations, except:
  - Dams under a certain size (height and/or impounded water volume)
  - Dams owned or licensed by the federal government (e.g. FERC)
  - Dams operated for mining, agricultural, or canal purposes

# RWSA Dam Safety Program

- Permitting & Regulatory Compliance
- Dam Safety Policies
- Emergency Action Plan (EAP) updates, training, and exercises (internal and regional)
- Maintenance & Vegetation Control
- Repairs/Upgrades
- Public Safety and Outreach
- Studies and Reports
- Inspections and Surveys
- Monitoring
- Operations

# RWSA/RSWA Dam Facilities

- **High Hazard Dams:**

- South Fork Rivanna Dam (FERC)
- Ragged Mountain Dam
- Sugar Hollow Dam
- Beaver Creek Dam

- **Low Hazard Dams:**

- Totier Creek Dam
- Lickinghole Creek Dam
- Buck Mountain Property

- **OTHER:**

- North Fork Rivanna Low Head Dam
- Mechums River Low Head Dam
- Ivy SWRC Pond Dam (RSWA)

# South Fork Rivanna Dam

- Federally Regulated Dam (FERC)
- Built in 1965
- Small Hydropower Facility added in 1987 (decommissioning UNDERWAY)
- Concrete Gravity Dam
- 700 feet long, 54 feet tall





# Ragged Mountain Dam

- State Regulated Dam (DCR)
- Built from 2012-2014
- Historical Dams 1885 & 1908
- Earthfill Dam
- 785 feet long, 125 feet tall
- Constructed to impound an additional 12 feet of water = 700 MG





# Sugar Hollow Dam

- State Regulated Dam (DCR)
- Built in 1948, upgraded in 1998
- Concrete Gravity Dam
- Rubber Crest Gate (replaced in 2021)
- 480 feet long, 96 feet tall



# Beaver Creek Dam

- State Regulated Dam (DCR)
- Built in 1963
- Earthfill
- 530 feet long, 60 feet tall
- Albemarle County Park in Crozet
- State Road on Crest (Browns Gap Turnpike)
- Spillway upgrade Design underway with funding from nrcs (Federal)





# Totier Creek Dam

- State Regulated Dam (DCR)
- Earthfill Dam, Built in 1971
- 277 feet long, 35 feet tall
- Albemarle County Park in Scottsville



# Lickinghole Creek Dam

- State Regulated Dam (DCR)
- Built in 1995
- Concrete gravity dam, serves as a sediment basin
- 458 feet long, 32 feet tall





# Buck Mountain Property Dam

- State Regulated Dam (DCR), low hazard potential
- Built in early 1980's, Acquired by RWSA as part of buck Mountain Property
- Earthfill
- 190 feet long, 33.5 feet tall
- Primary spillway conduit has reached the end of its useful life – dam will require repair or removal to address known deficiencies







North Rivanna Low  
Head Dam



Ivy SWRC Pond  
Dam



Mechums River Low Head Dam

# Planning For Dam Emergencies

- Dam emergencies are low probability events with the potential for extremely high impact
- Dams are designed with a high level of conservatism to minimize the potential for failure or other emergencies
- Potential causes of dam emergencies and failure:
  - Rainfall exceeds dam design
  - Material failure
  - Vandalism/terrorism
  - Accidents / public safety

# Hazard Potential Classification

- Dams are categorized according to the severity of consequences from their failure or misoperation (not a reflection of a dam's condition)

**HIGH HAZARD POTENTIAL** – upon failure would cause probable loss of life or serious economic damage

**SIGNIFICANT HAZARD POTENTIAL**– upon failure might cause loss of life or appreciable economic damage

**LOW HAZARD POTENTIAL** – upon failure would lead to no expected loss of life or significant economic damage

- Dam hazard potential dictates design criteria/spillway capacity requirements



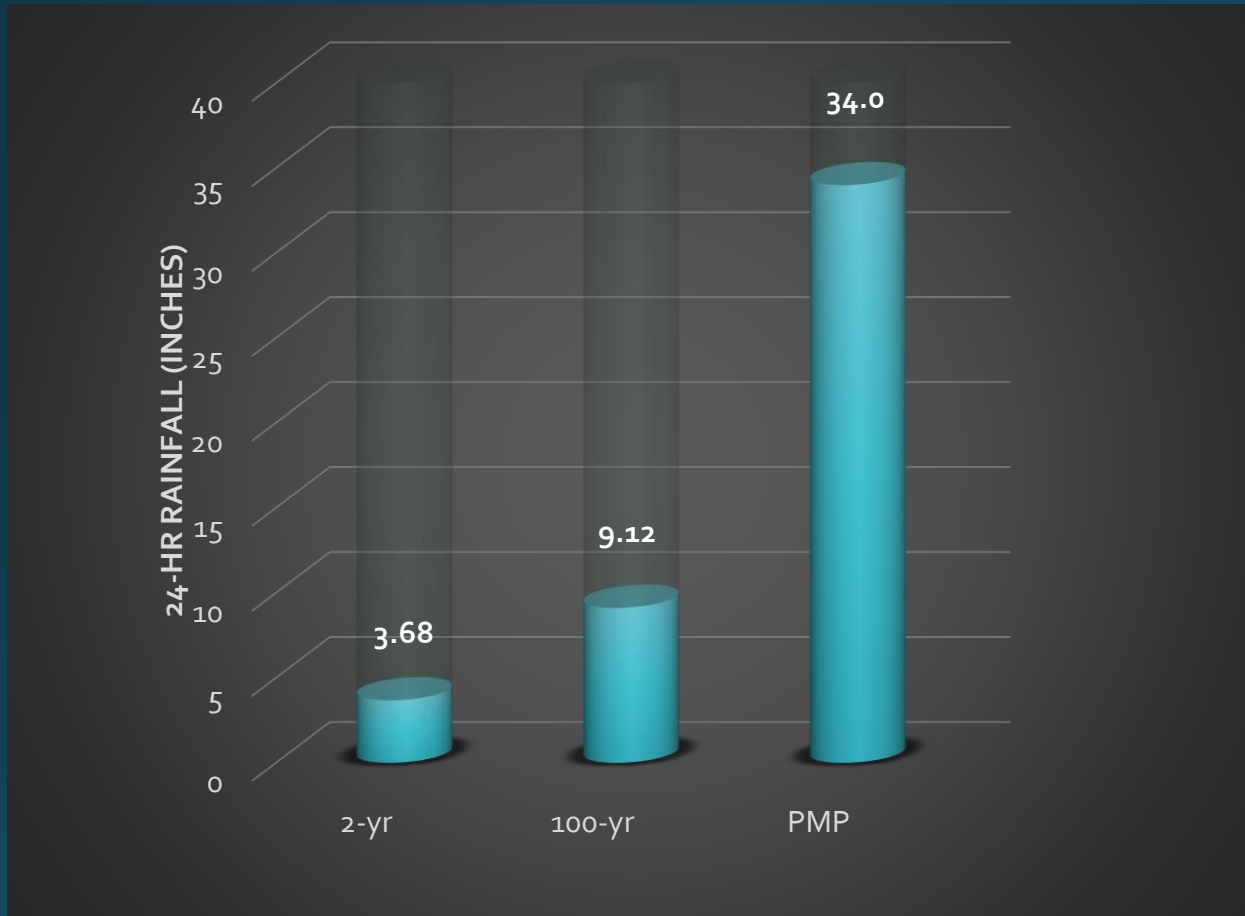
# Probable Maximum Precipitation (PMP)

*"The theoretically greatest depth of precipitation for a given duration that is physically possible over a particular drainage area at a certain time of the year."*

- American Meteorological Society, 1959

In Virginia, dams with a **high hazard potential** must be designed to pass 90% of the Probable Maximum Flood (PMF), the flood resulting from the PMP, without failure or overtopping. RWSA requires its high hazard dams to pass 100% of the PMP.

# Probable Maximum Precipitation (PMP)



- PMP is different for each watershed and storm duration
- The chart to the left shows the 2-year, 100-year, and PMP storm rainfall amounts for a 24-hour storm event in the Sugar Hollow watershed
- Hurricane Camille (Nelson County, 1969): >27" of rain overnight, 81% of the PMP
- Madison County (1995): 25-30" of rain in 16 hours, 86% of the PMP

Rainfall Recurrence Intervals for Charlottesville Area, from NOAA Atlas 14 (Volume 2, Version 3) & VA DCR PMP Study for Virginia, November 2015

# Dam Emergency Action Plans

- An Emergency Action Plan (EAP) is a set of preplanned actions to minimize or alleviate emergency conditions at the dam.
  - Contains procedures and information on issuing early warning notifications to minimize loss of life and property damage during an emergency event.
  - Requires coordination among VDEM, ECC, local police, fire and rescue, VDOT, media, local government, and others
- RWSA maintains EAPs for each of its four high-hazard dam. Updates are underway and will be distributed in 2024.

# Dam Emergency Action Plans

EMERGENCY ACTION PLAN  
SOUTH RIVANNA DAM

FERC Project Number P-6841  
NATDAM No. VA83007

Rivanna Water and Sewer Authority  
695 Moores Creek Lane  
Charlottesville, VA 22902  
(434) 977-2970

External Copy

Revised:  
February 2022

CONFIDENTIAL - Protected from  
Disclosure under FOIA,  
Va. Code 2.2 - 3705.2.4

EMERGENCY ACTION PLAN  
New Ragged Mountain Dam

DCR Inventory No.: 003053

High Hazard Dam

Rivanna Water and Sewer Authority  
695 Moores Creek Lane  
Charlottesville, VA 22902  
(434) 977-2970

External Copy

Revised:  
February 2022

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Disclosure under FOIA,  
Va. Code 2.2 - 3705.2.4

EMERGENCY ACTION PLAN  
SUGAR HOLLOW DAM

Inventory No. VA 003124

Rivanna Water and Sewer Authority  
695 Moores Creek Lane  
Charlottesville, VA 22902  
(434) 977-2970

External Copy

Revised:  
February 2022

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Disclosure under FOIA,  
Va. Code 2.2 - 3705.2.4

EMERGENCY ACTION PLAN  
BEAVER CREEK DAM

Inventory No. VA 003122

Rivanna Water and Sewer Authority  
695 Moores Creek Lane  
Charlottesville, VA 22902  
(434) 977-2970

External Copy

Revised:  
February 2022



# Responsibilities under the EAP's

- **RWSA:**

- Verify and assess emergency conditions at the dam
- Notify participating emergency management agencies
- Take corrective action at facility, if possible
- Issue condition status reports
- Declare termination of emergency at facilities

- **Outside Agencies (Emergency Communications Center, County and City Governments):**

- Receive condition status reports from RWSA
- Notify public
- Coordinate and conduct evacuation from inundation areas, if required
- Provide mutual aid, if requested and able

# EAP Notification Charts

- EAPs provide descriptions of various emergency scenarios and three emergency stages:

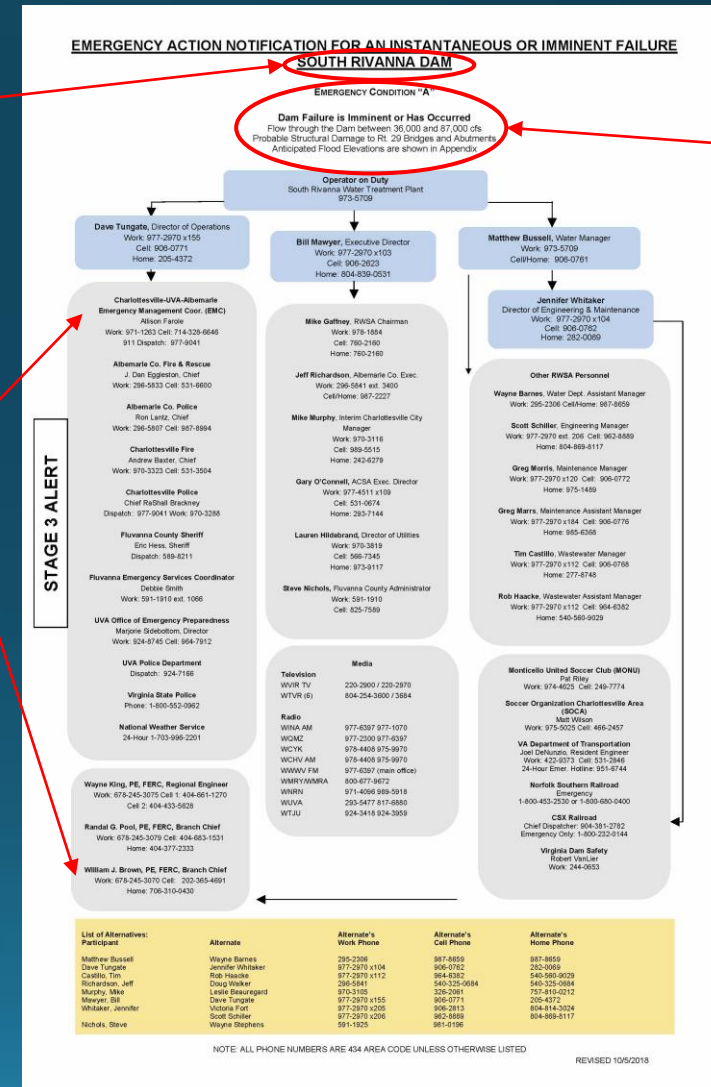
- Non-failure Emergency Condition (Stage I)
- Potential Failure Situation Is Developing (Stage II)
- Failure Is Imminent Or Has Occurred (Stage III)

- Written message prompts are provided for clear, concise communication

Dam Facility Name

Event Scenario & Description

Notification Calldown List







# RWSA Dam Projects

## **Underway Or Recently Completed:**

- South Rivanna Dam hydropower decommissioning (complete pending final FERC approval)
- Sugar Hollow Dam Bladder Air Piping Modifications (anticipated Jan-Feb 2025)

## **Planning or Design Phase:**

- Beaver Creek Dam spillway upgrades – final design underway (NRCS funded)
- Dam Concrete & Steel Repairs
- Sugar Hollow Dam Audible Warning (Siren) System
- Public Safety Plan & Signage Design
- Buck Mountain Property Dam Remediation

## **Annual Maintenance And Permitting Activities:**

- Monthly tree and brush clearing, seasonal clearing of brush in stream channels
- Instrumentation maintenance & calibration
- EAP tabletop planned for 2025 for Ragged Mountain and South Rivanna Dams



Questions?