



RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
July 28, 2020

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, July 28, 2020 at 2:16 p.m. via Zoom.

Board Members Present: Mike Gaffney, Dr. Tarron Richardson (arrived at 2:21 p.m.), Dr. Liz Palmer, Jeff Richardson, Gary O’Connell, Lauren Hildebrand.

Board Members Absent: Lloyd Snook.

Rivanna Staff Present: Bill Mawyer, Katie McIlwee, Lonnie Wood, Jennifer Whitaker, Matt Bussell, Andrea Terry, John Hull.

Attorney(s) Present: Kurt Krueger.

1. CALL TO ORDER

Mr. Gaffney called the July 28, 2020 regular meeting of the Rivanna Water and Sewer Authority to order at 2:16 p.m.

2. STATEMENT FROM THE CHAIR

Mr. Gaffney read the following statement aloud:

“Notwithstanding any provision in our Bylaws to the contrary, as permitted under the City of Charlottesville’s Continuity of Government Ordinance adopted on March 25, 2020, Albemarle County’s Continuity of Government Ordinance adopted on April 15th, 2020, and Chapter 1283 of the 2020 Acts of the Virginia Assembly effective April 24, 2020, and the Resolution of the Authority authorizing the adoption of procedures for electronic public meetings and public hearings, adopted by the Authority on May 26, 2020, we are holding this meeting by real time electronic means with no board member physically present at a single, central location.

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

Mr. Gaffney called the roll call.

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

47 Mr. Gary O'Connell stated that he was located at 168 Spotnap Road.

48
49 Dr. Lizbeth Palmer stated that she was located at 2958 Mechum Banks Drive in Albemarle County.

50
51 Mr. Jeff Richardson stated that he was located at 401 McIntire Road (Albemarle County Office
52 Building) in Charlottesville.

53
54 Mr. Mike Gaffney stated that he was located at 3180 Dundee Road in Earlysville.

55
56 Mr. Gaffney noted that Dr. Tarron Richardson and Mr. Lloyd Snook had not joined the meeting.

57
58 Mr. Gaffney stated that the following Authority staff members were joining the meeting: Bill
59 Mawyer (Executive Director), Lonnie Wood (Director of Finance and Administration), Jennifer
60 Whitaker (Director of Engineering and Maintenance), Dave Tungate (Director of Operations),
61 Andrea Terry (Water Resources Manager), Katie McIlwee (Communications Manager and
62 Executive Coordinator), and John Hull (Software Analyst).

63
64 Mr. Gaffney stated that they were also joined electronically by Mr. Kurt Krueger (Counsel to the
65 Authority).

66

67 **3. MINUTES OF PREVIOUS BOARD MEETINGS**

68 *a. Minutes of Regular Board Meeting on June 23, 2020*

69

70 Mr. Gaffney asked board members if they had comments or changes.

71

72 Dr. Palmer stated that she had one small change that she had already sent Ms. McIlwee. She
73 stated this change was on line 49 and was a correction of the spelling of her name.

74

75 Dr. Palmer stated that in the minutes of the last meeting, Mr. Mawyer mentioned that they
76 received the \$341,000 grant from Natural Resource Conservation Service (NRCS) and that it
77 would pay for 70% of the cost of design and construction. She stated that she was curious as to
78 what this was for -- if it was for the design of the pipeline, or what the 70% of the cost of design
79 and construction was for, as it did not say it in the minutes, and she could not recall.

80

81 Mr. Mawyer replied that the \$341,000 is to pay for a planning study for the Beaver Creek Dam
82 modification project. He stated that when this is finished, they will apply for design and
83 construction dollars for the projects, which would include the dam as they modify the spillway.
84 He stated that they hope NRCS will also pay for a portion of the cost to construct the new raw
85 water pump station, and possibly the pipe from the pump station to the Crozet water treatment
86 plant. He stated that they will pursue funding for all of the work, but they have to work with
87 NRCS to see what parts they would approve.

88

89 Dr. Palmer asked if they were talking about the infrastructure from Ragged Mountain to
90 Observatory Hill, predominantly.

91

92 Mr. Mawyer replied no. He stated that this was for the Beaver Creek Dam project.

93
94 Dr. Palmer stated that this made more sense. She stated that it didn't say this in the minutes and
95 that it looked like it went with Ragged Mountain, so she was confused and could not remember.

96
97 Mr. Mawyer stated that there was no grant money for the pipeline from Ragged Mountain to the
98 Observatory WTP. He stated that the Beaver Creek Dam work is based on the dam safety
99 standards that were changed some years ago, requiring a larger spillway. He stated that NRCS,
100 which is part of the federal Department of Agriculture, gets some federal funding to support
101 these types of projects, which is what Rivanna is applying for.

102
103 Dr. Palmer suggested that they look at lines 201-203 in the minutes to see if there was something
104 missing. She stated that if someone goes and reads this, they will not recognize that it goes with
105 the Beaver Creek Reservoir. She stated that she was sure that when Mr. Mawyer was speaking,
106 he gave that information, but it was not in the minutes.

107
108 Mr. Mawyer stated that they could insert some words that would make it clear that it was for the
109 Beaver Creek Dam Improvement Project.

110
111 Mr. Krueger stated that they could do this as an editor's footnote at the bottom.

112
113 Mr. Krueger noted that Dr. Richardson had joined the meeting.

114
115 Dr. Tarron Richardson stated that he was located at City of Charlottesville City Hall.

116
117 **Mr. O'Connell moved that the board approve the minutes of the previous board meeting,**
118 **with the editor's note and the correction on line 49. The motion was seconded by Dr.**
119 **Palmer and passed unanimously (6-0). (Mr. Snook was absent.)**

120
121 **4. RECOGNITIONS**

122 There were no recognitions.

123
124 **5. EXECUTIVE DIRECTOR'S REPORT**

125 Mr. Mawyer stated that he wanted to congratulate and recognize Mr. Brian Haney, who was
126 recently promoted to the Wastewater Assistant Manager position at Rivanna. He stated that Mr.
127 Haney has been on the team at Rivanna for over 18 years, so they were pleased to have an
128 internal promotion to Assistant Wastewater Manager.

129
130 Mr. Mawyer stated that they continue to work on the South Rivanna to Ragged Mountain
131 Reservoir waterline easements. He stated that he understood that it is on City Council's agenda
132 for August to grant easements for four properties near the Ragged Mountain Reservoir. He stated
133 that this will help Rivanna, which is also working with all the other property owners.

134
135 Mr. Mawyer stated that as a Strategic Plan goal for operational optimization, he wanted to note
136 that Rivanna bought a piece of laboratory equipment back in the spring. He stated that as of June,
137 it was certified by the state's Virginia Department of Consolidated Lab Services to run
138 wastewater samples on the new machine. He stated that this is saving Rivanna about 16

139 employee hours every month, rather than having to do the samples the manual way. He stated
140 that this was a good choice, and they commend Dr. Bill Morris (Lab Manager) for bringing this
141 suggestion forward to purchase the equipment.

142
143 Mr. Mawyer stated that they are working with several research groups from UVA who are
144 investigating the presence of the COVID virus in the wastewater sludge. Rivanna is providing
145 the researchers with access to their sludge product.

146
147 Mr. Mawyer stated that on the state front, the board members may have read that the Virginia
148 Department of Labor and Industry just passed new emergency regulations to prevent the spread
149 and to protect employees from COVID. He stated that these regulations went into effect on
150 Monday July 27, 2020, and Rivanna is working with the new regulations to determine how this
151 impacts them.

152
153 Mr. Mawyer stated that generally, the new regulations require many of the things that everyone
154 has been doing to date such as Personal Protective Equipment (PPE) and distancing at work with
155 employees. He stated that Rivanna is required to give notice to all employees if they have a
156 positive employee in the workspace. He stated that it sets forth some return to work requirements
157 on how they should clear employees who would be positive for the virus, and when they can
158 return to work.

159
160 Mr. Mawyer stated that Rivanna is trying to absorb and digest the new regulations. He stated that
161 they do not see many significant differences to what they are already doing.

162
163 Mr. Mawyer stated that it has been hot, and that Rivanna is monitoring the reservoirs. He stated
164 that the good news is that all the reservoirs continue to overflow, except for Ragged Mountain.

165
166 Mr. Mawyer presented a statewide map that was put together by DEQ, noting that they are
167 starting to see some yellow blocks throughout the eastern half of the state now. He stated that in
168 the Central Piedmont area, the yellow block means there is a watch on the groundwater level. He
169 stated that the other green blocks in their region indicate that they have normal precipitation,
170 reservoir levels, and stream flows. He stated that the lone red block on the map is the Northern
171 Coastal Plain area (King George County, Caroline, Westmoreland, King and Queen, and
172 Gloucester).

173
174 Mr. Mawyer stated that Rivanna will continue to monitor this situation. He stated that they have
175 had high urban water demand of up to 12 million gallons per day (mgd) in the urban area and
176 that in Crozet, it has been exceedingly high, with an almost 1 mgd demand on a few days the
177 prior week. He stated that they are monitoring this situation and as the board knows, Rivanna is
178 expanding the Crozet Water Treatment Plant, which currently treats 1 mgd, which is the
179 maximum. He stated that they will grow to 2 mgd when the treatment plant is finished in the next
180 6-10 months.

181
182 Mr. Mawyer stated that they are also working with DEQ on getting a permit so they can
183 withdraw more water from Beaver Creek Reservoir.

184

185 Mr. Mawyer stated that as they transition from FY 20 into FY 21, he wanted to mention a couple
186 of projects that they are finishing, and those they are starting.

187
188 Mr. Mawyer stated that they had a small project near Albemarle High School to demolish an
189 existing wastewater concrete basin. He stated that this was an overflow basin, and that there is a
190 pump station near that area that serves all the schools. He stated that when they would lose
191 power in the distant past, the wastewater would overflow into the concrete basin. He stated that
192 as seen in the photo he presented, the concrete basins have been removed, and they are filling
193 them in to plant grass. He stated that they intend to help and allow the School Division to use
194 that area. Mr. Mawyer stated that this was a small project, but one that had a safety and viewshed
195 issue near Albemarle High School.

196
197 Mr. Mawyer stated that there is also a project where they are going to clean out the two large
198 retention ponds that hold about 3 million gallons of overflow wastewater at Moores Creek. He
199 stated that they will drain those two ponds and take out all the sludge that has been there to get
200 rid of it, which is an odor control measure. He stated that this will go on from September through
201 March of 2021.

202
203 Mr. Mawyer stated that there is a small project at the Scottsville facility to increase the
204 disinfection equipment over the next half of the year.

205
206 Mr. Mawyer stated that earlier, they had talked about the Beaver Creek Dam and Pump Station
207 project. He presented a map of the future pump station site, noting that there is a project to put in
208 a new labyrinth spillway. He stated that it will be a concrete chute that goes through the middle
209 of the dam. He stated that there will be a bridge that will be on Browns Gap Turnpike. He stated
210 that the pump station shown in the picture he presented exists below the dam, and must be
211 moved, as it will be in the way. He stated that they plan to move this to the future pump site on
212 the west side of the reservoir, which is on County-owned property. He stated that they will have
213 a meeting with County staff tomorrow about this, and that they have talked with Mr. Bob
214 Crickenburger, County Parks Director.

215
216 Mr. Mawyer stated that some of the neighbors there that they will need easements from have not
217 been happy that Rivanna plans to come across their property. He stated that in fact, staff will
218 have a meeting with some of those neighbors that afternoon.

219
220 Mr. Mawyer stated that there is another big project to construct a 1-million-gallon concrete tank
221 off of Routes 250 and 240 that supports Crozet. He stated that this tank will hold excess sewage.
222 They will take it out of the pipes and put it in the tank when there is a rainstorm. He stated that
223 when the flow in the pipe subsides, they put the wastewater back into the pipe on its way to
224 Moores Creek, which helps to minimize any sewer overflows along that path between Crozet and
225 Moores Creek.

226
227 Mr. Mawyer stated that this concluded his report, which gave an overview of what is coming up
228 as well as some items that were on the consent agenda that day.

229

230 Mr. Gaffney asked Mr. Mawyer if he had any idea when the UVA researchers will come up with
231 any report on what they are finding in the wastewater sampling.

232
233 Mr. Mawyer replied that he did not know the schedule. He stated that he understood that they
234 were trying to get some base data before the students actually return en masse so they can then
235 use to compare the data after the students are back.

236
237 Mr. Gaffney stated that they may not hear anything until September or October.

238
239 Mr. Mawyer stated that it would be at least the latter part of August.

240
241 Mr. Richardson stated that regarding the Moores Creek sludge treatment work that will be done
242 between September and March, he understood Mr. Mawyer to say that this work is an effort with
243 continued focus on odor control.

244
245 Mr. Mawyer stated yes.

246
247 Mr. Richardson asked if while that work is underway between September through March, the
248 fact that the work is in progress in order to treat this will create more of an odor control problem
249 during that timeframe.

250
251 Mr. Mawyer replied that it could because they keep the sludge covered with water now to keep
252 the odors underneath the water. He stated that they will have to pump the water out to remove
253 the sludge. He stated that this has been done in the past, to a small degree, but that they usually
254 notify all the neighbors that this will be done and provide them with a contact if there is an odor
255 issue. He stated that he is hopeful that it will not be a significant problem, but there is the
256 potential for that.

257
258 Mr. Richardson stated that Mr. Mawyer answered his second question regarding neighbor
259 outreach for these programs.

260
261 **6. ITEMS FROM THE PUBLIC**

262 Mr. Gaffney opened the meeting to the public.

263
264 Hearing no comments, Mr. Gaffney closed Items from the Public.

265
266 **7. RESPONSES TO PUBLIC COMMENT**

267 As there were no public comments, there were no responses.

268
269 **8. CONSENT AGENDA**

270 *a. Staff Report on Finance*

271
272 *b. Staff Report on Operations*

273
274 *c. Staff Report on Ongoing Projects*

275

- 276 d. *Staff Report on Wholesale Metering*
277
278 e. *Sewer Use Regulations Update*
279
280 f. *Construction Contract Award – MC Slide Gate Improvements Project – Waco, Inc.*
281
282 g. *Capital Improvement Plan Amendment– Scottsville Water Treatment Plant LT2 Improvements*
283
284 h. *Construction Contract Award and Capital Improvement Plan Amendment– Crozet Flow*
285 *Equalization Tank – Anderson, Inc.*
286

287 **Dr. Palmer moved that the board approve the Consent Agenda. The motion was seconded**
288 **by Mr. O’Connell and passed unanimously (6-0). (Mr. Snook was absent.)**
289

290 **9. OTHER BUSINESS**

- 291 a. *Presentation: Bond Rating & Reserves Review; Lonnie Wood, Director of Finance and*
292 *Administration*

293 Mr. Lonnie Wood stated that in May, there had been some questions during the presentation of
294 the budget about reserve levels and bond ratings. He stated that this will be a quick presentation
295 on some of those questions that were asked.
296

297 Mr. Wood stated that the bond rating agencies generally have a credit rating between AAA down
298 to D. He stated that he would show the board a chart of what those mean. He stated that those are
299 more of a snapshot in time bond rating based on what one’s current financials are and the
300 previous 5-6 years of financials. He stated that the agencies sometimes provide an outlook with
301 the rating, by industry, on what the future prospect looks like.
302

303 Mr. Wood stated that Rivanna received a bond rating review back in April from Moody’s, and
304 that they typically do this once every year or two. He stated that Standard & Poor normally does
305 this when there is a publicly traded bond issue. He stated that Moody’s gave Rivanna a rating,
306 and that Rivanna retained its Aa2 rating. He stated that they had no future outlook for Rivanna,
307 which is typical. He stated that this is called a surveillance rating.
308

309 Mr. Wood stated that to highlight some of Moody’s comments, they say that Rivanna’s credit is
310 a high quality at its Aa2 rating, which is above the median for water and wastewater systems
311 nationwide. He stated that part of that strong rating is because Rivanna has ample liquidity, but
312 they also have a higher than average debt load profile and a narrow debt service coverage. He
313 stated that he would explain what those mean momentarily.
314

315 He stated that Rivanna has 765 Days Cash on Hand, which is excellent, but they also have 5.5x
316 their operating revenue in debt load, which is very heavy compared to the median.
317

318 Mr. Wood presented a slide showing Rivanna's metrics compared to the U.S. median. He stated
319 that the debt service coverage is basically a factor of two numbers on the slide. He stated that
320 they take the net revenue and divide it by the amount of their annual debt service to get their debt
321 service factor. He stated that what this means is that for every \$1 in debt payment they have, they
322 have \$1.39 in net revenue to pay for it. He stated that the median for the U.S. is 2.3x, which
323 means Rivanna is a little low there.

324

325 Mr. Wood stated that Moody's is saying Rivanna's trend is stable because there is little change
326 over the last 4 out of 5 years. He stated that Days Cash on Hand is 765 and that the U.S. median
327 is about 440. He stated that for being weak in one area, they are strong in this area.

328

329 Mr. Wood stated that they were a little heavy on their debt-to-operating revenue versus the U.S.
330 average. Mr. Wood indicated that Moody's uses other environmental factors for rating such as
331 median family income and remaining useful life.

332

333 Mr. Wood indicated on the slide to a separate score Moody's gives on certain parts of the review.
334 He stated that rate management and budgeting is Aa, which is a good, strong rating. He stated
335 that regulatory compliance and capital planning was given an A, and that he was not sure why.
336 He stated that this is usually because there is a big debt load.

337

338 Mr. Wood stated that Bba is a fairly low rating for the rate covenant. He stated that Rivanna's
339 rate covenant was created back in 1979, and the biggest thing in the rate covenant says that they
340 have a minimum of 1.0, which is a dollar-for-dollar ratio. He stated that for every dollar of debt
341 service they have, they have to have a dollar of net revenue to pay for it.

342

343 Mr. Wood presented a slide that graphed the same numbers from the other page.

344

345 Mr. Wood presented a chart on what the ratings mean. He stated that Rivanna is Aa2 with
346 Moody's, and an AA+ with S&P, which means they are a high-grade, investment-grade bond
347 rating. He stated that when they were at a Bba, the rate covenants were down in the non-
348 investment grade category. He stated that their minimum per the rate covenant is not a good
349 metric to go by.

350

351 Mr. Wood stated that every year, Davenport puts together the same numbers and some
352 comparisons on how Rivanna compare against some select utilities in Virginia. He stated that
353 presented the numbers for liquidity and Days Cash on Hand, at the 700+ mark. He indicated on
354 the slide to how this is computed, and how Rivanna compares to some of the localities in the
355 state and to the national average AAAs and AAs.

356

357 Mr. Wood presented the debt balance over the last 10 years, which has gone from \$57 million to
358 \$200 million, which is basically a 350% increase. He stated that they have had some major
359 projects such as the Ragged Mountain Dam, GAC, Rivanna Pump Station, and the beginning of
360 the upgrades to South Rivanna and Observatory.

361
362 Mr. Wood presented Rivanna's debt service ratio and policy target. He stated that they had their
363 financial policies approved several years ago, and have a policy target of 1.5x. He stated that
364 they have been hitting that over the last ten years, except for the last couple years. He stated that
365 this is the 1:1 ratio he spoke about in the rate covenant, and how their debt service coverage
366 stacks up. He stated that they are low on the debt service ratio comparisons, and were high on the
367 liquidity and Days Cash on Hand. He stated that these balance each other out to bring Rivanna
368 up to the Aa2 rating.

369
370 Mr. Wood presented more comparisons. He indicated to an area on the slide, explaining it was
371 how Moody's compares the 1.50x to 1.25-1.70x ratio, which is where they fall, which is an A
372 rating. He stated that the Days Cash on Hand brings the A rating up, so there are some balancing
373 factors. He stated that this is how S&P looks at those particular metrics.

374
375 Mr. Wood indicated on the slide to Rivanna's debt service coverage for 2021, based on their
376 budget numbers. He stated that they were able to use reserves that year instead of having rate
377 increases, which kept this down. He stated that before COVID and the budget adjustments
378 happened, the debt service ratio was around 1.3. He presented the numbers of where the budget
379 was for the last few years. He stated that in 2019, there was a budget target of 1.35. He stated
380 that they were at 1.38 for 2019, which was close to hitting the budget target.

381
382 Mr. Wood stated that with regard to reserve balances, they track their reserves by all the major
383 rate centers. He stated that back in January, there was a presentation done on the rate centers and
384 why they were set up that way. He stated that it was mainly due to the four-party agreement. He
385 stated that the two main ones the City and County are partners on are the two urban rate centers.
386 He indicated on the slide to the reserve balance in each one.

387
388 Mr. Wood stated that urban water had a balance at the beginning of the year of \$14 million and
389 was now down to \$13 million because there was a deficit they had to fund. He stated that they
390 are also using quite a bit of money over the next five years to transfer to their capital fund.

391
392 Mr. Wood indicated on the slide the use of reserves for GAC. He stated that the \$756,000 figure
393 was new that year, and that they were using this to balance out the budget to reduce the need for
394 rate revenue. He indicated to a blank space on the graph and stated that he highlighted this in
395 yellow because they would probably do the same thing for 2022, but they do not know how
396 much yet.

397
398 Mr. Wood stated that the same was true for wastewater, for which they were using \$4.25 million
399 for CIP. He stated that he updates this information every year after the year has ended, so these
400 were not audited.

401
402 Mr. Wood stated that they were trending downward in urban water. He stated that if they have
403 more deficits, they will likely back off some of the transfers. He stated that every year they
404 adjust the 5-year reserve plan based on what actually happens in any given year.

405
406 Mr. Wood stated that the smaller rate centers don't have nearly as much of a reserve because
407 they are much smaller, but they do the same thing.

408
409 Mr. Wood stated that they use this in their capital planning as far as how much they can transfer
410 to the capital fund to offset the need for new debt. He stated that if they have good years, they
411 will plug resulting from the surpluses. He stated that if there are bad years, they will readjust
412 reserves down. He indicated on the slide to where they are using reserves to balance out the need
413 for rate center charges. He then indicated on the slide to where they are using reserves for GAC.

414
415 Mr. Wood stated that overall, Rivanna has maintained its Aa2 rating with Moody's. He stated
416 that Days Cash on Hand is 765, which is very strong. He stated that rate management and budget
417 management are AA. He stated that the operating-to-debt ratio and the debt service coverages are
418 not as strong as the medians, which balances out the Days Cash on Hand. He stated that to get
419 this number up, they will have to start seeing rate increases again in order to maintain an
420 aggressive CIP program. He stated that they have adequate (but declining) reserves, which offset
421 the strong factors.

422
423 Dr. Palmer stated that this was helpful, and that she had a few questions about the covenant that
424 she would ask later, after she reviews this information once more. She stated that she would
425 either send Mr. Wood an email or ask him about it at the next meeting.

426
427 Mr. O'Connell thanked Mr. Wood for putting this together and stated that it was useful.

428
429 *b. Presentation: Bond Rate Reset Resolution – 2014a Bond And 2005a Bond; Lonnie Wood,*
430 *Director of Finance and Administration*

431
432 Mr. Wood stated that with the interest rates being down so low, he and Davenport (Rivanna's
433 financial advisor) have taken a look at many of their bonds to see which ones could possibly
434 qualify for a refunding or refinancing. He presented two particular bonds that are eligible and are
435 part of the state's revolving loan fund. He stated that Rivanna can do something called a rate
436 reset or rate modification, which is a very efficient way to refinance their bonds.

437

438 Mr. Wood stated that last November, they issued new bonds to replace the old bonds, with a new
439 interest rate. He stated this takes more closing costs and underwriters.

440

441 Mr. Wood stated that the bottom line is that they are going to refinance about \$25 million in
442 outstanding debt by doing a rate reset. He stated that the rates on the two bonds will decrease
443 from 2.45-3.00% on the existing bonds down to 1.0-1.6% . He stated that the new rate will go
444 into effect after October 1, and they will have roughly an annual savings of \$120,000 a year until
445 the year 2036, which is the original term of the bonds. He stated that over that term, it will save
446 approximately \$1.84 million in total net present value.

447

448 Mr. Wood stated that in order to move forward with this financing, they will have a closing
449 sometime in mid-to-late August, and perhaps even early September. He stated that the board will
450 need to approve the attached resolution authorizing certain amendments in connection with the
451 cost of fund reductions, and the two attached allonges for the 2005A and 2014A bonds,
452 evidencing the change in cost of funds.

453

454 Mr. O'Connell stated this was good work and incredible savings.

455

456 Dr. Palmer agreed. She asked if they could find any more savings.

457

458 Mr. Wood stated that they would wait until about January to take another look and see which
459 ones may be beneficial. He stated that in November last year, they did this as well, in a different
460 way. He stated that over the last 12 months, with this and with the November action, they are
461 saving a total of about \$240,000 to \$250,000 per year.

462

463 **Mr. O'Connell moved to approve the bond rate reset resolution and the allonges. The**
464 **motion was seconded by Dr. Palmer. Mr. Gaffney asked Mr. Krueger to take a roll call**
465 **vote:**

466

467 **Ms. Hildebrand: Aye**

468 **Dr. Richardson: Aye**

469 **Mr. Gaffney: Aye**

470 **Dr. Palmer: Aye**

471 **Mr. Richardson: Aye**

472 **Mr. O'Connell: Aye**

473 **Mr. Snook: Absent**

474 *c. Presentation: Annual Reservoir Report; Andrea Terry, Water Resources Manager*

475 Ms. Andrea Terry stated that she would talk about the reservoir monitoring program and provide
476 an update. She stated that there would be a summary of bathymetric surveys, and also talk about
477 a new survey that was done in the past year. She stated that she would also talk about source

478 water protection and the initiatives they are working on, as well as outreach activities and partner
479 coordination.

480

481 Ms. Terry presented a schematic of the water supply reservoirs, with the three urban reservoirs
482 across the top (Ragged Mountain, Sugar Hollow, and South Rivanna). She stated that those are
483 the reservoir sources of supply for the urban area. She stated that they also have reservoirs at
484 Totier Creek and Beaver Creek, which supply Scottsville and Crozet, respectively.

485

486 Ms. Terry presented a picture of Albemarle County, broken out by its drinking water watersheds.
487 She stated that Sugar Hollow reservoir was located at the top, with the Beaver Creek Reservoir
488 just below it. She stated that they can see the tiny Ragged Mountain watershed, which is so much
489 smaller. She stated that all of those are part of a greater Rivanna River watershed. She stated that
490 the Totier Creek Reservoir could be seen near Scottsville.

491

492 Ms. Terry presented numbers associated with these thoughts. She stated that the volumes she
493 listed on the slide are usable storage volumes (not total storage). She stated that this is what is
494 usable for water supply. She stated that at Ragged Mountain, there is 1.4 billion gallons. She
495 stated that it has the smallest watershed, at a little less than 2 square miles. She stated that at
496 South Rivanna, they have 884 million gallons, but this watershed is 259 square miles. She stated
497 that this helps the board see the differences between the size of the watershed and the volumes
498 that can be taken from them, as well as their surface areas.

499

500 Ms. Terry stated that in the past, a Reservoir Water Quality and Management Study Report was
501 done. She stated that this report came out in 2016 and was presented to the board. She stated that
502 it came from work from mid-2014 up through 2016 on water quality. She stated that they
503 identified water quality concerns in the reservoirs and evaluated potential management methods.
504 She stated that DiNatale Water Consultants was the firm that did that.

505

506 Ms. Terry stated that they then decided they wanted to go back and investigate further with
507 Beaver Creek and South Rivanna Reservoirs, as they were finding they were having more algal
508 issues at those two reservoirs. She stated that they wanted to understand them better and have
509 DiNatale Water Consultants refine what they recommended Rivanna to do to address the algae.

510

511 Ms. Terry stated that one of the things the consultants recommended Rivanna to do is put a
512 hypolimnetic oxygenation system in Beaver Creek. She stated that this has been included as part
513 of the upgrade plans for the Beaver Creek Dam Modification project and Pump Station Project.

514

515 Ms. Terry stated that Rivanna's reservoir monitoring program includes the goal to collect data to
516 understand the biological processes in the reservoirs and use that information to inform their
517 water treatment decision making.

518

519 Ms. Terry stated that they began the detailed monitoring program in 2014. She stated that they
520 basically do bi-weekly sampling (meaning every two weeks) at the urban reservoirs from April
521 through November, then do monthly sampling at Sugar Hollow and Totier Creek Reservoirs
522 during those same months. She stated that in the winter, they reduce sampling, and the urban
523 reservoirs get sampled about once a month.

524

525 Ms. Terry stated that valuable information is collected, and it provides a better understanding of
526 each reservoir and what is happening in each lake. She stated that they are very different
527 reservoirs with different characteristics.

528

529 Ms. Terry stated that nutrients flow into reservoirs, and come from streams as well as from
530 groundwater. She stated that the nutrients are the source of fuel for algae, so algae start to grow.
531 She stated that in the spring, it probably has decent oxygen all the way through the water
532 column. She stated that when algae growth continues and the algae then die, they sink and start
533 to decompose. She stated that as they decompose, they suck up the oxygen and take it away from
534 the system such that it can be an impact to the fisheries and the lake.

535

536 Ms. Terry stated that in the summertime, the top of the lake starts to heat up, and algae continues
537 to be fed by the nutrients coming in from the streams and groundwater. She stated that the algae
538 continue to grow, die off, sink, and take up the oxygen. She stated that fish can only survive in
539 oxygenated waters. She stated that as the upper portion starts heating up, what is formed is what
540 is called a thermocline, and the bottom part of the lake has little to no oxygen.

541

542 Ms. Terry stated that in the fall, the water cools and gets back into what they call an isothermic
543 situation where it is the same temperature throughout. She stated that the nutrients from the
544 bottom are mixed with the surface, and they often see an algae bloom in some of the reservoirs
545 late in the season.

546

547 Ms. Terry stated that she would talk about the monitoring trends. She stated that they have been
548 focusing more attention lately on Beaver Creek Reservoir and South Fork. She stated that with
549 Beaver Creek Reservoir, the stratification where the the thermocline forms starts in early May,
550 but they do not see a turnover until very late November and sometimes even into December. She
551 stated that the reservoir does become anoxic at depths starting in June, which is early. She stated
552 that phosphorus is loading from the sediments and in flowing streams.

553

554 Ms. Terry stated that South Fork Rivanna is what they refer to as a run-of-the-river reservoir. She
555 stated that it has a 256-square-mile watershed, and when it rains, the flow coming through that
556 reservoir is significant. She stated that retention time for nutrients in that reservoir tends to flush

557 things out. She stated that typically, they do not see any issues with algae blooms there until they
558 are getting close to the top of the crest of the dam, or below it.

559

560 Ms. Terry stated that Rivanna refers to Ragged Mountain Reservoir as their new reservoir. She
561 stated that it starts stratification in May, with turnover in November. She stated that this year was
562 the first year that they have observed a blue-green algae bloom, and they did treat it just a few
563 weeks ago. She stated that this may be surprising to some, as this is thought of as a new reservoir
564 that would not have this problem, but algae have been around for millions of years and will be
565 there. She stated that there is sufficient phosphorus in that system already to cause algal issues.

566

567 Ms. Terry stated that they are monitoring Sugar Hollow and Totier Creek Reservoirs less, but
568 that from the monthly data they see, they are not seeing any blue-green algae blooms.

569

570 Ms. Terry presented a table showing the number of algaecide applications. She stated that these
571 applications are a contractor going out and placing a product, which has copper sulfate in it in the
572 reservoir to control the algae. She stated that for Ragged Mountain, the two for 2014 and 2015
573 were green algae blooms and were not blue-green, but that they now have their first blue-green at
574 Ragged Mountain. She stated that they have treated two at Beaver Creek, and none yet at South
575 Fork Rivanna that year.

576

577 Ms. Terry stated that they talked about bathymetric surveys and that she would show the board
578 the Lickinghole Creek stormwater basin. She indicated on the slide to the location of the basin,
579 noting it is between Routes 240 and 250 and is a 13.7-square-mile watershed that goes up into
580 Crozet. She stated that Lickinghole Creek flows down to the Mechums River. She stated that it is
581 not in the watershed of Beaver Creek Reservoir, and that this watershed is divided along Route
582 240.

583

584 Ms. Terry stated that this was created to be a sediment pond to capture sediment and prevent it
585 from getting down to South Fork. She stated that this was built in the early 1990s, and the
586 original design volume was 32 million gallons. She stated that in 2019, a bathymetric survey was
587 done, and it was shown to have a volume of 26.43 million gallons, which is a 5.6-million-gallon
588 decrease in storage. She stated that storage has decreased by approximately 17%.

589

590 Ms. Terry stated that there is a Source Water Protection Advisory Committee. She stated that
591 there was some funding that was offered through the Virginia Department of Health to help
592 localities develop a source water protection plan for their reservoirs, rivers, or any of their
593 sources. She stated that Rivanna wanted to benefit from and be a part of that program, and the
594 first funding opportunity they had, they would fund only for those sources that served less than
595 10,000 customers. She stated that for Rivanna, this means Beaver Creek, the North Rivanna
596 River, and Totier Creek.

597
598 Ms. Terry stated that this is why the advisory committee was formed. She stated that its members
599 include Rivanna, Albemarle County Natural Resources staff, ACSA, Rivanna Conservation
600 Alliance, and Thomas Jefferson Soil and Water Conservation District. She stated that this group
601 met on January 31, 2020. She stated that one of the things that came out of the meeting was that
602 everyone has a lot to share, and that a lot of the source water protection initiatives that apply to
603 those three sources could also be applied to some of the bigger reservoirs. She stated that for that
604 reason, they are inviting the City to participate in this as well.

605
606 Ms. Terry stated that the source water protection plans for Beaver Creek, Totier Creek, and
607 North Fork are currently being updated with the help of a consultant that VDH has hired for
608 Rivanna.

609
610 Ms. Terry stated that Rivanna has done some other things in the meantime. She stated that they
611 coordinated with Albemarle County and the Soil and Water Conservation District to identify
612 how cows were entering the Beaver Creek Reservoir. She stated that they collaborated, and it
613 was interesting who knew who and how they could talk to people. She stated that they solved the
614 problem there, and cows are no longer getting into the Beaver Creek Reservoir.

615
616 Ms. Terry stated that they are developing mailings to residents of three source water watersheds
617 with educational information. She stated that Rivanna also received a \$19,200 grant from VDH
618 to put up some source water protection signs or watersheds signs in those three watersheds of the
619 smaller sources. She stated that the signs will say something along the lines of the person being
620 in a drinking water watershed and not to pollute.

621
622 Ms. Terry stated that they have also participated in riparian zone plantings and stream cleanups
623 with the Rivanna Conservation Alliance.

624
625 Ms. Terry summarized that the takeaway from her presentation was that Rivanna has a robust
626 reservoir monitoring program that informs their water treatment decision making. She stated that
627 it has been beneficial, and that staff share information between treatment and reservoirs. She
628 stated that this helps them to be efficient in their treatment. She stated that new this year was a
629 blue-green algae bloom at Ragged Mountain. She stated that storage volume at the Lickinghole
630 Creek stormwater basin has decreased by about 17%. She stated that they are actively working
631 on their source water protection program in collaboration with partners.

632
633 Dr. Palmer asked where the phosphorus in the Ragged Mountain system was coming from.

634
635 Ms. Terry replied that when the detailed sediment studies were done, they were done on South
636 Rivanna and Beaver Creek She stated that they have not done sediment studies at Ragged

637 Mountain. She stated that she hypothesizes that there are nutrients in the sediment, as it is going
638 anoxic at some point, is very deep, and has such a small watershed that is mostly forested. She
639 stated that her perspective is that it is probably more of what is already in the system. She said
640 there can be a breakdown of phosphorus and nitrogen coming off the watershed, but she thinks
641 that it has to be in the sediments.

642

643 Dr. Palmer stated that perhaps as it was constructed, it came from the rocks. She stated that there
644 wasn't a lot of sediment, as it was so new.

645

646 Ms. Terry stated that there are plants growing there that break down around the edges and
647 provide sources. She stated that it may be worth looking at sediment sometime in the future, but
648 that this is where she thinks it is probably already there.

649

650 Dr. Palmer asked Ms. Terry to remind her who pays for any maintenance on Lickinghole. She
651 stated that she knows they have talked about this many times before, and wanted to know how
652 this is done.

653

654 Ms. Terry replied that Rivanna owns that facility and maintains it. She stated that she knows
655 there is an agreement and asked if anyone else could speak to that.

656

657 Dr. Palmer stated that she could find out later if it was difficult.

658

659 Mr. Mawyer stated that he thinks Rivanna pays for it, but that he would double-check and let Dr.
660 Palmer know.¹

661

662 Dr. Palmer stated that she thought they had worked out something where the County was paying
663 for it directly and not having it go through the water prices if they had to dredge it.

664

665 Dr. Palmer asked Ms. Terry if she could send her the presentation separately from the Dropbox,
666 as she would like to share it with the other Supervisors.

667

668 Ms. Terry stated that she would do so.

669

670 Mr. Gaffney asked at what point Lickinghole Creek needs to be dredged, what volume needs to
671 be maintained, and who oversees this from the state standpoint.

672

673 Mr. Mawyer replied that Rivanna will manage this with DEQ and the Department of
674 Conservation and Recreation. He stated that he thinks everyone thought that Lickinghole was

¹ It was verified that maintenance costs for the Lickinhole Basin are funded by Urban Water rates.

675 virtually full of sediment, but that the bathymetric study says it is not -- that it is only 17%
676 sedimented. He stated that they have a ways to go, and that he would follow up with Mr. Gaffney
677 on what they think at what level they would need to dredge it.

678

679 Mr. Gaffney stated that this was a good answer, as he had thought that 17% was a bad number
680 but it now sounds like it is a good number.

681

682 Mr. Mawyer stated that there is 83% left and a ways to go, with over 18 years at 17%. He stated
683 that they could say they have at least another 100 years, depending on the sedimentation rate. He
684 stated that if it stays at the current rate, they have a ways to go.

685

686 Mr. O'Connell stated that given that at one point, there was the thought that there needed to be a
687 capital project but that now, this is far off into the future.

688

689 Mr. Mawyer agreed.

690

691 Dr. Palmer stated that she couldn't recall when they last did the bathymetric study, and asked if
692 the idea was that it probably got cleaned out a bit with the 2018 flood.

693

694 Ms. Terry asked if Dr. Palmer was talking about South Fork.

695

696 Dr. Palmer replied no. She stated that she was talking about Lickinghole and the fact it has only
697 gone down 17%.

698

699 Ms. Terry replied that it may have, but they do not have any way to prove that.

700

701 Ms. Jennifer Whitaker stated that they have not done a bathymetric, except for the original
702 construction documents, but that it does have a unique system in that about 10% of its volume is
703 dedicated to constructed wetlands, as shown in the photograph Ms. Terry presented. She stated
704 that those areas cannot be dredged or removed. She stated that the 17% is of the usable storage
705 volume. She stated that in the 15-year plan, there is a dredging project, but as Mr. O'Connell
706 pointed out, it moved the last year out further into the future.

707 *d. Presentation: Approval of the Observatory WTP Lease, Alderman PS License, and Piping*
708 *Easement, all with UVA; Bill Mawyer, Executive Director*

709 Mr. Mawyer stated that it was a pleasure to bring the presentation to the board asking for
710 approval of the Observatory Water Treatment Plant lease, the Alderman Road finished water
711 pumping station license, and a piping easement for a variety of raw finished storm and
712 wastewater pipes that are all the general vicinity of the Observatory Treatment Plant.

713

714 Mr. Mawyer pointed on the map to Scott Stadium to better orient the board. He stated that the
715 treatment plant is located on Observatory Mountain. He stated that the purple lines on the map
716 are raw waterlines coming from Ragged Mountain. He stated that as the inset on the map shows,
717 there are two lines from Ragged Mountain that supply the Observatory Treatment Plant. He
718 stated that one line passes through the Royal raw water pump station. He stated they have the
719 Stadium Road pump station below Scott Stadium. He stated that both of those pump stations and
720 waterlines supply water to the Observatory Treatment Plant, and that all four of these (two pump
721 stations and two raw waterlines) are scheduled to be replaced over the next 5-10 years.

722

723 Mr. Mawyer stated that the lease includes the Observatory WTP, the Royal raw water pump
724 station and the Stadium Road pump station.

725

726 Mr. Mawyer stated that UVA constructed the original Observatory water treatment facilities
727 back in the 1850s. He stated that they granted the rights to operate the facilities and own the
728 buildings to the City back in 1922, and granted a 99-year lease that will expire on April 17, 2021.
729 He stated that the lease was amended a number of times along the way. He stated that the City
730 granted the Observatory Water Treatment Plant lease to Rivanna when Rivanna was created in
731 1972-73. He stated that since that time, for nearly 50 years, Rivanna has managed the
732 Observatory treatment facilities.

733

734 Mr. Mawyer stated that he began discussion of a new lease shortly after he got there in 2016, and
735 there has been much discussion about the three documents. He stated that for three years, they
736 have talked about the question of the plant needing to stay on Observatory Mountain, which they
737 determined to be the plan, as they had no plan otherwise.

738

739 Mr. Mawyer stated that they talked at length about the term of the lease. He stated that Rivanna
740 wanted 100 years, while UVA wanted 49 years. He stated that they talked about how much the
741 lease would cost, the exact location of the lease boundaries, who will approve the architectural
742 buildings that could be built there, how to get offsite utilities to the site, and the requirement for
743 Rivanna to protect the vegetated buffer from the dormitories and surrounding facilities.

744

745 Mr. Mawyer stated that ultimately, they separated the lease into two other documents: a license
746 for Alderman, and an easement for the water, wastewater, and stormwater lines. He stated that
747 lastly, they separated the easement for Rivanna and the City between the Stadium Road pump
748 station and the Observatory plant. He stated that this was in the original 1922 lease and in their
749 wisdom, they separated those easements between the two parties.

750

751 Mr. Mawyer stated that they developed a master plan for the Observatory site when they started
752 the process in order to show UVA what facilities would be at the plant site when Rivanna
753 expands from 10 mgd to 20 mgd by around 2070. He stated that they had to convince UVA that

754 they needed a paved access road throughout the site, which would require a retaining wall on the
755 south side. He stated that those improvements are now in the contract with English Construction
756 and will be built by 2023.

757
758 Mr. Mawyer stated that they had to talk about reserving sewer capacity in the piping that leaves
759 the site and conveys sewer through other UVA properties. He stated that UVA encouraged
760 Rivanna to make the site they are leasing as small as possible, so Rivanna got rid of a location
761 for a stormwater facility, but then had to write in the lease that UVA would agree to partner with
762 Rivanna if a new stormwater facility is required.

763
764 Mr. Mawyer stated that this was a glimpse into the many things that were discussed over the last
765 several years.

766
767 Mr. O'Connell asked if the footprint of the lease would allow all the expansion to occur in the
768 future without any further lease agreements.

769
770 Mr. Mawyer stated that this was correct. He stated that UVA wanted Rivanna to be as small as
771 they could be, and Rivanna presented their master plan.

772
773 Mr. Mawyer stated that the ground lease includes three properties: Observatory Treatment Plant,
774 Royal pump station, and Stadium Road pump station, totaling about 6.8 acres. He stated that the
775 term is for 49 years, from July 1 of 2020 through June 30 of 2069. He stated that it has a
776 provision that allows renewal for an additional 50 years, until the year 2119, unless either party
777 gives notice that they do not want to renew. He stated that if UVA were to give Rivanna notice
778 that they do not want to renew, they would have 10 additional years (until 2079) to site and build
779 a new water treatment plant if they felt they needed one (which he thinks they would) and to
780 demolish the existing plant.

781
782 Mr. Mawyer stated that the lease cost is \$100,000 for the first year. He stated that Mr.
783 Richardson came up with a concept to help them out -- that they should have a tiered roll-in of
784 the cost. He stated that \$100,000 is the cost, and that it is currently about \$33,000 per year. He
785 stated that it is \$100,000 the first year, and then escalates to \$175,000 on July 1, 2021 and
786 thereafter. He stated that there is an annual increase based on the Consumer Price Index that will
787 be measured every year, but administratively, they will only adjust it every tenth year.

788
789 Mr. Mawyer stated that the license is only for the space in the Alderman Road finished water
790 pump station, so UVA continues to own the building and the property, but they granted a license
791 for Rivanna to have space in the building. He stated that it follows the same term as the
792 Observatory Water Treatment Plant, with the only addition that if they would discontinue use of

793 that space for one year, they would lose their rights to it. He stated that there is no additional cost
794 to use that facility.

795

796 Mr. Mawyer stated that the third document is an easement for the underground raw, finished,
797 waste, and stormwater pipes in the area. He stated that those are perpetual easements, but if
798 Rivanna were to discontinue use of those infrastructure facilities for one year, they would lose
799 their rights. He stated that there are no additional costs for the easements.

800

801 Mr. O'Connell expressed his appreciation to everyone involved, particularly Mr. Mawyer, Mr.
802 Gaffney, and Mr. Krueger.

803

804 Mr. Mawyer stated that he wanted to thank Ms. Whitaker for her help, as she is the historian and
805 has records going back a century. He stated that Mr. Wood did a lot to help them with the
806 finance portion, and Mr. Krueger has been instrumental and key. He stated that Mr. Gaffney
807 jumped in when they needed a heavy hitter to help. He stated that they worked with Mr. Don
808 Sundgren (Chief Facilities Officer) and Mr. Charlie Hurt (Assistant Vice President for Real
809 Estate and Leasing), as well as a number of others from the UVA Architect Office and Ms.
810 Colette Sheehy (Senior Vice President of Operations).

811

812 Mr. Mawyer thanked his team for their help over many meetings and for the many drafts that
813 were written.

814

815 Mr. Mawyer stated that he would recommend authorization from the board for the Chair and
816 Executive Director to execute the documents with UVA. He stated that the documents are
817 currently in UVA's hands, and that Mr. Krueger even had a final discussion with their attorney
818 that afternoon about one word in the lease, license, and easement. He stated that hopefully, they
819 have that resolved, and UVA will sign and send the documents to Rivanna, which will then sign.

820

821 **Mr. O'Connell moved to approve the documents and authorize the Chair and Executive**
822 **Director to execute the documents. The motion was seconded by Ms. Hildebrand and**
823 **passed unanimously (6-0). (Mr. Snook was absent).**

824

825 Ms. Hildebrand thanked Mr. Mawyer for assisting the City and separating out the easement deed,
826 which was extremely helpful.

827

828 Mr. Mawyer credited Mr. Krueger for the idea.

829

830 Mr. Krueger credited Ms. Whitaker for aptly pointing out that there were two pipes in the same
831 easement, and Rivanna only operated one of them while the City operated the other.

832

833 Mr. Mawyer stated that it was a team effort, with many things that had to be discussed.

834

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

836 There were none.

837 **11. CLOSED MEETING**

838 There was no closed meeting.

839

840 **12. ADJOURNMENT**

841 **At 3:28 p.m., Mr. Richardson moved to adjourn the meeting of the Rivanna Water and**
842 **Sewer Authority. The motion was seconded by Dr. Palmer and passed unanimously (6-0).**
843 **(Mr. Snook was absent.)**

844

845 Respectfully submitted,

846

847

848

849

850

851



Jeff Richardson
Secretary - Treasurer