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RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
May 25, 2021

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, May 25, 2021 at 2:15 p.m. via Zoom.

Board Members Present: Mike Gaffney, Dr. Liz Palmer, Jeff Richardson, Lauren Hildebrand, Gary O’Connell, Chip Boyles, Lloyd Snook.

Board Members Absent: none.

Rivanna Staff Present: Bill Mawyer, Lonnie Wood, Jennifer Whitaker, David Tungate, John Hull, Scott Schiller, Miranda Baird.

Attorney(s) Present: Lori Schweller.

1. CALL TO ORDER

Mr. Gaffney called the May 25, 2021 regular meeting of the Rivanna Water and Sewer Authority to order at 2:23 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 revised effective October 1, 2020 and Chapter 1283 of the 2020 Acts of the Virginia Assembly effective April 24, 2020, we are holding this meeting by real time electronic means with no board member physically present at a single, central location.

“All board members are participating electronically. This meeting is being held pursuant to the second resolution of the City’s Continuity of Government Ordinance and Section 6 of the County’s revised Continuity of Government Ordinance. All board members will identify themselves and state their physical location by electronic means during the roll call which we will hold next.

“I note for the record that the public has real time audio-visual access to this meeting over Zoom as provided in the lawfully posted meeting notice and real time audio access over telephone, which is also contained in the notice. The public is always invited to send questions, comments, and suggestions to the Board through Bill Mawyer, the Authority’s Executive Director, at any time.”

Mr. Gaffney called the roll.

Mr. Chip Boyles said he was located at 605 East Main Street in Charlottesville, VA.

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

47 Mr. Gary O’Connell said he was located at 168 Spotnap Road (ACSA headquarters).

48
49 Dr. Liz Palmer said she was located at 2958 Mechum Banks Drive, Charlottesville, VA 22901.

50
51 Mr. Jeff Richardson said he was located at the County Office Building at 401 McIntire Road in
52 Charlottesville, VA.

53
54 Mr. Lloyd Snook said he was located at 2408 Hillwood Place in Charlottesville, VA.

55
56 Mr. Mike Gaffney said he was located at 3180 Dundee Road in Earlysville, VA.

57
58 Mr. Gaffney said the following Authority staff members were joining the meeting electronically:
59 Bill Mawyer, Lonnie Wood, Jennifer Whitaker, David Tungate, John Hull, and Miranda Baird.

60
61 Mr. Gaffney said they were also joined electronically by Ms. Lori Schweller, Counsel to the
62 Authority.

63
64 **3. MINUTES OF PREVIOUS BOARD MEETINGS**

65 *a. Minutes of Regular Board Meeting on April 27, 2021*

66
67 Dr. Palmer said she had submitted a correction to the minutes Mr. Mawyer earlier, to change a
68 date from 2021 to 2012 in the approval of the Water Supply Plan, on line 626.

69
70 **Dr. Palmer moved that the board approve the minutes of the previous board meeting. The**
71 **motion was seconded by Mr. Snook and passed unanimously (7-0).**

72
73 **4. RECOGNITIONS**

74 There were no recognitions.

75
76 **5. EXECUTIVE DIRECTOR’S REPORT**

77 Mr. Mawyer said Mr. Haider Al-Safee, a Rivanna employee, has been with the Authority for
78 about 18 months and is a Water Operator who passed his Class III, then his Class II license. He
79 said Mr. Al-Safee has moved up from a trainee through several license levels in his 18 months
80 with the Authority. He said they are proud of Mr. Al-Safee and his efforts to get his license.

81
82 Mr. Mawyer said COVID vaccinations have been positive in the RWSA. He said 81% of staff
83 had requested vaccination, and all of those staff have received one or more vaccinations, to date.

84
85 Mr. Mawyer said the gasoline shortage did not impact Rivanna. Although they discussed and
86 planned as far as how to get critical staff to work, in reality, there was not much effect. He said
87 there is gas and diesel fuel on site that they are able to use for Rivanna vehicles.

88
89 Mr. Mawyer said they are getting geared up again with the Schenks Branch sewer line
90 replacement project, and there would be a meeting the following week to review where they are
91 in that project, in the hopes to continue discussions with Mr. Richardson and Mr. Boyles.

92

93 Mr. Mawyer said Rivanna continues to work with the UVA Foundation about getting easements
94 for the Rivanna-to-Ragged waterline project.

95
96 Mr. Mawyer said that in the newspaper the following day, one may see a public notice for the
97 Environmental Permit Program. He said Rivanna is required to have sewer user regulations,
98 which they do have. He said as a part of their permit, they have requested that the DEQ allow
99 them to have some flexibility to accept alternate methods of compliance for their categorical pre-
100 treatment standards, which apply specifically to their significant industrial users, of which there
101 are three: Northrup Grumman, Microsystems, and Virginia Diodes. He said this is not a
102 significant issue but rather a modification to the permit.

103
104 Mr. Mawyer said they were monitoring potential drought conditions. He said there was currently
105 no drought considered in Central Virginia. He said the Virginia DEQ Drought Monitoring
106 Committee said conditions were normal in Central Virginia. He said he plans to have a more
107 detailed report for the board in June, unless there is a lot of rain, in which case it will be a non-
108 issue.

109
110 Mr. Gaffney asked Mr. Mawyer for an update on the Central Waterline.

111
112 Mr. Mawyer said they continue to talk with City staff and Service Authority staff as they refine a
113 potential route through the City to extend the 24-inch waterline that will go from the Observatory
114 Mountain water tank, on its way to Free Bridge to connect to the system in that area. He said
115 City and ACSA staff have been doing field surveys and are trying to select a precise path for this
116 waterline. He said they are nearing the end of the selection process.

117
118 **6. ITEMS FROM THE PUBLIC**

119 There were no public comments.

120
121 **7. RESPONSES TO PUBLIC COMMENT**

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

123
124 **8. CONSENT AGENDA**

125 *a. Staff Report on Finance*

126
127 *b. Staff Report on Operations*

128
129 *c. Staff Report on Ongoing Projects*

130
131 *d. Staff Report on Wholesale Metering*

132
133 *e. FY 22 Personnel Management Plan Update*

134
135 *f. FY22 Pay Scale Adjustment*

136
137 *g. FY22 Holiday Schedule*

138

139 *h. Construction Change Order Authorization – MC Slide Gate Improvements Project –*
140 *Waco, Inc.*

141
142 **Dr. Palmer moved that the board approve the Consent Agenda. The motion was seconded**
143 **by Mr. O’Connell and passed unanimously (7-0).**

144
145 **9. OTHER BUSINESS**

146
147 *a. Presentation: Approval of FY 2022-2026 Capital Improvement Plan; Bill Mawyer,*
148 *Executive Director*

149 Mr. Mawyer said he had covered this with the board in detail in February, and he wanted to bring
150 this item back for final consideration. He said a public hearing was not needed on this, but he
151 would like the board to approve it.

152
153 Mr. Mawyer said infrastructure and master planning is one of Rivanna’s strategic goals and that
154 for the next five years, they have proposed 54 projects totaling \$170.1 million, with the majority
155 of those dollars being spent in the urban water system for treatment plants and piping.

156
157 Mr. Mawyer said Rivanna proposes to use about \$14 million of their cash reserves over the next
158 five years to help level the costs to the customers of both the City and the Service Authority. He
159 said Rivanna is seeing that they may need to issue up to \$129 million in additional debt.

160
161 Mr. Mawyer said Rivanna’s major programs for the next five years include upgrading treatment
162 plants, regulatory requirements with the Crozet Wastewater Flow Equalization Tank, updating
163 exterior lighting at Moores Creek, and the Beaver Creek Dam and Pump Station project which
164 has a regulatory requirement to increase the spillway size. He said there is redundancy and
165 resiliency provided by the Central Waterline that will go through the City; the Airport Road
166 Pump Station that helps to strengthen the northern end of the finished water distribution system;
167 and a river crossing at South Rivanna, which will give them a second crossing and redundancy.
168 He said as well, the South Rivanna to Ragged Pipeline will provide redundancy, resiliency, and
169 capacity to the entire urban water system.

170
171 Mr. Mawyer said there are a number of operations, maintenance, and security projects. He said
172 there are growth aspects associated with the Rivanna-to-Ragged Pipeline and that, as he
173 mentioned to the board in February, he split the costs for the project in half – half being under
174 redundancy and resiliency, and half being in growth.

175
176 Mr. Mawyer said there is also master planning for the urban water system, wastewater facilities
177 at Moores Creek, asset management program to proactively manage Rivanna’s many assets, and
178 information technology systems.

179
180 Mr. Mawyer said significant projects in the CIP include the water treatment plant renovation
181 projects, the pipeline replacement going from Ragged Mountain Reservoir to Observatory
182 Treatment Plant, the Central Waterline that will go possibly through the center of the City
183 (possibly through the Cherry Avenue area), the Rivanna to Ragged Mountain Waterline (the

184 largest project) and raising the water level at Ragged Mountain 12 feet to add 700 million gallons
185 of storage in the reservoir.

186
187 Mr. Mawyer said included in new projects that are hoped to start soon is continuation of the
188 Rivanna-to-Ragged Pipeline project with a section of about 1,200 feet that will connect at the
189 north end of the pipe that was already installed at the Birdwood Golf Course and extend it to the
190 north along the property line of the Weedon Center and the property owned by JPA Towers
191 (formerly Piedmont Tractor Center). He said they would bore and cross under the railroad tracks
192 at Old Garth Road to the north to be on UVA Foundation property, where an easement is
193 currently under discussion with the Foundation. He said Rivanna is anxious to get this project
194 done while getting ahead of any development in that area that they are told is coming.

195
196 Mr. Mawyer said they are finishing up the Sugar Hollow Dam gate replacement, where a new
197 bladder is being installed this week on top of the dam. He said they hope to wrap up this project
198 in the next month or so.

199
200 Mr. Mawyer said the Crozet Wastewater Flow Equalization Tank is under construction, and they
201 are beginning to build the concrete tank that will store these wastewater flows when storm water
202 enters the wastewater system from Crozet so that they do not have overflows.

203
204 Mr. Mawyer presented an aerial view of the Moores Creek Lighting Project, which will ramp up
205 in June.

206
207 Mr. Mawyer said the Airport Road Pump Station will go to bid later in the year and will be
208 constructed over the next two years. He said this is just north of Kohls and the Hollymead Town
209 Center, off of Airport Road.

210
211 Mr. Mawyer said for the Beaver Creek Dam, Pump Station, and Piping Project, Rivanna is
212 working with federal agencies on how the project would be built, in hopes that they will share
213 65% of the construction costs. He said Rivanna anticipates potentially having a labyrinth
214 spillway. He presented a picture of the proposed spillway through the middle of the dam, adding
215 that there will be a bridge going across the spillway, which would be Brown's Gap Turnpike. He
216 said they will also have to move the pump station, as shown on the screen, to one of the sites on
217 the presented map. He said that he would likely be bringing a presentation to the board in June to
218 talk about potential sites for the new pump station.

219
220 Mr. Mawyer said in summary, there are 54 projects worth about \$170.1 million. He said Rivanna
221 is contributing some reserve funds to help level the costs for their customers, and plans to issue
222 new debt. He offered to answer questions from the board and asked them to approve the CIP.

223
224 Dr. Palmer mentioned dealing with the sediment from the South Fork Rivanna Reservoir over to
225 Ragged Mountain before it is transferred, and that Mr. Mawyer had mentioned they are looking
226 at ways of timing this to reduce the sediment load and withdrawal. She asked Mr. Mawyer if he
227 could comment on the status of this.

228
229 Mr. Mawyer replied that they have done a desktop assessment of phosphorus and nitrogen that

230 might be in the water and now, they are starting a test program with the actual water from
231 Rivanna. He said this program will likely go on for a year to a year and a half, and it will test
232 how much sediment, phosphorus, and nitrogen might be in the water at different times of the
233 year to give them real data on when they could plan to pump water to Ragged without having an
234 extreme level of treatment to keep those pollutants out of Ragged. He said they are about a year
235 and a half away from wrapping that up.

236
237 Mr. Mawyer said they have been looking at ways to minimize the costs of the pretreatment
238 facility, and the goal is to provide an appropriate level of sediment, phosphorus, and nitrogen
239 pretreatment in the water in South Rivanna before they pump it to Ragged to help maintain the
240 high level of water quality at Ragged.

241
242 Mr. Mawyer said they will have detailed answers in a year and a half, which will be plenty of
243 time for Rivanna to design and build the pipeline project starting in 2027.

244
245 Dr. Palmer said if they are successful in figuring out a way to do it, it would greatly decrease the
246 price of the pipeline.

247
248 Mr. Mawyer agreed. He said they have the option to pump when they want to if the water is very
249 high in sediment load. He said perhaps they would not need to transfer water then, and they can
250 wait until calm times after a storm, when the water quality is much higher. He said this is when
251 they would pump to maintain the water level at Ragged Mountain Reservoir, rather than having
252 to treat it when it is very dirty. He said they have to treat water at the South Rivanna WTP every
253 day when it is full of sediment because people want to drink and use water every day. He said
254 they do not have this option in the finished water, but they do in the raw water area, which is
255 what he was referring to about being selective when transferring water from Rivanna to Ragged.

256
257 Dr. Palmer said the untreated water could remain in South Fork when South Fork water is very
258 muddy, to decrease the cost of treatment.

259
260 Mr. Mawyer said this was correct. He said this gives them a lot of flexibility once they can get
261 the pipeline completed from the Rivanna to Ragged Reservoirs.

262
263 Mr. O'Connell asked Mr. Mawyer if he could talk about the Crozet Water Treatment Plant, next
264 steps on the Beaver Creek Dam Project, and timeframes.

265
266 Mr. Mawyer said the Crozet Water Treatment Plant upgrade is substantially complete, and the
267 plant will now produce 2 million gallons, where it had been at 1 million gallons per day. He said
268 they are in the process of increasing the raw water pumping capacity from the reservoir to the
269 WTP.

270
271 Mr. Mawyer referred to his "three-legged stool" analogy: they must have the water available, be
272 able to pump and pipe it, and be able to treat it in order to provide it to customers. He said
273 currently, the bottleneck is in the raw water pumping from Beaver Creek to the expanded
274 treatment plant. He said they are in the process of getting new pumps, which should be in place
275 in the next month or so to allow them to pump 1.5 mgd.

276
277 Mr. Mawyer said the Crozet community is challenging 1 mgd in treatment capacity and the day
278 prior, the demand was 870,000 gallons. He said Rivanna recognizes they need to have more
279 water supply, and they believe the Beaver Creek Reservoir is adequate. He said now, the water
280 treatment plant is capable of serving the community for many years. He said they are upgrading
281 the pumps so that they can get the raw water to the treatment plant.

282
283 Mr. Mawyer said the dam project is about stormwater control and protecting residents,
284 businesses, and facilities below the dam. He said the spillway is not large enough to release the
285 amount of water that the regulations require to be released (31 inches of rain per day). He said
286 when one's facilities cannot do this, there are incidents such as what occurred in Lynchburg,
287 where the dam washed out, as well as in California and other places. He said Rivanna is trying to
288 get in compliance with the regulations so that they have adequate facilities to pass the proper
289 amount of stormwater when there is a major storm event without having the spillway wash out,
290 potentially losing the entire dam and the sole water supply for the entire Crozet community.

291
292 Mr. O'Connell asked what the next step was on the dam project.

293
294 Mr. Mawyer replied that Rivanna is still working with the federal agency in reviewing all the
295 components of the project: the dam, how it will be built, the pump station, and the potential
296 bypass road to get people around the construction project. He said that in 2022, they should
297 finish this process, and they will have all final decisions made in accordance and concurrence
298 with the federal agency on the design of the project. He said then, hopefully, the agency will
299 agree to fund 65% of the costs. He said they would then go into final design and start
300 construction in 2024, lasting through 2026. He said this is the plan if the project stays on track.

301
302 **Mr. O'Connell moved that the board approve the FY 22-26 Capital Improvements Plan.**
303 **The motion was seconded by Dr. Palmer and passed unanimously (7-0).**

304
305 *b. Presentation and Public Hearing: Approval of FY 2021 – 2022 Operating Budget and*
306 *Rate Schedule Resolution: Bill Mawyer, Executive Director*

307 Mr. Mawyer said this proposed budget was reviewed in detail earlier in the year. He said for the
308 operating budget for next fiscal year (July 2021 through June of 2022), Rivanna is proposing a
309 budget of \$38.9 million, which is a 4.9% increase over the current year's budget. He said the
310 charges to the City would be about \$15.9 million, and the charges to the ACSA would be about
311 \$21.1 million.

312
313 Mr. Mawyer said programs include debt (the largest program), at 47%, to fund the CIP that was
314 just discussed. He said the second largest program is personnel costs, at 24%, which pays for
315 salaries, benefits, health insurance, worker's compensation, and retirement. He said thirdly is
316 operations and maintenance, which pays for the chemicals, equipment repair, and the like, at
317 \$6.3 million, or 17% of the budget. He said lastly, there are general services, which are
318 professional and non-professional services that are contracted out, as well as communications
319 and utility costs.

320

321 Mr. Mawyer said these funds go to support all capital facilities and equipment, where there is
322 about \$280 million in assets with five water supply reservoirs, six water treatment plants, four
323 wastewater treatment plants, pump stations, waterlines, and the Lickinghole Creek Basin (a
324 stormwater impoundment they manage and own). He said Rivanna has 93.4 employees and with
325 the new budget, they would add three employees, for a total of 96.4.

326
327 Mr. Mawyer said major projects in the coming years include substantially completing
328 renovations of the South Rivanna and Observatory Water Treatment Plants, the Crozet
329 Wastewater Flow Equalization Tank (currently under construction), and the Airport Road Pump
330 Station. He said they continue to put the Rivanna to Ragged Mountain Pipeline easements in
331 place to build a small section from Birdwood to Old Garth Road. He said there is the Central
332 Waterline and Beaver Creek Dam as well.

333
334 Mr. Mawyer added that there are major permit applications for renewal, including the Urban
335 Water Protection Permit that was applied for in May. He said Ms. Whitaker will tell the board
336 more about those permits in June. He said further, Rivanna has to apply for a new permit for the
337 Crozet water system.

338
339 Mr. Mawyer said strategic investments proposed for the coming year include a 2% merit pool for
340 staff, which totals about \$145,000. He said the rest of the money in that category is for the mid-
341 year merit that the board granted in January 2021.

342
343 Mr. Mawyer said Rivanna has proposed three additional positions, one being an Accounting
344 Associate to help Mr. Wood and his group as they have not had an additional staff person in that
345 group for decades, and the budgets have grown significantly. He said the group not only
346 accounts for the Water and Sewer Authority, but for Solid Waste as well.

347
348 Mr. Mawyer said Rivanna is asking for another IT Administrator position to help them manage
349 their SCADA systems, which control all water and wastewater treatment processes, potentially
350 remotely and automatically. He said there is new security software, and they are implementing a
351 new CityWorks asset management software program. He said the IT Administrator, along with
352 the rest of the IT team, would be supporting those new programs.

353
354 Mr. Mawyer said the additional Facility Coordinator will help Rivanna implement an asset
355 management business process in terms of how to get the data from their assets into their system.
356 He said an asset could be a pump, pipe, or motor, and data includes when it was put in, its
357 voltage, and how long they expect it to last, adding up to when they think they will need to
358 replace it so that they can proactively plan for budgets and predict rates.

359
360 Mr. Mawyer said there are minor health insurance increases. He said Rivanna received a new
361 proposal from Anthem, and the health insurance costs did increase. He said they do not propose
362 to pass any of those increases onto staff but rather, they propose that Rivanna absorb those
363 increases.

364
365 Mr. Mawyer said there is equipment that needs to be replaced, engineering studies to conduct on
366 digesters, and continued optimization of GAC. He said there is also arc flash, which is a safety

367 issue where there are high-voltage electric panels, and people could be injured if they are
368 working too closely and do not have the correct personal protective equipment. He said there are
369 also software licenses for CityWorks.

370
371 Mr. Mawyer said the Observatory Water Treatment Plant lease will increase \$75,000 this year.
372 He said they have also proposed funds to manage the Buck Mountain property.

373
374 Mr. Mawyer presented Rivanna's organizational chart. He said the pink blocks were the three
375 proposed positions – two under Mr. Wood, Director of Finance and Administration, and one
376 under Ms. Whitaker as the Director of Engineering and Maintenance. He said this will give a
377 total of 96.4 positions in the Water and Sewer Authority.

378
379 Mr. Mawyer said regarding the charges and financial summary, in FY 21, they had a zero charge
380 increase to the City and ACSA. He said that with the programs and bond and debt obligations
381 Rivanna has, they are proposing a 7.6% increase to the City and a 14.3% increase to the ACSA.
382 He said for the next four years, the City's rates stay similar, but the ACSA rates substantially
383 come down. He said the ACSA does have a large funding obligation in paying 100% for Beaver
384 Creek, 80% for the Rivanna-to-Ragged Pipeline, and 100% of the Crozet Flow Equalization
385 Tank, which is driving their rates above the City's rates.

386
387 Mr. Mawyer said the budget increase for FY 22 is 4.9% above the current year. He said Rivanna
388 proposes to use \$516,000 in cash reserves to help buffer the rates for FY 22. He said much of
389 this money had been programmed to support the GAC program and replacement of the GAC
390 media, which is a fairly expensive process each year. He said the capital budget for FY 22 is
391 \$25.8 million, and the FY 22-26 CIP is \$170.1 million, with new debt anticipated.

392
393 Mr. Mawyer said that in summary, the total budget proposed is \$38.9 million. He said the City's
394 charges would be about \$15.9 million, and the ACSA's charges would be \$21.1 million.

395
396 Mr. Mawyer said that with the board's authorization, Rivanna advertised the water and
397 wastewater rates that support this budget on April 28 and May 5, in the newspaper. He said they
398 advertised to have a public hearing on May 25 on the rates and budget. He offered to answer
399 questions and invited Mr. Gaffney to hold the public hearing.

400
401 Hearing no questions from the board, Mr. Gaffney opened the public hearing. As there were no
402 public comments, he closed the public hearing and asked a board member to make a motion.

403
404 **Mr. Snook moved that the board approve the Rivanna Water and Sewer Authority**
405 **Operating Budget and Rate Schedule for FY 2021-2022. The motion was seconded by Dr.**
406 **Palmer and passed unanimously (7-0).**

407
408 Mr. Snook left the meeting.

409
410 *c. Presentation: Options for the North Rivanna WTP; Engineering Manager, Scott Schiller*
411

412 Mr. Schiller said the North Rivanna Water Treatment Plant, which is located along the north fork
413 of the Rivanna River, was built in 1974 and treats around 300,000 to 400,000 gallons per day, on
414 average. He said as the plant is approaching its end of useful life, Rivanna performed a needs
415 assessment at the facility and found a number of improvements they would have to perform in
416 order to make sure the plant continues to operate appropriately.

417

418 Mr. Schiller said some of the improvements were operational-related, and some were required
419 due to regulatory concerns. He said the main waterline that leaves the treatment plant and
420 supplies the North Rivanna Pressure Zone runs along the river, and they have had a number of
421 issues with this waterline. He said they need to relocate the waterline to St. Ives Road. He said
422 these make for a number of improvements that will be costly.

423

424 Mr. Schiller said that at the same time, Rivanna has been designing the Airport Road Pump
425 Station, which will allow them to convey water from the Urban Pressure Zone into the North
426 Rivanna Pressure Zone. He said this pump station will take the place of the temporary Kohls
427 pump that is currently located by the department store. He said this is an important part of
428 making sure there is redundancy in water supply to the North Rivanna Pressure Zone.

429

430 Mr. Schiller said that while they saw all the needs required at the North Rivanna Treatment
431 Plant, they considered whether these plant upgrades were necessary or if they could proceed
432 solely with the Airport Road Pump Station to serve future needs in that area.

433

434 Mr. Schiller presented an image of the treatment plant. He said one could see two lagoons, which
435 are on the southern side of the plant, as well as the north fork of the Rivanna River and a low
436 head dam, where they have the intake. He said among the issues and regulatory concerns with
437 this plant, those two lagoons are located within the actual floodway, meaning that when the river
438 is high, the water actually flows over the lagoons, and DEQ indicated that this needs to be
439 resolved. He said at this point, the plan would be to build some form of backwash tank similar to
440 what was done in Crozet.

441

442 Mr. Schiller said there are also concerns with water withdrawals from the river. He said that
443 during the dry record, it was about a 0.7-mgd safe yield that they could pull from the river, and
444 they have a 2-mgd treatment plant, indicating the water supply can be insufficient.

445

446 Mr. Schiller said in addition, they will need to increase the amount of chlorine contact in the
447 future. He said currently, this is handled through the finished water pipeline, and this will require
448 some type of additional facility. He said there are significant improvements to the plant that
449 would require additional land acquisition as well.

450

451 Mr. Schiller said that in addition to those issues with the treatment process itself, the North Fork
452 Rivanna River water quality can change very quickly, which can cause issues, with no notice as
453 far as how to treat the water. He said the design of the intake screens in the low head dam is such
454 that it can very quickly plugged depending on what kind of material comes through the river.

455
456 Mr. Schiller said they are looking to relocate the finished water main from the river over to St.
457 Ives to improve the reliability of the line.

458
459 Mr. Schiller said when pulling all these improvements together, including construction
460 contingencies, this comes to approximately \$14.7 million as a total project cost. He said this is an
461 expensive cost for a fairly small treatment plant.

462
463 Mr. Schiller said they have been designing the Airport Road Pump Station and plan to have this
464 project advertised in the fall. He said Rivanna thought there may be an opportunity to use this
465 pump station, as opposed to the treatment plant, to feed the North Rivanna Pressure Zone with
466 water.

467
468 Mr. Schiller said as shown in the image on the slide, the Airport Road Pump Station is located at
469 the end of Timberwood Blvd at Berkmar Drive before getting to Airport Road, and Route 29 also
470 appears in the image. He said the purpose of the pump station would be to provide water to the
471 North Rivanna Pressure Zone from the Urban zone from the Urban zone.

472
473 Mr. Schiller said in the past, if there has been an issue at the North Rivanna Water Treatment
474 Plant, a line break, or something that segregated a portion of the pressure zone from the
475 treatment plant or some other source, Rivanna has used the Kohls pump, to supply the pressure
476 zone. He said unfortunately, the Kohls pump takes time to set up.

477
478 Mr. Schiller said the purpose of the pump station was to provide a permanent facility where
479 remotely, they could activate the pump station if needed to make sure they kept water going to
480 the pressure zone. He said it is being designed with a 1.5-mgd firm capacity initially, but it will
481 be expandable up to 4.4 mgd as needs increase in the future. He said its presence allows the
482 opportunity to decommission the North Rivanna Water Treatment Plant.

483
484 Mr. Schiller said as Rivanna has been investigating what issues or concerns there may be as they
485 consider the decommissioning of the water treatment plant, they have talked with the City and
486 ACSA to get their thoughts. He said one thing that came up was fire flow in the North Rivanna
487 Pressure Zone. He said a number of modeling runs were performed, as depicted on the graph on
488 the slide, and in summary, by putting the Airport Road Pump Station online and by turning off
489 the treatment plant, they will have improved fire flow within that area with no other

490 improvements in the system. He said they would discuss additional improvements later that will
491 further expand the fire flow capabilities.

492

493 Mr. Schiller said another point of importance is that the Airport Road Pump Station will be
494 pulling water from the Urban zone, so there is a concern about what the suction side conditions
495 of the pump station would be, meaning that if they are not able to pump the water out of the
496 urban zone, there is zero fire flow. He said through some modeling efforts, they determined that
497 as long as there is any sort of usable water or water at minimum levels in the Urban zone, then
498 the North Rivanna Pressure Zone would have water as well. He said they are therefore in good
499 shape as far as fire flow, given these conditions.

500

501 Mr. Schiller said there were also redundancy and reliability concerns. He said the North Rivanna
502 Water Treatment Plant is on the north fork of the river, and there is a separate water source that
503 could serve that area. He said if they decommission the plant, that water source would no longer
504 be available for that purpose. He said there were concerns associated with system breaks and
505 with the plant offline, how it could potentially isolate the North Rivanna Pressure Zone from the
506 Urban Pressure Zone. He said the main issues there are river crossings, where the pipeline
507 crosses the river to get to that pressure zone.

508

509 Mr. Schiller said there is a second South Fork Rivanna River crossing planned. He said there is
510 an existing 12-inch line that crosses that river, and they will be adding a 24-inch line. He said
511 there is also another second crossing at the north fork of the Rivanna River, and so both of those
512 will directly speak to redundancy at those weak points to make sure that they could always
513 transmit water to that pressure zone.

514

515 Mr. Schiller said that in addition, there are other, general urban zone improvements, such as the
516 Central Waterline and the raw water system improvements from Ragged Mountain to
517 Observatory as well as South Rivanna to Ragged Mountain. He said these speak more to overall
518 reliability of the Urban Pressure Zone, and as long as the Urban Pressure Zone has water, the
519 North Rivanna Pressure Zone will have water, given the proposed setup.

520

521 Mr. Schiller said another concern with the North Rivanna system is the condition of the waterline
522 that goes along Route 29. He said there have been several breaks over the past few years on that
523 line, and if there were to be a break, that would isolate portions of the North Rivanna Pressure
524 Zone from the water supply from through Airport Road Pump Station. He said generally
525 speaking, it has been Rivanna's thought that those breaks have been due to surge pressures in
526 that system. He said one thing they will do is a surge analysis in that system, then look at what
527 system components can be added to try to reduce the impacts of some of the surges that may be
528 created.

529

530 Mr. Schiller said the Airport Road Pump Station itself will be designed such that when the
531 pumps turn on, they will have slow start-ups, variable frequency drives, and other equipment to
532 minimize any surge pressures that Rivanna could create from its own infrastructure, so this will
533 be taken care of already. He said they will look to analyze any other impacts from the rest of the
534 customers in the system to see what else they can do there to improve.

535
536 Mr. Schiller said when there have been breaks in the line there, they have looked at the condition
537 of the pipe, and the majority of the wall thickness is there. He said the pipe is in good condition,
538 assuming they can get some of the surge pressures down. He said they will continue to monitor
539 the pipe conditions and scheduled pipeline replacements when necessary.

540
541 Mr. Schiller said the system operates at a relatively high pressure, which exacerbates the surge
542 pressure. He said another option is the eventual creation of the Airport Pressure Zone, which
543 would decrease pressures throughout the majority of the Northern pressure zone and reduce the
544 likelihood of breaks. He said that in addition, there are many ACSA pipelines that run parallel to
545 Rivanna's, and Rivanna believes that with a few strategic interconnections, they can further
546 eliminate any sections that would lose service, should they have a break on their line. He said
547 these things will all be evaluated as they progress, should they further consider this
548 decommissioning process.

549
550 Mr. Schiller said Rivanna has identified the regulatory concerns, as shown on the chart on the
551 slide. He said this was to indicate that these are current concerns that they have to deal with, not
552 issues in the future. He said if they determine they want to move forward with decommissioning
553 the water treatment plant, the need to overhaul the lagoon, chlorine contact tank, and other things
554 begin to fade away. He said there have been preliminary discussions with DEQ with regard to
555 the lagoon, and should they determine that decommissioning is the way to go, DEQ would
556 support Rivanna through that process.

557
558 Mr. Schiller said as far as the general schedule, the Airport Road Pump Station construction is
559 the critical component, as this would be the future water source for that pressure zone. He said
560 they have also identified that the second South Rivanna River crossing would be critical to make
561 sure that they have enough reliability with those river crossings to feed water to the pump
562 station. He said after the second South Rivanna River crossing, they could consider
563 decommissioning the water treatment plant.

564
565 Mr. Schiller said the other items on the plan show the already-planned projects that would
566 continue to increase the reliability and redundancy of the overall unified system.

567
568 Mr. Schiller said as far as the benefits of decommissioning, in general, it would avoid the cost of
569 improvements to the treatment plant that would be needed for its long-term reliability. He said

570 this would cost \$14.7 million if they were to improve the plant as needed for its long-term use.
571 He said as part of the decommissioning process, they would be removing the low head dam on
572 the North Fork Rivanna River, which would return the river to its natural state.

573

574 Mr. Schiller said there are a number of projects already in place that will improve reliability and
575 redundancy. He said fortunately, decommissioning would take full advantage of those already-
576 active or planned CIP projects that they will be doing anyway.

577

578 Mr. Schiller said finally, decommissioning will take funds that would have gone towards North
579 Rivanna and put it into the Urban system, where water treatment is more cost effective.

580

581 Mr. Schiller said as far as the actual decommissioning of the plant, he pulled together a cost
582 estimate for what that would entail. He said going through a complete clearing of the property, as
583 well as removal of the dam and other features and adding in engineering contingencies, he came
584 up with a total estimated project cost of about \$2.6 million.

585

586 Mr. Schiller noted that GAC facilities were included on the slide, and those facilities were
587 installed in 2018. He said the GAC vessel itself is the primary component of that system, and
588 they are fortunate that the vessel located at North Rivanna is the same size as the other vessels in
589 the Observatory and South Rivanna plants. He said the plan would be to pull that vessel out of
590 the facility, then include it in future plant upgrades to make best use of that vessel.

591

592 Mr. Schiller said to compare those two capital costs, they wanted to look at two operating
593 scenarios as well to look at more of a long-range cost analysis. He said Scenario 1 was what they
594 had planned to do from the start, which is to upgrade the North Rivanna Treatment Plant,
595 relocate the waterline on St. Ives, operate the plant five days a week and the pump station two
596 days a week. He said Scenario 2 would be to proceed with the decommission and run the pump
597 station all seven days as opposed to just over the weekend. He said the two days per week was to
598 allow the operator some flexibility to move between the plants and not have to be at North
599 Rivanna over the weekend. He said with Scenario 2, this would not be necessary as they would
600 be running the pump station all seven days.

601

602 Mr. Schiller said as shown on the slide, by taking into account capital costs, present worth costs
603 of operating, and maintenance expenses, there is a significant difference between the cost per
604 million gallons treated – \$5,200 under Scenario 1 with the upgraded plant versus just around
605 \$1,000 with Scenario 2 with the decommissioning of the plant.

606

607 Mr. Schiller said in summary, the planned construction of the pump station has allowed Rivanna
608 the opportunity to consider this decommissioning. He said they began with the needs assessment
609 process in looking at what they needed to do to upgrade the treatment plant, but as they got a

610 better feel for what those costs would be, with a \$14.7-million estimate, they began to recognize
611 some of the potential value to decommission the plant instead and to put the money towards
612 other uses.

613
614 Mr. Schiller said some of the planned urban water system upgrades and improvements would
615 resolve the majority of the decommissioning concerns. He said concerns related to the waterline
616 itself could be resolved through the surge analysis, adding some surge-related components to the
617 system as well as dealing with some systemic connections. He said eventually, the creation of the
618 airport zone will reduce the pressure overall in that system.

619
620 Mr. Schiller said another point is that decommissioning will allow Rivanna to take some of the
621 \$14.7 million and apply it to more cost-effective uses within the urban system. He said the entire
622 process generally supports what they consider to be a unified water system, where they aim to
623 improve the overall system redundancy and reliability and place investments in that system
624 where they are most cost effective, using dollars-per-million-gallon cost metric to determine that.

625
626 Mr. Schiller offered to take any questions.

627
628 Dr. Palmer commented she was thrilled that Rivanna is looking at decommissioning the plant.
629 She said she looked forward to hearing the vote and that she was sorry she would not be on the
630 board to vote for it. She said she became lost, however, on the timing. She asked Mr. Schiller
631 when the things that need to be done are expedited to complete.

632
633 Mr. Schiller presented the schedule again. He said he was trying to show construction
634 timeframes and not necessarily design timeframes. He said as Mr. Mawyer mentioned earlier,
635 they are looking at construction of the Airport Road Pump Station beginning in FY 22 and
636 expect this to complete in FY 23. He said they are also in the midst of designing the second
637 South Rivanna River crossing and anticipate this going into construction in FY 23, with
638 completion in FY 24.

639
640 Mr. Schiller said recognizing that when those two construction projects are completed, with use
641 of those facilities are substantially complete and ready for them to put into operation, they
642 thought that at that point, in FY 25, it would be possible for them to begin decommissioning the
643 water treatment plant, meaning that they had the redundancy associated with the second South
644 Rivanna River crossing so that the water could be provided to the Airport Road Pump Station,
645 which would supply water into the North Rivanna Pressure Zone.

646
647 Dr. Palmer asked what the span of the GAC vessel is, adding that they look to be indestructible.
648

649 Mr. Schiller replied that this likely has a 20-year to 25-year timeframe, but he could find more
650 specific information about this. He said these will be fairly lengthy in timeframe.

651
652 Dr. Palmer asked if they are planning on storing the vessel or selling it, or if they would look at it
653 at that point in time. She said she suspected that a slightly used one would be marketable.

654
655 Mr. Schiller replied the initial thought is that they would like to use it elsewhere. He said as to
656 whether or not it is stored somewhere and wrapped properly and protected from the elements, or
657 whether the vessel is used to increase GAC capacity at another facility would be evaluated. He
658 said assuming they do determine they want to proceed with the decommissioning of the facility,
659 they will have to go into a more substantial analysis of the decommissioning process, and they
660 will take a look at the best way to utilize the vessel.

661
662 Dr. Palmer said this is wonderful and she is glad it is being looked at.

663
664 Mr. Gaffney asked Mr. Mawyer when he anticipates asking the board to vote on whether to
665 improve or decommission.

666
667 Mr. Mawyer replied that he would ask for this immediately, unless there was a need for more
668 information. He said there was not much additional information, however, to provide in the
669 future.

670
671 Mr. O'Connell said from an ACSA standpoint, when he first heard about this, there were
672 concerns about service reliability, and fire flows in particular. He said that thanks to the Rivanna
673 staff, who went through a detailed analysis and modeling work, ACSA is convinced not only
674 from a cost standpoint, but from a system reliability standpoint (i.e., quality of water and fire
675 flows) that this will be a good thing for the ACSA customers in the northern system. He said as
676 Mr. Schiller mentioned, this ties together the entire urban system where they can take advantage
677 of the expansions at Observatory Plant and the work that is going on at South Rivanna.

678
679 Mr. O'Connell said ACSA staff are supportive of this proposal and would encourage it to go
680 forward, authorizing the staff to move forward to the 2025 timeframe.

681
682 Mr. O'Connell added as a comment that the other improvements being in place before the
683 decommissioning is something everyone thinks is important, and he thinks that the schedule Mr.
684 Schiller laid out helps accomplish that. He said ACSA is supportive of the sequencing as well.

685
686 **Mr. O'Connell moved that the board authorize the decommissioning of the North Rivanna**
687 **Water Treatment Plant after completion of the necessary urban water system**

688 improvements. The motion was seconded by Dr. Palmer and passed unanimously (6-0).
689 (Mr. Snook left the meeting early and was absent from the vote.)

690

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

692 There were no items.

693 **11. CLOSED MEETING**

694 There was no closed meeting.

695

696 **12. ADJOURNMENT**

697 At 3:19 p.m., Dr. Palmer moved to adjourn the meeting of the Rivanna Water and Sewer
698 Authority. The motion was seconded by Mr. O'Connell and passed unanimously (6-0). (Mr.
699 Snook left the meeting early and was absent from the vote.)

700

701

702 Respectfully submitted,

703

704

705

706

707

708



Mr. Chip Boyles
Secretary - Treasurer