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3 **RWSA BOARD OF DIRECTORS**
4 **Minutes of Regular Meeting**
5 **October 22, 2019**
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7 A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was
8 held on Tuesday, October 22, 2019 at 2:30 p.m. in the 2nd floor conference room, Administration
9 Building, 695 Moores Creek Lane, Charlottesville, Virginia.

10
11 **Board Members Present:** Lauren Hildebrand, Kathy Galvin, Mike Gaffney, Dr. Liz Palmer.

12
13 **Board Members Absent:** Jeff Richardson, Dr. Tarron Richardson, Gary O’Connell.

14
15 **Rivanna Staff Present:** David Tungate, Michelle Simpson, Austin Marrs, Andrea Terry,
16 Victoria Fort, Jennifer Whitaker, Scott Schiller, Lonnie Wood, Dr. Bill Morris, Dyon Vega,
17 Katie McIlwee, Bill Mawyer.

18
19 **Attorney(s) Present:** Kurt Krueger, RWSA counsel

20
21 **Also Present:** Members of the public and media representatives.

22
23 **1. CALL TO ORDER**

24 Mr. Gaffney called the meeting to order at 2:36 p.m.

25
26 **2. MINUTES OF PREVIOUS BOARD MEETINGS**

27 **a. Minutes of Regular Board Meeting on September 24, 2019**

28 Mr. Gaffney invited members to comment or to offer changes.

29
30 Mr. Mawyer stated that there was a correction on line 251 of the minutes which previously stated
31 “Mr. Gaffney suggested they hold a work session” and it was more appropriately restated to “Mr.
32 Gaffney stated that discussion could be part of a work session discussed at the Rivanna Solid
33 Waste Authority Board meeting.”

34
35 Dr. Palmer stated she had also sent a typographical correction to staff.

36
37 **Dr. Palmer moved that the Board approve the minutes of the September 24 meeting as**
38 **amended. The motion was seconded by Ms. Galvin and passed unanimously (4-0). Mr.**
39 **Richardson, Dr. Richardson, and Mr. O’Connell were absent from the meeting and the**
40 **vote.**

41
42 **3. RECOGNITION**

43 There were no recognitions.

45 **4. EXECUTIVE DIRECTOR'S REPORT**

46 Mr. Mawyer reported that Andrea Terry had participated in the Rivanna Renaissance
47 Conference, where she spoke about algae and talked to the Boys & Girls Club about the local
48 water supply. He stated that she also attended the Rivanna River Flow Fest to bring people closer
49 to the river, and the RWSA appreciates her community outreach.

50
51 Mr. Mawyer stated that graduate students from the Darden School of Business had recently taken
52 a tour of the wastewater treatment facility, and he and Dave Tungate had attended a Virginia
53 Biosolids Council meeting in Richmond during which they heard national speakers from the
54 EPA and Virginia DEQ discuss industry trends on biosolids, the PFAS¹ issue and pending
55 regulations. He stated that he, David Tungate, Phil McKalips, and David Rhoades had toured the
56 McGill Environmental Composting Facility at Waverly. He stated that David Tungate was
57 invited to a conference in Ohio where he talked about client expectations. He stated that they
58 continued to move forward with strategic plan goals of infrastructure planning and master
59 planning and had been working with UVA on the Observatory Treatment Plant's lease, and the
60 Board could expect a report in November when more members would be in attendance.

61
62 Mr. Mawyer reported that Ms. Whitaker and her staff have been working hard on the Wholesale
63 Water Master Metering Project and that 23 out of the 25 meters were working. He stated that the
64 other two meters would be tested on October 24 and that a report would be produced to show the
65 monthly usage of water by both the City and Albemarle County Service Authority over the 30-
66 day period. He explained that the purpose of the report was to keep track of the terms of the
67 Ragged Mountain Agreement and the allocation of the extra water storage that was created by
68 construction of the Ragged Mountain Reservoir Dam and the cost allocation that was agreed
69 upon to pay for that work,² and for the pipeline from South Fork Rivanna to Ragged Mountain
70 reservoirs in the future.

71
72 Mr. Mawyer stated that Augusta Health would be in the office on October 24 to provide flu shots
73 for staff and that Employee Appreciation Day would be held at Michie Tavern on October 31,
74 which the Board was invited to attend. He stated that the next two meetings would be on
75 November 19 and December 17 – the third Tuesdays of those months – due to holiday schedules.

76

77 **5. ITEMS FROM THE PUBLIC**

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79 **6. RESPONSES TO PUBLIC COMMENTS**

80

81 **7. CONSENT AGENDA**

82 *a. Staff Report on Finance*

83

84 *b. Staff Report on Ongoing Projects*

85

¹ Ed. Note: PFAS: perfluoroalkyl and polyfluoroalkyl substances

² Ed. Note: The metering plan and cost allocation was done pursuant to the Water Cost Allocation Agreement dated January 1, 2012 among the City, ACSA and the Authority

- 86 c. *Staff Report on Operations*
37
88 d. *Recommendation for Disposition of FY 2019 Year-End Results*
89
90 e. *Approval of Capital Improvement Plan Amendment – Valve Repair-Replacement (Phase 2)*
91
92 f. *Authorization of Professional Engineering Services for Additional Temporary Sewer Flow*
93 *Metering – Frazier Engineering*
94

95 Mr. Gaffney asked Board members if there were any items they would like to pull from the
96 Consent Agenda.

97
98 **Dr. Palmer moved that the Board approve the consent agenda as presented. The motion**
99 **was seconded by Ms. Hildebrand and passed unanimously (4-0). Mr. Richardson, Dr.**
100 **Richardson, and Mr. O’Connell were absent from the meeting and the vote.**

101
102 **8. OTHER BUSINESS**

103 *Presentation: Drought Update; Director of Engineering & Maintenance, Jennifer Whitaker*
104

105 Ms. Whitaker stated that the presentation she would be giving was slightly different than the one
106 in the Board’s packet, noting that it was updated with rainfall data from the past few days. She
107 stated that RWSA has a Drought Response and Contingency Plan, which was in response to state
108 legislation for community water supply planning. She noted that the plan was a regional
109 cooperative document that addresses regional drought response and includes Rivanna, the City of
110 Charlottesville, Albemarle County Service Authority, and Albemarle County staff to look at key
111 indicators in dry weather, as part of a regional drought response.

112
113 Ms. Whitaker stated that the Rivanna Regional Drought Response Committee convened the
114 week prior, and she outlined the five guiding points of the plan that assess whether a drought
115 watch, warning, or emergency would need to be issued for the regional water supply. She
116 continued to say that the information utilized for this included the Virginia Drought Monitoring
117 Task Force, the state subcommittee’s monthly report which uses information from the DEQ,
118 declarations by the Governor, weather forecasts, a local Oasis hydrologic model, and USGS
119 DEQ stream flow data. She referenced a map and stated that as of October 15, there was a high
120 level of concern regarding the amount of precipitation and drought conditions throughout the
121 state — and the Governor had declared a drought watch for the entire state of Virginia.

122
123 Ms. Whitaker stated that precipitation at that time was in an emergency state, groundwater and
124 stream flows were in a watch state, and reservoirs were in a normal conditions state. She stated
125 that the day prior to the meeting there were still watch areas in the state, but most regions had
126 recovered back to a normal state due to recent rain.

127
128 Ms. Galvin asked how many inches of rain had fallen since October 15th.
29

130 Ms. Whitaker responded that it was coming up in her presentation. She continued to say that
131 there was a U.S. Drought Monitor report that showed on October 8, there were increasing areas
132 of Virginia under severe drought — but she expected most of that to retreat when the updated
133 drought map is provided. She noted that the Governor’s watch advisory had been declared on
134 October 11, referencing the map provided.

135
136 Ms. Whitaker stated that her staff had made a report on the precipitation from the past few days
137 as well as a forecast for the next few days, with about an inch of rain in the area on October 16;
138 2-2.5 inches of rain on October 20, and forecasts for a half inch total on October 22, as well as a
139 wet forecast for October 25-28 and 30-31. She stated that as of October 14, there had been
140 virtually no rain for the month in this region, and September was also extremely dry – the driest
141 September in historical record for some locations in the state. Ms. Whitaker noted that the region
142 was about 5.5 inches below normal, and as of this morning they were about 3.75 inches below,
143 based on the National Weather Service data.

144
145 Ms. Whitaker reported that within a week, the reservoir volumes had increased from 91%
146 capacity to 92%. She stated that it was important to note that South Fork was at 100% for both
147 the current and previous weeks – with almost a foot of water going over the dam two days before
148 the Board meeting. She presented the Oasis hydrologic watershed model that uses data as to how
149 the reservoir system operates – running all 120 years of history through the model – then it
150 predicts the next 12 weeks of rainfall based on that entire history. She noted that if there was
151 greater than a 20% chance that the total urban reservoir storage would be below 75% in 12
152 weeks, this triggers concern and it becomes a potential drought watch. She stated that at the
153 beginning of October, the model showed only a 2% chance of being below the 75%, and she
154 predicted that if the model were run today, there was a 0% chance of being below that 75%.

155
156 Mr. Gaffney asked if this was because in October there was more rainfall.

157
158 Ms. Whitaker confirmed that and stated that late October to early November was the start of the
159 rainy season locally.

160
161 Ms. Whitaker reported that stream flow data and gauging data suggested that although they were
162 lower than the median daily stream flow, and today the Mechums gauge today shows 40 CFS
163 versus a median of 35. She summarized that there were adverse climate conditions in September
164 and October that were leading to a significant drought period and that if it had not rained in the
165 past week, there would be greater concern for drought conditions. She noted that as of the
166 previous week, all urban reservoirs were above 90% total volume – and that has improved even
167 further, with ample water supply for the community. She stated that the reservoirs have been
168 monitored with different parameters of water intake to the treatment plants to optimize the
169 reservoirs, and staff presented this information with the hope that the Board would have future
170 guidance for the issue.

171
172 Ms. Galvin commented that the public has not reached out to her about drought concerns.

173
174 Dr. Palmer stated that she had received comments about how dry it had been, but that everyone
175 knew how rainy it had been in the past week. She asked what they suggested for the future.

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Mr. Mawyer responded that his suggestion was to continue to monitor the drought conditions. He stated that the Authority’s protocol is for staff to come before the Board and ask for authority to notify the City, the Service Authority, and the County to implement voluntary water restrictions, which was not currently necessary because the South Fork Rivanna Reservoir has a significant overflow. He noted that they would monitor conditions until the November meeting and report back to the Board, and if dry conditions returned and South Fork Rivanna Reservoir went below the top of the dam, staff would request action from the Board at the November 19 meeting.

Ms. Hildebrand commented that on the map of drought conditions in the state, even though there was a large area affected by dry weather conditions, the reservoir levels were normal. She noted that the primary concerns were for agriculture.

Mr. Mawyer stated that in their research, they found that the rainfall from 2018 was still benefiting the state – particularly groundwater levels – and they weren’t getting the water losses they would typically get otherwise, which lead to drought conditions.

Mr. Gaffney stated that he recalled the 2002 drought in Virginia was caused partially by the very low groundwater levels, and anything that rained went into the ground instead of the reservoir – which was the result of three years of little rain.

Dr. Palmer stated that although the evidence may be anecdotal, the spring on her property stopped running during the drought of 2002 and had not stopped running at all this year.

Mr. Mawyer stated that they had entered a period where the vegetation was not absorbing as much water, so the runoff amounts are greater – and the evapotranspiration is not as high now as it would be in the spring and summer. He continued to say that the recommendation was to continue to monitor the situation and discuss the topic further in November, meeting with the Drought Committee (comprised of him, Ms. Hildebrand, Mr. O’Connell, and Lance Stewart from Albemarle County). He noted that they had only met once in his three years with Rivanna.

Presentation: Series 2019 Refunding Revenue Bond; Director of Finance, Lonnie Wood

Mr. Wood presented to the Board and stated that a few months ago, long term interest rates took a steep decline in the bond market, so the outstanding debts were reanalyzed to determine if there were any candidates to refinance. He stated they identified the Series 2012A bond, which was issued through the Virginia Resource Authority’s pooled-fund bond program. He stated that the call date for the bond is 2022, when it can be paid off early, and his recommendation was to refinance about \$17.7 million of the Series 2012A bond. He stated that if the interest rates stay where they are currently, the potential savings would be around \$2.1 million in cash flow savings and \$1.5 million in net present value savings, measured over time. He noted that the bond would still have the same term of 24 years.

Mr. Wood stated that the resolution in the Board packet recommends approving a not to exceed the amount of \$19 million, and it was higher than the \$17 million figure because the bond buyers could potentially bid the bond at a higher rate under a discount scenario. He stated the other “not

222 to exceed parameters” are that the cumulative bond interest is not to go over 4.5% and if it does,
223 Rivanna will pull its bond out of that deal, and if it has a net present value savings of less than
224 7%, they would not participate in the bond. He stated that the resolution also authorizes the
225 supplemental trust amendment, which brings the bond into standing with all the other bonds in
226 parity so there is not preference for any bond, and the second is the VRA financing agreement.
227 He stated that Mr. Krueger and several other attorneys, as well as the bond council, have
228 approved the agreement. He noted that November 6 was the date for signing the bond agreement.

229
230 Mr. Mawyer asked if they needed to approve the resolution.

231
232 Mr. Wood confirmed that they did.

233
234 Ms. Galvin asked if they tracked the interest rates in order to know when it’s time to call.

235
236 Mr. Wood stated that it was a combination of the interest rate and the call date, and several years
237 ago there was a change in law that prohibits refinancing untaxed bonds. He stated that the bond
238 in question would be replaced with a taxable bond so that it could be refinanced, which further
239 shows how low the current interest rates are.

240
241 Mr. Mawyer stated that the Authority’s financial advisor, Davenport & Company, helped advise
242 on when it was a good time to refinance.

243
244 Mr. Krueger stated there is a five-page resolution to approve the 31st Supplemental Agreement
245 of Trust of the Local Bond Sale and Financing Agreement. He stated that bond counsel, Mr.
246 Wood, and he had all reviewed it, and that the Board would be authorizing the Authority to enter
247 into those agreements and authorizing Mr. Gaffney to execute those agreements on behalf of the
248 Authority.

249
250 **Dr. Palmer moved that the Board approve the resolution authorizing the issuance, sale, and**
251 **award of the taxable regional water and sewer refunding bonds and the amount to not**
252 **exceed \$19,545,000.**

253
254 **Mr. Gaffney asked if there was any discussion.**

255
256 **Mr. Krueger asked for a roll call vote, which was given as follows: Ms. Hildebrand, aye;**
257 **Ms. Galvin, aye; Mr. Gaffney, aye; Dr. Palmer, aye. Mr. Richardson, Dr. Richardson, and**
258 **Mr. O’Connell were absent from the meeting and the vote.**

259
260 *Presentation: Corrosion Control Inhibitor Update; Director of Operations, Dave Tungate*

261
262 Mr. Tungate presented to the Board and stated that Rivanna has studied corrosion control
263 products for the past two years to look at current practices as part of operations, with the
264 inhibitor added to finished water to prevent lead and copper from leaching from pipes and
265 plumbing fixtures into the drinking water. He noted that they have been adding a corrosion
266 control product to drinking water in the region for the past 30 years. He stated that as part of
267 operational optimization, it was decided that they would look at the corrosion inhibitor program

268 — and historically, the water levels had shown very low amounts of copper and lead.

59

270 Mr. Tungate stated that a consultant performed an analysis of the corrosion control program to
271 evaluate the effectiveness of the corrosion inhibitors for all five of the Rivanna water plants,
272 which was done in a laboratory setting to evaluate the impacts of switching from a
273 polyphosphate product to an orthophosphate corrosion inhibitor. He stated that they used
274 finished water from all five plants, which is something unique they do as part of their
275 experimental design. He noted that they also analyzed for unintended consequences of switching
276 products, such as discolored water.

277

278 Mr. Tungate stated that this analysis was done by taking water samples from the five Rivanna
279 plants to test for lead and copper. He explained that they took the samples twice a week,
280 analyzing it for lead and copper concentrations, then changing the water out and putting new
281 water in. He stated that they would then let it sit and analyze how much of the metals were
282 leached into the water samples. Mr. Tungate emphasized that this was a relative comparison, but
283 the water treated with the polyphosphate corrosion inhibitor had higher concentrations of lead
284 and copper than an orthophosphate polyphosphate blend or an orthophosphate alone. He stated
285 that the results of the test were specifically for the water samples from the lab, not a general
286 overview of what was in the community's drinking water, so these concentrations could not be
287 applied across the board.

288

289 Mr. Tungate reported that in 2019, lead concentrations were less than two parts per billion, with
290 the action level – the point at which a water system must change its treatment process – being 15
291 parts per billion. He noted that the actual numbers from the water supply were significantly
292 lower than the threshold for needing to change the corrosion inhibitor. He stated that the copper
293 levels were higher than that of lead, but the action level is 1,300 parts per billion – with the
294 action levels in the current local system being 97 ppb, 21 ppb, 74 ppb, and 64 ppb. Mr. Tungate
295 noted that the decision to make the change was proactive, as it was time to upgrade the
296 technology.

297

298 Ms. Galvin asked if it was known as to why there was such a range of numbers in the data.

299

300 Mr. Tungate responded that it was difficult to say, but all the samples were significantly lower
301 than the federal threshold action level of 1300 ppb.

302

303 Mr. Mawyer asked if these were federal standards.

304

305 Mr. Tungate confirmed that it was the 1996 Lead and Copper rule, which limits exposure to lead
306 and copper lining in drinking water systems.

307

308 Mr. Tungate reported that Rivanna proposes to change the corrosion inhibitor in November in
309 Crozet to an ortho-polyphosphate blend, taking a conservative approach by not completely
310 switching the product. He stated that Crozet is a good place to start, with a new chemical feed,
311 equipment and room purchased as part of the GAC project. He noted that this would be followed
312 by implementation in Scottsville, then the Urban system. He stated that Rivanna was
13 coordinating with ACSA and the City to develop a customer communication plan and a

314 monitoring program to check the performance of the product as it leaves the treatment plant, as
315 well as analyzing samples as they are distributed into the system.

316
317 Dr. Palmer asked if the main point of concern was discoloration of water.

318
319 Mr. Tungate responded that discoloration of water could be an issue because it was seen in the
320 lab.

321
322 Dr. Palmer asked what caused the discoloration.

323
324 Mr. Tungate explained that the polyphosphate has a sequestering capacity that allows it to keep
325 the iron and manganese solution, and reducing the polyphosphate concentration could reduce the
326 benefits – which is why they are going with a blend.

327
328 Ms. Galvin asked if it affected taste of water.

329
330 Mr. Tungate stated that it did not.

331
332 Mr. Mawyer asked about whether it would be suitable for aquariums.

333
334 Mr. Tungate confirmed that it would, and stated there were communications with the dialysis
335 center at UVA and at Sentara and Martha Jefferson, and that it would not impact dialysis
336 centers.

337
338 Mr. Gaffney asked how the new inhibitor's effectiveness with lead would be measured if the lead
339 levels were already so low.

340
341 Mr. Tungate replied that they would be taking a series of background tests in each of the systems
342 before the change is made. He continued that once the change is made, samples will be collected
343 once a week and they would be coordinating with the County and City that upcoming Friday to
344 select sentinel homes to be monitored for copper and lead levels after the transition. He
345 continued to say that VDH has given approval to make the change, but they want to see an
346 implementation plan.

347
348 Dr. Palmer asked what part of the plan was the optimization.

349
350 Mr. Tungate stated that most utilities currently use the ortho-polyphosphate blend and it protects
351 from corrosion more so than a polyphosphate does alone, which was typical 30 years ago. He
352 noted that the ortho provided more protection from corrosion.

353
354 Mr. Gaffney asked what the cost of the change would be.

355
356 Mr. Tungate stated it would be a minimal change with little to no cost difference, and they would
357 not have to mix it as it came already mixed in 55-gallon totes.

358
359 **9. OTHER ITEMS FROM BOARD/STAFF NOT ON AGENDA**

360 There were none.

51

362 **10. CLOSED MEETING**

363 There was none.

364

365 **11. ADJOURNMENT**

366 **At 3:17 p.m., Ms. Galvin moved that the Board adjourn the meeting. The motion was**
367 **seconded by Ms. Hildebrand and passed unanimously (4-0). Mr. O'Connell, Mr.**
368 **Richardson, and Dr. Richardson were absent from the meeting and the vote.**

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370

371 Respectfully submitted,

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377



Jeff Richardson
Secretary - Treasurer

