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**RWSA BOARD OF DIRECTORS**  
**Minutes of Regular Meeting**  
**December 17, 2019**

10 A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was  
11 held on Tuesday, December 17, 2019 at 2:15 p.m. in the 2<sup>nd</sup> floor conference room,  
12 Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

13 **Board Members Present:** Lauren Hildebrand, Kathy Galvin, Dr. Liz Palmer, Jeff Richardson,  
14 Gary O’Connell, Dr. Tarron Richardson.

15 **Board Members Absent:** Mike Gaffney.

16 **Rivanna Staff Present:** David Tungate, Lonnie Wood, Michelle Simpson, Austin Marrs,  
17 Andrea Terry, Victoria Fort, Jennifer Whitaker, Scott Schiller, Dr. Bill Morris, Phil McKalips,  
18 Vincent Deavers, Matt Bussell, Katie McIlwee, Bill Mawyer.

19 **Attorney(s) Present:** Kurt Krueger.

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

21  
22  
23 **1. CALL TO ORDER**

24 Dr. Richardson called the December 17, 2019 regular meeting of the Rivanna Water and Sewer  
25 Authority to order at 2:15 p.m.

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

28 *a. Minutes of Regular Board Meeting on November 19, 2019*

29  
30 Dr. Richardson asked the board members if there were any questions or comments about the  
31 November 19, 2019 meeting.

32  
33 Dr. Palmer stated that she had put in one correction.

34  
35 Mr. Mawyer stated that on line 178, and 179, the minutes reflected that he was stating that the  
36 Authority financed \$17.6 million in bonds, on which they were paying 3.9% interest. He stated  
37 the words, “on which is about \$17.6 million” should be deleted because it was redundant to the  
38 first sentence and was somewhat confusing.

39  
40 **Dr. Palmer moved that the board approve the minutes of the regular board meeting of**  
41 **November 19, 2019, with the change noted. The motion was seconded by Ms. Galvin and**  
42 **passed unanimously (6-0). Mr. Gaffney was absent from the meeting and the vote.**

43  
44 **3. RECOGNITIONS**

45 Dr. Richardson read aloud the resolution in appreciation for Ms. Galvin:

46  
47 “WHEREAS, Ms. Galvin has served as a member of the Board of Directors for the Rivanna  
48 Water & Sewer Authority and the Rivanna Solid Waste Authority since November 2011; and  
49

50 “WHEREAS, over that same period Ms. Galvin has demonstrated leadership in water and sewer,  
51 solid waste and recycling services; and has been a valuable member of the Boards of Directors  
52 and a resource to the Authorities; and

53  
54 “WHEREAS, Ms. Galvin’s understanding of the water, sewer, solid waste and recycling  
55 operations of the City of Charlottesville, the Water & Sewer Authority and the Solid Waste  
56 Authority has supported a strategic decision-making process that provided benefits to the  
57 customers served by the City of Charlottesville as well as the community as a whole. During Ms.  
58 Galvin’s tenure and through her efforts, major projects were completed including:

- 59
- 60 - the Ragged Mountain Reservoir Dam
- 61 - the Rivanna Sewer Pumping Station
- 62 - Odor Control Improvements at the Moores Creek Advanced Water Resource Recovery Facility
- 63 - Granular Activated Carbon Filters for all water treatment plants
- 64 - a Refuse Transfer Station at the Ivy Material Utilization Center
- 65 - a Strategic Plan for both Authorities; and

66  
67 “WHEREAS, the Board of Directors of the Water & Sewer Authority and the Solid Waste  
68 Authority are most grateful for the professional and personal contributions Ms. Galvin has  
69 provided to both Authorities and to the community; and

70  
71 “NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Rivanna Water &  
72 Sewer Authority and the Rivanna Solid Waste Authority recognize, thank, and commend Ms.  
73 Galvin for her distinguished service, efforts, and achievements as a member of the Rivanna  
74 Water & Sewer Authority and the Rivanna Solid Waste Authority, and present this Resolution as  
75 a token of esteem, with their best wishes in her future endeavors.

76  
77 “BE IT FURTHER RESOLVED that this Resolution be entered upon both the permanent  
78 Minutes of the Rivanna Water & Sewer Authority and the Rivanna Solid Waste Authority.”

79  
80 The Board presented a plaque to Ms. Galvin.

81  
82 Ms. Galvin stated that it was an honor to serve on the Board, noting that they had accomplished  
83 much work together that has kept the community alive and thriving. She stated that some things  
84 that may seem mundane (such as odor mitigation) are actually fundamental. She also gave her  
85 regards to staff for their pursuit of excellence, adding that it has been exciting to see the  
86 innovation.

87  
88 Dr. Palmer stated that although the City and County do not always get along well, she very much  
89 enjoyed working with Ms. Galvin, and expressed her appreciation for their honest discussions.

90  
91 **4. EXECUTIVE DIRECTOR’S REPORT**

92 Mr. Mawyer stated that there were many goals connected to the Strategic Plan. One of the goals  
93 is Workforce Development, and that he first wanted to recognize one of the staff, Mr. Vincent  
94 Deavers, who recently has worked hard to obtain his commercial driver’s license. He asked Mr.  
95 Deavers to speak about the experience.

96  
97 Mr. Deavers stated that it was very trying.

99 Mr. Mawyer asked Mr. Deavers to explain what he had to do to obtain his license.  
100  
101 Mr. Deavers stated that the worst part was parallel parking and turning around.  
102  
103 Mr. Mawyer stated that he understood that it takes about six months of practice and training. He  
104 stated that there is a training area where they take the candidates for CDLs and they are trained  
105 on how to drive and park the bigger trucks and trailers. He stated that Mr. Deavers then had to  
106 take a written exam with the Department of Motor Vehicles, as well as a field driving test. He  
107 stated that it is a stringent requirement to receive the CDL and that he was pleased that Mr.  
108 Deavers was able to obtain it. He stated that there is a need for that service and congratulated Mr.  
109 Deavers.  
110  
111 Mr. Mawyer stated that the Board agreed to increase the Education Assistance Program on July  
112 1, 2019 and there are two staff members who were using the program and pursuing graduate  
113 degrees with Rivanna's support. He stated that this was a great thing, as Rivanna develops its  
114 workforce.  
115  
116 Mr. Mawyer stated that they also supported the Imagine a Day Without Water initiative, along  
117 with Ms. Hildebrand's and Mr. O'Connell's groups. He stated that this is a program where K-12  
118 students are invited to submit their artwork on what it means to imagine a day without water. He  
119 stated that they celebrated with the winners at Mr. O'Connell's office recently and were happy to  
120 participate in this program. He stated that there were over 300 poster submissions for the group  
121 effort. He thanked Ms. McIlwee for managing this.  
122  
123 Ms. Galvin asked if this initiative was evenly spread over the County and City.  
124  
125 Ms. McIlwee replied that the County had more submissions because they have more schools. She  
126 stated that it was evenly spread comparatively and proportionately.  
127  
128 Ms. Galvin noted that this was a lot of submissions.  
129  
130 Mr. O'Connell stated that it was also high-quality artwork.  
131  
132 Ms. McIlwee stated that she believed the first or second year of the initiative had the most  
133 submissions, but that this year had more submissions than the previous year.  
134  
135 Mr. Mawyer asked if there was an online voting program.  
136  
137 Ms. McIlwee replied yes. She stated that the City set up a website for fan-favorite voting and that  
138 there were over 1,800 votes.  
139  
140 Ms. Hildebrand stated that they had tried to expand this to high school, but that it did not seem to  
141 gain much traction. She stated that this was a first for this year.  
142  
143 Ms. McIlwee stated that it was also opened to Kindergarten and that they did have some  
144 submissions from them.  
145  
146 Mr. Mawyer stated that under the Infrastructure and Master Planning program, he, Mr. David  
147 Tungate (Director of Operations) and Mr. Rob Haacke (Wastewater Manager) attended the

148 Virginia Association of Municipal Wastewater Agencies (VAMWA) quarterly meeting in  
49 Richmond with a particular eye on what the State is currently doing with the WIP3 (Water  
150 Improvement Plan). He explained that "3" is the third phase of how to clean up the Chesapeake  
151 Bay. He stated that Virginia has to submit a plan to the EPA, and that they are monitoring if the  
152 State is being successful.

153  
154 Mr. Mawyer stated that some of the concern, and what VAMWA is monitoring, are the  
155 regulations that the State has proposed to adjust on wastewater treatment plants to make Rivanna  
156 further reduce the nutrients that they release with treated wastewater (nitrogen and phosphorus).  
157 He stated that one concern they get, as noted in the Financial Report, was that they got a check  
158 for \$78,763 that year for nutrient credits that they create. He explained they treat wastewater to  
159 lower nutrient levels than they have to, and thereby create the credits. He stated that with part of  
160 the new plan, Rivanna feels like the State is going to take RWSA's ability to obtain those credits  
161 and revenue away.

162  
163 Mr. Mawyer stated that VAMWA is monitoring the issue and this was a reason he attends the  
164 meetings so he can obtain information about issues like this.

165  
166 Mr. Mawyer stated that regarding the South Rivanna Reservoir to Ragged Mountain Reservoir  
167 waterline easement effort, Rivanna has made offers to nine of eleven private property owners,  
168 and they had one acceptance so far, which they were pleased with. He stated that they continue  
169 to work with VDOT, and with the City for property owned near Ragged Mountain Reservoir, as  
170 well as with the County School Board as the pipe will be located behind Albemarle High School  
71 and Jouett Middle School.

172  
173 Mr. Mawyer stated that they are continuing with negotiations on the Observatory Water  
174 Treatment Plant lease, noting it has been in UVA's hands for the past few weeks and that  
175 Rivanna was expecting a response from UVA sometime soon.

176  
177 Mr. Mawyer stated that he and Mr. Tungate also went to the Virginia Biosolids Council in  
178 Richmond. He stated that this is where they learn about biosolids regulations. He stated that the  
179 conversation now about PFAS being in biosolids and whether biosolids should be allowed for  
180 land application, is a hot topic. He recalled that they brought those alternatives to the RWSA  
181 Board a month or two earlier, and that the Board decided we would continue to compost all of  
182 the biosolids at the McGill facility in Waverly, Virginia. He stated that although they are still  
183 doing this, they want to be aware of regulations that are being proposed, as well as new  
184 technologies and opportunities.

185  
186 Mr. Mawyer stated that Rivanna makes over 500 truck trips to McGill per year, delivering about  
187 14,000 tons per year of biosolids. He stated that this is what is left at the end of the wastewater  
188 treatment process, and that the biosolids are spun, dried, and put on the truck almost every day,  
189 with some days having more than one truckload.

190  
191 Mr. Mawyer recalled that the prior month, the Board was informed that Rivanna will start the  
192 new corrosion inhibitor product in the Crozet water distribution system. He stated that this was  
193 going well and that they have not heard any concerns from customers about odors, colors, or  
194 issues with the change in the corrosion inhibitor. He explained that the product helps to coat the  
195 interior of the water pipes and all fixtures in the home so that lead doesn't leach into the drinking  
196 water.

197  
98 Mr. Mawyer noted that Rivanna is continuing to streamline its documents. He stated that in  
199 Attachment 7B (Staff Report on Ongoing Projects), this is one of the most voluminous sections  
200 to the Board Report. He explained that they have gone to what he calls the "Executive  
201 Summary" format in that they list all the projects up front, and then they list the brief summary  
202 of the status of those projects. He stated that if the reader is still interested, they can go to the  
203 back and read the history and more information. He stated that they can also choose not to read  
204 all the history and focus on the first few pages.

205  
206 Mr. Mawyer stated that there was also a new document in the board packet, in Attachment 7C  
207 (Staff Report on Operations). He stated that this will be a standard part of the packet where they  
208 will have the Wholesale Metering Program Report. He stated that as they finish the Wholesale  
209 Metering project, they will have a report every month in the board packet as a part of Consent  
210 Agenda Item 7C. He stated that the board will start to see those graphs grow. He stated that Ms.  
211 Victoria Fort would be telling the Board about the program, including a review of the graph to  
212 understand the data.

213  
214 Mr. Mawyer stated that there was also a suggestion from the Board about Rivanna quantifying  
215 and documenting its sustainability efforts. He stated that they had an engineer coming early in  
216 February to help give some orientation and training on greenhouse gases, climate action plans,  
217 carbon footprints, and other topics to help bring Rivanna up to speed on those and how to  
218 calculate the metrics so that they can be reported back to the Board.

219  
20 **5. ITEMS FROM THE PUBLIC**

221 Dr. Richardson opened the meeting to the public.

222  
223 Mr. John Martin (White Hall District) stated that the week before, he attended the meeting at  
224 Agnor-Hurt Elementary School, hosted by the County to explain the project of devoting a parcel  
225 of land on the reservoir to a brewing company to build a brewery there. He stated that the  
226 meeting was attended by scores of South Fork Reservoir neighbors. He stated that those people  
227 clearly felt anguished about the proposal. He recalled that one woman who had been sitting near  
228 him was making comments about living on the reservoir, and that she abruptly stopped her  
229 comments as she was crying.

230  
231 Mr. Martin stated that this all came down upon the residents with very little notice. He stated that  
232 the parcel of land he was referring to was at the end, where the reservoir does a turn and goes  
233 back up north. He stated that it was a parcel of land directly opposite the Ivy Natural Area land.  
234 He stated that it has been occupied by a church, which has combined its congregation with  
235 another church, and so they are moving out of the building. He stated that if this is no longer  
236 going to be a church, he wanted to consider what would be the highest and best use of that  
237 particular parcel of land on the reservoir.

238  
239 Mr. Martin stated that going back to the water planning days 15 years before, they talked a lot  
240 about the history of the reservoir, and that one member gave several recitations of her knowledge  
241 of the history of the people who lived on the site of the reservoir before it was filled. He stated  
242 that this was fascinating information that he hadn't known previously. He stated that there was a  
243 whole community called Hydraulic, and that there was a plant there where they mined sand and  
244 gravel, which was used to build UVA post-Civil War. He stated that this community has totally

245 vanished, and that it was something that should be better known. He stated that these are people  
46 that should be remembered.

247  
248 Mr. Martin stated that the highest and best use, in his mind, for that property would be to use it  
249 as a site to do some sort of historical remembrance or recognition that those people existed, for  
250 the benefit of the entire community. He stated that the subject parcel would be the perfect  
251 location to do this.

252  
253 Mr. Martin stated that in terms of going about this, he didn't know, and he didn't know what  
254 money would be involved, but that it seemed to him that it would be very appropriate if Rivanna  
255 (joint City and County) purchased that land, and condemned it if need be. He stated that they  
256 should purchase the land with the City and the County, working out the financial aspect of it  
257 together, and have Rivanna be the good steward that it is of the reservoir and administer the  
258 property, going forward.

259  
260 Mr. Martin stated that the prospect of there being a brewery there with signage and lights on the  
261 reservoir was troubling, not only for the people who live around the reservoir, but the whole  
262 community.

263  
264 Mr. Martin asked if Rivanna would consider his idea, noting that time was of the essence. He  
265 reiterated that the community didn't know about the proposal until a few weeks earlier. He stated  
266 that his suggestion would work toward the betterment of the reservoir and the lives of those who  
267 live around it, as well as the betterment of the entire community (City and County).

68

269 **6. RESPONSES TO PUBLIC COMMENTS**

270 Mr. Mawyer stated that Rivanna has been coordinating with the County (and specifically, with  
271 Dr. Palmer) about its involvement in the project, which was minimal as it was a by-right  
272 development and did not go through a formal development review process. He stated that the  
273 Water Resources Manager, staff, and Ms. Fort have provided feedback to the County.

274  
275 Mr. Mawyer stated that Rivanna never considered purchasing the property and that this hadn't  
276 been part of their plan.

277  
278 Dr. Palmer stated that the project was going before the ABC Board for an ABC license in a  
279 hearing in the beginning of the year. She stated that the development is by right, and there is a  
280 State law that says a brewery can start with a tasting room anywhere in the County, or in  
281 Virginia, if the zoning is RA. She stated that it is a horrible law that was passed a few years  
282 earlier. She stated that she spoke with the ABC agent last Friday and that he told her that if  
283 someone puts a pumpkin patch outside and makes one batch of pumpkin brew a year, they can  
284 qualify as an Agricultural Operation. She stated that it is an amazing State law that the County  
285 doesn't seem to have any control over.

286  
287 Dr. Palmer stated that what the Board of Supervisors would be looking at on Wednesday was a  
288 resolution in support of the objectors of the ABC license. She stated that she could send this  
289 resolution to the RWSA Board, noting that there was a lot of history of the property in it and that  
290 the Supervisors worked very hard over the weekend.

91

292 Dr. Palmer stated that she personally thought the project was a travesty, and that she couldn't  
293 believe it was happening for a variety of reasons. She stated that the Board of Supervisors only  
294 found out about it weeks before and that they had to scramble to figure out how to respond.  
295

296 Dr. Palmer stated that purchasing the property would be a big deal. She stated that the City is an  
297 abutting owner, with the first several feet of the particular property on two sides of City property.  
298 She stated that she assumed that City staff was notified back when the ABC license was applied  
299 for, but that she didn't know how this process works. She stated that Rivanna found out about the  
300 project from the Rivanna Conservation Alliance, and that it was an amazing set of circumstances.  
301 She stated that the County staff finds out when the ABC license is applied for, which her  
302 understanding was either September or October, but that the Board of Supervisors was not  
303 notified.  
304

305 Dr. Palmer stated that if the City was interested in doing anything, the County would be  
306 interested in finding out.  
307

308 Ms. Galvin asked Dr. Palmer to send her the resolution so that she, at the very least, could send it  
309 to her colleagues and the future Councilors-Elect who are assuming office January 1. She asked  
310 when the resolution would be read and passed.  
311

312 Dr. Palmer replied that the Board of Supervisors would be doing this the next day (December  
313 18). She stated that she assumed the Board would pass it. She stated that as soon as it goes  
314 through that process, she would send the resolution to the RWSA Board.  
15

316 Ms. Galvin stated that it would be good to have a passed resolution from the County to use as a  
317 model. She stated that she could forward it along.  
318

319 Ms. Galvin stated that she believed that the landscape is pristine and a shared amenity. She stated  
320 that she also found it troubling that the brewery was being proposed. She stated that zoning has  
321 been her nemesis ever since she took office, and that this was something that represented a  
322 problem they are dealing with at the State level.  
323

324 Ms. Galvin stated that she didn't know if it would help to bring this up to the UVA Rowing  
325 Team.  
326

327 Dr. Palmer stated that the ABC Board only allows the Board of Supervisors to object on a very  
328 limited set of issues. She stated that she could also send this list when she sends out the  
329 resolution, as there are many "whereas" statements in the resolution, but that the objecting points  
330 are very short. She stated that this reflects what they are able to object to.  
331

332 Ms. Galvin stated that this was very helpful. She thanked Mr. Martin for bringing the matter to  
333 the board's attention.  
334

## 335 **7. CONSENT AGENDA**

336 *a. Staff Report on Finance*  
337

338 *b. Staff Report on Ongoing Projects*  
339

340 *c. Staff Report on Operations*

341

42 **Ms. Hildebrand moved that the board approve the Consent Agenda. The motion was**  
343 **seconded by Ms. Galvin and passed unanimously (6-0). Mr. Gaffney was absent from the**  
344 **meeting and the vote.**

345

346 **8. OTHER BUSINESS**

347 *a. Presentation: Wholesale Water Meter Program; Senior Civil Engineer, Victoria Fort, PE*

348 Ms. Victoria Fort stated that now that they have reached the end of the project (noting it had  
349 been a long road to get to that point), they thought it was a good time to explain how they got to  
350 where they are, the next steps, and information about the report the Board will be seeing each  
351 month and what the information means.

352

353 Ms. Fort presented a map that had been provided previously in another presentation and that at  
354 one point, they were showing all the incomplete sites. She stated that the sites are now all green  
355 on the map, which means they are complete and in operation.

356

357 Ms. Fort stated that to provide an overview of where the project came from, it came out of the  
358 2012 Water Cost Allocation Agreement. She stated that this Agreement essentially allocated the  
359 additional safe-yield that would come out of the implementation of the Community Water  
360 Supply Plan, and how the two agencies (City and ACSA) would share in the cost of the projects  
361 that make up the Water Supply Plan. She stated that the cost of the new Ragged Mountain Dam  
62 would be shared 85/15% between ACSA and the City, and the new pipeline that will connect the  
363 South Rivanna and Ragged Mountain Reservoirs would be shared 80/20%. She stated that the  
364 cost of dredging, if conducted, would be shared 50/50%.

365

366 Ms. Fort stated that the Agreement also contained a provision that required RWSA to implement  
367 a metering program to monitor each agency's actual water usage.

368

369 Ms. Fort stated that following the signing of that Agreement, a contract was awarded to Michael  
370 Baker International in August 2012 to complete an alternative study and provide services all the  
371 way through design and construction.

372

373 Ms. Fort stated that by September of 2013, the study was completed, and a jurisdictional  
374 approach was selected, which means that any water that was crossing over the jurisdictional  
375 boundary would be metered rather than metering every single interconnect between the City and  
376 County. She stated that when this approach was put together, there were about 34 meters, and  
377 that this was eventually reduced to 25 meter sites.

378

379 Ms. Fort stated that they then proceeded with design, and the construction contract was awarded  
380 in November 2015 for \$2.2 million to Linco, Inc. She stated that their original substantial  
81 completion date was in February of 2017, and by early 2018, there was still a struggle with  
82 delays in getting the construction contract completed. She stated that there was one site the  
383 contractor declined to complete due to site difficulties.



384

385 Ms. Fort stated that Rivanna in April of 2018 terminated the contract with Linco for  
386 convenience. She stated that staff managed completion of the rest of the project and all of the  
387 punch list in-house, primarily through Rivanna's own maintenance staff, noting that staff has put  
388 a tremendous amount of work into the project.

389  
390 Ms. Fort stated that between April of 2018 and March of 2019, Rivanna spent a lot of time  
391 completing the work and doing a lot of troubleshooting on the instrumentation. She stated that by  
392 March of 2019, they were able to move into calibration of the meters.

393  
394 Ms. Fort stated that during that same period, in May of 2018, they completed the Wholesale  
395 Metering Administrative and Implementation Policy, which ACSA and the City have signed off  
396 on. She stated that from March through October of 2019, they worked through calibration of the  
397 meters.

398  
399 Mr. Mawyer asked her to explain how calibration was performed.

400  
401 Ms. Fort stated that calibration testing confirms that the reading from the meter is accurate within  
402 the manufacturer's specifications. She stated that there were a few different ways of calibrating,  
403 and that most of them are done using a comparative test method, which uses a test meter and  
404 compares it to what the user's meter is reading. She stated that if the reading is off by a certain  
405 percentage, the meter would fail and that if it was within a certain percentage, it would pass.

406  
407 Ms. Fort stated that in the end, they closed out the CIP project in July of 2019, and the total  
408 project expenditures were \$3.2 million.

409  
410 Ms. Fort stated that the punch list and meter troubleshooting were completed between April of  
411 2018 and March of 2019. She stated that in terms of the punch list, Linco declined to complete  
412 one of the metering sites. She presented a picture of this site (Meter Site 15), explaining that it  
413 was wedged between Ivy Road and the railroad, with overhead utilities and underground utilities.  
414 She stated that it was a difficult site to construct, and that this was completed under the on-call  
415 construction services contract with Faulconer Construction. She stated that this work was  
416 completed in June of 2018.

417  
418 Ms. Fort stated that they worked through a massive amount of punch list items which included  
419 site restoration, paving, and instrumentation setup. She stated that one site was supposed to have  
420 an electrical service, but this was never completed, so staff had the electrical service and all the  
421 instrumentation installed at that site.

422  
423 Ms. Fort stated that regarding the troubleshooting, they had a lot of problems getting the  
424 instrumentation up and running. She presented a picture of Site 14 as an example. She stated that  
425 most of the metering sites include the meter itself. She stated that the meter connects to a  
426 register. She stated that the register is the computer that logs and processes all the data, then

427 sends it to the transmitter. She stated that this is transmitted via cellular signal to a cloud server,  
28 where Rivanna can retrieve all the metering data.

429  
430 Ms. Fort stated that getting the meters, registers, and transmitters to talk to each other was a  
431 challenge. She stated that staff spent a lot of time working with replacement of the two  
432 manufacturers of the selected meters (Mueller and Master Meter), on site, on the phone, and  
433 through email. She stated that they also had some issues with some of the bidirectional meters  
434 because when there was flow in a negative direction, the Badger transmitters could not transmit  
435 the negative numbers, and so many of the meters had to be reprogrammed.

436  
437 Ms. Fort stated that some of the cellular transmitters (the end points that are part of the Badger  
438 AMA system) were faulty, and many of these had to be replaced. She stated that by March of  
439 2019, they finally had all the instrumentation functioning and transmitting data, and so it was  
440 then time to move into calibration, which staff believed at the time would be the end. She stated  
441 that this proved not to be true.

442  
443 Ms. Fort stated that they performed calibration in March, June, August, and October of 2019,  
444 with four separate visits from calibration crews. She stated that during the first visit in March,  
445 eight of 25 meters passed calibration, so eight of the meters were within 3% of the accurate value  
446 on the test meter. She stated that they then spent a lot of time with the engineering consultant and  
47 with the manufacturers of the meters trying to come up with reasons why the other meters  
448 wouldn't calibrate.

449  
450 Ms. Fort stated that Rivanna spent a lot of time with its own maintenance staff, ruling out  
451 possible causes of error such as improper grounding that causes some issues and trapped air. She  
452 stated that they looked at the makeup of the water itself to make sure that the magnetic signal  
453 wouldn't be thrown off. She stated that they were able to find some issues, and that much of it  
454 was due to a learning curve by the calibration crew and staff.

455  
456 Ms. Fort stated that with the subsequent visits in June, August, and October, they were able to  
457 get all 25 meters to pass calibration testing and become fully operational. She stated that they  
458 now have 25 meters that they feel are accurate.

459  
460 Ms. Fort stated that throughout the process, they had to replace about 10 meters. She stated that  
461 with some, they determined that the ones that had been replaced were actually accurate and that  
462 they have these meters in inventory as spares.

463  
464 Ms. Fort stated that some of the meters were under warranty, and some were not. She stated that  
465 some of the cost was absorbed by contingency in the project, before it was closed out. She stated  
466 that some of the meters were covered under warranty and provided at no cost by the  
467 manufacturer, and with the remaining items, they had to pay out of the operations budget.

468  
469 Dr. Palmer asked how often the meters have to be recalibrated and what their life span is.

470

71 Ms. Fort replied that calibration is recommended, at a minimum, every year. She stated that  
472 some manufacturers recommend calibrating twice a year. She stated that the finished water  
473 meters at the three plants are calibrated at least once annually.

474

475 Ms. Fort stated that in terms of life span, the meters should last ten years. She stated that the five  
476 or six Master ultrasonic meters are under warranty for ten years. She stated that the Mueller  
477 meters that make up the bulk of the program were only warranted for a year.

478

479 Ms. Fort stated that access to some sites was a challenge during calibration. She stated that the  
480 one site that is not on the Badger system (Meter Site 26) is located on Route 29 in a travel lane,  
481 in a manhole. She stated that they had to do lane closures, which VDOT only allows at night.  
482 She stated that they found out the first time they tried to calibrate it that at night, flows are very  
483 low, and they are below the minimum needed for calibration of that site. She stated that they then  
484 had to get ACSA and the City there the next time, do the same lane closures, and flow hydrants  
485 and check pressure so that they had enough flow for that meter to calibrate.

486

487 Ms. Fort stated that another challenging site was Meter Site 24 on Greenbrier Terrace. She stated  
488 that it is always full of water and mosquitos. She stated that it is a 20-inch meter and is very  
489 difficult to manipulate. She stated that this meter had to be replaced during the summer of 2019,  
90 which was not easy. She stated that they also found that the test port was located too close to the  
491 meter itself, so a few months back, they installed a new test port outside of the meter hole so that  
492 they can accurately test it in the future.

493

494 Dr. Palmer asked how long it took to calibrate the meter on Route 29.

495

496 Ms. Fort replied that the entire process took about 3-4 hours.

497

498 Dr. Palmer asked if Route 29 had to be closed in that area.

499

500 Ms. Fort replied yes. She stated that they closed two lanes on the northbound side, noting that  
501 one was a left-turn lane and one was a through lane. She stated that this was coordinated with  
502 VDOT and that they were able to keep traffic going, but that there are restrictions on hours  
503 during which work can be done and when lanes can be closed.

504

505 Ms. Fort stated that once everything was calibrated, the project entered the implementation  
506 phase. She stated that she would provide some information on where the data comes from and  
507 how Rivanna compiles and reports it.

508

509 Ms. Fort stated that the data is retrieved from multiple sources, such as the Badger site. She  
10 presented a screenshot of the Badger site showing 24 of the 25 sites, explaining that all kinds of  
511 analytics can be pulled off the Badger site to get information. She stated that the last of the 25  
512 meters is the one in Route 29, which comes from SCADA.

513

14 Ms. Fort stated that they have the production data for the three water treatment plants. She stated  
515 that there are City and ACSA swap meters, where in a few places in the system, there are City  
516 meters on the ACSA side of the water line, or an ACSA meter on the City side of the  
517 jurisdictional break. She stated that both groups are sending Rivanna data on all the swap meter  
518 accounts every month, which are factored into the equation as well.

519  
520 Ms. Fort stated that they have a potable water meter at the Observatory Water Treatment Plant  
521 that gets subtracted out from the production number to give a net production at Observatory.

522  
523 Ms. Fort stated that all of this data is put into a spreadsheet that Rivanna has provided to the City  
524 and ACSA as part of the implementation policy. She stated that the spreadsheet calculates the  
525 water usage of each agency for every month.

526  
527 Ms. Fort presented the monthly board report and stated that she would explain where the data  
528 comes from. She presented the water allocation worksheet, explaining that they input the data  
529 from the jurisdictional meters, water treatment plant production numbers, and the swap meter  
530 accounts, and that it calculates the total monthly usage for ACSA and the City, average daily  
531 usage, and percent usage by each entity as compared to the total.

532  
33 Ms. Fort stated that this chart is taken directly from the worksheet and put into the Board report.  
534 She stated that while all the details are not provided in the report, the summary is given. She  
535 stated that they will also include any other pertinent data that comes up each month about the  
536 meters, as well as the charts.

537  
538 Dr. Palmer stated that she thought there were 25 meters.

539  
540 Ms. Fort replied that there are 25.

541  
542 Dr. Palmer stated that under "Jurisdictional Meter Sites," there were 32 displayed. She asked if  
543 she was reading the information wrong.

544  
545 Ms. Fort replied that the sites were originally numbered 1-32, and the numbering convention was  
546 maintained after the number of meters was reduced to 25. She stated they originally had 32 sites.

547  
548 Dr. Palmer stated that she could then see the ones that were missing and understood.

549  
550 Ms. Fort stated that throughout the design process, the sites were referred to by number and that  
551 they decided not to renumber them.

552  
553 Ms. Fort stated that she would provide a brief overview of the charts included in the Board  
554 report. She stated that the Water Cost Allocation Agreement allocates the additional safe yield  
555 that they create out of the implementation of the community water supply plan. She stated that

556 the ultimate total safe yield, as part of that agreement, is 18.7 MGD. She stated that the City is  
557 allocated 6.71 MGD, and the ACSA is allocated 11.99 MGD. She stated that with the annual  
558 true-up that is done as part of the metering implementation policy, if the previous 12 months'  
559 average daily usage exceeds the allocation of either entity, then a true-up would be required for  
560 the payments for the projects.

561  
562 Ms. Fort stated that to give a sense of how the number changes once a month, billing data is used  
563 for the last 11 months. She explained that on the chart, where the numbers turn green and blue,  
564 for the City and ACSA, respectively, this is the wholesale metering data. She stated that as they  
565 obtain more metering data, more of this will turn green and blue, and they will be using the  
566 actual wholesale data. She stated that this chart was more for demonstration purposes.

567  
568 Ms. Fort stated that the chart shows that the average usage was 4.66 MGD by the City and 4.55  
569 MGD by the ACSA for November. These averages are lower for both the City and ACSA as  
570 compared to the annual allocation.

571  
572 Mr. Mawyer noted that these were examples as they were not official data.

573  
574 Ms. Fort stated that this was correct, adding that the data was based on billing and not on the  
575 wholesale data. She stated that it will vary slightly from what is billed monthly.

76  
577 Mr. O'Connell asked if the percentage was for the first full month.

578  
579 Ms. Fort replied yes.

580  
581 Mr. O'Connell asked if they would then build upon that until they get to 12 months.

582  
583 Ms. Fort replied yes.

584  
585 Ms. Fort stated that for next steps, they will be completing another calibration prior to the true-up  
586 month (which is July of each year). She stated that they will complete another round of  
587 calibration testing in the spring with all the things that staff has learned, adding that they feel this  
588 will go much more smoothly. She stated that the annual true-up is in July of every year because  
589 it requires 12 full months of data. She stated that the first real true-up will be in July of 2021. She  
590 stated that they would probably go through the exercise to get a sense of what the process looks  
591 like in 2020, but that it would be official in 2021.

592  
593 Ms. Fort stated that the program requires periodic audits. She stated that once every five years,  
594 they have an outside engineer review the program to make sure it's still functioning the way it  
595 was meant to and that it is meeting the objectives that were set forth by that Agreement.

96  
597 Ms. Fort stated that any time updates are needed to the swap meter accounts, or new  
598 development requires a new water connection across jurisdictional boundary, they may need to

599 add jurisdictional meters to the program as well. She stated that updates will be needed from  
600 time to time, and this will continue to be considered on an annual basis.

601

602 Mr. Mawyer asked her to explain what a swap meter is.

603

604 Ms. Fort replied that a swap meter is a meter on the opposite side of the jurisdictional boundary  
605 from the customer.

606

607 Mr. Mawyer stated that, as an example, it was a City meter that's being supplied off the County  
608 line.

609

610 Ms. Fort stated that this was correct, or vice-versa. She stated that there were not many of these.

611

612 Mr. Mawyer stated that these are swapped to keep the usage summation correct between the City  
613 and ACSA.

614

615 Ms. Fort stated that she had mentioned that one of the methods of meter testing is using a test  
616 meter. She presented a picture where two test meters were being tested to see if they were  
617 reading the same. She stated that this was not a common setup, but that she wanted to show what  
618 the test meter looks like. She stated that the test meter is used to validate the readings on the  
619 meter they are testing.

620

621 Dr. Palmer noted that the project had been going on for many years. She stated that she was on  
622 the ACSA Board when they were first discussing the project, and remembered how this cannot  
623 be completely accurate. She stated that they could not put in enough meters to have it be, and  
624 that there is a point at which the cost of the meters is too high, and that there was a discussion  
625 several years ago about how valuable the project was, given the cost.

626

627 Dr. Palmer asked how accurate the meters are as far as a percentage.

628

629 Ms. Fort replied that she would have to go back to the design report to provide the correct  
630 answer. She stated that it depends on the accuracy of the meters themselves, and then the fact  
631 that they are not metering every interconnection, but only the ones across the jurisdictional  
632 boundaries. She stated that there is some inherent inaccuracy associated with that, but they  
633 should be within at least a few percentage points. She stated that she could provide a more exact  
634 number to the Board.

635

636 Dr. Palmer stated that there was no hurry on this, but that perhaps this could be presented at the  
637 next meeting. She stated that she would like to revisit and have that information in case there are  
638 questions about it.

639

640 Mr. Mawyer stated that within the program of 25 meters, there is the possibility that a meter  
641 could not be working correctly at any time. He stated that in fact, in the first report, there is one

642 meter that didn't record correctly. He stated that the policy says that they go back and average  
643 historical readings and apply it to keep the summation as close as it can be. He stated that in  
644 terms of accuracy, it's a very relative thing. He stated that they are accurate meters, but the  
645 collection of 25 data points and some of errors in the compounding of those readings need to be  
646 considered.

647  
648 Mr. Mawyer stated that the main purpose of the whole project is to compare back to those  
649 allocation graphs of 6.71 MGD (City) and 11.99 MGD (ACSA).

650  
651 Ms. Galvin stated that this is tied to the cost allocation agreement percentages between the City  
652 and County.

653  
654 Mr. Mawyer stated that this was correct.

655  
656 Ms. Galvin stated that it has a monetary implication, and that this was another check on this,  
657 which was a hard-fought formula. She stated that she remembered vividly how the City was  
658 involved with figuring that out. She stated that there were many closed-door sessions with a  
659 mediator from Richmond, and that it was an intense time.

660  
661 Dr. Palmer stated that it was a very long process.

662  
663 Ms. Galvin stated that she found it amazing to see, at her last Board meeting, a presentation on  
664 the very thing that was her first task as a new Councilor and board member to figure out the cost  
665 allocation agreement.

666  
667 Dr. Palmer stated that she had forgotten how long they had been working on it.

668  
669 Ms. Galvin stated that it had been eight years, as it started in 2012.

670  
671 Ms. Hildebrand asked if it was possible that the City and the County could get the backup sheet,  
672 at least initially, to see some detail. She stated that they knew the detail based on the policy, but  
673 that it would be nice to see real numbers associated, rather than just a total, for those people who  
674 are more involved in the detail. She stated that this would be helpful.

675  
676 Ms. Hildebrand stated that she was referring to the backup sheet that was showed.

677  
678 Mr. Mawyer asked if the backup sheet was in the cloud.

679  
680 Ms. Fort replied no. She stated that this was something managed internally.

681  
682 Ms. Hildebrand stated that this would be helpful to have. She stated that she was also curious as  
683 far as the water loss calculations that are continuing to evolve and recommendations from the  
684 American Water Works Association. She stated that there is some discussions and serious

685 consideration as to whether it is necessary to calibrate things less often, and more often. She  
36 stated that some of those meters may fall into the category of being more often, as they are used  
687 for certain purposes. She stated that it wasn't a question, but more of a comment of what is going  
688 on in the water loss conversation that continues to evolve. She suggested that perhaps revisiting  
689 this, especially with the water treatment plants.

690  
691 Ms. Hildebrand stated that there is some conversation about large meters and having those  
692 calibrated every quarter. She stated that they would then look to have things that are less  
693 frequently calibrated, so instead of every year, they are calibrated every three years.

694  
695 Ms. Galvin stated that the frequency in monitoring changes would depend on location.

696  
697 Ms. Hildebrand replied yes. She stated that she was not sure what effect this would have on the  
698 metering, but that it was something that should be considered.

699  
700 Mr. Mawyer stated that he would look into this.

701  
702 Ms. Hildebrand stated that there was a consultant who was helping her to provide guidelines and  
703 that she could help inform that process.

704  
705 Ms. Fort stated that currently, they have budgetted twice-annual calibration for the sites, noting  
706 that this seems to be consistent with most calibration firms that they are talking to for meters  
707 used for this purpose. She stated that they will also have to assess after they see how things go  
708 the next go-around with calibration and whether doing it more often or less often would make  
709 sense.

710  
711 Mr. O'Connell stated that there was a lot of good engineering value related to all this besides the  
712 financial results that come from it. He stated that it is available to all engineering departments  
713 through an annual water audit, which was part of the water loss prevention approach.

714  
715 Mr. O'Connell asked if Ms. Fort could talk about the water treatment plant metering, as this was  
716 another major component of the project. He noted that all but one water treatment plant was  
717 about to upgraded.

718  
719 Mr. Schiller stated that the Scottsville site was almost done. He stated that they still have to  
720 calibrate its meter, but that it was installed and is functional.

721  
722 Mr. O'Connell stated that there were brand new meters at all the treatment plants, so the water  
723 volume information was much more accurate.

724  
725 Mr. O'Connell asked if there was also more frequent calibration.

726



727 Ms. Fort replied that it was once a year. She stated that all three of the urban water treatment  
28 plant meters were replaced as part of the program. She stated that this was done with the GAC  
729 construction, and so those have been completed for a few years.

730  
731 Mr. O'Connell asked if they had more accurate numbers coming out of the treatment plants in  
732 terms of the water used.

733  
734 Ms. Fort replied yes.

735  
736 Mr. O'Connell stated that there would be more accurate usage within the system as well.

737  
738 Mr. Mawyer stated that this was a project where large meters, vaults, and underground pits were  
739 not like the water meter boxes in people's yards that can be opened and meters easily installed.  
740 He stated that this was a much bigger project with many challenges over several years. He  
741 expressed appreciation for Ms. Fort, Ms. Jennifer Whitaker, and Mr. Scott Schiller, as well as  
742 Maintenance staff, who all worked to get the project done. He stated that it was painful many  
743 times with the Service Authority expecting completion and RWSA not meeting the  
744 commitments.

745  
746 Mr. Mawyer stated that fortunately, they made it to the end, and it will be an ongoing project  
47 with calibrations every year, repairs, and maintenance. He stated that this was thus not the end,  
748 but was a different beginning, of the wholesale meter project.

749  
750 Dr. Palmer stated that they were warned at the beginning of the project by Mr. Mawyer's  
751 predecessor that the project was going to be a difficult one.

752  
753 *b. Presentation: Industrial Pretreatment Program; Lab Manager, Dr. Bill Morris*  
754 Mr. Mawyer introduced Dr. Bill Morris as Rivanna's Lab Manager. He stated that they manage  
755 the industrial wastewater pretreatment through Dr. Morris and his staff.

756  
757 Dr. Morris stated that he also worked with Mr. Haacke (Wastewater Manager) on the program as  
758 well.

759  
760 Dr. Morris stated that the purpose of the program is to protect the sewer system and the treatment  
761 processes. He stated that it is also required by the Environmental Protection Agency and the  
762 Virginia Department of Environmental Quality. He stated that they have to submit a report on the  
763 industries monitored annually.

764  
765 Dr. Morris stated that even though the program is required, it is in Rivanna's best interest to do  
766 this, because if anything comes into the plant that they cannot deal with or that overwhelms the  
67 plant, and then they discharge something that puts them over the regulatory limits, then they are  
768 responsible for that. He stated that prevention is the best course of action to take.

769

770 Dr. Morris stated that under the Virginia Pollutant Discharge Elimination System (VPDES),  
771 Rivanna is required to implement a pretreatment program that complies with the EPA's Clean  
772 Water Act. He stated that they have to submit an annual report on the pretreatment program by  
773 January 31 of each year. He stated that this details all the industries that are permitted, and all the  
774 activities or any changes to things that they may have done in that year.

775  
776 Dr. Morris stated that there are wastewater discharge limits. He stated that the pretreatment  
777 program looks at certain constituents, including fats, oils, and greases (FOG). He stated that  
778 typically, ACSA and the City handle FOG, and that this is primarily from restaurants and other  
779 large food processing facilities. He stated that metals (manganese, copper, lead, and other heavy  
780 metals) that are bad for the environment and drinking water are also monitored.

781  
782 Dr. Morris stated that nutrients are more typically monitored out of the plant. He stated that they  
783 didn't have any large industrial producers of nitrogen or phosphorus, but that they do still make  
784 all the industries test for that whenever they renew their permit, which is every three years.

785  
786 Dr. Morris stated that pH was very important to control, and that they require that everyone's  
787 discharge be between 6.0 and 9.0 (not too acidic, not too basic). He stated that they also look at  
788 biochemical oxygen demand because they have to meet certain requirements dealing with this.  
789 He stated that biochemical oxygen demand involves putting nutrients into a sample along with  
790 bugs to see how much oxygen the bugs consume, which shows the potential for pollution in  
791 water. He stated that this was one measurement of it.

792  
793 Dr. Morris presented a picture showing a pH adjusting system. He stated that it was not the exact  
794 one that Microsystems has, but one of the industries that we regulate has one of these that takes  
795 all of their waste and automatically adjusts the pH before discharging it to the sewer.

796  
797 Dr. Morris presented a picture of what people call a "fatberg." He explained that this is what  
798 happens whenever there are a lot of fats, oils, greases, and baby wipes that are flushed. He stated  
799 that all these things stick together and create fatbergs that clog up the sewers. He stated that they  
800 can become very big. He stated that London has a very old sewer system at 150 years old and a  
801 couple years ago, they had a fatberg the size of the Statue of Liberty that they had to deal with.

802  
803 Dr. Morris stated that when there is a fatberg, people have to be sent down to the sewer to break  
804 it up. He stated that it is very dangerous work because the fatbergs can contain pockets of gases  
805 such as methane or carbon dioxide, which if released, can be deadly. He stated that prevention  
806 was recommended.

807  
808 Dr. Palmer asked what is being done to prevent that in the system.

809  
810 Dr. Morris replied that ACSA and the City require that all restaurants, breweries, or major  
811 producers of food to have FOG (fat, oils and grease) traps. He stated that those traps catch the

812 FOG as it goes through, before it gets to the sewer system, and then the grease traps are emptied,  
13 and some other industrial waste hauler hauls it away and disposes of it properly.

814  
815 Mr. Mawyer mentioned that companies such as Valley Proteins collects and reuses waste oils.

816  
817 Dr. Palmer asked if the other chemical discharge companies have their own sewage treatment  
818 plants, or if this only kicks in when it is a large company.

819  
820 Dr. Morris replied that there were a couple things that could trigger having this. He stated that he  
821 has to identify significant industrial users, which fall into two subgroups: categorical, which falls  
822 into a category that has been preordained by EPA as something that needs to be monitored (metal  
823 finishing, semiconductor manufacturing); and non-categorical, which is any company who  
824 doesn't fit into one of those categories, but still discharges more than 25,000 gallons per day.

825  
826 Dr. Morris stated that an industry could also be non-categorical if Rivanna has determined it  
827 could adversely affect the treatment process, as they have the discretion to choose places that  
828 need permits. He stated that they just spent a lot of time and money on the odor control project,  
829 and that although sulfate and sulfur are particularly dangerous industrial wastes, they can cause  
830 serious odor problems. He stated that if they were experiencing this or suspected that an industry  
831 might be doing that, Rivanna could look into it and regulate them, and make them pretreat or  
32 have to dispose of their waste some other way besides the sanitary sewer.

833  
834 Dr. Morris stated that examples of businesses that discharge pollutants of concern are  
835 restaurants, breweries, wineries, dentists, and drycleaners.

836  
837 Dr. Morris stated that currently, there are three significant industrial users that Rivanna monitors,  
838 and that all three of them are categorical. He stated that Microsystems is a metal finishing  
839 company that makes very fine gratings that are used in medical equipment and guided systems  
840 for focusing lasers.

841  
842 Dr. Morris stated that Northrup Grumman makes metal components for submarines and navy  
843 ships, and the reason they are categorical is because they have one tiny scrubber in their plant  
844 that serves to deburr metal. He stated that they put soapy water into it and have lots of metal  
845 parts in it that sloshes it around. He stated that the outflow of that is considered categorical  
846 industrial waste, and Northrup Grumman has to send Rivanna a report on it twice a year. He  
847 stated that it's never been in levels that have been of concern, but because they are categorical,  
848 they have to do it.

849  
850 Dr. Morris stated that Virginia Diodes makes semiconductors for radio telescopes and are also  
851 categorical. He stated that whenever they test, nothing of concern was ever found. He stated that  
852 most of the materials they work with are made out of quartz, which isn't concerning. He stated  
853 that still, they are categorical and must have a permit.

854

855 Dr. Morris stated that permits were just recently reissued because all three of the companies had  
56 permits that went from 2016 and expired July 1, 2019. He stated that the new permits will expire  
857 in 2022 and throughout the entire period, they will have to submit semi-annual reports, mostly  
858 since they are categorical, and as semiconductors and metal finishers, it will be of different  
859 metals. He stated that whenever the companies renew, they will have to test for everything again,  
860 such as BOD, phosphorus, ammonia, FOG, etc.

861  
862 Dr. Morris presented a questionnaire that is used if there is a new industry coming to town, or if  
863 there is an industry that Rivanna suspects may have a process that they would need to look into.  
864 He stated that the company can fill out the questionnaire and Rivanna can evaluate it prior to  
865 making them go through the entire permit application, which is a long process that involves a lot  
866 of testing.

867  
868 Dr. Morris stated that the company has to include a lot of information and have to account for  
869 exactly how much water they produce and how much they discharge, and they have to provide  
870 an entire schematic of their process. He stated that Rivanna tries to start out the process simply  
871 by screening before going through the more involved process.

872  
873 Dr. Palmer asked at what point the companies actually need their own treatment plants. She  
874 asked what is required to meet the permit as far as treating. She stated that Dr. Morris showed a  
975 picture of one machine that adjusts pH. She asked if some were requiring a larger operation to  
76 get ready to get into the larger sewer system.

877  
878 Dr. Morris replied that the biggest company is Microsystems, which has the pH adjustment and  
879 some other methods for filtering out metals. He stated that they have a process where their waste  
880 goes into a container, and then they put this through the pH adjustment and perhaps a metal  
881 scrubber. He stated that it then comes out, and then they can discharge it to the sewers. He stated  
882 that they have to send Rivanna what they are discharging and when they do their semiannual  
883 report, they have to send Rivanna the water that has gone through their process before going to  
884 the sewer.

885  
886 Dr. Morris stated that Northrup Grumman's waste comes right out of the machine and that it  
887 doesn't have that many pollutants in it, as it is mostly soapy water. He reminded that because the  
888 company is categorical, they must be permitted.

889  
890 Mr. Mawyer stated that their equipment has to reduce the metals level below the EPA and  
891 Virginia standards, and then they can release it into Rivanna's wastewater. He stated that it is up  
892 to the companies how they do this and whether they treat it with equipment or hire a hauler to  
893 take it away, but that they have to get their product down below the federal and state standards  
894 before they can put it in the sewer system.

895  
896 Dr. Morris stated that if they choose to have it hauled away, then Rivanna doesn't have to do  
897 anything, and this is an option. He stated that the matter is more about the waste released to the  
98 sewer.

899

900 Mr. O'Connell stated that this is essentially what the grease traps do. He stated that these are  
901 capturing the waste, and these are inspected to make sure the companies are regularly doing this,  
902 noting that some of them do not. He stated that there are probably more issues with grease in the  
903 system than with the metals.

904  
905 Dr. Morris stated that they didn't have very many large industrial generators. He stated that  
906 Virginia Diodes' process is incredibly benign. He stated that Rivanna makes them test at the  
907 beginning of every permit system, but that they almost never have anything of concern. He stated  
908 that what they have to do semiannually is submit a form signing off saying that they are not  
909 releasing any toxic organics.

910

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

912 Mr. Mawyer stated that 2019 has been a great year for the Authorities. He stated that they would  
913 miss Ms. Galvin. He stated that 2020 would be another big year they would be looking forward  
914 to

915

916 Mr. Mawyer stated that they would be jumping into discussions in February, March, and May for  
917 the CIP and Operating Budgets, and that staff was currently working on this. He stated that they  
918 would be convening with Mr. O'Connell and Ms. Hildebrand as the subcommittee for the budget  
919 issues starting in January and will begin to talk about CIP projects and how much they will cost.

920

921 Mr. Mawyer wished Ms. Galvin the best.

922

923 **10. CLOSED MEETING**

924 There were no closed meeting items.

925

926 **11. Adjournment**

927 **At 3:24 p.m., Dr. Palmer moved to adjourn the meeting of the Rivanna Water and Sewer**  
928 **Authority. The motion was seconded by Mr. O'Connell and passed unanimously (6-0). Mr.**  
929 **Gaffney was absent from the meeting and the vote.**

930

931 Respectfully submitted,

932

933

934

935

936

937



---

Jeff Richardson  
Secretary - Treasurer