



**RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
December 15, 2020**

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, December 15, 2020 at 2:00 p.m. via Zoom.

Board Members Present: Mike Gaffney, Jeff Richardson, Gary O’Connell, Lauren Hildebrand, Lloyd Snook, and John Blair.

Board Members Absent: Dr. Liz Palmer.

Rivanna Staff Present: Bill Mawyer, Katie McIlwee, Lonnie Wood, Jennifer Whitaker, David Tungate, John Hull, Victoria Fort, and Andrea Bowles.

Attorney(s) Present: Kurt Krueger.

1. CALL TO ORDER

Mr. Gaffney called the December 15, 2020 regular meeting of the Rivanna Water and Sewer Authority to order at 2:16 p.m.

2. STATEMENT FROM THE CHAIR

Mr. Gaffney read the following statement aloud:

“Notwithstanding any provision in our Bylaws to the contrary, as permitted under the City of Charlottesville’s Continuity of Government Ordinance adopted on March 25, 2020, Albemarle County’s Continuity of Government Ordinance adopted on April 15th, 2020, and 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. John Blair stated he was located at Charlottesville City Hall, at 605 East Main Street in Charlottesville, VA.

47
48 Ms. Lauren Hildebrand stated she was located at 305 4th Street Northwest in Charlottesville, VA.

49
50 Mr. Gary O’Connell stated he was located at the ACSA offices at 168 Spotnap Road in
51 Charlottesville.

52
53 Mr. Gaffney noted that Dr. Elizabeth Palmer was absent from the meeting.

54
55 Mr. Jeff Richardson stated he was located at the County Office Building, 401 McIntire Road, in
56 Charlottesville, VA.

57
58 Mr. Lloyd Snook stated he was located at 408 East Market Street in Charlottesville, VA.

59
60 Mr. Mike Gaffney stated he was located at 3180 Dundee Road in Earlysville, VA.

61
62 Mr. Gaffney stated the following Authority staff members were joining the meeting electronically:
63 Bill Mawyer, Lonnie Wood, Jennifer Whitaker, Dave Tungate, John Hull, Victoria Fort, Andrea
64 Bowles, and Katie McIlwee.

65
66 Mr. Gaffney stated they were also joined electronically by Mr. Kurt Krueger, Counsel to the
67 Authority.

68
69 **3. MINUTES OF PREVIOUS BOARD MEETINGS**

70 *a. Minutes of Regular Board Meeting on November 17, 2020*

71 **Mr. O’Connell moved that the board approve the minutes of the previous board meeting.**
72 **The motion was seconded by Mr. Richardson and passed unanimously (6-0). (Dr. Palmer**
73 **was absent.)**

74
75 **4. RECOGNITIONS**

76 There were no recognitions.

77
78 **5. EXECUTIVE DIRECTOR’S REPORT**

79 Mr. Mawyer stated he wanted to recognize Ms. Jennifer Whitaker, Director of Engineering and
80 Maintenance, who recently completed her Master of Engineering degree in Civil Engineering
81 from UVA. He asked for a round of applause for Ms. Whitaker for her accomplishment, adding
82 that there would be a cake for her as soon as they could all get together.

83
84 Several board members offered their congratulations to Ms. Whitaker.

85
86 Mr. Mawyer stated a consultant has been selected (Land Planning and Design Associates) for the
87 Buck Mountain property management plan. He stated this is the same firm that completed the
88 master plan, and they are getting started on a property management plan. He stated he hopes to
89 bring some information to the board around the February timeframe.

90
91 Mr. Mawyer stated work continues on the Beaver Creek Dam pump station and piping
92 modifications project. He stated as mentioned, they are partnering with the federal Natural

93 Resources Conservation Services (NRCS) and, in accordance with NRCS procedures, there was
94 a virtual public meeting held on December 10 to inform the public about the project. He stated
95 over 30 or 40 members of the public were online for that meeting and offered many good
96 comments, with most of them being about how the access for the project will likely need to close
97 Browns Gap Turnpike and making sure a detour road is constructed during that period.
98

99 Mr. Mawyer stated there was also a virtual meeting the afternoon of December 10 with all the
100 federal and state agencies that will be a party to this project, and good comments were made by
101 them. He stated Delegate Runion, who represents the Crozet area, was also online with the state
102 agencies. He stated the project is moving forward, and Mr. O'Connell attended the meeting as a
103 stakeholder.
104

105 Mr. Mawyer stated there is about 1.5-2 years in front of them to complete the planning process
106 with the NRCS and then, they will go to final design around 2023, and to construction in 2024
107 through 2026. He stated hopefully, they will receive up to 65% of the project funding from the
108 NRCS, with the current total budget being \$27 million.
109

110 Mr. Mawyer stated the project is moving forward, but they are having to somewhat rewind and
111 go back through all the design alternatives that they have been through in the last two years to
112 achieve a higher rate of releasing water from the Beaver Creek Dam. He stated new regulations
113 require them to release more water during a storm, and so they have to enlarge the spillway. He
114 stated this is what they are working on with the NRCS.
115

116 Mr. Mawyer stated they also met with the board's subcommittee for the Capital Improvement
117 Plan for FY 22-26, and the subcommittee includes Mr. O'Connell and Ms. Hildebrand. He stated
118 they met with them and went through the five-year CIP, which totals \$169.6 million over the five
119 years. He stated they will be refining that plan based on the subcommittee's comments, and plan
120 to present the CIP to the board in February.
121

122 Mr. Mawyer stated RWSA is a co-sponsor of the annual "Imagine a Day Without Water"
123 contest. He stated all of the applications have been received, and the winners will be announced
124 later that week. He stated this is always a highlight of wintertime.
125

126 Mr. Mawyer stated that he and the division directors gave a presentation to the Albemarle
127 County Service Authority Board of Directors in November about the FY 21-25 CIP and the
128 charges that may come from that CIP. He stated this is the CIP that the RWSA Board heard
129 about in May and June. He stated RWSA updated the ACSA Board about the many projects,
130 financing plan, and charges that may come from that plan.
131

132 Mr. Mawyer stated an email was sent to the RWSA Board about the total maximum daily load
133 study that the Virginia DEQ is doing on the South Rivanna River. He stated it does not include
134 the South Rivanna Reservoir and is below the dam. He stated Ms. Andrea Bowles, Water
135 Resources Manager, is a member of the Technical Advisory Committee for that study, and so she
136 is staying well-attuned to the topics being discussed with those committees as well as the
137 comments from the public.
138

139 Mr. Mawyer stated in terms of COVID-19 vaccines, RWSA is coordinating with the Virginia
140 Department of Health. He stated in fact, they sent a letter to the Department of Health that day
141 asking that RWSA receive as much priority as VDH will give them for vaccines for their
142 essential employees. He stated they are in Group 1B, and that Group 1A are healthcare providers
143 and long-term care residents. He stated there are about 450,000 people intended to be vaccinated
144 in Group 1A. He stated essential employees are in the second group.

145
146 Mr. Mawyer thanked Mr. O'Connell, explaining that Mr. O'Connell received a letter from the
147 Water Association that they used to send to the Health Department asking that they give essential
148 employees as much priority as they will. He stated they will be waiting to hear about when they
149 can get vaccinated. He stated there are about 95 employees who are essential which are the water
150 operators, wastewater operators, laboratory analysts and chemists, maintenance crew, and
151 everyone in Solid Waste refuse disposal and recycling. He stated these are all in the essential
152 employee category, and there are about 95 of the 112 employees who are on the list as being
153 essential.

154
155 Mr. Mawyer stated despite the year of 2020 and the COVID challenges, RWSA feels that it has
156 been a good year, and they have stayed healthy. He stated they have continued to provide
157 outstanding services to the community, despite the challenges. He stated they appreciate
158 everything the board and staff have done in that regard, and they look forward to a much better
159 and brighter 2021.

160
161 Mr. Gaffney asked if there were any comments or questions about the report.

162
163 Mr. O'Connell stated he wanted to reiterate what Mr. Mawyer stated about the Crozet meeting.
164 He stated he thought it went very well and thanked Ms. Fort and Ms. Whitaker for educating the
165 public. He stated he was shocked to see that 40 people were on the call. He stated it was good
166 information to get out. He stated he was a little surprised that they have to start all over with the
167 whole process, but if 65% of grant funding is what it takes, then that is okay.

168
169 Mr. Gaffney stated any funding assistance would be appreciated.

170 171 **6. ITEMS FROM THE PUBLIC**

172 Mr. Gaffney opened the meeting to the public. He asked Mr. Hull if there were any members of
173 the public present who wished to speak.

174
175 Mr. Hull replied that there were not.

176
177 Mr. Gaffney closed Items from the Public.

178 179 **7. RESPONSES TO PUBLIC COMMENT**

180 As there were no items from the public, there were no responses.

181 182 **8. CONSENT AGENDA**

183 *a. Staff Report on Finance*

184

- 185 *b. Staff Report on Operations*
- 186
- 187 *c. Staff Report on Ongoing Projects*
- 188
- 189 *d. Staff Report on Wholesale Metering*

190
191 **Mr. Richardson moved that the board approve the Consent Agenda. The motion was**
192 **seconded by Mr. O’Connell and passed unanimously (6-0). (Dr. Palmer was absent.)**

193
194 **9. OTHER BUSINESS**

- 195 *a. Rivanna’s Dam Safety Program*

196 Ms. Victoria Fort, Senior Civil Engineer with the Engineering Team, stated she serves as the
197 Dam Safety Program Coordinator for RWSA. She stated she would give the board a brief
198 overview of the Dam Safety Program, explain why it is important to have a robust dam safety
199 program and culture, and share all the work staff does to maintain safe dams.

200
201 Ms. Fort stated in terms of what qualifies as a dam, it is a manmade structure that is used to
202 retain or store water and other materials. She stated dams enable storage for drinking water,
203 hydropower generation, flood control, recreation, and other uses. She stated dams can also have
204 environmental benefits.

205
206 Ms. Fort stated that in Virginia, all dams are regulated by the Department of Conservation and
207 Recreation (DCR) unless they fall below a certain height measurement or impoundment volume.
208 She stated some larger dams can be exempted for agricultural or mining uses, or if they are
209 federally regulated. She stated the South Fork Rivanna Dam, which she would describe in more
210 detail, is a federally regulated dam.

211
212 Ms. Fort stated the Virginia State Dam Safety Regulations are intended to provide for proper and
213 safe design, construction, operation, and maintenance of dams to protect public safety.

214
215 Ms. Fort stated to highlight the importance of a robust dam safety program, she wanted to review
216 a few examples of recent dam safety incidents in the news and the scope of their impact. She
217 stated one of the most significant recent dam failures occurred earlier in 2020 in central
218 Michigan, with the failure of the Edenville and Sanford Dams. She stated extreme heavy rainfall
219 resulted in failure of the Edenville Dam, which then created flash flood conditions and ended up
220 overtopping the Sanford Dam, which was about 10 miles downstream.

221
222 Ms. Fort stated that following all the flooding that resulted, over 2,500 structures were damaged
223 or destroyed. She stated damages are estimated at over \$250 million, and there were massive
224 widespread environmental impacts. She stated more than 11,000 downstream residents had to be
225 evacuated but that thankfully, a well-coordinated emergency response prevented any major
226 injuries or fatalities from that event.

227

228 Ms. Fort stated the cause of that failure is currently under investigation but prior to its failure,
229 there were some known concerns about the spillway's capacity and whether it complied with
230 Michigan's state dam safety regulations.

231

232 Ms. Fort stated another high-profile dam incident occurred at the Oroville Dam in California in
233 2017. She stated this one is significant because at 770 feet tall, this is the tallest dam in the
234 United States. She stated heavy rains, snowmelt, and the resulting water level rise in the reservoir
235 damaged the concrete primary spillway, and it threatened to breach the earthen emergency
236 spillway. She stated eventually, waters receded without a breach, but repairs to the dam that were
237 completed between 2018 and 2019 cost over \$1.1 billion.

238

239 Ms. Fort stated lastly, she wanted to provide an example that was closer to home. She stated in
240 August of 2018, the College Lake Dam in Lynchburg saw a rapid rise in water level after heavy
241 rains. She stated this dam's emergency spillway, which she indicated to on the photo on the
242 screen as being under the bridge, did activate, but the capacity of the spillway was insufficient to
243 prevent the earthen embankment from overtopping. She stated the picture on the screen showed
244 damage to the embankment on the right side.

245

246 Ms. Fort stated a breach would have sent a deadly flood wave into the City of Lynchburg, and
247 this prompted officials to evacuate 124 residents overnight as a precaution. She stated thankfully,
248 failure was once again avoided by rapidly dewatering the lake, and this dam is now slated for
249 removal beginning sometime in 2021.

250

251 Ms. Fort stated with that context, she would review some of the components of Rivanna's Dam
252 Safety Program. She stated a large part of that is maintaining permits and regulatory compliance.
253 She stated the program also requires annual updates to dam emergency action plans, which she
254 would discuss later. She stated these plans are to prepare staff and the community for the very
255 unlikely (but very high consequence) possibility of a dam failure.

256

257 Ms. Fort stated another big part of the program is training and exercises of emergency action
258 plans; maintenance and vegetation control; repairs and upgrades to the facilities as they become
259 necessary; installation, maintenance, and public safety features; and completion of studies and
260 reports. She stated RWSA has an active term contract with an engineering firm that specializes in
261 dams for the completion of reports and inspections, and to provide assistance in the event of a
262 dam emergency.

263

264 Ms. Fort stated maintenance and engineering staff perform regular inspections of all dam
265 facilities. She stated daily monitoring is performed at some of these facilities either through
266 onsite visits or remotely using SCADA and cameras.

267
268 Ms. Fort stated that dam safety emergencies are very low-probability events, but they have the
269 potential for very high and very costly impacts. She stated dams are therefore designed with a
270 very high level of conservatism to minimize the chance that they would fail. She stated dams can
271 fail due to excessive rainfall, material failure, vandalism, terrorism, and other factors. She stated
272 accidents or public safety issues can also be considered dam-related emergencies, in some cases.

273
274 Ms. Fort stated before she would discuss Rivanna's dams in detail, she wanted to briefly touch
275 on hazard classification. She stated both Virginia and federal requirements designate three
276 different hazard classifications for dams according to the degree of consequence from their
277 failure or disoperation. She stated an important distinction to make is that the hazard
278 classification is not a reflection on the dam's current condition or the likelihood that it is going to
279 fail. She stated it is merely to designate what the results would be if it were to fail.

280
281 Ms. Fort stated a high-hazard dam would cause probable loss of life or serious economic damage
282 if it were to fail, and so they are required to be able to handle a larger-design storm to ensure
283 safety. She stated significant-hazard dams could result in loss of life and appreciable economic
284 damage. She stated low-hazard dams are not expected to result in any loss of life, nor any
285 significant economic damage, due to failure.

286
287 Ms. Fort stated high-hazard dams in Virginia are required by the state to be designed to handle at
288 least 90% of the Probable Maximum Precipitation (PMP). She stated this is essentially defined as
289 the theoretically largest amount of rainfall during a single event in a dam's watershed.

290
291 Ms. Fort stated the flood resulting from the PMP rainfall event is referred to as the Probable
292 Maximum Flood (PMF). She stated to get a sense of scale of what a PMF event looks like, in the
293 chart presented on the screen, she compared the two-year, 100-year, and PMP rainfall events for
294 a 24-hour duration storm in the Sugar Hollow Watershed. She stated a two-year storm at Sugar
295 Hollow would be about 4 inches of rain in the course of 24 hours, adding that this is a good
296 amount of rain. She stated a 100-year storm would be just under 10 inches in that same 24-hour
297 period.

298
299 Ms. Fort stated that PMP, by contrast, would exceed 30 inches of rain in that same 24-hour
300 period. She stated that at RWSA high-hazard dams, the PMP rainfall amounts range from 23.7
301 inches at South Fork to 33.3 inches at Beaver Creek in a 24-hour period.

302
303 Ms. Fort stated while this may sound like a very unlikely event, PMP rainfall amounts have
304 actually been measured twice in U.S. history: once at Cherry Creek, Colorado in 1935, and at
305 Smethport, Pennsylvania in 1942.

306

307 Ms. Fort stated in 2017, Hurricane Harvey produced rainfall upwards of 90% of the 72-hour
308 PMP. She pointed out that Central Virginia has seen its share of very significant rainfall events.
309 She stated during Hurricane Camille, Nelson County saw 25 to 30 inches of rain overnight, or
310 approximately 81% of the PMP. She stated in 1995, Madison County experienced significant
311 flooding when it reportedly received as much as 30 inches of rain in 16 hours, which sounds
312 unfathomable. She stated this is about 86% of the PMP.

313
314 Ms. Fort presented a list of all the dam facilities that Rivanna manages, as well as some other
315 local dams in the region, for reference. She stated in Rivanna's system, there are four high-
316 hazard dams, which are at Sugar Hollow, the South Fork Rivanna River, Beaver Creek, and
317 Ragged Mountain. She stated there are two low-hazard dams, at Totier Creek and Lickinghole
318 Creek. She stated there are a handful of smaller, unregulated dams, including two low head dams
319 on the Mechums and North Fork Rivanna Rivers. She stated there is a small farm dam located on
320 the Buck Mountain property, and there is also a pond dam at the Ivy Material Utilization Center.

321
322 Ms. Fort stated for reference, Lake Albemarle is managed by the state, which is nearby in
323 western Albemarle County. She stated there are also many private dams throughout the County
324 including Key West and Clover Lake in the West Leigh subdivision (which needs a fair amount
325 of repair). She stated these are the responsibility of local HOAs for maintenance.

326
327 Ms. Fort stated the County owns dams, including Walnut Creek and Chris Greene. She stated
328 Lake Anna is owned by Dominion Energy.

329
330 Ms. Fort stated the South Fork Rivanna Dam, as she mentioned earlier, is Rivanna's only
331 federally regulated dam, which is due to the existence of a hydropower facility that is located just
332 downstream of the dam. She stated this facility is planned for decommissioning and once it is
333 decommissioned, it will lose its state dam safety exemption and will then fall under the
334 jurisdiction of DCR, like the rest of Rivanna's dams. She stated it was originally built in 1965.
335 She stated it is a concrete gravity dam that stands 47 feet tall and 700 feet long.

336
337 Ms. Fort stated the Ragged Mountain Dam was completed in 2014, which replaced two historic
338 dams built in 1885 and 1908. She stated the dam is a 125-foot-tall earthfill dam that measures
339 785 feet across.

340
341 Ms. Fort stated the Sugar Hollow Dam is a concrete dam that was originally built in 1948. She
342 stated that following the storms she mentioned in Madison County in 1995, the dam was updated
343 in 1998 to include the rubber bladder along the crest. She stated it is 77 feet tall and is currently
344 undergoing the replacement of the rubber crest gate that spans the crest of the dam.

345

346 Ms. Fort stated the last high-hazard dam is Beaver Creek, which is another earthfill dam that was
347 built in 1963. She stated it is 60 feet tall and was constructed as a water supply and flood control
348 dam in coordination at that time with the Soil Conservation Service, now the NRCS. She stated it
349 also provides recreational benefit to the adjacent County park. She stated Browns Gap Turnpike
350 runs along the crest of the dam. She stated this dam is currently operating under conditional
351 operating certificate with the state, since the spillway requires upgrades in order to be able to
352 pass the PMP storm.

353
354 Ms. Fort stated Rivanna is currently working on a planning study with funding from the NRCS,
355 and as Mr. Mawyer mentioned earlier, over the next year and a half, they will be developing
356 alternatives for upgrading that spillway. She stated the study being done now would qualify
357 Rivanna for federal funding for construction if it is available at the time.

358
359 Ms. Fort stated Totier Creek and Lickinghole Creek are both considered low-hazard dams. She
360 stated Totier Creek Dam is located in Scottsville. She stated it is an earthfill dam that was built in
361 1971 and stands at 25 feet tall.

362
363 Ms. Fort stated Lickinghole Creek Dam is the only dam that is not for water supply. She stated it
364 is a sediment basin, concrete gravity dam and was constructed in 1995. She stated the dam stands
365 32 feet tall.

366
367 Ms. Fort stated in order to plan for emergency events, Rivanna manages an Owners Dam Safety
368 Program, which specifies their internal dam safety policies and training procedures, ensures
369 safety in design and quality construction, and outlines guidelines for dam maintenance and
370 monitoring. She stated they also maintain emergency action plans to coordinate with emergency
371 response personnel in the event of a dam-related emergency. She stated these plans are updated
372 annually, trained, and exercised every year as well.

373
374 Ms. Fort stated Rivanna also promotes public safety at their different dam facilities by installing
375 and maintenance signs, cameras, alarms, and other features.

376
377 Ms. Fort stated regarding emergency action plans (EAPs), these plans outline the steps to be
378 taken to minimize the loss of life and any property damage during any unusual or emergency
379 event at one of the high-hazard dams. She stated they provide guidelines for coordinating with
380 outside organizations which include VDEM, local and state police, Fire Rescue, and others.

381
382 Ms. Fort stated that during a dam emergency, the EAP outlines responsibilities for the various
383 parties involved. She stated RWSA is responsible for taking any corrective actions necessary at
384 the facility to protect it. She stated they monitor the status of the dam and notify the participating
385 emergency management agencies.

386
387 Ms. Fort stated the Emergency Communications Center (ECC) and the emergency management
388 agencies receive the status reports from Rivanna and notify the public of any cautionary action or
389 evacuations.

390
391 Ms. Fort stated local government also plays a role and is responsible for assisting with public
392 notification, coordination of evacuations, and provisions of aid and resources as needed to
393 manage the dam safety incident.

394
395 Ms. Fort provided a quick glance of a notification chart from one of the EAPs. She stated all four
396 of the high-hazard dam emergency action plans have three notification charts, and they outline
397 the urgency of different scenarios based on the likelihood of the failure of the dam. She stated it
398 provides a call-down list for each scenario to make the necessary notifications both internally
399 and to the Board of Directors, emergency management agencies, VDOT, etc.

400
401 Ms. Fort stated the EAPs also include inundation mapping for each facility, which shows any of
402 the areas that would flood in the event of a dam breach. She stated it also contains information
403 such as any affected structures if the dam were to break and any roadways that would be
404 overtopped. She stated the green boxes shown in the map on the screen contain information
405 about the travel time and height of any floodways that would follow a dam breach to give a sense
406 of how quickly one would need to respond to protect certain areas.

407
408 Ms. Fort stated she wanted to touch on a few dam-related projects that are ongoing or planned.
409 She stated currently, the Sugar Hollow Dam is under construction for replacement of the rubber
410 bladder, which has reached the end of its useful life. She stated this work is expected to be
411 completed by the fall of 2021.

412
413 Ms. Fort stated the South Rivanna Dam is also about to undergo repairs to two mud gates located
414 on each abutment of the dam. She stated this is currently scheduled for early January. She stated
415 there are also grouting repairs of the South Rivanna Dam, which are likely expected to take place
416 in the spring.

417
418 Ms. Fort stated projects currently in the planning or design phase include Beaver Creek Dam
419 Spillway Upgrades; and alterations to the Ivy MUC irrigation pond dam, which are expected to
420 take place from the spring to summer of 2021. She stated another project in this category is the
421 South Rivanna Dam Hydropower Decommissioning project, which she believed was scheduled
422 for late 2021.

423
424 Ms. Fort stated ongoing maintenance work includes tree clearing and brush clearing; any
425 drainage improvements or necessary concrete or structural repairs; installation of monitoring

426 devices such as cameras and instrumentation; public safety measures such as signs, buoys, and
427 booms; and anything else that comes up related to the dams that needs to be taken care of.

428

429 Ms. Fort stated she hoped this gave the board a sense of the scale and importance of this
430 program, as well as an understanding of the degree of work that is required from Engineering,
431 Water Department, and Maintenance Department staff in order to safely operate these facilities.
432 She offered to answer any questions.

433

434 Mr. O'Connell stated it was sobering to think about what could happen. He stated this was a
435 good presentation.

436

437 Mr. Mawyer stated it was a sobering call in May of 2018, when Ms. Whitaker called him at 2:00
438 a.m. to say there was 7.5 feet of water going across the South Rivanna Dam, and they were at the
439 verge of activating the emergency action plan for failure of that dam. He stated fortunately, they
440 did not have to, but if it had become much worse, he would have been calling Mr. Richardson
441 and Mr. Blair to tell them to get their crews ramped up to possibly evacuate everyone
442 downstream of that facility. He stated it is not a scenario they want to get into, but it exists and as
443 Ms. Fort showed the board, it has happened around the country and even in Lynchburg. He
444 stated they cannot be naïve to the possibilities of what could happen with these dams.

445

446 Mr. Blair noted that regarding the PMP, they have obviously seen in the realm of flood control
447 and climate change a change in assumptions. He asked if climate change has, in any way,
448 affected any assumptions behind PMP.

449

450 Ms. Fort replied that the best she could say about this is that the state released a study in 2015 of
451 the PMP in Virginia. She stated at that time, they did a lot of storm modeling and analyzed a lot
452 of meteorological data, which she would not pretend to understand. She stated they released
453 guidelines and a tool one can use to determine the PMP for a specific watershed, which provided
454 a way to get a more accurate depiction of what that PMP storm is, watershed by watershed,
455 where previous guidelines had not been quite as detailed. She stated she would have to refer to
456 the report to know how much climate change played into the development of that study, but she
457 was sure it was a factor.

458

459 Ms. Whitaker added that Ms. Fort was dead on in that the study did present new information, and
460 she knows that they did incorporate some information. She stated part of the reason for the study
461 was that some of the hurricanes that had happened along the coast, as well as some of the larger
462 storms up against the mountains, resulted in a real interest in trying to capture some of the
463 meteorological anomalies. She stated she suspects that the report will likely be revisited another
464 five or ten years down the road, as climate change and other factors play into it.

465

466 Mr. Snook stated he had a question completely unrelated to safety, but it was triggered by
467 something in the report. He stated he had no idea that the Rivanna Dam was ever at a
468 hydroelectric capacity. He asked how long that had been out of operation.

469
470 Ms. Fort stated Ms. Whitaker could probably answer better than she on exactly when that last
471 operated.

472
473 Ms. Whitaker stated it was built in 1983 under a federal grant program during post-oil embargo
474 days. She stated the facility operated quite well in its first ten years of operation at water
475 demands, water resources, downstream needs, and lake and reservoir health became more
476 emphasized. She stated then, the amount of water and electricity that could be generated became
477 less and less. She stated in the early 2000s, the hydrofacility was used less and less, was less
478 effective, and with some age on it, it started having some mechanical problems. She stated in the
479 mid-2015 timeframe, there was a major flood where unfortunately, the facility was open at the
480 time to do some mechanical work and was destroyed by the flood.

481
482 Ms. Whitaker stated an alternatives analysis was done to see if it was economical to rehabilitate
483 the facility or abandon it. She stated frankly, there was just not enough water in the reservoir to
484 generate the type of power offsets that they would need in order to make it economical. She
485 stated the decision was made to mothball the facility and use the current low-level gate as a dam
486 safety feature as opposed to a hydrofeature.

487

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

489 There were none.

490 ***11. CLOSED MEETING***

491 There was no closed meeting.

492

493 ***12. ADJOURNMENT***

494 **At 2:52 p.m., Mr. O'Connell moved to adjourn the meeting of the Rivanna Water and**
495 **Sewer Authority. The motion was seconded by Mr. Snook and passed unanimously (6-0).**
496 **(Dr. Palmer was absent.)**

497

498 Respectfully submitted,

499


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501

502

503

504



Mr. John Blair
Secretary - Treasurer