



RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
October 25, 2022

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Tuesday, October 25, 2022 at 2:15 p.m. in the 2nd floor conference room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

Board Members Present: Michael Rogers, Vice Chair; Jeff Richardson, Brian Pinkston, Ann Mallek, Lauren Hildebrand, Gary O'Connell.

Board Members Absent: Michael Gaffney, Chair.

Rivanna Staff Present: Bill Mawyer, Jennifer Whitaker, David Tungate, Andrea Bowles, Dyon Vega, Scott Schiller, Michelle Simpson, Lonnie Wood, Victoria Fort, Deborah Anama.

Attorney(s) Present: Carrie Stanton.

1. CALL TO ORDER

In Mr. Gaffney's absence due to a medical condition which prevented his attendance, Mr. Rogers, Vice-Chair, convened the October 25, 2022 regular meeting of the Board of Directors of the Rivanna Water and Sewer Authority at 2:15 p.m.

2. AGENDA APPROVAL

There were no comments or questions on the agenda.

Mr. Pinkston moved to approve the agenda. Ms. Mallek seconded the motion, which was carried unanimously (6-0).

3. MINUTES OF PREVIOUS BOARD MEETING

a. Minutes of Regular Board Meeting on September 27, 2022

There were no comments or questions on the minutes for the September 27, 2022 meeting.

Ms. Mallek moved that the Board approve the minutes of the September 27, 2022 meeting as presented. Mr. O'Connell seconded the motion, which passed unanimously (6-0).

4. RECOGNITIONS

There were none.

5. EXECUTIVE DIRECTOR'S REPORT

Mr. Mawyer announced that in terms of workforce development, he would recognize three of the Authority's staff as examples of "home-grown" Water and Wastewater Operators. He stated that the three individuals joined the Authority unlicensed, and all had recently passed their licensing exams.

Mr. Mawyer noted that all three of the employees had college degrees—Cary Wingo was a civil engineer from UVA, Jeremy Lawson was an astrophysicist from UVA, and Alison Henry was a biology major from VCU. He noted that they had only been employed by the Authority for one or two years. He stated that the Water and Wastewater Department Managers provided training and resources to better enable staff to successfully complete the state licensing exams required for these positions.

Mr. Mawyer announced that Liz Coleman, Safety Manager, had applied for and received a \$4,000 grant from the Virginia Risk Sharing Association, our liability insurance carrier. He stated that they used the funds to purchase manhole safety guards to assist staff when required to enter confined spaces.

Mr. Mawyer stated that they continued to work on the infrastructure and master planning goals. He noted that there were several pipeline projects underway, such as the Rivanna to Ragged Mountain pipeline. He stated that they continued to work with the UVA Foundation and one private owner to obtain the final easements for the eight-mile-long pipeline from the Rivanna Reservoir to Ragged Mountain.

Mr. Mawyer stated that they were coordinating with UVA and the UVA Foundation for the last 2 easements required to build a raw water pipeline from Ragged Mountain to the Observatory WTP.

Mr. Mawyer stated that they continued to communicate and collaborate. He announced that Andrea Bowles, Water Resources Manager, recently attended the Rivanna River Basin Commission Annual Conference along with Ms. Mallek, who is the Chair of the Commission.

Mr. Mawyer stated that Liz Coleman led a regional safety meeting with several safety professionals from the Authority, the City, and Waynesboro Public Schools. He stated that they encouraged staff to communicate and network, locally and regionally.

Mr. Mawyer stated that they celebrated October 18 as the 50th anniversary of the Clean Water Act, approved by Congress through a congressional override of a presidential veto in 1972. He stated that the Act was intended to regulate the discharge of pollutants into U.S. waters. He stated that one of the poster children of the legislation was the Cuyahoga River burning because it was so polluted.

Mr. Mawyer attributed the solving of the Kepone issue in the region to the Clean Water Act. He stated that there would be a presentation today about what could be done to protect and monitor the streams in the area.

Mr. Pinkston asked Mr. Mawyer to explain what Kepone was.

Mr. Mawyer explained that Kepone was an ant and roach pesticide that was toxic, and in the past, it had been dumped in the rivers of Virginia.

Ms. Mallek stated that it was dumped below the falls of the James River, resulting in the river

not being fishable or swimmable, and the fish could not be eaten for 15 years.

Mr. Mawyer stated that the next Board meeting would be in three weeks, on November 15, as they accommodated the holiday schedule.

6. ITEMS FROM THE PUBLIC

There were none.

7. RESPONSES TO PUBLIC COMMENTS

There were no comments from the public, therefore, there were no responses.

8. CONSENT AGENDA

a. Staff Report on Finance

b. Staff Report on Operations

c. Staff Report on Ongoing Projects

d. Staff Report on Wholesale Metering

e. Authorization to Increase Engineering Services Contract – Birdwood to Old Garth Raw Water Line Project – Kimley-Horn and Associates, Inc.

f. Authorization for an Amendment of Professional Services – Implementation of Computerized Maintenance Management System, GHD, Inc.

Mr. Pinkston moved to approve the Consent Agenda. Ms. Mallek seconded the motion, which passed unanimously (6-0).

Mr. O'Connell asked how much of the total Rivanna to Ragged Waterline project would be constructed with the Garth Road section.

Mr. Mawyer responded it would be 1,200 feet of the line. He stated that it was from the south side of Route 250, would go under Route 250, the railroad tracks, Garth Road, and into the property on the north side of Old Garth Road. He stated that they were working with the UVA Foundation (UVAF) to acquire the easements.

Ms. Mallek asked if there was a timetable for the negotiations and whether they were making progress.

Mr. Mawyer responded he believed they were making progress, though it had been slow. He explained that they obtained an easement from the Weedon Center and an office building on the east side of the Weedon Center. He stated that they were working on easements from UVAF for the Westover property located north of Old Garth Road. He stated that the easement would continue to Colthurst Drive. He stated that the Foundation had been provided with the most

current documents, and they were awaiting a response.

Ms. Mallek clarified that everything south of Route 250 had been acquired.

Mr. Mawyer responded the pipe had already been installed adjacent to Birdwood. He stated that there were more easements to obtain south of Birdwood through Fox Haven Farm. He noted the locations on a map where the easement still had to be obtained. He stated that they met with the owner of property near Albemarle High School, and they had a meeting scheduled in November to follow up with the owner. He stated that the owner had a horse farm and was concerned about the impact of the project on the horses.

Mr. Mawyer stated that they would construct about 18 miles of pipeline from the South Rivanna Reservoir to Ragged Mountain Reservoir, to the Observatory WTP, and to Free Bridge via the Central Water Line. He stated that pipeline would strengthen the urban water supply system and complete the Community Water Supply Plan.

9. OTHER BUSINESS

- a. Presentation: Rivanna Conservation Alliance's Water Quality Monitoring and Restoration Efforts*
Lisa Wittenborn, Ph.D., Executive Director
Clair Sanderson, Ph.D., Monitoring Program Manager

Rivanna Conservation Alliance Executive Director Dr. Lisa Wittenborn introduced Dr. Clair Sanderson, stating that she was the newest employee and ran the water quality monitoring program. Dr. Wittenborn explained that the Rivanna Conservation Alliance (RCA) was formed in 2016 by the merger of two long-standing groups: Stream Watch and the Rivanna Conservation Society. She stated that while they had officially existed since 2016, they had worked in the watershed since 1990.

Dr. Wittenborn stated that the mission of the RCA was working with the community to conserve the Rivanna River and its tributaries through water quality monitoring, restoration, education, and advocacy.

Dr. Wittenborn stated that the Rivanna watershed was part of the Chesapeake Bay watershed. She stated that they were part of the solutions to cleaning up the Bay. She stated that within the Rivanna watershed were several municipalities—Albemarle, Fluvanna, Green, Orange, Louisa, and Charlottesville.

Dr. Sanderson reported that there were two main water quality monitoring programs—the bacteria monitoring program and the benthic macroinvertebrate biological monitoring program. She stated that they worked closely with the Virginia DEQ, and both programs had been certified by DEQ as Level III. She stated that a Level III certification meant the quality of the data collected by the programs was equivalent to the quality of the data collected by DEQ, and DEQ was able to use the programs' data as their own in the water quality decision-making processes.

Dr. Sanderson explained that the biological monitoring program involved volunteers sampling benthic macroinvertebrates, which were small organisms that lived at the bottom of streams. She

185 stated that they varied in pollution tolerances—mayfly and stonefly larvae were intolerant to
186 pollution while blackfly and midge larvae were very tolerant. She stated that examining the
187 number and diversity of bugs in the stream gave a good indication of water quality.

188
189 Dr. Sanderson stated that 50 sites around the Rivanna River watershed were sampled each spring
190 and fall. She stated that they sampled at Moores Creek near Rolling Mills, downstream from the
191 wastewater treatment plant. She stated that in 2021, the RCA conducted an analysis of long-term
192 benthic trends, and both sites showed significant positive trends, with the stream health score
193 increasing over time.

194
195 Dr. Sanderson stated that the RCA also had a bacteria monitoring program where volunteers
196 tested for E. coli in the water and turbidity. She stated that there were 19 urban sites where
197 samples were taken monthly from March through November. She stated that in 2022, they began
198 a weekly monitoring program in the spring of eight sites.

199
200 Dr. Sanderson stated that the eight sites were where people potentially recreated in the streams
201 and rivers. She stated that they were tested weekly to comply with the revised Virginia Water
202 Quality standard, requiring 10 samples taken over a nine-month period to list or delist waters as
203 impaired for bacteria.

204
205 Dr. Sanderson stated that they tested weekly in the summer from Memorial Day through Labor
206 Day at three high-recreation sites along the Rivanna River—Darden Towe, Riverview Park, and
207 Palmyra. She stated that all of the data collected was published on the website where it was
208 available for people to see. She stated that the weekly summer bacteria data was additionally
209 published on the James River Watch website and a swim guide app. She stated that the data was
210 posted every Friday morning.

211
212 Dr. Sanderson stated that the monitoring data was used to identify pollution hotspots. She stated
213 that in the past, the bacteria and benthic monitoring programs had indicated sewer leaks in
214 different places within the greater Charlottesville area. She stated that they worked with the City
215 and the County to rectify those issues.

216
217 Dr. Sanderson stated that the data was used to guide local water resource planning and protection
218 efforts and to assist the DEQ and EPA with assessing water quality and identifying headwaters.
219 She stated that the data had helped DEQ list over 175 miles of streams and rivers within the
220 Rivanna watershed. She stated that the benthic macroinvertebrate data had helped DEQ delist
221 Buck Island Creek.

222
223 Dr. Sanderson stated that the data was used to inform TMDL assessments and to evaluate the
224 impact of water quality improvement efforts, such as those at Rolling Mills, Moores Creek, and
225 further downstream.

226
227 Dr. Wittenborn stated that the new annual stream health report had been recently released. She
228 stated that the recent stream health scores were contained in the report. She stated that they had
229 been doing a lot of education programs. She stated that they had operated a 6th-grade watershed
230 education program with Burley Middle School for five years, and they had been requested by the

ACPS to expand the program to all five schools in the spring.

Dr. Wittenborn stated that the RCA owned property in Fluvanna County called the Shire Natural Area—a 100-acre park open to the public with trails and ponds. She stated that stewards in kayaks were on the navigable stretches of the river, including the drinking water reservoirs, to monitor any issues or pollution problems.

Dr. Wittenborn stated that a sonde was recently purchased and attached to a kayak. She explained that the sonde was geolocated, so as they paddled, they collected data on pH, dissolved oxygen, turbidity, conductivity, and temperature. She stated that the data was mapped.

Dr. Wittenborn stated that the RCA did a lot of river cleanups. She stated that a cleanup with RWSA was done in 2019. She stated that they started a program in 2020 called the Rivanna River Roundup, an annual cleanup. She stated that the third event was held that year—they were in 21 different locations throughout the watershed, and 243 volunteers participated. She stated that they pulled 173 tires out of the river and streams.

Dr. Wittenborn mentioned there were two restoration projects receiving more work. She stated that tree plantings had increased through a partnership with the James River Buffer Program. She stated that the tree plantings along streams and rivers were important for source water protection. She stated that in 2021, they planted nearly 3,000 trees in the Rivanna and Dunlora communities. She noted that they were careful to avoid buried utilities.

Dr. Wittenborn stated that there was a restoration project in Riverview Park they were trying to get off the ground. She stated that the stream bank in Riverview was eroding, and the park was the only public access point to the river in the whole City. She stated that they proposed to restore about 600 feet of the bank in the park. She mentioned there was stormwater outfall from the Woolen Mills neighborhood coming into the park that was cutting back further—it cut 10 feet the past year.

Dr. Wittenborn stated that they had already applied for state funding to help restore the side channel to prevent it from cutting back to the sewer line and make it safer. She stated that the erosion was dramatic and a public safety hazard. She stated that at the average rate of erosion, it would reach the line in less than 30 years. She stated that big storm events accelerated the process.

Dr. Wittenborn stated that they had a planning grant to do preliminary engineering analysis and surveying work to determine what was feasible. She stated that they had been doing public engagement to figure out what people wanted to see in the park. She stated that they would apply for funding to implement the project in the spring.

Dr. Wittenborn stated that the RCA was supported by about 100 trained volunteers, and it took a lot of supplies and materials to operate the lab and office and have the staff to make it happen.

Mr. Pinkston asked what the funding model was.

277 Dr. Wittenborn asked if Mr. Pinkston wanted to know the model for the organization or the
278 monitoring program.

279
280 Mr. Pinkston stated that he wanted to know the model for the whole organization.

281
282 Dr. Wittenborn stated that there was a mix of funding. She noted that there was government
283 support from the County, the City, and the Authority. She noted that there was grant funding and
284 private donations, and they also performed contracted monitoring services.

285
286 Mr. Pinkston asked how many staff the RCA had.

287
288 Dr. Wittenborn stated that there were three full-time staff and two part-time staff.

289
290 Ms. Mallek clarified that if dangerous conditions were identified, then a red-flag warning would
291 go up immediately. She noted that there was a lot of runoff from storms. She clarified that the
292 ongoing monitoring levels were different than the emergency condition monitoring.

293
294 Dr. Wittenborn responded that they constantly shared the monitoring results with community
295 partners when they received the data in real time. She stated that if they noticed an issue, such as
296 a clear sewer leak, then they were immediately notifying the appropriate parties. She stated that
297 they were often called in by local partners to investigate issues.

298
299 Mr. Mawyer mentioned there was a very complimentary article in the *Richmond Times Dispatch*
300 on the work done by the RCA.

301
302 Ms. Andrea Bowles noted that there was good collaboration with the RCA. She stated that the
303 data had greatly impacted the Authority; reports came before her for review, and they were
304 beneficial. She mentioned that the Authority provided disposal for some of the E. coli samples.

305
306 Dr. Wittenborn mentioned Ms. Bowles was on the Science Advisory Committee for the RCA.

307
308 Mr. Mawyer stated that the Board had been supportive of the program with donations each year.

309
310 *b. Presentation: Major Capital Projects Construction Update*

311
312 Mr. Schiller stated that the intent of the Crozet wastewater equalization tank and pump station
313 upgrade was to store wet weather flow, and they had completed a 1-million-gallon storage tank
314 for that purpose. He stated that they replaced the third pump and added a fourth pump in the
315 pump station. He stated that wastewater flow could be sent to the storage tank or down the line to
316 adjacent pump stations.

317
318 Mr. Mawyer asked Mr. Schiller to provide an overview of Crozet wastewater being transported
319 to Moores Creek.

320
321 Mr. Schiller stated that all the wastewater came into pump station 4, and there was a series of
322 three additional pump stations that eventually brought the wastewater to the Moores Creek

interceptor. He stated that the equalization tank allowed up to 1 million gallons to be stored during a wet weather event to relieve capacity constraints and minimize sewer overflows.

Mr. Schiller stated that the project would be completed this month, with a total cost of \$5.4M. He clarified that it was an offline storage tank. He stated that the tank would run an automatic flushing sequence. He stated that there were four flush gates inside the tank, and they were filled with water on the backside, and after a draining sequence, each flush gate would be released sequentially.

Mr. Schiller stated that there were four chambers in the bottom of the tank and depending on how long the flow had been in the tank, it may flush two or three times. He stated that the operations were done automatically. He showed a video of the tank flushing process.

Mr. Schiller stated that the next project was the Scottsville WTP lagoon liner replacement. He stated that the project intent was to replace two synthetic liners which had reached the end of their service lives. He stated that in addition to the liners, new draining devices were installed and they improved the ability to access the bottom of the lagoon, as well as improved the access road behind the plant down into the lagoons.

Mr. Schiller stated that the project was completed in August at a cost of \$540K, \$350K of which was provided through ARPA funding from Albemarle County.

Mr. Pinkston asked what the liner membrane was made of.

Mr. Schiller responded that it was a high-density polyethylene (HDPE).

Mr. Pinkston asked how long the liners lasted.

Mr. Schiller stated that the last liner was installed in 2007 or 2008, so about 15 years.

Mr. Pinkston asked what they did with the water in the lagoons.

Mr. Schiller stated that the water was from backwash from water treatment filters, or if a basin had to be emptied, it was sent to the lagoons. After settling, the clear water is returned to Totier Creek and the sludge is taken to Moores Creek for treatment.

Mr. Schiller stated that the Moores Creek lighting improvement project was to improve site lighting for safety purposes. He stated that they followed industrial facility lighting guidelines for the improvements and complied with County exterior lighting requirements.

Mr. Schiller stated that the lighting was done through the installation of full-cutoff fixtures which avoided light spray above the fixtures. He stated that some light fixtures were angled to avoid disturbing the surrounding area. He stated that prior, they used large spotlights to light the facility, and now, light was focused on the necessary areas. He stated that they were taking final light readings at the edge of the property to ensure they were in compliance with County requirements, and they would send a report to the County. He showed a video of the facility at

night.

Ms. Mallek asked if pictures would be taken from the neighborhoods for documentation purposes.

Mr. Schiller responded that they took pictures when the lighting was installed.

Mr. Schiller stated that the next project was the Moores Creek clarifiers and lime silo demolition project. He stated that the two clarifiers were open vessels in poor condition and there were safety concerns, so they were demolished. He stated that the concrete related to the tanks had been removed, so there was no remaining foundation—only compacted fill.

Mr. Schiller stated that the lime silo and adjacent electrical building had been removed. He stated that the project was completed in July at a cost of \$790K. He stated that there was a project to install a third pump and a new VFD at the Glenmore Water Resource Recovery Facility to increase capacity, and a new exhaust fan was also installed to improve ventilation. He stated that the project was completed in September at a cost of \$370K.

Mr. Mawyer asked Mr. Schiller to explain what a VFD was.

Mr. Schiller responded that a VFD was a variable frequency drive that enabled the speed of the pump to be changed.

Mr. Schiller stated that the Observatory and South Rivanna WTP renovation project was under construction. He stated that the project was to increase the Observatory capacity from 7.7 MGD to 10 MGD and to increase the reliability of South Rivanna to treat 12 MGD. He stated that two filters would be installed at South Rivanna, alum and fluoride storage would be improved, and several improvements would be done to the sedimentation basins.

Mr. Schiller noted that a new administration building had been constructed at the South Rivanna WTP for the water department. He stated that an enclosure was built around the liquid lime storage tanks. He stated that improvements were made to the raw water and sludge pumps. He stated that the facility was ready to provide 12 MGD capacity. He stated that they were preparing to go into a long-term shutdown of the Observatory WTP to facilitate improvements.

Mr. Schiller stated that at the Observatory WTP they were planning a new chemical building, plate settlers, and sedimentation basins improvements. He stated that they would expand from two to six GAC vessels along with other improvements. He stated that the new chemical building was a multilevel facility that would have storage on both levels.

Mr. Schiller explained that the plate settlers sped up the settling process of solids in the sedimentation basins. He stated that they could get 10 MGD capacity per sedimentation basin, so 20 MGD total. He stated that they would demolish basins 1 and 3 to allow for future expansion of the facility.

Mr. Schiller stated that the Observatory WTP shutdown was planned for December 5 through

March 5. He stated that work would be done that would best take place while the facility was nonoperational.

Mr. Schiller mentioned the Airport Road pump station and piping project. He stated that the project was to provide a reliable connection between the urban pressure zone and the Piney Mountain north pressure zone. He stated that the pressure zone was fed by the North Rivanna treatment plant.

Mr. Schiller stated that the new pump station would take the place of the temporary pump used near Kohls. He stated that the new finished water pump station would allow the North Rivanna WTP to be decommissioned. He stated that it would eventually be part of the Airport Pressure Zone, though there was no timeline for the development of the zone.

Mr. Schiller noted the installation of the water line through the Hollymead Town Center. He stated that there was a poly-wrap that went around the pipes to protect them from corrosive soils. He stated that the project would be completed by December 2023 with a cost of \$10M.

Mr. Schiller noted the Moores Creek 5 kV electrical system upgrade. He stated that the upgrade would replace some of the major electrical components. He stated that many of the components were from the 1970s or 1980s. He stated that it included control centers, large transformers, and switchgear. He stated that they had issued the notice to proceed to the contractor in May, but there had been no site activity because of long lead times for the large electrical devices. They anticipated the project would be completed by June 2024 at a cost of \$5M.

Mr. Schiller stated that he would cover projects in the design phase. He noted that the second South Rivanna River crossing was being done for redundancy and reliability purposes to ensure water could be transported from the main urban zone to the northern urban zone and eventually to the Piney Mountain zone.

Mr. Schiller noted the locations of surrounding structures of the South Rivanna WTP. He stated that they underwent a series of alignment options, and they selected a horizontal directional drill (HDD) crossing beneath the river. He stated that they were moving design forward and acquiring easements when necessary.

Mr. Mawyer stated that they had to dig a pit on both sides of the river and drill the pipe underneath it.

Mr. Pinkston asked how far below the river the pipe would be laid.

Mr. Schiller stated that they anticipated drilling 40 feet under the base of the river. He stated that the pipe would be joined above ground and then fed through the drilled hole.

Ms. Mallek asked if the project was located where there was vehicle parking between Berkmar Drive and the high-pressure water tank.

Mr. Schiller stated that he believed it was likely the airport pump station at the end of Berkmar

461 Drive.

462
463 Ms. Mallek stated that it was south.

464
465 Mr. Schiller stated that site was for a different project. He stated that they were moving forward
466 with design and easements, and they expected the river crossing project to be completed by 2024
467 at a cost of \$7M.

468
469 Mr. Schiller stated that the South Rivanna to Ragged Mountain/Birdwood to Old Garth project
470 was a portion of the transfer line being installed ahead of private development. He stated that
471 they wanted to ensure the pipeline disturbance was done before the development work.

472
473 Mr. Schiller stated that they were working through permitting and easement needs. He stated that
474 they had reached about 90% design. He noted that they had to bore under Route 250 and the
475 railroad, so the permitting was extensive. He stated that it was expected to be completed by 2024
476 with a budget of \$4M.

477
478 Mr. Mawyer asked if there would be impacts to traffic on Route 250.

479
480 Mr. Schiller responded there should not be traffic impacts other than vehicles using the
481 construction entrance.

482
483 Mr. Mawyer stated that they would dig pits on both sides of Rt. 250 and bore beneath it. He
484 stated that a similar process would be done to go under the railroad. He stated that the technique
485 was called jack and bore.

486
487 Mr. Schiller explained that there was a receiving pit and sending pit, and the pipe was jacked
488 through a hole bored in the ground.

489
490 Ms. Mallek clarified that the pipe would be laid out on the send side before jacking it through the
491 hole.

492
493 Mr. Schiller stated that was more the case with the HDD. He explained that individual pipe
494 sections could be added for the jack and bore technique.

495
496 Mr. Schiller noted the Beaver Creek Dam pump station and piping modification project. He
497 stated that the project would update the spillway of the dam to meet Virginia Department of
498 Conservation and Recreation dam safety standards. He stated that the type of spillway proposed
499 was a concrete labyrinth structure. He stated that the spillway design would require the
500 relocation of the existing raw water pump station. He stated that they had selected the site for the
501 new pump station on the west side of the reservoir, and there would be a new raw water line
502 from the new pump station to the Crozet WTP.

503
504 Mr. Schiller stated that they were working through the NRCS funding process. He stated that
505 they had submitted the supplemental watershed plan and environmental assessment document.
506 He stated that the documents indicated the intention of the Authority to apply for design funds.

He stated that the NRCS had accepted what was submitted, and they hoped for the process to be completed by the end of January.

Ms. Mallek asked if approval of the application with NRCS was implied and whether the Authority was still eligible for the funding.

Mr. Schiller stated that was correct. He stated that they would hear from stakeholders and the public and then they would proceed into the final round of design comments.

Mr. Mawyer mentioned that NRCS awarded the Authority a \$400K grant to perform the preliminary design and early assessments. He stated that the NRCS was working positively with the Authority, so they had high expectations for approval of design and construction grants.

Mr. Schiller stated that they looked for the overall project to be completed by 2027 with a budget of \$43M.

Mr. O'Connell asked if they knew when they would receive the grant.

Mr. Schiller responded that an application for approval of design funding would be made by the end of January, with any approval several months later. He stated that they would have to submit a request for additional construction funding as part of the grant process.

Mr. Mawyer clarified that they would have to apply for construction funding after the design had been completed in 2024.

Ms. Whitaker explained that NRCS had a pay-as-you-go program, so the NRCS awarded funding for planning as the Authority was doing planning, and when it began design, they would enter into an agreement. She stated that as long as NRCS approved the project and had funds available, they would fund the design and commit to paying for construction.

Mr. Pinkston asked what NRCS stood for.

Mr. Mawyer responded it was the Natural Resources Conservation Service within the federal Department of Agriculture. He stated that they hoped to receive about \$17 M for the Beaver Creek project.

Ms. Mallek stated that they may need support to ensure there was still funding available when it came time for construction.

Mr. Schiller stated that the process to determine available funding was complicated. He stated that there were several categories, and there were percentages that applied to each category according to the total project cost.

Mr. Rogers asked if the project would be 100% federally funded.

Mr. Schiller responded it would not.

553
554 Mr. Rogers asked what the percentage would be.
555

556 Mr. Schiller stated that it was complicated. He stated that the funds would amount to 65% of the
557 total applicable project costs. He stated that it was still to be determined what components of the
558 project were applicable.
559

560 Mr. Mawyer mentioned the NRCS would review the dam modifications, temporary road, pump
561 station, and the pipe to the Crozet WTP and decide which components of the project were
562 eligible for funding. He stated that the project would require no funding from the City. It would
563 be funded by the federal programs and ACSA.
564

565 Mr. O'Connell asked if they would change what was in the upcoming CIP because it included
566 funding 100% of the project by ACSA.
567

568 Mr. Mawyer stated that they would include a scenario in the draft CIP in which they assumed
569 they would receive the grant funding and one in which they did not get the funding.
570

571 Mr. Schiller mentioned the Ragged Mountain Reservoir to Observatory WTP pump station and
572 waterline. He stated that the project was part of the overall raw water transfer system, and it
573 would increase the conveyance capacity to make use of the 10MGD capacity at the WTP. He
574 stated that there were currently two pump stations—a 40-year-old one and a 70-year-old one. He
575 stated that there were also two raw water transfer lines—a 70-year-old line and a 110-year-old
576 line.
577

578 Mr. Schiller stated that the aging infrastructure would be replaced with a new waterline and
579 pump station. He noted that it was a complicated design because it would be used to transfer
580 water from Ragged to Observatory in the short term, and it would be also used to send water
581 from Ragged to South Rivanna WTP as part of the raw water transfer process.
582

583 Mr. Schiller stated that the design engineers had worked hard to better understand the basic
584 design and layout of the pump station.
585

586 Mr. Pinkston clarified that the waterline to be replaced was the one that was visible on the
587 surface of the ground in several locations from Reservoir Road.
588

589 Mr. Mawyer stated that was correct.
590

591 Mr. Pinkston asked if the pump station would be across from the Fontaine Research Park.
592

593 Mr. Schiller responded the pump station would be off Reservoir Road on Fox Haven Farm.
594

595 Mr. Mawyer responded that the existing pump station was near Fontaine Avenue, but it would be
596 removed.
597

598 Mr. Schiller affirmed that the Royal Pump Station was near Fontaine Avenue.

Mr. Pinkston clarified that water could come in from the reservoir and be directed to several destinations.

Mr. Schiller responded that this was correct. He stated that they would install the pumps in phases—currently, the pumps were needed to convey water from Ragged Mountain to Observatory WTP. He stated that once the whole piping system was in place, the pumps could also convey water from Ragged Mountain to South Rivanna WTP.

Mr. Schiller stated that there would be a series of automatic control valves to determine where the flow was directed. He stated that the engineers underwent a complicated design process to ensure all hydraulic conditions were accounted for.

Ms. Mallek asked if the pumps were bidirectional.

Mr. Schiller explained that the piping would be set up so that the flow was always in the correct direction. He stated that they were working through the final site acquisition process with the Foundation for the pump station and working through final easements. He stated that they were in the process of refining the pump station design. He stated that the project was expected to be completed in 2028 at a budget of \$44M.

Mr. Schiller stated that there was a lot of recent work associated with the Central Waterline. He noted the selected alignment for the Southern Route or Cherry Avenue Route. He stated that since it had been selected, they were working through surveys and the design process. He stated that the project was intended to improve waterflow pressure and redundancy in the urban system and to connect the Observatory WTP better hydraulically with the central and eastern portions of the urban transmission system.

Mr. Schiller stated that they anticipated the project would be completed by 2028 with a budget of \$41M. He mentioned the Red Hill WTP was previously used as a wellhouse and was now used as a WTP. He stated that they had a number of vessels—calcite contactors and various chemicals stored in the building. He stated that they performed a needs assessment to determine more space was needed.

Mr. Schiller stated that they intended to add on to the facility to improve the monitoring and chemical automation processes. He stated that the design was underway, and they expected the project to be completed in 2023 with a budget of \$450K. He noted that \$400K was received from the County's ARPA funding.

Mr. O'Connell asked if the tank would change.

Mr. Schiller responded it would not. He stated that everything would remain the same, except the location of where the chemicals were stored, and it would improve the ability to monitor the treatment process through our SCADA system.

Mr. Schiller stated that there were several projects underway at the Moores Creek facility. He

645 stated that there was an expansion and rehabilitation of the building known as the Engineering
646 and Administration Building project. He stated that there was rehabilitation of the gas sphere
647 associated with the sustainable digester gas process, and there was a continuation of the
648 aluminum slide gate replacement project at the Moores Creek pump station and headworks, and
649 the UV disinfection facility. He mentioned that there was also rehabilitation of the compost shed
650 roof.

651
652 Mr. Schiller mentioned that there were operations and maintenance building upfits. He stated
653 that there were cogeneration system upgrades. He noted that there were planned structural
654 modifications and concrete repairs. He stated that the work was associated with the equalization
655 basins and holding ponds, and there were improvements for the pump station catwalk. He stated
656 that there would be valve replacements and digester repairs. He stated that they were ensuring
657 the digesters could remain in operation for 10 to 15 years before replacement was required.

658
659 Mr. Schiller stated that there would be gravity sludge thickener pumping and chemical feeding
660 improvements. He stated that altogether, the cost for projects at Moores Creek was about \$31M.
661 He stated that each one was at a different stage of design, but all were intended to be completed
662 by 2027.

663
664 Mr. Mawyer stated that they were drafting the CIP for FY 24 - 28. He noted that the prior year
665 five-year CIP was \$200M, and the first draft of the updated CIP was \$350M. He stated they had
666 to reprioritize and integrate the needs with the finances to develop a reasonable plan.

667
668 Mr. Mawyer stated that the proposed CIP would be brought before the Board in February. He
669 stated that the operating budget would be presented in March, and there would be public hearings
670 and approval in May 2023.

671
672 Ms. Mallek mentioned power backups and asked if there would be backup power for the flow
673 equalization station in Crozet.

674
675 Mr. Schiller explained that it would be powered by the existing generator. He stated that the
676 generator was appropriately sized for all of the features.

677
678 Mr. Mawyer stated that as storms were forecast, they filled all of the fuel storage tanks so they
679 could maintain service during storms.

680
681 Ms. Mallek noted that the derecho was 10 days.

682
683 Mr. Schiller stated that they typically looked for 72 hours of storage for fuel.

684
685 Mr. Mawyer stated that it was part of an optimization they worked on to add chemical capacity
686 and diesel fuel storage capacity. He stated that they were able to operate in emergency conditions
687 for quite a while.

688
689 Mr. Tungate noted that they were able to deliver fuel to all of our generators during the derecho
690 though the road to Crozet raw water pump station was blocked.

691 Mr. Mawyer stated that Ms. Victoria Fort was back from leave, and she was one of the senior
692 project engineers.
693

694
695 **10. OTHER ITEMS FROM BOARD/STAFF NOT ON THE AGENDA**

696 There were no items to discuss.
697

698 **11. CLOSED MEETING**

699 There was no reason for a closed meeting.
700

701 **12. ADJOURNMENT**
702

703 **At 3:22 p.m., Mr. Pinkston moved to adjourn the meeting of the Rivanna Water and Sewer**
704 **Authority. Ms. Hildebrand seconded the motion, which passed unanimously (6-0).**
705

706 Respectfully submitted,
707

A handwritten signature in black ink, appearing to read 'Jeff Richardson', is written over a horizontal line.

708
709
710 **Mr. Jeff Richardson**
711 **Secretary - Treasurer**
712