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**RWSA BOARD OF DIRECTORS  
Minutes of Regular Meeting  
July 28, 2015**

A regular meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Tuesday, July 28, 2015 at 2:15 p.m. in the 2<sup>nd</sup> floor conference room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

**Board Members Present:** Mr. Ken Boyd, Mr. Tom Foley, Mr. Mike Gaffney – presiding, Ms. Kathy Galvin, Mr. Maurice Jones, Ms. Judith Mueller and Mr. Gary O’Connell.

**Board Members Absent:** None.

**Staff Present:** Mr. Tom Frederick, Rich Gullick, Ph. D., Ms. Katie Karaffa, Ms. Teri Kent, Mr. Scott Schiller, Ms. Jennifer Whitaker and Mr. Lonnie Wood.

**Also Present:** Mr. Kurt Krueger – RWSA Counsel, members of the public, and media representatives.

**1.0 Call to Order**

The regular meeting of the RWSA Board of Directors was called to order by Mr. Gaffney on Tuesday, July 28, 2015 at 2:16 p.m., and he noted that a quorum was present.

**2.0 Minutes of Previous Board Meeting**

*a. Minutes of the Regular Meeting of the Board on June 23, 2015*

**Mr. O’Connell moved that the Board of Directors approve the minutes of the regular meeting of the Board held on June 23, 2015. Mr. Boyd seconded the motion. The motion passed by a vote of 5-0. Ms. Galvin and Ms. Mueller abstained from the vote as they were not present at the meeting of June 23, 2015.**

**3.0 Executive Director’s Report**

*Amendment No. 1 to 1972 Service Agreement*

Mr. Frederick stated that staff had prepared to introduce proposed Amendment No. 1 to the Service Agreement with the Albemarle County Service Authority (ACSA), County of Albemarle

(County), and City of Charlottesville (City) regarding a change in the method of how wholesale charges were computed, but the Albemarle County Board of Supervisors had some additional questions and postponed its vote until early August. He said that this amendment had already been approved by the Board of the ACSA and City Council. He noted that this amendment would change the way debt service charges were calculated – from being a part of a rate per thousand gallons, to a separate fixed fee.

Ms. Mueller asked if RWSA staff had looked at the impact this might have on the charges for November.

Mr. Frederick said that they wanted to get this done as quickly as was legally possible. He stated that assuming the Board of Supervisors approved the amendment in August, it would be put on the RWSA Board agenda in August. He said that as soon as the RWSA Board approved the amendment, he will ask the Board to approve a preliminary rate resolution and call for a public hearing, noting that to change a portion of the rates to a fixed fee, RWSA must place two announcements in the newspaper followed by a public hearing. Mr. Frederick stated that the Board could act in September to make the rate effective October 1, 2015 which was the earliest that it could be done while following the requirements of state law.

Ms. Mueller mentioned that there was no question that all parties want to implement this amendment, and asked if this change had the potential to lower the City's and ACSA's rate. Mr. Wood said that the estimated revenue would be the same under the new fixed fee as the debt service component of the old rate, and that the reason for the change was to make the collection of actual revenues more predictable.

Mr. O'Connell stated that he did not understand why the rate resolution had to go through the public hearing process since it was just a billing arrangement.

Mr. Krueger confirmed that the Virginia Water and Waste Authorities Act required RWSA to advertise and then hold a public hearing before setting water or wastewater rates and fees, and Amendment No. 1 would require RWSA to change the wholesale water and wastewater rates to lower rates plus added new fees. He explained that the estimated revenue from the new lower rates plus the new fees would be the same as the estimated revenue from the existing rates, but because RWSA was setting different water and wastewater wholesale rates and adding new fees, the action must be approved in compliance with the Act.

Mr. Gaffney commented that this proposed amendment "was great", and it should have been proposed ten years ago.

Mr. O'Connell mentioned that it had been proposed in 1988 by the City's Director of Finance and was considered by City Council and this Board.

Mr. Frederick summarized the discussion by stating that approving the amendment authorized RWSA to change the rates, but RWSA must then go through a public process required by law to adopt the rate changes.

*Celebrate our River!*

Mr. Frederick reported that staff had been discussing with members of the community the desire to have a formal celebration recognizing the time at which RWSA's water protection permit with Virginia DEQ would invoke the fourth and final tier of enhanced ecological flows to the Moorman's River. He stated that invitations were ready to be sent the following day if the Board decided to go ahead with this event, tentatively scheduled for August 11 at 10:30 a.m. at the Sugar Hollow Dam. He stated that water levels at Sugar Hollow had recently dropped very low, and he would have more information for the Board once they got to Sugar Hollow on the agenda.

Mr. Gaffney invited questions from Board members. There were none.

**4.0 Items from the Public**

Mr. Gaffney invited questions/comments from the public. There were no questions or comments, and he closed the public comment period.

**5.0 Responses to Public Comments**

Mr. Gaffney asked if Mr. Frederick wanted to discuss his written response as part of the agenda under Other Business. Mr. Frederick agreed that it made sense to approach it then, and the Board had no objections.

**6.0 Consent Agenda**

Mr. Gaffney asked if there were any items that Board members wanted to pull for comments or questions from the Consent Agenda.

- a) Staff Report on Finance*
- b) Staff Report on Operations*
- c) Staff Report on Ongoing Projects*
- d) Engineering Services – Observatory Water Treatment Plant Flocculator Improvements*
- e) Engineering Services – Moores Creek AWRRF Grit Removal Facilities*
- f) Engineering Services – South Rivanna Hydropower Plant Repair Feasibility Study*

Mr. Frederick stated that he would like to make a correction to Item 6e) regarding authorization of funds in the amount of \$165,625 for final design for the grit removal facility, which is part of the odor control project. He stated that while this number correctly described the total amount negotiated for final design, the Board had already authorized some of those fees – and the net which the Board had not yet authorized was \$94,205. He stated that it would be appropriate and correct for the Board to approve at the current meeting only the net amount.

**Mr. Foley moved to approve the Consent Agenda with Item 6e) amended as discussed. Ms. Mueller seconded the motion, which passed by a 7-0 vote.**

## **7.0 Other Business**

### *Response to Public Comments (from Item 5.0)*

Mr. Frederick stated that he agreed with the statement made the previous month that if the community wanted to keep the Sugar Hollow Reservoir full year round except under extreme circumstances and continue to operate a water system, then the Ragged Mountain pipeline needed to be built. He stated that until the pipeline was built, one should expect fluctuations in the reservoir level and in dry years the water level could be expected to reach the bottom of the water supply pool – with only 10% of the water, or what engineers call the “dead pool” remaining. He added that the fluctuation in water levels in Sugar Hollow would also be affected by the release of ecological flows to the Moorman’s River, which was a big part of discussions that the community had with the Rivanna Water and Sewer Authority during water supply planning, and this was something RWSA should continue to honor, as the Board has endorsed.

Mr. Frederick stated that one suggestion during last month’s public comments had been to accelerate the project for the new pipeline, and he understood why those comments were being made, but this was quite complicated for staff time management as it had many projects already in implementation, and staffing levels remained lean. He stated that the pipeline project was expected to generate significant public comment, some of which might be in opposition, and it should be done well and done right – when staff could commit the appropriate staff resources – but right now was not the time to do it. Mr. Frederick stated that the current capital improvement plan called for finalizing the pipeline alignment and acquiring right-of-way in 2017 through 2018, but did not include funding for final design and construction. He opined that a study in 2017 could go a little further towards addressing questions that were currently surfacing, to include using updated information on the South Fork Reservoir. He stated that a reservoir management study was presently underway by a group called Dinatale Consultants, which would be available to the Board in Spring 2016, and he was hopeful that this study would add to the conversation on how to design the pipeline to avoid transferring sediment and nutrients from the South Fork Reservoir to Ragged Mountain. Mr. Frederick added that Gannett Fleming identified one potential but expensive solution with very limited funding principally aimed at addressing environmental impact, but staff wanted to use the future results from the ongoing reservoir management study to identify if there were lower cost solutions available. He stated that once the RWSA had a better idea of the cost, it could do a better job of financial planning and future debt service projections, as RWSA must answer both to the community and to its lenders. Mr. Frederick stated that once the financial planning was performed a better schedule for final design and construction of the future pipeline could be estimated, and at that time RWSA could solicit public input in terms of how and when to build it.

Mr. Frederick stated that he had placed a graph in the Board packets, to emphasize the effort by Jennifer Whitaker and the RWSA water supply team to provide a substantial benefit to the Moorman’s River between the construction of the new dam and the subsequent pipeline, recognizing for financial reasons there could be a substantial period of time between the two projects. He displayed a graph to demonstrate that under the soon to be effective Tier 4 stage, released flows were mimicking the natural inflow of the Moorman’s River up to 10 million gallons per day (MGD), which was a substantial benefit to the river.

a) *Discussion – Sugar Hollow Reservoir*

Mr. Frederick stated that the Board did not have to take any action on this item at this point, and could just receive the information. He stated that in May, a model scenario was presented to the Board showing the potential for the usable pool of water in Sugar Hollow to become exhausted during the summer. He stated that the Board had asked several questions, recognizing their primary responsibility of providing an adequate water supply and meeting obligations for appropriate releases to the rivers – as well as acknowledging secondary uses of the reservoir, including recreational uses such as fishing both above and below the dam at Sugar Hollow. He stated that at the Board's request, staff had contacted the Virginia Department of Game and Inland Fisheries (DGIF), and they had visited the reservoir on July 7. Mr. Frederick stated that DGIF issued no specific recommendations from an environmental perspective, and their view was that the water level was dropping at a pace slow enough so that fish and their spawning activities could be mobile, and there would not be negative environmental consequences. He noted that the only comment made in the Department of Game and Inland Fisheries report regarding dropping water levels was that it would make it difficult for people to enjoy fishing.

Mr. Frederick commented that based on current trending, about the second week of August the Ragged Mountain Reservoir water level would be estimated to rise to within 9.2 feet of the elevation of the dam's spillway; the level where the permit triggered elevating the release requirements to the Moorman's River from Tier 3 to Tier 4. He stated that it was also possible that by the third week of August, Sugar Hollow would reach the bottom of the water supply pool, at which time the permit would require the closing of the transfer of water from Sugar Hollow to Ragged Mountain. He stated that at the time the water at Sugar Hollow reached the bottom of the water supply pool, represented by the bottom of the lowest operable intake, RWSA would be required to fully open the valve that releases flow to the river, so that whatever water was flowing into the reservoir would pass through and discharge into the river. Mr. Frederick stated that if conditions remained very dry, Ragged Mountain levels would fall without transfer from Sugar Hollow, and Ragged Mountain water levels could then fall below 9.2 feet level, which would trigger backing up to Tier 3 under the permit. He added that if there was a substantial amount of rain in August, it could change this projection, but the 10-day forecast was not optimistic. Mr. Frederick reiterated that by continuing to transfer flow from Sugar Hollow to Ragged Mountain, RWSA would likely reach the Tier 4 threshold, but then be required soon afterward to close the transfer, and could be back into Tier 3 as early as about the Labor Day weekend.

Mr. Frederick presented some photos in a PowerPoint presentation of Sugar Hollow water levels during a severe drought around the year 1979, noting that the reservoir had reached very low levels, but there was still plenty of water right by the dam.

Mr. O'Connell asked if he knew how many feet down it was at that time.

Mr. Frederick responded that he did not have water level information from 1979. He then showed a picture below the dam, commenting that at the time there were no releases to the river so the water was pretty stagnant below the dam. He completed showing pictures from 1979 and stated that the second set of photos was taken in 1995 after a landslide at Sugar Hollow

following a major flood, and noted floating organic debris, some of which may be at the bottom of the reservoir now.

Mr. O'Connell asked about the perspective of one of the photos.

Ms. Whitaker stated that she suspected that it was the North Fork of the Moorman's, as many of the photos were taken where the landslide came in.

Mr. O'Connell commented that at the time there was concern that the dam was going to break due to the buildup of debris, and some nearby residents were evacuated.

Mr. Frederick showed photos taken the day before the Board meeting, noting that the water levels were down to 19.5 feet below the spillway, and stated that another 19 feet would get close to the lower intake valve. He presented a photo from the face of the Sugar Hollow Dam looking upstream, pointing out the exposure of organic debris due to low water levels, and said that he was interested in determining if this was organic debris or sediment, or perhaps even the ground. He stated that the material on the plateau in the background of the photo was all under water when the reservoir was full, and the elevated and flat appearance of the substance suggested to him that some of the material may have settled after the reservoir was put in service, whereas the exposed banks in other locations looked natural. Mr. Frederick pointed to DGIF's "trout slide," and stated that it was normally under water, as the agency introduced trout near the road up the bank a little further, with the fish going down the slide to enter the water.

Mr. O'Connell mentioned that it was stocked in early spring.

Mr. Frederick presented a photo looking toward the North Fork of the Moorman's, on the right-hand side when standing on the dam, and while it looked healthy it was a much smaller pool than normal. He referenced a photo taken at Ragged Mountain yesterday, standing on the corner of the earthen dam, and said that it had 10 feet to go to be full. Mr. Frederick showed an area the contractor had used for "borrow", and noted that it had become less noticeable as the new reservoir was filling.

Mr. O'Connell asked if the water fill level would get above the top of the borrow area.

Mr. Frederick responded that most of the area would then be under water, but a rock ledge had been found during construction that was too expensive to dynamite and remove, adding that the small area above water would have trees planted on it. He then showed another picture and noted the location of a small shed used as a mobile laboratory, and said that with another 10 feet, the water level wouldn't be too far from the guard rail near that shed.

Mr. O'Connell stated that he was on the site a few weeks earlier, and someone asked why they couldn't use the road pictured adjacent to the shed to access the reservoir.

Mr. Frederick stated that there were items in the building that the public should not have access to, but there was another access point at the end of the public parking area, and perhaps RWSA staff could talk to the City about making it more "user-friendly" for boat launching.

Mr. Frederick presented a chart of year-to-date rainfall compared to the historical average, and stated that it was not far below normal, with August being the time of year when water levels were traditionally at their lowest. He stated that throughout the months of June and July they had been releasing to the Moorman's River at the Tier 3 level – 2 MGD – and all summer to date, the calculated natural inflow had been higher than that level. Mr. Frederick stated that if current trends continued, on August 11 the natural inflow could be at or below 2 MGD, which meant that changing to Tier 4 may not change the amount released to the river at that moment – but over time, there was a big difference between Tier 3 and Tier 4.

Mr. O'Connell asked if the scenarios Mr. Frederick was now describing had been anticipated in the original computer model to determine the fill for Ragged Mountain and the stream flows, to make sure there were certain levels to support aquatic life.

Mr. Frederick responded that at the time consultants were building the models, they did not know in what month the Ragged Mountain construction would end, and did not know that Tier 4 would be triggered in the second week of August, but the initial fill tiers were designed to ensure that there was enough transfer to get Ragged Mountain filled in a reasonable amount of time. He stated that once Ragged Mountain would reach its initial fill, Tier 1 and Tier 2 would no longer be options, with Tier 4 releases in effect most of the time, and Tier 3 as a fallback during a severe drought. Mr. Frederick explained that after the initial fill at Ragged Mountain was completed, Ragged Mountain would typically be full annually in the spring, such that drought conditions would ensue to cause water levels to drop 9.2 feet and trigger a fallback to Tier 3. However, in 2015 Ragged Mountain was encountering its initial fill and was far below full in the spring – the present possible scenario of rising to 9.2 feet just before shutting the transfer from Sugar Hollow off, was a coincidence during the initial fill that should not be repeated in future years.

Mr. Boyd asked if the water level dropped to the bottom of the water supply pool if the Sugar Hollow Reservoir would basically be turned into a river.

Mr. Frederick stated that they were conducting weekly inspections and once they reached -38 ft. at Sugar Hollow, which was the lowest operable level, the permit required that they close the transfer line to Ragged Mountain and allow whatever water comes in to the reservoir from the rivers to flow out into the stream. He stated that at that point the reservoir becomes like a pass through from the rivers to the streams and would still have a shallow pool.

Mr. Boyd said that he was curious as to why DEQ would require this.

Mr. Frederick responded that it was widely recognized that a minimum amount of pool area should be designed into a reservoir that was not used for water supply, to provide a place for sediment to settle, and to provide enough water so that aquatic life could survive. He said that the only way to continue to transfer water once the level was at the bottom of the water supply would be to insert a pump to pull water from the remaining shallow pond. However, he cautioned that emptying the shallow pond below that level could kill the fish, so the plan would be not to transfer any more water to Ragged Mountain Reservoir until it rains enough for the Sugar Hollow pool to rise again.

Mr. Boyd said that he did not understand how the lake would remain if all the water were released downstream.

Mr. Frederick explained that the water level was at the bottom of the intake “box,” and would not go any lower by gravity, so any water coming into the reservoir from upstream would be released to the river, but no water below the bottom of this box would be released, either to the river or to Ragged Mountain.

Mr. Gaffney commented that to have a public event at the reservoir on August 11 could be at a time when it may be at its lowest level in 30 or 40 years.

Mr. Boyd asked if RWSA were certain there would not be a significant amount of dead fish there at the time.

Mr. Frederick responded that he didn’t expect there to be dead fish, but staff would be checking weekly, and weren’t sure how the landslide may have affected the bottom – and if staff suddenly saw a problem, the transfer could be closed.

Mr. O’Connell stated that if the transfer were closed, the Ragged Mountain Reservoir may not reach the Tier 4 level.

Mr. Frederick responded affirmatively that Tier 4 releases would not be required under that scenario, but could be voluntary.

Mr. O’Connell said that he had been frequently asked about progressing levels at Ragged Mountain, and suggested it may also be appropriate to plan an event at Ragged Mountain.

Mr. Frederick stated that there has been some discussion about having an event when Ragged Mountain was completely full, and that was likely several months in the future.

Mr. Gaffney said that he questioned whether they wanted to have a Tier 4 event at a time when Tier 4 may not be consistently going forward, and perhaps RWSA could move the event to early September. He wanted to ensure the Sugar Hollow Reservoir would be at a higher pool level at the time of the event.

Mr. O’Connell stated that the event would need to be September/October, because otherwise the press would be focused on why there was not water in Sugar Hollow.

Ms. Galvin noted that this was a pretty technical discussion, and it would be lost on people.

Mr. Gaffney asked if RWSA would go to Tier 4 when the Ragged Mountain level reached -9.2 feet.

Mr. Frederick responded affirmatively, as the permit required, then added he was also hopeful with some rain soon that Ragged Mountain would not later fall back lower than -9.2 feet.



Ms. Galvin asked for confirmation that despite the current dry conditions, there would not be any danger of a shortage to the water supply.

Mr. Frederick replied that staff had modeled from current conditions using the hydrology of a worst-case scenario such as the 2001-2002 drought, and there was enough water in storage today for the community to make it through a drought similar to that one.

Mr. O'Connell emphasized – “through all the controversy, that was the goal”.

Ms. Mueller commented that the City and ACSA were still actively promoting water conservation and it was important to note and not let people forget that it was still an issue.

Mr. O'Connell added that people were responding to water conservation education, and the average residential use per person was slowly declining.

There was no vote but a general consensus among the Board to postpone the planned “Celebrate Our River!” event to a later date to be determined later.

#### **8.0 Other Items from Board/Staff not on Agenda**

There were none presented.

#### **9.0 Closed Session**

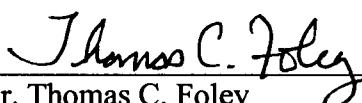
There was no need for a Closed Meeting this month.

#### **10.0 Adjournment**

**Ms. Mueller moved to adjourn the meeting. Ms. Galvin seconded the motion, which was approved by a vote of 7-0.**

**There being no further business, the meeting adjourned at 3:03 p.m.**

Respectfully submitted,

  
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Mr. Thomas C. Foley  
Secretary - Treasurer

