



# RIVANNA WATER & SEWER AUTHORITY

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## RWSA BOARD OF DIRECTORS Minutes of Regular Meeting May 21, 2007

A regular meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Monday, May 21, 2007 at 2:00 p.m., in the Conference Room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

**Board Members Present:** Mr. Gary Fern, Mr. Michael Gaffney – Presiding, Mr. Gary O’Connell (arrived at 2:10 p.m.), and Mr. Robert Tucker.

**Board Member Absent:** Ms. Judith Mueller.

**Authority Staff Present:** Ms. Anne Bedarf, Mr. Bruce Edmonds, Mr. Tom Frederick, Mr. Chuck Kent, Ms. Mary Knowles, Mr. Cary Lang, Ms. Michelle Simpson, Ms. Jennifer Whitaker, Mr. Norman Wescoat, Ms. Randi Wescoat, Dr. Robert Wichser, and Mr. Lonnie Wood.

**Also Present:** Ms. Carolyn J. Fowler – President of HR Diversified Solutions, LLC, Mr. Kurt Krueger – RWSA Attorney, 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. Michael Gaffney on Monday, May 21, 2007 at 2:00 p.m., and he noted that a quorum was present.

### **2.0 Minutes of Previous Board Meeting**

Upon a motion by Mr. Tucker, and seconded by Mr. Fern, the Board of Directors by a 3 – 0 vote approved the minutes of the regular Board meeting held on Monday, April 23, 2007. Mr. O’Connell was absent during the vote.

### **3.0 Executive Director’s Report**

Mr. Frederick first referred to his comments in the written report concerning the number of activities currently underway in the organization. He felt it was appropriate that the annual Rivanna Employee Appreciation Day would be held this Wednesday, which afforded him the opportunity to express his appreciation to Rivanna employees for all their efforts during the year.

Mr. Frederick next reported on the status of the Moores Creek Wastewater Treatment Plant (Moores Creek WWTP) Upgrade related to the nutrient wasteload allocations. The Water Quality Improvement Fund (WQIF) Grant Agreement with the Virginia Department of Environmental Quality (DEQ) is included on today’s agenda under Other Business. A request to formerly join the Virginia Nutrient Credit Exchange Association (the Exchange) was scheduled for the June 25, 2007 Board meeting. The Exchange was proposing one more membership meeting before each of the wastewater plants throughout Virginia would be asked to make a decision on whether to join the Exchange. Mr. Frederick would be providing an update to the

Board on the latest information from the Exchange at the June meeting. He added that all of the participating utilities were submitting non-binding numbers at this time. The numbers that RWSA will use for its presentation to the Exchange are the same as the performance requirements provided in the WQIF Grant Agreement, which will be discussed in further detail during the "Other Business" portion of the meeting.

Mr. Frederick then stated that a Preliminary Engineering draft for a new Meadowcreek Interceptor sewer transmission line remains on schedule to be completed by the end of May 2007 by RWSA's consultant, Greeley and Hansen. A summary of their findings will be provided to the Board at the June Board meeting.

Mr. Tucker inquired if it were anticipated that RWSA would be able to move forward with the project at that time. Mr. Frederick stated that in addition to a summary, an action plan for moving to the next stage will be presented to the Board for its consideration and approval.

#### **4.0 Items from the Public**

Mr. John Martin, resident of Free Union, Virginia, stated that he would be commenting on the following two items included on today's agenda:

1. Minimum In-stream Flows – Mr. Martin thought it was wonderful that RWSA and The Nature Conservancy (TNC) worked so closely together and had a "really good working relationship."
2. Phasing of Community Water Supply Plan – In the memorandum, Mr. Frederick indicated that the preliminary target date for completing the South Fork pipeline is 2021, which was based on a "straw" position related to the financial impacts of the plan on the wholesale Urban Water Rate. Mr. Martin would be 78 years old in 2021, and he would like to see an earlier completion of that pipeline. He felt there were really good reasons for building the pipeline a lot sooner, and in fact could be done the same time as the Ragged Mountain reservoir was being constructed. He understood the financial constraints and the "perfect storm" that was occurring. As Mr. Frederick suggested in his memorandum, "it is reasonable that the 'straw' position be an opening for public discussion." Mr. Martin would encourage that public discussion and also inquired when it could take place. He felt it would be "nice" to get all four parties together and participate in that discussion.

Mr. Martin further commented that it was not clear to him from Mr. Frederick's memorandum how long it would take to fill the Ragged Mountain Reservoir without building the pipeline first. As best he could determine, depending on how many billion gallons of water needed to be added in order to fill up the Ragged Mountain Reservoir and other variables, it could take anywhere from 3 ½ to 5 years. He felt it was a "huge, long additional drain and degradation of the Moormans River." He would encourage discussion to see if this could be done in a more prompt fashion.

Ms. Diane Frisbee, resident of the City of Charlottesville, next stated that she worked for TNC in Virginia as a Watershed Protection Specialist, primarily conducting land protection strategies.

Mr. Ridge Schuyler and Mr. Brian Richter also with TNC worked very closely with RWSA over the past few years on developing the minimum flow recommendations. Since Mr. Schuyler and Mr. Richter were unable to be present today, they requested that Ms. Frisbee attend and express their appreciation for RWSA's willingness to work with them to help restore the flows of the Moormans and the Rivanna Rivers. Mr. Schuyler and Mr. Richter very much looked forward to continuing their work with the Authority to implement the plan to balance the needs of the aquatic life with the needs of the public water supply.

Mr. Gaffney thanked Mr. Martin and Ms. Frisbee for their comments. He added that the Board looked forward to the ongoing discussions concerning this matter with the assistance of TNC as well as other environmental organizations in the community.

### **5.0 Consent Agenda**

Mr. Gaffney asked if there were any items that the Board members would like to pull for questions or further discussion from the Consent Agenda.

- 5a) Staff Report on Finance
- 5b) Staff Report on Operations
- 5c) Staff Report on On-going Projects
- 5d) Design Services – Moores Creek WWTP ENR Upgrade
- 5e) Design Services – Dell Waterline
- 5f) Engineering Modular Building Addition
- 5g) Personnel Changes

In regards to **Item 5f), Engineering Modular Building Addition**, Mr. Fern inquired about the long-term plan for the Engineering Department concerning a more permanent structure.

Mr. Frederick stated that there was an item in the Capital Improvement Plan (CIP) that was adopted by the Board in March to retain an architect within the next year to look at several issues related to the Administration Building. He anticipated that the future needs for Engineering will be part of that architectural discussion.

As there were no further questions or discussion, Mr. Tucker moved, which was seconded by Mr. O'Connell, that the Board of Directors vote to approve **Items 5a), b), c), d), e), f), and g)** of the Consent Agenda. The motion was approved by a 4 – 0 vote.

### **6.0 Other Business**

In regards to **Item 6a), Public Hearing and Adoption of FY 2008 Budget**, Mr. Frederick provided a brief summary of the proposed budget prior to holding the Public Hearing. He stated that the Board adopted a resolution in February to advertise the wholesale water and wastewater rates for FY 2008 as preliminary rates for the required 60 days for the purpose of notification of a public hearing to be held during today's meeting. There were some minor changes since the budget was presented in February 2007 to reflect more current information on insurance and benefit programs, which slightly reduced the increases in wholesale rates for FY 2008.

Mr. Frederick further reported that when the proposed budget was introduced in February 2007, the cost of electricity for next year was uncertain as the General Assembly was still in session considering a "re-regulation" bill proposed by Virginia Dominion Power. Since that time, Dr. Robert Wichser has had numerous contacts with all of the Authority's electric providers and Virginia Energy Purchasing Governmental Association (VEPGA) officials concerning this issue. With the bill's passage, it is believed that Virginia Dominion Power intends to implement a 12.9% increase in its rates beginning July 2007 that will impact all of Rivanna's facilities on Virginia Dominion Power rate schedules. Preliminary numbers indicate that there will be about a \$75,000 increase in electrical costs at the Moores Creek WWTP. Since impacts to the other cost centers will not be as significant as compared to normal fluctuations in flow received within the year on electricity use due to weather, RWSA was not proposing at this time that the budget be adjusted upward to cover the increased electrical costs. Additional efforts are already being undertaken to ensure the most efficient use of electricity, included conducting energy audits at the Moores Creek WWTP and the South Rivanna facility. This item will be closely monitored over the next several months, and the Board will be provided a mid-year update.

Mr. Gaffney next asked about the effective date of the electric rate increase. Mr. Frederick responded that we understand it would go into effect on July 1, 2007. Mr. Gaffney further inquired if the 12.9% increase would be phased in over a period of time. Dr. Wichser stated that Dominion is proposing a 12.9% increase in the electrical rate in each of the next three years.

Mr. Gaffney then opened up the Public Hearing on the proposed FY 2008 Budget at 2:15 p.m.

Mr. Keith Ford, resident of Albemarle County and owner of Cavalier Septic Service, commented that there were four problems in the pumping industry that needed to be addressed as follows:

1. Change in the cut-off time for septage dumping from 5:00 p.m. to 4:30 p.m. – The haulers were "comfortable" with the 5:00 p.m. time they were originally given. RWSA then made a sudden decision to change the time to 4:30 p.m. The half hour in the wintertime is a very important factor for the "pumpers," and he asked that the Authority to look into that matter.
2. Would it benefit Albemarle County if all the "pumpers" quit? Haulers were coming from another county across the mountain and charging Albemarle County residents \$180 to pump their septic tanks and then bringing their loads back to dump into their county's river. Albemarle County haulers cannot afford to charge the same fee and pay the \$90.00 fee to dump a 1,000 gallon tank. Mr. Ford commented that it "doesn't bother us in Albemarle County; let them have it in their river. We don't want it in ours, right?"
3. Grease Problem – Mr. Ford prefaced his comments concerning this issue by stating that Mr. Cary Lang and the others at the Moores Creek WWTP do an excellent job. They were required to test every load that was brought into the plant, which they do. When the haulers arrive after 4:30 p.m., staff were prompt to let them through the gate. However, there was a serious grease problem in Albemarle County. "Pumpers" cannot dump a tank at the Moores Creek facility if it has grease in it. He questioned RWSA staff as to how grease was handled when it went into the sewer line, as it was the same residents who

were getting their septic tanks pumped that were dumping grease into the sewer line. His septic service handled about 800 tanks per year at a cost of approximately \$40,000 plus, which he felt was appropriate in order to do what was right for the County. He felt the grease problem needed to be addressed. His drivers are not able to pump a tank if there is a large grease deposit. When they go back to that residence and see that the tank has been dug up again and pumped, he wondered where the grease was being disposed of in Albemarle County since it was not hauled by his company's trucks. Mr. Ford reiterated that he felt that this was a very serious problem that needed to be addressed. If he had to mix chemicals with the solution in order to pass the pH test so that Rivanna would accept the loads with grease, then he could no longer pump tanks for \$240. He would need to pass this additional expense on to his customers, and people on fixed incomes cannot handle a \$500 septic tank pump charge.

4. Horse Problem – More horses were being brought into the County, and when they die, some residents are burying them next to their wells. The chemicals used to humanely kill the horses could end up in the drinking water. His men handled this correctly by measuring 200 to 500 feet away from the well for the burial site. He felt this situation needed to be addressed because people could become sick by the horses buried near their wells.

Mr. Ford next stated that he felt everyone in this room was working toward the goal of keeping our water fresh and keeping the septic tanks pumped. There were a number of tanks that were running on top of the ground, and one tank in Crozet was running into a pond. These matters needed to be addressed, and “we are the ones that can make it happen. Nobody can make it happen but us.”

Mr. Gaffney thanked Mr. Ford for his comments.

As there were no other members of the public who were in attendance at the meeting who wanted to speak on the proposed RWSA FY 2008 budget, Mr. Gaffney closed the Public Hearing at 2:20 p.m.

Mr. Tucker asked Mr. Frederick to address the issue raised by Mr. Ford concerning the 4:30 p.m. cut-off time for septage dumping. Mr. Frederick recognized Dr. Robert Wichser who would comment on this matter. Dr. Wichser stated that the main gate closed at 4:30 p.m. RWSA would look at the hardship that the time change has had on the haulers and evaluate whether it would be feasible to change the cut-off time back to 5:00 p.m. He felt that a decision on this matter could be made prior to the June Board meeting. Mr. Gaffney then asked if the gate in question was the main entrance to the plant. Dr. Wichser replied in the affirmative and added that the septage haulers disposed of their loads within 150 feet of that gate. Mr. Frederick added that budget implications would need to be considered along with issues raised by Mr. Ford. RWSA has a full-time employee who works 40 hours a week at the Moores Creek Pump Station. One of his responsibilities is to receive the septic tank trucks and test their loads. If the expanded hours required overtime, there would be a negative impact on the budget.

Mr. Frederick next asked Dr. Wichser to also respond to Mr. Ford's comments concerning the grease issue. Dr. Wichser stated that it was his understanding that septic tanks are not connected to either the City of Charlottesville or the Albemarle County Service Authority (ACSA) collection system. Both the City of Charlottesville and ACSA have sewer use ordinances prohibiting disposal of oil and grease into their collection systems. Dr. Wichser suggested using an educational pamphlet that advised homeowners not to dispose of any type of grease in their septic tank due to the potential for tank blockage and entering the drain field. Mr. Ford responded that his drivers had attempted to educate their customers about this problem, but some continue to dispose of grease in their septic tanks. Although his company will not pump the tank if it has grease in it, some other companies will pump the tank and the load ends up going down some manhole and entering the sewer system. Bodo's and another company have put in extra tanks for grease disposal, and Harrisonburg Protein will pump the grease but not any sewage. However, he felt that the problem with homeowners continuing to dispose of grease in their septic tanks needed to be addressed and asked that RWSA consider using a skimming process at the Moores Creek facility. Mr. Ford stated that his company will be willing to assist RWSA with any of these issues.

Mr. Tucker next stated that Mr. Ford's comments concerning horses appeared to be a Health Department issue. Mr. Tucker offered to contact the Health Department about his concerns and suggested that if Mr. Ford had personal knowledge of anyone improperly burying their horses to convey that information to the Health Department. Mr. Ford responded that he felt some type of County ordinance was needed to address this issue because of the increased number of horses that were being brought into this area due to the excellent veterinarian care available. His company was aware of this situation since they buried a lot of horses. He was concerned with the number of people who buried their beloved horses near their wells, which could potentially contaminate their drinking water.

As there were no further questions or discussion, Mr. Fern moved, which was seconded by Mr. O'Connell, that the Board of Directors vote to approve the following resolution detailing the proposed FY 2008 water and wastewater rates and the supporting budget to be effective July 1, 2007:

**RESOLUTION  
ADOPTION OF THE RIVANNA WATER AND SEWER AUTHORITY  
BUDGET AND RELATED WATER AND WASTEWATER  
RATES FOR FISCAL YEAR 2008**

**WHEREAS**, the Authority has advertised and held a public hearing on May 21, 2007, on the proposed Fiscal Year 2008 budget and related rates in accordance with Section 15.2-5136(G) of the Code of Virginia, as amended;

**THEREFORE, BE IT RESOLVED** that the Rivanna Water and Sewer Authority Board of Directors hereby adopt the accompanying rates schedule effective July 1, 2007, and the Fiscal Year 2008 budget as summarized in the attached table.

**WATER RATES**

Urban Area  
 City - \$2.226/1000 gal.  
 ACSA - \$2.912/1000 gal.

Crozet - \$43,372/monthly  
 Scottsville Water - \$34,127/monthly

**WASTEWATER RATES**

Urban Area  
 City - \$2.233/1000 gal.  
 ACSA - \$2.460/1000 gal.

Glenmore - \$19,726/monthly  
 Scottsville Wastewater - \$24,897/monthly

**SEPTAGE RATES**

Local Haulers - \$72.00/1000 gal. (\$.072/gal.)  
 Outside Haulers - \$99.00/1000 gal. (\$.099/gal.)

*After normal business hours:*

Local Haulers - \$99.00/1000 gal. (\$.099/gal.)  
 Outside Haulers - \$138.00/1000 gal. (\$.138/gal.)

**VOTE**

**AYES:** Mr. Fern, Mr. Gaffney, Mr. O'Connell, and Mr. Tucker

**NAYS:** 0

**ABSENT DURING VOTE:** Ms. Mueller

**ABSENT DURING MEETING:** Ms. Mueller

In regards to **Item 6b), Salary Compensation Study and Pay Grade Adjustments**, Mr. Frederick stated that every two years Rivanna conducts a survey of all of its positions within the organization and looks at what the market is paying for comparable positions. Industry-specific positions are compared with other water and sewer utilities and other solid waste organizations across Virginia. The comparison of administrative positions was focused primarily with other local governments and administrative positions in the Charlottesville area.

Mr. Frederick further reported that this year's survey included a study of Rivanna's employee benefits. Rivanna participates in the City of Charlottesville's employee benefits plan. The survey showed that Rivanna's benefit package to be very competitive, and there are no recommended changes in this area.

Mr. Frederick next thanked the following staff who assisted with this survey: Mr. Lonnie Wood, Director of Finance and Administration, and Ms. Randi Wescoat, Human Resources Manager, who spent a significant amount of time on this project. Rivanna also received some consulting assistance from Ms. Carolyn Fowler with HR Diversified Solutions, who was in attendance today. Mr. Frederick also commented that this was the first time that Rivanna conducted its compensation survey in conjunction with the ACSA, and Mr. Gary Fern and Ms. Katrina Thraves

contributed to the overall work. Mr. Frederick added that RWSA is a member of the Virginia Water and Waste Authorities Association (VWVAA), and many of the utility organizations that are represented in that Association also participated in Rivanna salary compensation survey. At a VWVAA meeting that Mr. Frederick attended two weeks ago, one of the officers used Rivanna as a model when he suggested that the Association do more to get information about salaries in utility positions across Virginia for distribution among its members. He felt that it was a very high compliment on the quality of the work that was done on this particular survey.

Mr. Frederick then reported that the results of the survey lead to recommendations to ensure that Rivanna's salaries and pay grades remain competitive within the marketplace. The survey was not conducted last year, and the Board adopted a 3% across-the-board adjustment to all Rivanna pay grades. In the years that a survey is conducted, changes are earmarked particular to the results of the survey. This year's survey found that all but two of RWSA's positions would rate low compared to the current understanding of what the marketplace is hiring for the same positions. RWSA was recommending that each pay grade be adjusted by 5%. The Authority then identified 18 positions within the organization where further adjustment was needed and were individually mentioned in Section D of the separate report.

Mr. Frederick next stated that Rivanna was recommending that the Board adopt the changes as shown in Section D of the May 2007 Final Report for the "Compensation, Benefits, and General Information Survey and Analysis" for RWSA.

Mr. O'Connell inquired if the costs for those recommended changes to Rivanna's pay grades and positions were included in the FY 2008 Budget just adopted by the Board. Mr. Frederick replied in the affirmative.

Mr. Fern next commented on the benefits of ACSA's participation in this joint venture and that he felt the report was well prepared.

Mr. O'Connell next stated that the City could also benefit from the survey data. Mr. Wood commented that Mr. Galloway Beck, Human Resources Director for the City of Charlottesville, was provided with this information at an early date.

Mr. O'Connell moved, which was seconded by Mr. Fern, that the Board of Directors adopt the new pay plan for the Rivanna Water & Sewer Authority as shown in Section D of the May 2007 Final Report for the "Compensation, Benefits, and General Information Survey and Analysis" for the Rivanna Authorities. The motion was approved by a 4 – 0 vote.

In regards to **Item 6c), Water Quality Improvement Fund Grant Agreement**, Mr. Frederick stated that on the basis of significant discussions between DEQ and RWSA staff, who were assisted by the engineering firm of Hazen and Sawyer, RWSA was recommending that the Board authorize the Executive Director to execute a WQIF Grant Agreement for state grant money to help defray the costs of the upgrade of the Moores Creek WWTP to nutrient treatment. After this report was distributed with the Board packets, the initial face value of the grant was changed by DEQ to \$15,612,848 due to DEQ's way of calculating the overhead component. The actual amount of the grant will be based on actual costs, which will be adjusted at a later date, and will

be based on DEQ's assessment along with negotiations by staff to encourage that RWSA's appraisal of costs be reflected in the final numbers. DEQ's final determination was that 78% of the work being proposed under the upgrade project is eligible because it was directly related to treatment of nitrogen and phosphorus nutrients. RWSA was aware going into this process that the amount would not be 100% "grant eligible" since the Authority included some maintenance and replacement items within Moores Creek facility that needed to be addressed. Although those items had been budgeted separately in previous years, staff felt those projects could be more effectively implemented if they were all included in the upgrade project. RWSA believed that the agreed upon "grant eligible" percentage is a fair number.

Mr. Frederick next explained how DEQ determined that 60% of RWSA's eligible amount would be grant funded. State regulations dictate that DEQ apply a factor to each Grant Agreement based on the amount of money that median-income households in that community pay for utilities. For RWSA, DEQ determined the percentage by factoring in the data related to retail rates, and median-family household statistics for a composite of both ACSA and the City of Charlottesville.

Mr. Frederick then discussed the performance requirements, which he felt was one of the important issues to highlight related to the Grant Agreement. Every state-executed WQIF Grant Agreement requires the completed project to perform at removing nutrients to a level established by regulation particular to the unit processes that are being installed and being paid for under the grant. RWSA will be required under the final performance requirements to treat plant effluent to an annual average of 5 parts per million of total nitrogen and 0.3 parts per million of total phosphorus. As mentioned in the Board report, those requirements are a little stricter than the wasteload allocation regulation adopted by the State Water Control Board (SWCB) for our Moores Creek facility in November 2005. The regulation further stipulated that each facility would have to meet that allocation either through treatment or by trade. Since the grant would actually require the Authority to have a treatment facility that performed a little better than the state allocation, RWSA could position itself to sell credits through an agency such as the Exchange to other utilities who may choose not to build projects or elect to build projects that are less stringent than their performance requirements.

Mr. Frederick also reported that the Authority's decision to upgrade its treatment process with tertiary filters was the primary factor that influenced DEQ's decision regarding RWSA's performance requirements. RWSA's \$34.6 million Moores Creek WWTP upgrade project and the CIP do include \$5.7 million for tertiary filters, which DEQ consider 100% grant eligible. He felt that the Authority would realize the most benefit from this decision in approximately 10 years when it was projected that the Moores Creek WWTP would need to be expanded. The tertiary filters would be required for that plant expansion even if not built during the current upgrade project. He felt there might be more uncertainty as to whether grant monies would be available at a future date.

Mr. Frederick next noted that the Grant Agreement will require that RWSA's facilities be completed and put into service no later than December 31, 2012. As mentioned in the Board report, RWSA was in active discussions with its consultant on possible ways to target some interim deadlines in the construction contract that would allow the Authority to progressively

improve its treatment of nutrients even before the entire construction is completed. The Authority has not reached the point where specific dates and numbers can be presented because of the continuing challenge to balance the requirements placed on construction contracts against attempts to make RWSA's project more attractive in a contractor's market than the 90 plus projects across Virginia.

Mr. Frederick added that if the Board authorized him to execute the WQIF Grant Agreement with DEQ, the agreement would be signed and dispatched to DEQ today. DEQ would then advertise the agreement for a 30-day public comment period. If DEQ elects to approve the contract after that public comment period, RWSA anticipated that DEQ would sign the agreement by July. RWSA felt it was important to move forward with executing the document due to the uncertainty about what DEQ might accept or might change in a Grant Agreement, which would make it difficult to proceed very far into the design work.

Mr. Fern inquired if the WQIF grant amount included engineering or if it were strictly construction costs. Mr. Frederick stated that there was an allowance for engineering work, and similar to the construction cost, would be adjusted to the actual amount of the engineering contract.

Mr. Gaffney next asked if RWSA chose to build a second secondary clarifier rather than the tertiary filters would the facility only be able to attain the SWCB allocation of 6 parts per million total nitrogen and 0.5 parts per million total phosphorus. Mr. Frederick stated that DEQ had not been requested to provide a "straw" number on what the requirements would be if the Authority had proposed two secondary clarifiers and no tertiary filters, but it was the Authority's judgment that the requirements would not be as stringent. From a time perspective, Mr. Frederick would not recommend that DEQ be requested to readdress this issue. Mr. Gaffney then clarified that his question referred to the figures provided in the Board report concerning the approximately \$90,000 annual cost with an estimated \$80,000 benefit and if they were strictly based on the proposed tertiary filters. Mr. Frederick noted that in his written comments about the Exchange he had included a sentence that read, "If the ratio of sellers to buyers were 2:1, the value of our credits in that year would be approximately \$80,000." He further stated that the Exchange has decided at this point that the fixed price that a Class A buyer would pay for nutrient credits is \$2.00 per pound for nitrogen and \$4.00 per pound for phosphorus. The price that a Class A seller would actually receive would be dependent upon the ratio of sellers to buyers. Anyone affected by the SWCB regulation who wants to be a seller will be allowed to join the Exchange. Previous iterations with the Exchange were suggesting to this point that there are more sellers than buyers. If the ratio were 1:1, the value of the credits could be as high as \$160,000. He felt that the credits would not be that valuable and that the \$80,000 figure could fluctuate. Mr. Tucker then inquired if RWSA anticipated that the ratio would be 2:1, but Exchange meetings to date have not borne this out. Mr. Frederick replied that he hoped that the ratio would be closer to 1:1 than 2:1. Part of the purpose of the Exchange is to try to encourage some of the 90 plus facilities to delay implementing their projects, which would improve the market conditions for those that need to upgrade their facilities. The Exchange has also fixed the prices in order to encourage more buyers.

The structuring of the Exchange lends more uncertainty about the value of RWSA's credits each year.

Mr. Gaffney next asked if Mr. Frederick was aware of the number of jurisdictions that were proceeding at the same pace as RWSA. Mr. Frederick stated that based on his current knowledge he would suggest that RWSA was probably in the top 10 to 20 percent at this time.

Mr. Tucker moved, which was seconded by Mr. O'Connell, that the Board of Directors authorize the Executive Director to execute a WQIF Grant Agreement with DEQ in the initial face amount of \$15,612,848.

Prior to the vote Mr. O'Connell inquired if he understood correctly that the project costs that would need to be funded locally would be reduced by the amount of grant funding. Mr. Frederick stated that Mr. O'Connell's statement was correct and that about \$19 million would need to be financed locally. Mr. O'Connell further asked if the proposed wastewater rates for FY 2008 factored in the amount of grant funding. Mr. Wood replied that \$12 million was estimated as the grant amount during the budget process. Mr. Frederick added that the increasing need for debt service and reserves was based on a \$34.6 million project with \$12 million funded by the state. The amount of grant funding places the Authority in a better financial situation than Mr. Wood's previous financial analysis.

As there were no further questions or discussion, the Board of Directors approved the motion by a 4 – 0 vote.

In regards to **Item 6d), Minimum In-Stream Flows**, Mr. Frederick stated that as everyone in attendance is probably aware this is a rather involved issue that has been on the Authority's scope and has been a topic of discussions for a long period of time. He apologized for the length of the summary in the Board report, but he felt all of the information was pertinent to RWSA's decision on minimum in-stream flow criteria.

Mr. Frederick next echoed TNC's previous comments concerning appreciation for the cooperative efforts between the two agencies throughout this process. RWSA enjoyed working with TNC to reach the point today where the stream flow proposal could serve as a model for other communities throughout the nation and possibly worldwide on a strategy for utilizing streams to meet both human and environmental needs. It was understood from the beginning of the process that no system could be absolutely perfect.

Mr. Frederick further reported that the community made two significant decisions several months ago concerning the Community Water Supply Plan. First, there was a clear mandate that the public water supply should remain inside our watershed. The second item concerned augmenting the natural streams as much as could be done consistent with the first objective. A good strategy becomes critical during drought situations in order to balance both of those needs.

Mr. Frederick next commented that the report summarizes the position that RWSA has submitted to DEQ within the last week. First, this proposal included one recommendation that originated from DEQ and was not a concern for either TNC or RWSA: a minimum flow release

requirement of 23,800 gallons per day from the new Ragged Mountain Dam. The proposal for South Fork and Sugar Hollow Reservoirs was based on negotiations between RWSA and TNC. For the South Fork Dam, the minimum flows past the dam would be based on a targeted percentage of natural inflow, depending on the amount of the combined water supply storage for the entire system. Greater than 2.36 billion gallons of storage, RWSA must have a minimum release to the stream of 70% of natural inflow. This percentage decreases as the amount of total useable water supply storage gets lower. Attached to the report were some flow duration graphs to help illustrate and compare the benefits to the streams with the proposed strategies. Figures 1 through 3 were developed by RWSA's consultant, Gannett Fleming. Mr. Frederick explained that "in a perfect world" where 100% of natural flow was being met all the time, the curve on the graph would go straight up the y axis between 0 and 100 and straight across at 100%, somewhat like an "L" shape. The further the actual graph shifts toward that "L" the better the streams would be mimicking natural conditions. As illustrated in Figure 1, the proposed requirements for the South Fork Rivanna River do provide better performance in terms of mimicking natural conditions. Referring to the table on page 2 of the report concerning the "Proposed Flow Past the Dam Requirements," it was important to note the word "minimum" as it related to data listed in that column. If a dam is spilling, which currently occurs at the South Fork Dam 97% of the time, the flow actually going past the dam is more than what was shown in this table. He felt it was probably more correct to state that the South Fork Reservoir would be at 90-95% of natural inflow most of the time.

Mr. Frederick then discussed the table on page 5 concerning releases for Sugar Hollow Reservoir. Once the new Ragged Mountain Dam was completed and the new South Fork to Ragged Mountain pipeline built, Sugar Hollow will operate in a very simple manner. The Ragged Mountain Reservoir will remain full most of the time. The water that comes through the reservoir from the mountains will go over the spillway and closely mimic natural conditions. During rare times of drought conditions, RWSA would be requesting an opportunity to release the flow from Sugar Hollow into the Moormans River, which will be allowed to flow to the South Fork Reservoir. These would also be periods when the South Fork Reservoir would not be full, and in order to get the safe yield that was discussed in the 50-year water supply plan, RWSA would need to utilize the Sugar Hollow storage. During those times, the flows would be "pulsed" in a way to simulate natural conditions of a minor flood event so that there would be no damage and possibly even improve the natural habitat. After those releases when the Sugar Hollow Reservoir is down and until it is refilled by a rain event, RWSA would still be releasing at least 90% of natural inflow either over the dam or through the intake and pipeline that goes through the dam. Some modifications to the Sugar Hollow pipeline right at the dam will be needed in order to allow for the larger releases that were being proposed during drought conditions. Presently the pipe is tapped to provide a 400,000 gallon per day release. Modifications would entail a new tap and installation of devices that would allow adjustment of the flow when needed.

Mr. Frederick next reviewed the information on pages 3 to 5 of the report concerning finding the right "balance" between implementing and financing the improvements under the Community Water Supply Plan. RWSA recognized the significant possibility that due to the cost of both the dam and the pipeline that it might not be able to obtain the necessary support in order to raise the wholesale water rates in a way that will enable both projects to be implemented simultaneously.

To address those issues the proposal allows for an interim period of time when there is a new dam and reservoir-in-place without the new South Fork pipeline. The new Ragged Mountain Dam would then be filled from the Sugar Hollow Reservoir as opposed to the South Fork Rivanna Reservoir.

Mr. Frederick then commented that the remainder of the discussion addresses how natural flow releases would be set at the Sugar Hollow Reservoir with a cap that allows storage to be replenished during the peak flows of storms which would then be used for transferring water to the Ragged Mountain Reservoir. A four-tiered structure will be used for the initial filling of the new Ragged Mountain Reservoir, which would change to a two-tiered structure once the reservoir was full. Releases from the Sugar Hollow Reservoir would be based on the "Minimum Flow Past the Dam" requirements listed in the table on page 5 that called for natural inflow up to 10 mgd, which would occur most if not all of the time, and was orders of magnitude higher than the 0.4 million gallons per day under the current voluntary policy. RWSA has committed during its discussions with TNC to seek through forecast modeling ways that in actual drought practice the use of the second tier can be minimized.

Mr. Frederick next stated that RWSA has confidence in all the numbers included in the report as they have been through extensive computer model simulations and runs. He felt it was a significant improvement over the methodology used in the past.

Mr. Frederick then added that staff was recommending that the Board authorize RWSA to move forward with the final negotiations with DEQ regarding a water protection permit for the Community Water Supply with these minimum in-stream flow criteria.

Mr. O'Connell inquired when RWSA's normal operating procedures would be changed or adjusted to these new minimum in-stream flows criteria as it would take several years for the new dam to be built. Mr. Frederick stated that it was RWSA's challenging goal to build the new Ragged Mountain Dam by 2011. Water demand was closely approaching the point where it crosses safe yield, as discussed during the public participation process three years ago, and was the basis for RWSA request to DEQ to make no changes to the current voluntary policy while the dam was being constructed.

Mr. Tucker next asked if a response from DEQ about this issue was needed in order to move this process forward. Mr. Frederick stated that DEQ has moved forward on many aspects of its review of the Community Water Supply Permit Application. This particular issue has been on hold because DEQ was aware that TNC and RWSA were having significant discussions that might lead to a "better way to build a mousetrap." He felt that DEQ's respect for the joint work being undertaken was a positive aspect, but the permit process would be delayed until a proposal on minimum in-stream flows could be submitted to DEQ.

Mr. Gaffney next questioned whether discussions to build the pipeline at the same time as the new dam was being constructed would continue during this process. Mr. Frederick stated that he felt more discussion was needed in this community with multiple agencies concerning how the projects are phased. As Mr. Martin had indicated during his earlier comments, a "straw" position had been included in the Board report as a starting point for public discussion. Input from

citizens interested in the Moormans River as well as from ratepayers who would finance these projects will be needed in order to make a decision on the phasing issue.

Mr. O'Connell then inquired again as to when the new dam was currently scheduled to be completed. Mr. Frederick stated that the new Ragged Mountain Dam was scheduled to be completed by 2011. The "straw" position in the report proposes that the South Fork pipeline would be finished by 2021. Mr. Gaffney next asked about the time frame for the construction of the pipeline. Mr. Frederick replied that it entailed about a two- to three-year construction period. Mr. O'Connell also questioned if there was any money included in the CIP for the pipeline project. Mr. Frederick stated that expenses related to the right-of-way for the pipeline is included in the approved five-year plan, as well as funds to build the dam in one phase. The next agenda item concerning phasing of the Community Water Supply Plan was closely related to the current discussion. In that report there was some discussion related to the needs at the Observatory Water Treatment Plant. All the proposals being presented today were compatible with the approved CIP, including the design work for the Observatory facility.

Mr. Tucker moved, which was seconded by Mr. O'Connell, that the Board of Directors authorize the Executive Director to take the necessary steps to complete the agency review process for a Ragged Mountain permit, based on the stream flow proposal outlined in the Board report. The motion was approved by a 4 – 0 vote.

In regards to **Item 6e), Phasing of Community Water Supply Plan**, Mr. Frederick stated that there were two big issues that were discussed in this report. One item concerned RWSA's current position on the phasing sequence of the various projects in the Community Water Supply Plan with estimated completion dates. The second item related to a recommendation that the Ragged Mountain Dam be built as a single phase. A large portion of the report discussed the specific reasons for this recommendation, which he summarized as follows:

A critical reason for building the dam in one phase related to the last agenda item concerning minimum in-stream flows and the need for a significant increase in water supply storage if there were to be a difference in terms of releases to streams. RWSA was not able to increase its stream releases with the very minimal amount of storage available in its current systems. It has also been projected that the storage would diminish over time if no improvements were implemented, particularly at the South Fork Rivanna Reservoir. If there were an interim step between the construction of the dam and the pipeline, the dam must be built as a single phase to its full height in order to implement a natural inflow up to 10 million gallons per day at the Sugar Hollow Reservoir.

Another factor to consider if the dam were built in multiple phases at different heights related to the need to build a spillway at each stage of construction, which would add to the project costs. RWSA estimated that a two-phase approach would add more than \$3 million to the \$37 million that it would cost to build the dam in one phase, including also the additional costs related to design, construction administration, and overhead expenses for two large contracts versus one large contract. Mr. Frederick then clarified that raising the reservoir pool by 45 feet cannot be accomplished by building a 45-foot dam. If a project were built for half of the water supply storage now and the other half at a later date, it could not be done for half of the total cost. The

dam would need to be built up to a height of 67 feet just to maintain the current water supply storage capacity. The savings realized in a phased approach would not be significant compared to the storage that would be obtained. In fact, 54% of the \$37 million total project cost would be the expense for building a new dam up to the height of the existing dam itself.

Mr. Frederick next reminded everyone in attendance that RWSA was under a mandate from the Department of Conservation and Recreation (DCR) to either build a new dam or make \$5 million in improvements to the existing dam. By proceeding forward with the construction of the new dam, the \$5 million for rehabilitation would be saved.

Mr. Frederick also reported that due to the DCR mandate, RWSA would recommend that the Ragged Mountain Dam be the first project implemented under the Community Water Supply Plan. Additional water treatment capacity will also be needed around 2015 at the Observatory Water Treatment Plant because there was a need to replace the very old piping and pumping station at that facility as its location was strategic to the new water supply. Staff felt that the South Fork pipeline needed to be the next project. The final upgrade to the South Fork Water Plant and the last upgrade to the Observatory Water Plant could occur much later in the process.

Mr. Frederick then commented that staff was not recommending Board approval of the phasing plan at this time but were interested in discussion and guidance as to additional steps that RWSA could take in terms of public information on this item.

Mr. Frederick also mentioned that since the April Board meeting, RWSA was pursuing the Board's directive to schedule a meeting of the four joint boards. Staff has not been successful in securing a date in June when all four boards could agree to meet at the same time, so some possible dates in July were being explored. Mr. O'Connell inquired if the scheduled August 2007 date for the start of preliminary design for the Ragged Mountain Dam would be delayed until the joint meeting could be held or would the process move forward and information at that point shared whenever the meeting could be scheduled. Mr. Frederick stated that the ideal position would be if a decision could be made on whether or not Ragged Mountain Dam would be a one-phase or a two-phase project prior to the start of the design work. Mr. O'Connell further asked if RWSA intended to bring a staff recommendation to the Board in August and use the joint meeting of the boards and the public meeting as information into the decision on the phasing of the dam project. Mr. Frederick replied that he did not bring a specific recommendation on how this information would be presented to the public, but one obvious way that had been done previously was to hold a public meeting. Following some discussion concerning the difficulty of scheduling a meeting of the four boards during the summer months, Mr. O'Connell suggested, and the other Board members were in agreement, that RWSA host a public meeting and invite the members of the four boards. Mr. Frederick was in agreement and added that the end of June would be the very earliest that staff could consider holding the meeting. After further discussion, the Board agreed that a decision on the date for the public meeting would be at RWSA's discretion.

Mr. Tucker next inquired about the height of the existing South Fork Dam in comparison to the proposed height of the new Ragged Mountain Dam. He felt this information might be helpful

when considering the phasing issue. Dr. Wichser stated that the height of the South Fork Dam was about 60 feet.

**7.0 Other Items from Board/Staff not on Agenda**

There were no other items from the Board or staff not on the agenda.

**8.0 Closed Meeting**

There was no need for a closed meeting.

**9.0 Adjournment**

There being no further business, Mr. Tucker moved that the meeting be adjourned, seconded by Mr. O'Connell. All members voted aye, and the meeting was adjourned at 3:10 p.m.

Respectfully submitted,

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Mr. Robert W. Tucker, Jr.  
Secretary-Treasurer