



RIVANNA WATER & SEWER AUTHORITY

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RWSA BOARD OF DIRECTORS

Minutes of Regular Meeting

September 28, 2010

A regular meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Tuesday, September 28, 2010 at 2:15 p.m., in the lower level Board Room of the Albemarle County Service Authority, 168 Spotnap Road, Charlottesville, Virginia.

Board Members Present: Mr. Kenneth Boyd, Mr. Michael Gaffney – Presiding, Mr. Maurice Jones, Ms. Judith Mueller, Mr. Dave Norris (arrived at 2:19 p.m.), Mr. Gary O’Connell, and Mr. Robert Tucker.

Authority Staff Present: Ms. Tamara Ambler, Mr. Thomas Frederick, Ms. Mary Knowles, Mr. Doug March, Ms. Michelle Simpson, Mr. Justin Weiler, Ms. Jennifer Whitaker, and Dr. Robert Wichser.

Also Present: Mr. Kurt Krueger – RWSA Attorney, Mr. Chris Webster - RWSA Consultant with Schnabel Engineering, 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, September 28, 2010 at 2:15 p.m., and he noted that a quorum was present.

2.0 Minutes of Previous Board Meeting

Prior to the vote, Mr. Frederick noted two changes to the minutes of the August 24, 2010 minutes. In the 8th line of the first full paragraph on page 15, the sentence that reads “... those of you who find this had to believe ...” the word “had” should be changed to “hard.” On page 20, 9th line from the bottom of the middle paragraph, the sentence that reads “Mr. Boyd next questioned if the \$400,00 for ...”, should be changed to “Mr. Boyd next questioned if the \$400,000 for ...”

Mr. Tucker moved that the Board of Directors vote to approve the minutes of the regular meeting of the Board held on Tuesday, August 24, 2010, as amended by Mr. Frederick, which seconded by Ms. Mueller. The motion was approved by a 6 - 0 vote. Mr. Norris was absent from the vote.

3.0 Executive Director’s Report

Mr. Frederick stated that the latest Five-Year Capital Improvement Plan (CIP) was introduced to this Board at the July 27, 2010 meeting. During the discussion, the Board suggested that a meeting with the staffs of RWSA, the Albemarle County Service Authority (ACSA), and the City be held to review the plan. Mr. Frederick reported that this meeting had been held, and there were no substantive changes to the plan as a result of that meeting. RWSA staff is prepared at the Board’s discretion to bring the CIP back to the Board for adoption at the October meeting. Staff



further suggests that any amendments to the CIP as a result of changes in the water supply plan be approved later, but staff is open to alternative ideas on how to proceed with this process.

Mr. O'Connell inquired about the number of projects not related to the water supply that staff is ready to initiate. Mr. Frederick stated that there are some other projects not related to the water supply plan ready for implementation, but staff is awaiting confirmation of Board approval of the budgets for those projects.

Mr. Frederick next reported on work that is being conducted in conjunction with the staffs of the City and the ACSA regarding an amendment to the Four Party Agreement, which involves changing the way RWSA charges for debt service and capital expenses. The Authority is currently bound by the agreement to incorporate those charges into the wholesale rate. This means that the actual payments the City and the ACSA make do not match the budget due to the difficulty of accurately projecting a year in advance the amount of flow that will be used by those entities. Issues of overpayment or underpayment can occur during years where flow is significantly higher or significantly less than what was budgeted. The "obvious long-term fix" is to establish fixed monthly payments. Currently, there is agreement at the staff level to implement such a system, but legal issues related to the wording of an amendment to the Four Party Agreement are in the process of being resolved by the attorneys. The goal is to have a draft amendment ready for the Board's consideration in October. In addition, within those discussions at the staff level, the idea of a one-time rebate back to the City and ACSA from FY 2010 wastewater surpluses has been brought to RWSA's attention.

Mr. Frederick then stated that RWSA's auditors have requested resolution about a one-time only rebate that is being proposed on wastewater charges paid to RWSA last year so that it can be accurately reflected in the audit report for FY 2010. Mr. Boyd asked if the rebate would mean a reduction in revenue for RWSA. Mr. Frederick replied that the rebate was being "framed" as money that would come back to the City and ACSA from RWSA, which would reduce the Authority's wastewater reserves. Mr. Boyd then noted that because of the "CIP challenges that we have now, as well as reserves for the unknowns ... like the water pipe break that we had this past year," he did not know if he would be "really in favor" of the rebate. He was in favor of the proposed adjustment "to make it a level CIP fee as opposed to something based on volume." Mr. Gaffney next inquired about the amount of the proposed rebate, and Mr. Frederick replied that what was requested was \$1.5 million. Mr. Tucker then asked if the \$1.5 million was the amount to be returned and was not the amount of RWSA's reserves, and Mr. Frederick confirmed that it was the amount to be returned. Mr. Tucker next questioned about the current amount of the Authority's reserves. Mr. Frederick responded that he did not have that number available at this time, but that it was several million dollars. Mr. Gaffney then inquired about the amount of the underpayment for FY 2009. Although he did not have those numbers at hand, Mr. Frederick stated that the payments in the last two fiscal years prior to FY 2010 were less than what was budgeted. For FY 2010, the payments were significantly more than budgeted due to the wet weather conditions. Mr. Frederick added that "wastewater flow reflects weather, which is not something that anybody can predict ahead of time." Mr. Boyd next requested that when staff brings the rebate issue back for approval that those numbers are provided to the Board. Mr. Tucker then commented that he did not disagree with Mr. Boyd, but felt staff should consider if there would be adequate reserves available to fund future projects after refunding the

\$1.5 million. Mr. Frederick responded that 71% of the CIP involves wastewater projects and much of that is mandated through federal and state agencies. If a rebate is given and a fixed charge is implemented, then in future years the amount of rebate will need to be compensated back through future wholesale rates or fixed payments to fulfill the CIP. Mr. Boyd then commented that was also his concern since wastewater rates would increase in the future based on the CIP and inquired if the CIP would need to be adjusted if the rebate took effect or if staff took into consideration the \$1.5 million reduction in reserves when developing the CIP. Mr. Frederick replied that the CIP did not incorporate the \$1.5 million figure but considered the currently available reserves to be in place. This meant future higher wastewater rate increases in order to recoup that money over time. Mr. O'Connell next noted that since the attorneys have not yet reached agreement on an amendment to the Four Party Agreement that the four boards will need to consider, he felt an October time line for presenting a document to this Board would be difficult to achieve. He recognized that the auditors need a decision on the rebate issue, but "the approach has been that the agreement would be in front of the Board, approved, taking into account the rebate based on an in-depth formula and the allocation of cost for all the wastewater treatment projects." Ms. Mueller then stated that one of the issues involved the wastewater payment being "so far over what any of us had budgeted that it had a very dramatic financial impact on the City ... huge extra cost for the City; huge windfall for RWSA." The idea was that until fixed wastewater charges were implemented, a one-time rebate would be provided to the City and the ACSA. Mr. Gaffney added that it would be helpful for the Board to have numbers from the past two fiscal years, and Mr. Frederick stated that staff would provide the Board with the figures being requested when the rebate is presented to the Board for consideration.

Mr. Frederick then reported on the dry conditions that this area has experienced since early August into mid-September. He hoped that the recent wet weather indicated a change in that trend, but the locality did not receive the amount of rain initially forecasted. The rainfall received ranged from 1 ½ inches to 2 inches at various locations, with less being measured at the South Fork Rivanna Reservoir (SFRR) and a little more at the Sugar Hollow Reservoir. The reservoir levels have risen slightly over last two days and may rise a little more over the next day or so. RWSA's "initial prognosis from the recent rain is [that] we need significantly more if we're going to fill our reservoirs all the way to the top." Staff was continuing to review hydrologic modeling on a regular basis to determine how fast our reservoirs would fill up based on current reservoir levels and imposing them under hydrologic conditions in the driest year on record. The Authority found that "in every year of the hydrologic record, our reservoirs will refill before May 1, but in the driest year on record, which is 2001 - 2002, the Sugar Hollow Reservoir simulated [that] it may not fill up until early April." The May 1 deadline is used because "statistically things can begin to get dry ..." He noted that simulating the 2001-02 year "the record looks close, but in all 85 years of records we achieved the goal of refilling the reservoir." Based on that modeling, he felt the risk of not refilling the reservoir is very low. However, as long as the area experiences limited rainfall, it felt the situation merits close monitoring. Even with the recent rainfall event, RWSA continues to urge citizens to practice water conservation efforts, particularly water use related to fall planting.

Mr. Frederick next reported on an item not included in his report. The Authority received information last Friday after the Board packets were distributed about the Environmental Protection Agency's (EPA) response to watershed implementation plans submitted by the various

states in the Chesapeake Bay region. As discussed at a previous meeting, EPA was considering taking a more stringent position on the nutrient targets for all the wastewater treatment facilities in Virginia. On Friday, EPA confirmed this position and suggested that because Virginia was not doing enough to require the agricultural sector to meet nutrient targets, wastewater facilities should be "penalized by lower allocations." Formal adoption of EPA's position would require design of more wastewater treatment facilities for the Moores Creek facility, even though current construction at the plant meets Virginia nutrient targets, and would "definitely have an impact on our wastewater rates and our capital requirements." The Authority will continue to monitor this situation very closely. He expected that the Virginia Association of Municipal Wastewater Agencies (VAMWA) would oppose EPA's proposed action and support the Commonwealth's position on this issue.

4.0 Items from the Public

Mr. John Martin, who resides in Free Union, Virginia, suggested that the City of Charlottesville and the Albemarle County Service Authority (ACSA) "take a time-out for a day or two and put the dueling water supply plans on the shelf for a couple of days [and] address something which I think is very fundamental." He further stated that he "kept coming back to the Cost Allocation Agreement of 2003, which is attached to the minutes of the Rivanna Board meeting [of] December 15, 2003." He then read the following from the Cost Allocation Agreement as follows: "Applying the above methodology, the City is allocated 7.80 million gallons daily (mgd), and the ACSA is allocated 4.20 mgd of the existing 12 mgd of safe yield supply in RWSA's Urban water system." Mr. Martin was not certain what "safe yield supply" meant, but he felt the term was referring to "water storage capacity." He also believed that it "would be useful for the City and the ACSA get together and see if everyone agrees what that means." He felt if it meant "storage capacity in a system" than "65% is allocated to the City." He further suggested that the "second step in this analysis" would be for the City to "determine whether it needs any additional water storage capacity in addition to what it's already allocated to meet its needs through 2050." Mr. Martin also believed it was "possible that that calculation would come up with zero, especially given what the City has said about expectations for water conservation." He then suggested that the ACSA "do the same thing and issue a joint statement so it's clear in the community exactly who needs what." He felt it was "really confused in the public eye ... in my view."

Mr. Tom Olivier, who is the Conservation Chair of the Piedmont Group of the Sierra Club, next commented that he would be speaking on behalf of that organization today. He first commended "the City of Charlottesville and especially Mayor Norris for their efforts to develop better information on dredging and some other water planning issues and ...for presenting a compromise proposal for a revised water plan." He then read the following statement: "To lead us to the better plan that now is possible and our residents deserve, the Piedmont Group of the Sierra Club first urges that Requests for Proposals (RFPs) for capacity restoring dredging of the SFRR be issued soon and proposals for dredging in the 'small bites' scenario – developed by Richard Lloyd – we believe should be included in these RFPs. Secondly, we urge that meetings between RWSA representatives and other local government officials with Department of Environmental (DEQ) staff to discuss permits and other water plan related issues should be open to the public ...Third – unrelated to the water plan per se – I just want to comment [that] the Sierra Club strongly supports maintenance of clean water in our streams. We also believe that

control of agricultural runoff is part of this picture. We all know – or at least we should know – that there are costs to environmental degradations. I think we’re starting to learn ... mainly that we’re likely to be penalized if we do not do more to control agricultural runoff in Virginia. I simply want to urge that we believe stronger programs are due here, and we would be prepared to support that.”

Ms. Dede Smith, who resides at 2652 Jefferson Park Circle, Charlottesville, VA, next commented that she would be speaking specifically today on the agenda item concerning the “action items” from the Joint Boards Meeting. She stated that she was “a little confused about the dredging because it refers to only Phase I, and what was in the City’s resolution did not specify only Phase I. In fact it used the words ‘restorative hydraulic dredging (areas identified in [the] South Fork Rivanna Reservoir Dredging Feasibility Study) ... and to conduct continuous maintenance hydraulic dredging of the South Fork [Rivanna Reservoir].’” She further felt that “quite frankly I do not think Rivanna should be in charge to develop and bid an RFP. It should be the City. The City paid by far the bulk of the cost of that study, and I would ask the City representatives to take on the RFP. There’s no reason it needs to be a \$30,000 fee.”

Ms. Smith next commented that it was also the “same with the Black & Veatch [study].” She stated that the “City paid City taxpayer money,” and she requested as City representatives that “you also take on the continuation of looking at that.” She further believed that “it’s been very clear that the County does not want either of those things to go forward.” She understood “why you don’t, but the City does ...it should be under the City’s responsibility.”

Ms. Smith then stated that she actually had the 2003 agreement just referred to by Mr. John Martin, and she requested that “as you proceed with those negotiations, to make it as public as possible. There is nothing more serious for certainly the city ratepayers and the County ratepayers ... I don’t see any reason why the whole thing couldn’t be done very publicly.”

Ms. Betty Mooney, who resides at 201 Sunset Avenue, Charlottesville, VA, next read the following written statement, which she distributed to the Board Members:

“The City has gone to considerable expense to seek second opinions about cost estimates that were in doubt and now found far lower estimates on dredging, and better information on repairing and raising the existing [Lower Ragged Mountain] Dam than had been provided by consultants working under Rivanna’s oversight.

“Given this investment, it is important that the City representatives on the RWSA Board make sure any additional work is done by consultants who are truly independent and not influenced by previous work or associations with RWSA.

“The RWSA has stated repeatedly that its responsibility is to further the 2006 Community Water Plan that resulted in the proposed new dam and pipeline. Given that, it is difficult for many of us in the public to see how consultants working for RWSA would be truly objective.

“I believe the following e-mails show that at least one member of the ITRT has, apparently without benefit of technical information, formed a negative opinion regarding the existing dam. To summarize those e-mails in chronological order, and you have them before you:

1. On August 11, 2009 [at 11:25 pm and 3:26 pm]. A member of the local media contacted two members of ITRT seeking corroboration of a statement made by the RWSA Director that, based on a review of the 1913 report, the ITRT 'did express significant concerns were RWSA to propose to build a new spillway for the existing dam.'
2. On August 12, [2009] at 8:55 [am] One member of the ITRT replied to the reporter and declined to comment.
3. On August 12, [2009] at [12:00] midnight. The other member of the ITRT forwarded the reporter's e-mail to an RWSA engineer stating 'I am not aware of what Tom quoted, or where the comment about the new spillway for the existing dam was referring to.'
4. On August 12, [2009] at 12:13 pm. The RWSA Director e-mailed this second member of the ITRT, stating 'We will contact you to discuss.'

"An article was then published in *The Daily Progress* [on] November 25, [2009] – including the following:

"Dan Johnson, a member of the panel assembled by RWSA from ITRT, earlier this year to review engineering data and a 1913 safety report for the lower dam confirmed in an August interview that the independent panel expressed what Frederick has described as 'significant concerns' about any construction on the 1908 dam.

"I hope you will in your spare time carefully look over these e-mails ... that there's already a clear prejudice, we feel, on RWSA's part and now on this consulting team's part because as you noticed, Mr. Johnson spoke on behalf of the entire panel, not just for himself. So we feel given that it is imperative that the City keep any outside review of the Black & Veatch's work in the City's control, as well as the dredging RFP ... I really feel that the citizens of the City deserve this, given that we know now that there is this prejudice to not repair our dam and to not raise our dam; that the information we get from RWSA is biased to build a new dam. So, it is silly for all this investment to go for nothing that the City has invested in."

Ms. Rebecca Quinn, who resides in the City of Charlottesville, next read the following written statement that she distributed to the Board Members:

"We have heard on multiple occasions that the RWSA knows that there is a deadline of November 2011 to submit a regional water supply plan that is prepared in compliance with State regulations.

"The RWSA has also indicated that the demand analysis prepared some years ago to support the new dam and pipeline [project] will be updated to meet those requirements. That statement – at least the last time I heard it – pre-dated the decision to request an opinion from Swartz Engineering Economics –an exercise that I think only resulted in a delay of several months.

“I’d like to point out that the state regulations identify the methodology developed by the American Water Works Association (AWWA) as a preferred method to do the demand analysis. This methodology has been revised since it was last used by RWSA’s consultant, specifically it’s been revised to better account for how conservation is handled – certainly not by a short-cut percentage reduction or a ‘one-time step-down.’

“I appreciate Mr. Martin’s suggestion that we take a break and figure out how much water we use because that’s exactly what I think we need to do. The issue revolves around that single question – but not only how much water do we use today – but how much we will use or might use for the worst of the worst droughts – not today, but in 30 years – and that’s exactly what the state-required plan will address – using all of the data currently available and using updated methodologies.

“When City Council crafted its resolution, Councilman Dr. Brown specifically asked that it include a statement that we evaluate actual water use and actual population every 10 years. This is perfectly consistent with the state requirement to revise it every 10 years – and I believe we should not accept any more delays.

“You know from your previous efforts – and I know from mine as a consultant – that planning [and] consensus building can take a long time. I think we’re already running late in order to meet the deadline.

“I have many questions on this, but I will only ask two at this point of RWSA:

1. Have you put together a proposed schedule to deliver the plan by the deadline?
2. How was the 2007 state grant of \$20,000 used to prepare for this plan requirement?”

Dr. Liz Palmer next commented that she would be speaking today as an Albemarle County resident and also as an ACSA Board Member. She then stated that “at the Four Board Meeting there was a decision to go to DEQ and have a meeting with them ... I would request before we do that – I guess Mayor Norris – it’s at his urging that we do this – to write down exactly what we’re expected to get out of this. Are we going there with ... what’s the least amount of storage we’re going to get away with? Is that what you would like to find out? Are we going to be involved in some sort of iterative process where we ask 13 feet, 14 feet? ...because I’d like to really to understand why we’re making that trip.”

Dr. Palmer next reminded everyone in attendance that “although that demand analysis was far from perfect demand analysis, it was reviewed by the DEQ. They did do a reality check. They suggest that communities plan for somewhere between 80 to 200 gallons per capita per day, depending on what your industry looks like ... your hospitals, your schools ... those different things you have in the community. The County came up with 93 gallons per person per day. That is at the low end of that range. You have to be very very careful about going any lower than that. When you start going lower than DEQ suggests, you have to really be able to justify that. So, I’m perfectly happy with the demand analysis the way it is because of the final outcome.”

Mr. Richard Lloyd, who resides at 1825 Locust Shade Court in Albemarle County, next commented that “timing is a big issue and there’s all this talk of delays and delays and delays, but in fact the delays have really been caused by the fact that we rushed ... we assumed that the current Ragged Mountain Dam was no good. We didn’t read Section 5 of the Gannett Fleming report that said that it had exceeded all the Corps of Engineers’ safety criteria for multiple loading scenarios, and we assumed that it was no good ... we designed a concrete dam, and we paid for that... we designed an earthen dam, and we paid for the preliminary site of that ... now we find out that it is good. We looked at the demand analysis that had been done by the old method of AWWA, and there was cry that – ‘Don’t look at the demand analysis. It’s an improper use of public funds’ ... we did a demand analysis ... it showed that we had at least 1.4 million savings – that we didn’t have to build a reservoir for; that we don’t have to pay for. If we had built that and then had to pay for it and didn’t have the water sales to justify the containment, we would have had a shortage of money – not of water ... There was a cry for – ‘Don’t look at the dam’ ... we’ve just got to take our time and get away from all the preconceived biases and determine what the community really needs and then build for that ... we have plenty of time. There’s no impending disaster. There’s no public crisis. We’ve got years to consider this, but let’s not waste our money ...let’s analyze this. Let’s get the good information.”

Mr. Lloyd further commented that “I applaud the City for all their expenditures and the information that they’ve brought forward ... I think we need to consider it seriously. One thing that came forward is Black & Veatch. They said to use a concrete dam – phasing it makes more sense under Black & Veatch because you don’t have the spillway problem. This earthen dam – you can’t let it be overtopped, or it will awash the back side of the dam and endanger. With a concrete dam, you can let it be overtopped. So, if you raise a concrete dam, you just raise it and it becomes the spillway itself. If you raise an earthen dam, you have to then go and raise the spillway also. Black and Veatch has some very good points and very solid concepts that are far better than what we’ve seen from Schnabel – personal opinion – but I urge you to consider.”

As there were no further comments from the public, Mr. Gaffney closed public comment portion of the meeting.

5.0 Responses to Public Comments

Mr. Frederick stated that RWSA staff will consider all the comments that were just presented, but he would comment on one of the statements made today as follows:

“The context of comments is everything, and of course when information is lifted out of the context in which it was initially presented and moves it into a different context, it can have a different meaning ... quite often [we] find in this community that citizens in order to make points for their own advocacy will take someone else’s comments out of context to use it for their benefit. In the case of the comments Ms. Mooney just made, that’s exactly what happened. She gives you a summary, and she wants you to see only that I made a statement that the ITRT ... expressed ‘significant concerns were RWSA to propose to build a new spillway for the existing dam’ – and she stops. If you go a few pages over, she actually gives you the exact information and it’s more lengthy than that; it’s more qualified than that. It states that I understood that the ITRT had expressed ‘significant concerns were [RWSA] to propose to build a new spillway for the existing dam if the construction of that spillway would weaken or interfere even temporarily

with the integrity of the existing earthen abutment' ... when the entire statement is put in the context in which it was originally stated, it changes the meaning." Mr. Frederick further stated that "we had this information a little bit ahead of time, so we had some time to do a little research. First ... the e-mail was August 12, 2009 – that's 13 ½ months ago. Black & Veatch's report was released last month ... obviously, there's no way this could be any reference to anything that Black & Veatch had done. Further, we went back into our files to find where the ITRT reviewed the 1913 report, and it was in a meeting workshop here in Charlottesville ... held in March 2009, which was even 5 months before this e-mail was written – over 1 ½ years ago. This statement was in reference to part of the 2003 study that Gannett Fleming had done, and they were simply addressing that. There's anecdotal information with respect to the existing dam. We don't have all the facts; we didn't have all the information then, but there's enough information that in the 1930's, an earthen abutment was placed behind the dam, which at that particular point in time was considerable expense ... it doesn't give you the entire picture of what was being discussed at those times. That's clearly an indication that somebody found something that needed to be addressed, and it was addressed with a significant expenditure of funds ... this is simply saying that don't do any construction that would interfere with the integrity of that existing earthen abutment. The report Black & Veatch released last month actually includes that they recommend drilling anchors before the earthen abutment is removed. So they too recognize that something had to be done before the earthen abutment is disturbed ... there is nothing necessarily different between the statement Black & Veatch made and what's written here, but it was presented to you [by Ms. Mooney] in a light to make it seem like there was great difference. I think that deserves to be clarified for you."

Mr. Norris then asked Mr. Frederick if he "could at least take a preliminary stab at answering the two questions posed by Ms. Quinn" concerning a proposed schedule for the regional water supply plan and how the \$20,000 in grant money was spent for the preparation of that plan. Mr. Frederick replied that "we've got a bit of a chicken and egg problem with this question. The November 2011 state-wide water planning submittal is something that is being required of local governments throughout the Commonwealth, whether they need more water or not. It is not related to actions that a local community can take to seek and obtain permits to build additional water supply, even to implement and construct additional water supply. It's unrelated. The chicken and egg question we've got here is – many communities who have addressed their water supply and are building or have built and have a sustainable water supply already in place are simply writing a report to meet this requirement that confirms that they have made those decisions, and they either are implementing or have implemented sufficient water supply needs for a period of time ... they are recognizing in their report up to 30 to 50 years if they have adequate supply. There's nothing keeping this community from doing the same thing. Our Boards can get together [and] make decisions; we can move forward and actually have a report [that] would then reflect the decisions that have already been made by this community ... we're in a chicken and egg tussle because we have some people saying that this report needs to be filed before you can make decisions, which is misleading and misinformation. There is a point when – if this community cannot make decisions on what it's going to have to do – that we're going to have to go with the best information we have available to us, based on decisions made to that time, and finish a report to meet the deadline ... that report may or may not then state the actual decisions that you're making because we've about run out of time. We've identified as a staff that January 2011, tentatively, is a date when we really need to know – have you made a

decision or do we have to move to try to finish a report independent of your decision? It's not the intent of the Commonwealth of Virginia to say, 'Stop your permit process; stop everything you're doing to build your water supply so you can do another study.' It's actually the opposite. It's a report of what you've already done or a report of what you are doing or a report that you're already adequate. It seems to me that our job is to reflect your decisions; you are the decision makers [and] not have the decision process stop in order to write another report."

Addressing Ms. Quinn's second question, Mr. Frederick stated that "there was a grant that [RWSA] obtained in 2006. As I recall, much of the [money] from that grant was used for safe yield studies for the Beaver Creek and Totier Creek Reservoirs. There may have been a few other things that were done with that money that I may not recall exactly right now ... in the context of 2006 when this grant was awarded, there was a unanimous decision to move forward with the water supply plan, and because of the engineering studies that have already been done on the Urban water supply plan – in the context of 2006, there was no need to spend grant money restudying the Urban water plan as there may be today ... at that point in time, there was unanimous agreement to move forward with one water plan, both City and County on the same page [and] that's the context when that was done. So, that grant money was used primarily, as I recall, for Crozet's and Scottsville's water plan, and not for the urban water plan that had already been extensively done."

As there were no further responses to public comments from the Board or staff, Mr. Gaffney proceeded to the Consent Agenda items.

6.0 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.

- 6a) Staff Report on Finance
- 6b) Staff Report on Operations
- 6c) Staff Report on On-going Projects

Mr. Boyd moved that the Board of Directors vote to approve Consent Agenda Items 6a), b), and c), seconded by Mr. O'Connell. The motion was approved by a 7 - 0 vote.

7.0 Other Business

In regards to **Item 7a), Review of Action Items from September 21, 2010 Joint Boards**, Mr. Frederick stated that at the conclusion of the Four Boards Meeting an "Action Items" list was developed with assistance by Mr. Jim Colbaugh, ACSA Board Member. Mr. Frederick then commented that the "Action Items" were summarized in the board report based on his understanding of the proceedings and would be reviewed separately to allow for further discussion and clarity where needed before further action is taken.

Mr. Frederick then discussed the first item entitled: "Meeting with DEQ on Initial Height of Ragged Mountain Dam/Reservoir Pool." He noted that as stated in the Board report, staff has contacted DEQ about this matter. During the ensuing discussions, DEQ indicated that it might permit this meeting to occur. Staff will continue its efforts to finalize meeting details concerning

the context, date, and location. He also was seeking feedback on the composition of the delegation that would represent each of the four boards at this meeting. Mr. Frederick believed from the discussions at the Four Boards Meeting that no agreement had been attained between the County and the City about building the initial dam to its full height and only alter the pool height or if the dam itself should also be phased and that further clarification was needed on this matter.

Mr. O'Connell next stated that based on his listening of the recording of the Four Boards Meeting, he did not hear any disagreement with Mr. Colbaugh's suggestion to move forward with design on the earth filled dam to 42 feet. Mr. Norris then commented that it "certainly wasn't agreed by all four parties – that may have been a suggestion on the table." Mr. O'Connell next stated that it "was said as a summary of the meeting –walking through each one of these items as to what we would do next. There was not a discussion beyond that." Mr. Norris then asked if Mr. O'Connell was referring to "what we're going to bring to DEQ...?" Mr. O'Connell replied that it was "in terms of what we're going to bring to the Rivanna Board. Mr. Norris next clarified that he was referring to the second item concerning the earthen dam and not the DEQ meeting and suggested that discussion on item one be "wrapped up" first before addressing the earthen dam issue. Mr. Frederick replied that he would entertain any further comments about the DEQ meeting at this time. Mr. Norris then commented that he wanted to "second" Ms. Palmer's suggestion as he felt it was "vitaly important that we get on paper exactly what it is that we're looking to get clarity on ... I know Mr. Jones has suggested [that] even before we send a delegation to Richmond that we send a letter – here's exactly what we're looking for DEQ to analyze and to respond to ... then if we want to send a delegation once they're ready to respond to it, we do so ..." Mr. Jones next commented that he thought "the idea is to give DEQ plenty of time to review that so that they're ready when the delegation comes to visit with them." Mr. Jones further stated that "another question that I think we need to address is public involvement. There has been a suggestion about having it open to the public. Another option is to provide a member of the public that each one of the boards could choose that would travel along ...I think we probably should put that on the table as a possibility and a topic for discussion as well."

Mr. Boyd next commented that he wanted to further clarify what answers the four boards expected to get from DEQ. He felt that if the information requested is "not preliminarily defined to DEQ and they haven't had a year to study it, I think they'll be very vague in their answers." He further believed that "people will sit in that meeting and walk away with different interpretations of what was said." He felt this has occurred on several occasions and used an e-mail as an example of being interpreted in several different ways. He asked that the Board be "realistic" and not anticipate getting "some kind of definitive answer" in the near future from DEQ about the exact dam and pool height that could be built. Mr. Boyd then recalled the regulatory meeting he attended in 2005 or 2006 when he tried to get the agencies to "answer a straight question, and they never did." He next mentioned the group that accompanied Mr. Slutzky for a meeting with DEQ, and it took a year to receive a response from DEQ. "Even that letter is now being interpreted all sorts of different ways depending on what point of view you want it to say." Mr. Boyd added that he was "okay to go meet with DEQ and to make it public or not public or however we want to decide to do it, but my expectations of walking away from that with a solution is not very high ...I would like to know what the City would expect to

get out of that meeting and what would help you with the decision process ... our Board, as you heard, is solidly still behind [the] 2006 plan – the agreed-upon plan ... I see that possibly we can conserve better, and I think that would be great ... if we end up with more water than what we need, I think that's great because then it will be a 100-year plan instead of a 50-year plan – that doesn't bother me that much – particularly having looked at the numbers and seeing what the impact on our rates is going to be ... I don't see it as being a financial issue. I know there's consideration about the trees, and if that's what the concern is, let's look at that ... are we going to say, 'ok, if we save the trees by only a 13-foot dam, then we don't have to do the mitigation of the 200 acres of trees or we still mitigate the 156 acres with 200 acres ... I'm just really getting confused because I thought we've been through all this. We certainly had a year's worth of public meetings. Everyone in this room who wasn't at those meetings, it's shame on them. They should have been there when we first studied this ... I'm just really sort of getting very frustrated with this ... I'm personally ready to move ahead with the design of a 42-foot dam – we'll talk about that when we get to the second paragraph ... I think it's very important ... clearly define what we expect. Are we going to ask them if they will give us permission to build a 13-foot extension of the existing dam and fix the spillway and is that acceptable to them? Put it in writing and send it to them ... I doubt you'll get an answer in a year ... or we can go and meet with them ... my experience has not been that they're very deliberative and concise in their answers .. If you can find what you specifically want to get out of that meeting, then I agree we should send them that letter.” Mr. Tucker next stated that he thought the reason “the four boards had agreed to defer this was to get clarification to the letter that we received – that most people have not seen I think at the meeting ... I thought that's what we were taking to DEQ ... to get further clarification of that.” He questioned whether Mr. Jones was referring to getting answers to other questions that would help with their decision-making process. Mr. Jones responded that from the City Council's perspective he felt that clarification of the letter is really important because there was uncertainty about whether DEQ was “addressing the 13-foot dam within the idea of phasing in ... were they looking at it from a permanent 13-foot dam, and in that case, would it meet the demands of the 50-year water supply plan. We're not sure because they didn't address phasing as an issue ... probably because that wasn't discussed in the meeting that Dave Slutzky and the Mayor [attended], so that's important to clarify ... We also need to try to clarify ... if we were to phase it in – whether it's a construction of the dam or building a 42-foot dam and raising it – at what level would it need to be raised to address our immediate needs over the next 20 years instead of looking at it as a 50-year plan ... once again, addressing the issue from the standpoint of phasing, and I think we need to try to get some clarification on that ... we'd ask for them to expedite their response, but I think we do need to get some clarification. I think that's where the [City] Council is at least ... It seemed like the four boards were in agreement to do that.”

Mr. Boyd then asked that if “as a result – based on that conversation – we can say that we can build a dam to 13 feet ... as the first phase ... Because I think there's some other things that probably weren't considered in the first consideration – the first one that comes to my mind is the County's Land Use Plan. We're very actively trying to change the way our population is growing in the last 20 years; whereas, the biggest majority has been in the rural areas who are not using water supply and sewer supply ... We're trying to shift that, and our whole plan is ... build [an urban] concentration of people [to limit development in rural areas], which I think is going to change ... water use on the County level. These are things we're concerned about here because

if we don't provide the water necessary to accomplish our Land Use Plan, then what we're going to get ... is more expansion into the rural areas, [which] I don't think the City or the County wants. I certainly don't. I don't know if that was ever specifically posed to DEQ ... looking at where our approved land use is and where we're trying to move the growth in this County. That's going to be a significant difference in the future years than what it was in the past – we're at 60% to 70% rural to urban areas, and we've gone to great lengths to try and change that ... that would change this curve – and we can conserve all we want to, but if we're successful in what we want to do, that's going to create more growth and more water use and more sewage ... that's what bothers us because we don't want to come up short ... Is that a new element we should throw in as we discuss this with DEQ and talk about the demand analysis and ... we're going to say we don't think it was addressed well enough ... the conservation efforts that are going on and the future technology ... do we throw in the fact that now the University ... is going to be expanding students, and a lot of new construction going on. Their demand yield has gone down, but I think that curve has now shifted and going up the other way. There're an awful lot of uncertainties that we're never going to be able to solve; we'll never be able to address every single one of them. What we can do is ... delay this forever, which is kind of what it appears to me we're doing. It's just a constant delay after delay after delay. We can spend millions more in more studies trying to determine what's right for the community, and I don't know that we're going to be better off five years from now and a couple more million dollars in engineering studies. I'm also convinced that engineers will put together a plan that you want them to put together ... I really think that if we challenge an engineering group to find a way to do something, they'll find a way to do it. I could argue that side with Black & Veatch's [study] – they were to find a way ... can this be done ... figure out a way to make that dam safe and to build on it... I feel they're probably competent in doing that. Is that really the right thing to do or are we just hiring different people to come up with the results we want them to come up with?"

Mr. Norris next stated that he did not believe that "anyone wants to delay this any further. I feel like from the City's perspective [that] we're ready to move on implementation of the plan. The concerns you raised about land use in the County and the growth of [the University] – those are I think important concerns, and those are actually addressed in the Swartz study when he talked about balancing out the gains you are going to get from conservation with the increased demand from the land use and the University growth, etc. I want once again [to] reiterate the point that nobody's talking about not providing enough water for all those things that the County wants to do. It's a question of can we do that and reduce costs and reduce the environmental damage. I think as long as DEQ says what you are proposing to do here is in line with the general framework of this permit – that simply you're talking about phasing in a plan and not starting with a new permit – not starting with a different plan. I still believe that we can move forward in an expedient fashion to get moving on a plan that potentially could save us a lot of money and reduce environmental damage."

Referring back to the Four Boards Meeting held with the regulators in 2006, Mr. Boyd stated that "several people tried to sit there and get them to make a commitment on something, and their answer was always, 'put it down in writing and submit to us what you want your plan to be and then we'll give you a yes or no.' They were never going to help us decide on which way to go, and I'm afraid that's exactly what they're going to do this time ... 'Don't present us with a couple options and say which one we like best. You give us one, and we'll tell you whether we

like or don't like it." Mr. Norris responded that he felt that "was a good point. I think at the end of the day ...they really are looking to us. They would like to see us come to an agreement, and whether or not that's possible, I don't know. They'd like to see the City and the County forge an agreement that they can then figure out how to make it work." Mr. Gaffney next commented that DEQ did that one time – "...we came together; we agreed; we presented it; they said, 'it looks great.'" Mr. Boyd next commented that he felt DEQ was "not going to make any more decisions or give us answers until we come to that point again. Mr. Norris then stated that "somebody mentioned in the Four Boards Meeting [that] 'we're 90% of the way.' I really don't think in the grand scheme of things we're that far apart ... I know there've been a couple of key issues here to address ... again, we're not talking about starting over. We're simply talking about phasing the plan in and adding on top of that the idea of dredging the reservoir so that at the end of the day, ironically enough, if the dam is ever fully built out, we'll actually have a larger water supply than the 2006 plan calls for because you'll have added in the historical capacity of the SFRR ... Nobody's talking about starting over. I want to see us move forward. We've got a couple questions that we have to address."

Mr. O'Connell next asked how the City's question was different from what DEQ's letter addressed. Mr. O'Connell further commented that if he heard correctly, Mr. Norris was stating that the City did not want to change the permit. However, DEQ's letter was talking about "significantly amending the permit." Mr. Norris replied that "there is a section in the permit that talks directly to the possibility of phasing in construction of the dam, where we don't build it all the way at once. The proposal that was offered up for [DEQ] consideration was a different proposal, which was – 'what if you just built 13 feet;' didn't talk about phasing in the dam. There's also some other information that we gleaned since the permit was issued that we feel should be addressed in the permit. I think what we need clarity from DEQ on is: Are these modifications in line with the intent of the permit or is this going to cause us to have to go back and get a new permit? If so, that's going to be a big stumbling block." Mr. Boyd then asked Mr. Norris if he did not feel that DEQ's letter had already answered that question. Mr. Boyd added that the letter specifically addressed building a dam to 13 feet. Mr. Norris then asked "to keep in mind that was also based on the original Gannett Fleming demand projections ... with the Swartz report, we now know that projection overstated long-term demand." Mr. O'Connell next commented that he understood that the permit was based on Gannett Fleming's demand projections, and Mr. Norris was in agreement. Mr. Norris further stated that if we go back to DEQ and say that "we're no longer aiming for that 18.7 goal, we're not suggesting that we start over with the permit. We have to amend the permit anyway – this is the other thing that people need to keep in mind ...if we move forward with an earthen dam. The question is – as we're reopening the permit anyway, if we modify and propose to phase in implementation of the plan, is that going to be a major amendment ... or a new permit or is that something that could be done without a whole lot of red tape?"

Referring back to the first item concerning the DEQ meeting, Mr. Boyd stated that he would not personally have a problem if DEQ came here for an open meeting, if they would be willing to do that. He did feel that it should be the delegation that does the talking and that opening it up to public comment might "confuse the issue more because it's throwing out a lot more different concepts and ideas... I do agree that we ought go in and raise specific questions we'd like to get resolved." Mr. Gaffney next inquired for clarification purposes if these were "questions that

we're just going to give to [Mr. Frederick] to forward to DEQ or are these questions that need to be agreed upon by this Board before they go to DEQ?" Mr. Tucker then commented that he hoped that the questions could be "tied to the letter from DEQ because [DEQ] already responded, [and] now we're asking for clarification. If we bring up all kinds of other issues, we'll be another year ... getting a response to that –but if you focus them on the issues that they've already responded to ... so we're putting them on the spot to clarify some of those areas." Mr. Boyd then commented that Mr. Tucker made "a good point, and if we could do that and clearly define what we're asking in a letter, it might not require a meeting. It might just be – 'can you clarify these points in your last response?'" Mr. Norris next stated to "keep in mind ... even more important piece was the analysis attached to the letter ... we can couch it in terms of – 'thank you for your response. Here's some further clarifying questions ...'" Mr. Boyd then commented that he would be "ok with that to see if we can get a written response." Mr. Tucker next asked for clarification if the Board members would submit questions to Mr. Frederick, who would compile the list and then send the questions back to the Board members for their review before submitting to DEQ. Mr. Boyd stated that "if it's narrowed down to just clarifying questions about that letter, I don't have a problem with it ... and the Mayor putting together what clarifying points he wants – ... just let us review it before you send it in." Mr. Norris indicated that he was "fine" with what Mr. Boyd just suggested. Mr. Boyd then questioned how timely the City could provide their clarifying questions to Mr. Frederick, and Mr. Jones stated that this could be accomplished "pretty quickly."

Mr. Tucker next asked Mr. Frederick if he had received any potential meeting dates from DEQ. Mr. Frederick replied that the Authority's target date was mid-October, but DEQ has not yet provided any dates. If it was the Board's discretion to submit questions to DEQ rather than scheduling a meeting, the Authority would be agreeable to facilitating that process.

Mr. Frederick felt it would be helpful to establish how this would be accomplished and his role in the submission of questions. Mr. Norris then asked if Mr. Frederick was asking for direction in the compilation of the questions. Mr. Frederick responded that he "did not want to be in the position of trying to figure out what [the City's] questions are. I rather you give them to me."

Mr. Norris stated that he felt the Board had already agreed to that being the procedure.

Mr. Frederick then asked if the Board could agree on a date when the questions would be submitted to him. Mr. O'Connell asked Mr. Jones if the City had already begun working on those questions, and Mr. Jones replied that the City has already had some discussions about that matter. In the ensuing discussion, the Board members asked for further clarification about this process, which Mr. Frederick summarized as follows: The Board members would submit their list of questions to him. He would then draft a letter that included those questions, which would then be reviewed by the Board members. Upon approval by the Board, Mr. Frederick would submit the final version of the letter to DEQ. The Board members were in agreement with the process for handling the submission of questions to DEQ as just outlined by Mr. Frederick. Mr. Frederick further suggested the end of the day on October 6, 2010 as the deadline for submission of the Board's questions to him, and the Board members were in agreement with that date.

Mr. Boyd next asked Mr. Krueger to advise about the Board's authority to direct Mr. Frederick as discussed above. Mr. Krueger then stated that the Board's direction to Mr. Frederick to "ultimately draft a letter to DEQ asking clarification questions after getting the Board's input,

although the primary share of the questions will be[from] the City, then getting the Board's input to say if these are the right questions to ask DEQ" was probably appropriate.

Mr. Jones then asked for clarification purposes that if after the letter is sent, "we don't get the response that we need, will we then have a meeting with DEQ and invite them here and have a discussion?" Mr. Gaffney suggested that RWSA go ahead and set up a meeting with DEQ. If Mr. Frederick received confirmation that the letter will answer the questions, then the meeting can be cancelled. Mr. Gaffney felt that waiting to schedule a meeting until it can be determined whether DEQ will respond to the letter could delay the process even longer.

Mr. Frederick next discussed the second item entitled "Initiate Final Design of the Earthen Dam." He stated that a supplementary memo was provided to the Board members late this morning and copies were also provided to the public on the table located in the hallway, which provided more information than what was included in the Board report published last week. The first paragraph of the supplementary report states that one of the "Action Items" from the Four Boards Meeting directed RWSA staff to "obtain a fee estimate for the final design of the proposed earthen Ragged Mountain Dam to an increased pool height of somewhere between 30 feet and 42 feet." This comment originally came from what staff initially heard Mr. Colbaugh state at the Four Boards Meeting, although some have expressed today that they "thought we walked out of there with 42 feet."

Mr. Frederick further reported that the additional geotechnical work that RWSA requested Schnabel to undertake has been completed. There is only one more task that Schnabel can initiate without knowing the exact height of the dam. If there is confidence that a new earthen dam will be built that is at least 20 feet higher than the existing dam, Schnabel can proceed with the design of the outlet tunnel at a fee of \$71,365, which is a small portion of the total final design services. Schnabel is advising RWSA that "anywhere from 30 feet to 42 feet the tunnel will be exactly the same" and will serve as the primary spillway, as well as the height that water is transferred to and from the Ragged Mountain Reservoir, to and from the Observatory or South Fork plant locations. Data about raising the dam above 20 feet is "fixed," and Schnabel can proceed with the design even if there is uncertainty about the ultimate height of the dam. If the decision is made to build the structure to the full 42 feet height but want the flexibility on deciding the initial pool level, RWSA understands that Schnabel can do the entire final design work at a cost of \$869,000. Besides the outlet tunnel, Schnabel is ready to produce construction layout drawings. If there is indecision about the height of the structure and Schnabel is given the authority to proceed with that work and does the work based on the wrong assumption, the CAD drawings will then need to be changed resulting in additional cost. For that reason, Schnabel has advised that the height of the dam structure needs to be known before a commitment is made to proceed with the entire final design services.

Mr. O'Connell then asked for clarification purposes how the intake, which provides the ability to vary the pool levels, "fits" into the final design scenario. Mr. Frederick responded that "there is an intake tower ... the intake tower is going to contain the permanent spillway pipe and the pipe for transferring water." Gates and ports will be placed at various elevations to allow water to be withdrawn from the reservoir. If a decision is made to proceed with final design but the exact heights of those gates is still being contemplated, he understood that Schnabel could provide

some of that “flexibility and yet work on the final design.” However, Schnabel needs to know now the proposed height of the dam structure in order to start producing layout drawings “as defined to an exact height.” Mr. Frederick noted that Mr. Chris Webster Principal with Schnabel Engineering was in attendance today and could provide further clarifying information about their final design proposal.

Mr. Boyd next asked Mr. Webster if he could further explain the option of building the dam at least 20 feet higher than the existing structure. Mr. Webster explained that “assuming that the raise is a minimum of 20 feet –so from 20 to the 42 foot is what we call the primary spillway – the tunnel that is constructed through the embankment – that is set and will not change no matter what elevation it is. If you’re considering a dam of lesser height, the tunnel is not the most economical approach then – when you’re looking at a concrete structure, that’s different, as has been presented in our phase report. Assuming it’s a 20-foot raise or higher, that component is set ...” Mr. Boyd then questioned if the dam was designed for 42 feet and then ultimately decided to raise it only 30 feet in the first phase, would that be “a difficult adjustment to your design?” Mr. Webster responded that he “wouldn’t say it is difficult. As Mr. Frederick pointed out, there would be a fee impact. For example, if we were to provide the design for the 42-foot raise and we finished all our drawings and ... now ready for a contractor ... ‘well, wait a minute. We need to go back and do it for a lesser height.’ Then, of course, it’s a big fee impact. If on the other hand, we’ve just gotten underway – we’re a month into design – then that decision is made ... the impact is much less.” Mr. Boyd next asked “if you design a 42-foot dam with the idea that it’s only going to be filled 30 feet initially, does that create extra cost?” Mr. Webster replied, “No sir, it does not. Assuming again that the dam height – the structure itself – is built to its full height, and the reservoir itself and the associated clearing is adjusted perhaps at a lower elevation than the 42 feet ... As Mr. Frederick pointed out, it’s just a matter of setting the valves into the inlet structure to allow that flexibility – so we have that flexibility in a design, assuming that the height of [the dam structure] is to the full 42 feet.” Mr. Boyd then commented that you would have valves and a tunnel with an earthen dam and would not have a spillway over the top as was mentioned earlier. Mr. Webster replied that Mr. Boyd’s statement was correct and added for clarification that there are two spillways. “There’s what we call the primary spillway, which would handle flooding up to the 500-year flood event, and that’s the one that goes through the tunnel. The other – the rock cut, which is the larger cut into embankment – that’s to handle a flood event much higher – again, 500-year flood and more.”

Mr. Boyd next stated that “it was brought out a little while ago that it is going to be required that we ask for an amendment to our permit now because it’s going to be an earthen dam as opposed to a concrete dam, as well as it’s going to be lowered by three feet – from the 45 to 42 – if that’s what we decide. Is that something that is a significant change in your opinion that DEQ would have a problem with?” Mr. Webster responded that “the fact that we’re now looking at an earth dam – It’s a larger footprint as you pointed out. There’s more stream impact downstream – but with the 42-foot raise instead of the original 45-foot raise, which we calculated still meets your storage criteria – but having that lowered by three feet means there’s less upstream impacts as well ... In the initial conversations that we’ve had with DEQ [and] the Corps of Engineers, they see that as a positive, and so, they see this as what they call a ‘minor modification.’”

Mr. Frederick next commented that the “question Mr. Webster just answered with DEQ applies if the only change you are proposing to the permit is the adjustment of the linear feet of streams and wetlands impacted. If you add other items to that, [Mr. Webster] is not addressing the answer to those questions with [his response to] that question.” Mr. Webster then confirmed that Mr. Frederick’s interpretation was correct.

Mr. Webster next noted that “the geotechnical investigation of field work is now complete. Those findings will be presented this coming month –mid-October ... if we would proceed with design of the entire structure, the schedule would be by the April time frame, including that work which will allow a contractor to potentially move forward the first half of the year – 2011 – and then work would continue ... again, assuming an 18-month time frame ... the actual construction could potentially be done by the end of 2012. If the design work for the dam is pushed back, there is a possibility that the contractor would be starting later in the year and then would be affected by – instead of one winter – by two winters.”

Mr. Boyd then asked Mr. Norris if the City had any “problem with designing a dam to 42 feet?” Mr. Norris replied, “Philosophically, yes ... the reason I say that is because if it’s true that Black & Veatch’s on target and that we can save millions of dollars and get the same outcome by extending the existing dam [as] building a new dam ... I don’t see the wisdom in continuing to invest money [on a] design for a new dam – but [City] Council did not come down either way. In the meeting last Monday, [City] Council did not say new dam versus existing. They said ... ‘design a total dam of 42 feet [but] only build the first phase of 13.’” He felt that “it was partly because we wanted to continue the discussion with Black & Veatch to make sure they’re on target –[if] that it is indeed a viable proposition. I raised the point at the Four Boards Meeting that it’s not in conflict with the [City] Council resolution to continue design of the new dam as long as there is the provision for doing an initial [raise] at 13 feet built into that design ... I heard nothing from Mr. Webster indicating that’s not possible.” Mr. Boyd then stated that [Mr. Webster] did say that “if it’s not 20 feet, he can’t do it.” Mr. O’Connell next asked Mr. Webster to clarify that point. Mr. Webster clarified that he thought “there were two possibilities. One would be to design and build the dam to its full height – a 42-foot raise – for that situation, a phased approach by taking the reservoir level up to ... whatever it is ... can be easily adapted by again specifying additional valves. To construct an earth dam part of the way, stop, demobilize, and then at some point in the future – that’s much more problematic and [while it can be done it] is not what I would describe as cost effective” Mr. Norris next stated that he was not suggesting that “we construct it ... you asked me about design, and you presented a couple months ago a scenario in which the new dam could be built to 13 feet [and] demobilized. It wouldn’t necessarily save a lot of money. In fact, in the long run it may cost more money ... you suggested that it was feasible ... and so the [City] Council resolution said – my own opinion is a little bit different ... ‘let’s go ahead and proceed with design of a 42-foot dam, but one that the construction could be phased in. Again, I heard you say a couple of months ago that you could phase in construction of an earthen dam. It’s not what you would recommend.” Mr. Webster next pointed out that “the costing information that we provided to Rivanna assumes a single phase full-height structure, but with the flexibility of adding a valve for reservoir level that could be adjusted. To design a phased approach would require a bit more work – not significant ... those numbers that we provided do not reflect a multi-phase.” Mr. Norris then stated that “...I’ll go back to my initial point, which is to me, it doesn’t make sense to do any more work on

designing an earthen dam until we have a little bit more work done in the Black & Veatch study ... then we can compare apples to apples and make a decision between ...” Mr. Boyd next asked, “What’s that going to cost to go to the next phase?” Mr. Norris replied that “we’ve already allocated money to complete that study.” Mr. Boyd next commented – “which means they’re going to do all the geotechnical work ... what kind of time frame is involved in it?” Mr. Jones responded that “it’s going to take some time to do that ... I think what we’ve said, and I think what was agreed upon with Black & Veatch – at least this is the recollection of Council members that I talked to – is that the first step would be to take the Black & Veatch study and present that to the expert dam panel and allow them to take a good first look at it ...if they came back and felt it was feasible to build onto the dam, at that point we would then go back and say, ‘we’d like to approach Black & Veatch about taking the next step.’ I think that’s what [City] Council agreed to during the Four Boards Meeting.” Mr. Boyd next commented that “...there’s too much supposition on what the expert panel would do. They’re going to require the same type of data in order to verify it anyway. So whether Black & Veatch does it or the expert panel asks them to do it for them, there’s still going to be months of delay, I’m sure.” Mr. Jones thought that the process “would take some time,” and Mr. Frederick agreed that it would take some time to get an answer.”

Mr. Boyd then stated that “... whichever way we go it’s going to cost money and time to try to get further clarification on very preliminary information about expanding the existing dam ... I think that’s probably what’s bothering us in the County an awful lot – waste money and time.” Mr. Norris next commented that “... they give an estimate as any smart engineers do – but if it’s true that as we refine that idea that it’s within that range or even slightly outside of that range and we end up saving a significant amount of money and still getting the same result, why would we not want to proceed?” Mr. Boyd then stated that “... I haven’t seen that we’re going to save that significant amount of money. I’ve seen their preliminary numbers ... first of all that’s based on a 13-foot rise in the dam, which I don’t think is appropriate anyway.” Mr. Norris next responded that “they estimated both a 13-foot rise and a full 42-foot rise. The full 42-foot rise is significantly cheaper ...” and he asked if anyone remembered the initial estimate. Mr. Boyd replied that “Gannett Fleming’s cost was significantly cheaper than when they went and did the drilling ...having not changed the design of the dam is stupid when faced with that cost. These are all the uncertainties that bother me ...” Mr. Norris then stated that he didn’t think “[City] Council wanted to hold up design on a new dam. [City] Council was agnostic on that point Monday night. I was not ...if there is a way to proceed with design of a new dam – as long as there is some condition in there or an allowance in there for a shift in implementation and new construction to do a 13-foot rise, and I think that meets the spirit of the [City] Council resolution.”

Mr. Jones next inquired “how long would it take to review that and see what it would take to build up to 13 foot as part of a phased approach?” Mr. Webster replied that at this time “we have the single-phase design ... if it’s a 13-foot raise, there’re specific criteria as far as locations of the drains [and] the shape of the core is going to be somewhat different, so all these things would have to be established upfront ...we would develop a proposal for that work ... whatever elevation it is – if a raise of 13 foot or 20 foot – we would need to know upfront whether or not that’s in addition to the 42-foot single phase or a first step ... those questions need to be answered ...” Mr. Jones next commented that he thought that it would be an addition. It would

be a separate design study.” Mr. Webster responded that he thought that “within a week, two weeks we could have some updated numbers with a separate study for a phased dam.”

Mr. Boyd moved that the Board of Directors vote to approve the design phase of a 42-foot dam with the capability of a pool level of 30 feet, seconded by Mr. Tucker. The following Board members voted aye: Mr. Boyd, Mr. Tucker and Mr. O’Connell. The following Board members voted Nay: Ms. Mueller, Mr. Norris, and Mr. Jones.

Following the vote, Mr. Gaffney stated that he desired more discussion on this item.

Mr. Boyd next stated that he could not “speak for my board ...certainly we’re amenable to reducing environmental issues to reduce the pool. I think that was clear in the meeting that we had with the four boards ...to build 20% of the capacity for 99% of the cost is not cost justified ...we’re really not as concerned, I think, as the City that we have more water supply than what we need if that’s going to cause people not to conserve. We think that ought to be an option that we encourage and provide public information ...it’s not something we should force on our population by not providing the water ...we think the plan that was put together in 2006 is still viable ...we are agreeable to some [discussion of] height of the pool level ... just not willing to spend the time and effort and money to ignore it and look at an alternative. Mr. Norris then commented that he felt “a gamble you have to make is that we end up spending \$869,000 on a project that we ultimately don’t build ...If you’re confident that there’s a reasonable chance that the Black & Veatch study turns out to show that it’s not going to save that much money to build on the existing dam or DEQ is not going to allow it – if you think any of those risks are there, then maybe that’s a good investment. I feel like I’m bound by what City Council has said, which is ‘we want to test out this Black & Veatch study and we want to meet with DEQ. We don’t want to proceed right now with a dam that can’t be phased in’ ... This is not a decision to build a new dam ...”

Mr. Boyd next commented that he felt “all the risks that [Mr. Norris] mentioned are there – any one or all of them could turn out to be true. I also think the risk we’re not looking at ...hopefully this economy will turn around and the risk of construction costs going up ...the risk of having our primary design firm move on to another project and unavailable six months from now to get back on our project ... there is this other risk beside just whether or not the Black & Veatch numbers are correct or whether further design work would be higher or practical.” He then referred to a previous statement made by Ms. Sally Thomas: “If we have to put 7,000 trucks on that road up to the Ragged Mountain Dam, something’s going to have to be done to the surface of that road in order to make it viable for all the cement trucks to get up there to.” He felt that was an issue that had not been “looked at real hard ...by most of the materials being on-site.” Mr. Norris then commented that “we’re still going to have to use that road either way to get heavy equipment up in there ... make it safe ...”

Mr. Norris next stated “that another thing on the timing ... I specifically asked Black & Veatch ...how long it would take them if we proceeded with that course of action. [Black & Veatch] felt confident that they could have that project completed in the same time frame if we tell them to [proceed] as it would take to build the new dam, even though the design process for the new dam is far ahead of the design process on [Black & Veatch’s].”

Mr. Gaffney next proposed that RWSA get ITRT's input on the Black & Veatch report because he wanted to know "their concerns about the viability of that actually happening." He then asked Mr. Webster – "If we started the design on the 42-foot dam and got the Black & Veatch report at the next Board meeting, at what point would we be in the design if we could say, 'Ok, wait a minute. We need to stop and take a look at that?'" Mr. Webster rephrased the question as follows to be sure he understood it correctly: "If [Schnabel] was authorized to move forward with the final design services and at an interval of approximately one month into that work ... we were then asked to have a change in the design what would be the impact and the scope and the fee?" He then stated that the impact would be "fairly minimal. The work would just be getting underway. Again, most of the early work would be focused on the tunnel, which will not be affected by a change in height. It's only when we're talking several months – maybe into winter perhaps – where there will start to be more cost impacts if we were to go back and start making significant changes ... for a one-month interval, the impacts on design would not be what I would describe as significant." Mr. Boyd then asked if it would be correct to state that we could "develop a contract such [to] say, 'a month from now – time and materials – we'll pay up to what you've done so far' and the rest of it we don't have to do." Mr. Webster responded that "the work that we propose for several elements associated with it and – again if I understand correctly – assuming that we're authorized to move forward, and one month later, [you] assess whether or not this is the height that's needed. We do have the flexibility to move forward and make that change without any major cost impact." Mr. Norris next asked Mr. Gaffney if the following rephrasing of his question captured what Mr. Gaffney intended: "Can we agree to an extension of a certain time period and let Schnabel continue with its work while we flesh out the Black & Veatch option?" Mr. Gaffney replied that what he was suggesting is "not flesh out the Black & Veatch [option], but listen to the ITRT comment on what Black & Veatch has done because I want to know truly their input on the viability of the Black & Veatch [study] ... I think what we'll see ... what are the risks [and] what are the chances that this is a worst case scenario that isn't likely to happen." Mr. Boyd next asked if he thought "we could get that kind of information from them – a month's not very long to even convene that group ..." Mr. Frederick then commented that "if you want to try to get it done in the next month, we'll do everything possible but I think that's challenging given the schedules of these individuals ... frankly the ITRT workshop will go best if Black & Veatch is willing to provide them notes and calculations and information far more substantial than what was in the letter report that was released to the public. There's a question at this point – I would presume if we go forward ... because they're under contract with the City – that the City would work with making that happen – but to give them time to review it [and] schedule a meeting – the Black & Veatch folks are pretty busy people; the expert panelists are all over the world ... trying to get on their calendars, it could be very challenging to do in a month. Another thing you need to be aware of, there's a hope that they'll sit down and have this meeting and all the questions will get answered ... there's also the possibility, as I expressed last week, that what comes out of the meeting is even in agreement and Black & Veatch may even be agreeable to ... that more work needs to be done or more investigations or more drilling needs to be done to get to the apples to apples comparison ... I don't want to set you up to think that in a month we're going to have all the answers, and they'll be able to make a decision which way we're going to go. It could be a couple of months on the most optimistic side. On a side where we have to collect more data, it could up to six months before we have the answer." Mr. Boyd then commented that he felt it "was probably a more realistic schedule ... up to a six-month delay." Mr. Gaffney next stated that he wanted "to get the

input from Black & Veatch that says, 'ok, this would be the next step for the studies that need to be done. This is the challenge. The studies would have to fall out this way or this add-on to the existing dam would be possibly less expensive than this.' I think that we're going to be able to get some sort of input on what the potential costs could be for that based on the tests and the outcome of those tests to keep the costs low enough to make it a viable option to the current earthen dam ... I'm not looking for all the studies. What I want is the questions and the assumptions that the studies give us to help us make a better decision on whether we go forward with two things or stick with one ... I think the input from the expert panel will give us plenty of information, even if it is just asking the questions about what they may find."

Mr. Norris next stated that it has been stated on many occasions that the "County will be willing to pay for whatever costs' and asked if this "is one of the things that the County is willing to pay for? If so, I can't see why we would want to hold up this design process." Mr. Boyd responded that "obviously I can't make that decision." Mr. Norris then asked Mr. O'Connell to clarify the ACSA Board's statement that they would be "willing to fully pay for the [\$869,000] cost." Mr. O'Connell noted that the fee was for the design of a dam of 42 feet. Mr. Norris added that "if the County is willing to pay for it, I can't imagine we would hold it up ... we're paying for the Black & Veatch study out of our pocket. If you're willing to pay for it, I don't see why we can't move forward." Mr. Boyd next commented that "[the decision] would be an easier to make if we had that formula figured out ... adding theoretically maybe 15% or 20% more than what we would be paying anyway. Mr. O'Connell then stated that the "ACSA Board meets the 21st of October. If the goal is to keep something moving ... the Black & Veatch work reviewed - I'll stick my neck out to say, 'Let's keep Schnabel working - which I think has been the direction of our Board - at a dam at 42 feet with the elevation of a pool level at 30 [feet] - that we keep the work moving.' I'll get their approval at the next Board meeting to extend it beyond that ... I think [the ACSA Board's] concern is to keep it moving ... working on the DEQ response - working on the design of the earthen dam - working on [whether] the Black & Veatch a more cost effective way - and they're all moving in parallel ... that's what I heard our Board saying in the discussion that was going on at the Four Boards Meeting."

Mr. Norris then commented that "there is no sort of implicit commitment on our part to support because we're not there officially." Mr. O'Connell next stated that "you're going to have more factual information to be able to make a comparison ... if it's true that it's going to be more cost effective to do the concrete dam ... gets us more information on the table ... I think there's concern about that."

Mr. O'Connell moved that the Board of Directors vote to withdraw the first motion, seconded by Mr. Boyd. The motion was approved by a 7 - 0 vote.

Mr. O'Connell moved that the Board of Directors authorize Schnabel Engineering to begin work on the final design of the entire earthen dam structure at 42 feet with an alternative pool level at 30 feet and all the associated services that would need to be provided, which would be contingent upon the ACSA Board of Directors approving in public session on October 21, 2010 continuing this work beyond the next month, which was seconded by Mr. Boyd.

Prior to the vote, Mr. Norris wanted to be certain that the ACSA Board would be willing to assume the \$869,000 figure listed in the Board report for final design services. Mr. O'Connell responded that ACSA would "take on the proportional share for the next month until our Board can meet to approve it. I suspect they will approve the full design ... I can't make that decision by myself." Mr. Norris then commented that he "would have to oppose that because that's committing having the City ratepayers incur the cost for at least this month." Mr. O'Connell then clarified that "for this month the ACSA would pay for the next 30 days worth of work that Schnabel can get done ... beyond the 30-day period, I need approval from the [ACSA] Board to finish the contract out if there is not an agreement of this board." Mr. Norris said that he was "fine" with the motion after hearing Mr. O'Connell's clarification. Mr. Frederick next stated that "one of the things in this discussion that would help staff – because if you make a decision that you're going to move forward and the next step ... signing a contract – are you authorizing us to sign a contract for \$869,000 or do you want to set a spending limit until the ACSA Board meets that we can put in that contract that Schnabel cannot exceed during this period of time?" Mr. O'Connell felt that he was hearing Mr. Webster state that during the next 30 days there would be a lot of start-up type of work, so he was "not imagining a huge amount of cost. I think I need a trigger that beyond 30 days, if my Board does not approve it, then we've got to stop the work." Mr. Gaffney suggested limiting the amount to \$50,000 beyond 30 days. Mr. Jones then asked Mr. Webster to give the Board a "ballpark" figure, and Mr. O'Connell added that "maybe the actual cost for 30 days worth of work." Mr. Webster stated that "\$50,000 would be a reasonable amount. As I have indicated earlier, the work that we have ongoing now is wrapping up. The geotechnical work – that's finishing up mid-October, so this would fall through essentially quite well with that ... the start-up costs as Mr. O'Connell pointed to, would not be significant ... \$50,000 would be within a realm of what we would anticipate." Mr. Frederick then asked if Mr. O'Connell was willing to amend the motion to set a \$50,000 limit until the ACSA Board meets.

Mr. O'Connell amended his motion to add a \$50,000 limit until the ACSA Board of Directors acts on the entirety of the contract.

Prior to the vote, Mr. Frederick asked "if the ACSA Board of Directors acts to extend that limit before the next RWSA Board Meeting, are we authorized by this Board to go ahead and follow the wishes of the ACSA Board of Directors." Mr. O'Connell replied that it was the intent of his motion to allow RWSA to act in that manner.

As there were no further questions or discussion by the Board, the motion was approved by a 7 - 0 vote.

Referring to item three on the "Action Items" list concerning "Dam Expert Panel Review of Black & Veatch Study," Mr. Gaffney stated that he felt the previous discussion had covered this issue. Mr. Boyd then asked Mr. Norris if he was in agreement with the Board's recommendations on that item, and Mr. Norris affirmatively replied. Mr. Boyd next inquired if RWSA had leftover funds to cover the cost of reconvening the expert panel. Mr. Frederick replied that "when the Board initially approved the funding for the expert panel, we had scheduled workshops during final design ... we do have money available to schedule this workshop. The caveat I'm putting in here is – this is a workshop that we did not anticipate when

we submitted our initial budget. We have the money now, but it does mean when we get into final design – whoever we're working with – there may not be enough money because we would have advanced money that was intended for final design workshops. We might not have enough money for the expert panel to get through final design, and we may have to come back to the Board asking for additional funding.”

Mr. Boyd then asked for clarification purposes if this was the money that was to be used for the expert panel to review the final design services once completed by Schnabel. Mr. Frederick replied that RWSA planned to have the expert panel meet with the design team “at least twice during final design.”

Mr. Gaffney then moved on to item four entitled, “Develop Request for Proposal for at Least Part I Dredging.” Mr. Norris first asked the County the following “philosophical” question: “Does it matter to you whether the City issues that RFP?” Mr. Boyd replied that the County was more concerned about “who was going to pay for it.” Mr. Norris then clarified that he was not referring to who would actually pay for the dredging because he felt the City would pay for that project. He further stated that “the reason I ask this is because when we had the [City] Council meeting last week, we instructed the City staff to move forward on doing an RFP ... then we had the Four Boards Meeting the next day when the four boards instructed Rivanna’s staff to move forward on an RFP ... our assumption I think Monday night was that City staff would issue the RFP. We would incur the cost of doing the RFP and move forward with this ... that’s still my preference ... I think [City] Council is willing to go either way – at least a majority of [City] Council.” Mr. Jones then stated that “the majority of the [City] Council has said in individual clarifying discussions out of the Four Boards Meeting that they were comfortable with Rivanna taking the lead, with the [City] Public Works Director and with a representative from ACSA as a part of that discussion.” Mr. Norris next commented that his “question is similar to what we just agreed to do with the Schnabel [work] – would you be amenable if we paid for it? – we would move forward on doing the RFP.” Mr. Gaffney next commented that his “biggest concern ... is whoever does the RFP should administer and run the job. You wouldn’t want Rivanna running a job where the City puts out the RFP and hires a contractor ... if the City wants to manage dredging the reservoir, then it makes sense for the City to do the RFP. I’m not sure that’s what the City would want to do. I think what [Mr. Jones] said about having Rivanna prepare it with [Ms. Mueller] and somebody from the ACSA participating in the RFP and that process – I think that makes a lot more sense if it is Rivanna that is going to manage the process.” Mr. Norris next stated that he didn’t feel like “we have clarity yet. I know the majority of [City] Council said in terms of moving this forward they were ok ... if Rivanna issues the RFP. We haven’t had a full-fledge [City] Council discussion about who’s going to manage that process. I feel like we’re at a little bit of a loss right now internal with the City.” Mr. Boyd then commented that he didn’t “feel a real urgency to get this done anytime soon ... if you want to meet with [City] Council again ... I kind of go along with what [Mr. Gaffney] is saying here – if Rivanna is going to be managing this project or if the City is going to manage it and do it ... I think whoever does the RFP should also manage the project. When it gets to the cost allocation – moving forward with the dredging dollars – that’s a separate issue ... as well as I think – permitting ... all should be a separate [issue].” Mr. O’Connell then stated that “it seemed like from a cost allocation standpoint that if it was Rivanna that was doing it and taking a lead on it, that keeps everybody involved. I just think that makes more sense in the long run. We’ve already got a major amount

of work that's been done, and a consultant that fairly quickly should be able to turn around and start the RFP." Mr. Boyd added, "unless the City wants to open up the so-called 'small bites' ... that's a whole different question." Mr. Norris then stated that "...personally, if we're talking about doing the one-time dredging as outlined in the HDR report ... from a purely financial standpoint, don't know if that makes a lot of sense. There are many other reasons to dredge ... I've been convinced that there are better ways to dredge and cheaper ways to dredge. I just want to make sure that the RFP is structured to allow that ... there are actually a number of localities around the country now that are doing their own dredge – that are buying the equipment and running dredging operations – more and more localities are doing this on their own ... I think part of this is also to look internal to the City to see what it would take for us to develop the capacity." Mr. Boyd then noted that "it was not an RFP." Mr. Norris clarified that it would be "parallel to an RFP." Mr. Boyd next pointed out that the City "could do that on [its] own," and Mr. Norris agreed with that statement. Mr. Tucker suggested that this issue be discussed at the next City Council meeting ... because I don't see the urgency of this right now ... maybe once we understand where [City] Council might want to go, then the ACSA and the Board of Supervisors could then discuss ... hopefully at our next meeting in November we can then decide to either issue an RFP or [the City] go forward with issuing an RFP." Mr. Norris said that he was "fine" with what Mr. Tucker just suggested.

Mr. Boyd next questioned about "the work we've done so far – [HDR] actually identified sites and had preliminary discussions with people. I know the contracts have not been worked out and an RFP done – but opening that up to 100 other landowners ... in some other approach – that's a whole different can of worms you're opening yourself into." Mr. Norris then commented that "the idea of building large basins to dewater – if you do in mass – sort of a large one-time dredging operation – the cost isn't in getting the stuff out of the reservoir; it's dewatering – storing in large basins ... if we use a more marketable approach – what some call the 'small bites' approach. We don't need all that infrastructure. We need half an acre of land to put in a couple of dewatering trucks."

Mr. Frederick then stated that "an RFP can be written in a more broadly open-ended fashion, which allows bidders to be responsible for obtaining their own land sites. They can use the sites that are in HDR's report, or they can use any other sites that they can negotiate something with a property owner. They dredge at whatever rate and speed that they determine is appropriate and most profitable from their perspective. There are a couple cautions with this though ... no matter which staff is writing the RFP – that a consultant be involved in preparing this. If you're going to write something that's open ended, but at the same time very general, you can get responses all over the map. You can get reputable responses. You can get some very unreputable responses. Once it's out there and once you've received it, you've got to make a decision from what you've got. If you don't have a well written RFP, how are you going to rule out somebody that your hunch is unreputable or how are you even going to be able to prove that they're not reputable? Those are some huge questions. I don't think there's a problem writing an open-ended response. My concerns are more [about] a couple of things that I've heard stated outside of this meeting ... 'an RFP can be very simple to write and that small bites can save a whole lot of money that HDR missed.' We all hope at the end of the day in a contract that we get a good price. We always hope we get a better price than the engineer's estimate. Sometimes that happens. Sometimes it doesn't happen. I find it troubling to hear people say that HDR is a very reputable

firm and did a good job and then turn around in the next sentence to somebody else and say, 'but I've got an approach that's far cheaper' ... that's just basically saying that [you] don't trust HDR ... HDR was not told what to do and what not to do ... they selected the approach based on their expertise and experience for our reservoir that they thought was best ... Mr. Burch has stated that 'if you adopt a small approach, you may find the price is favorable at the beginning because you're going after the sand,' but over the long-term they [HDR] believe you'll spend more money – now that is their opinion. If you get a reputable contractor who comes in and disproves that ... you take the contract – but I think it's a mistake for us at this point to set up either the City staff or the Rivanna staff on the premise that HDR blew the cost estimate by a wide margin, and it can be done a lot cheaper. I think we'd better be very cautious and careful in how to approach this from a budgeting standpoint and that we're realistic in our focus. There's nothing wrong with doing some dredging, if that's what we want to do. I think in terms of our budgeting and in terms of our financial planning, let's don't plan it on the cheap and end up setting ourselves up for failure."

Mr. Boyd then noted that it was "County land out there and I don't want any of our constituents waking up the next morning and find a bunch of sludge in their yard." Mr. Norris then commented that "anytime you put an RFP you put in quality control. You look for work history and references."

Mr. O'Connell then asked if the dredging issue would be discussed at a City Council meeting, and Mr. Norris replied affirmatively. Mr. Norris added that City Council might decide that they want Rivanna to issue the RFP, but he wanted to have the chance to have that discussion with City Council.

Mr. Gaffney then moved on to the next item concerning "Develop New Cost Share Agreement for Water Supply Projects." Mr. O'Connell stated that the City and ACSA were working on this item. He further stated that "ultimately how much capacity the City and the ACSA [is needed] for their customers is what the bottom line is going to be ... I don't think we're at that point yet ... we've had some discussions ... some cost allocations agreements from previous years – I mentioned the 2003 agreement – there was a draft in 2008 and the assumption was we were going forward with the existing water supply plan ... I think that gives us information to work on." Mr. Boyd added that he felt "we really need to really look hard at what the purpose in dredging is for and how much of that is maintenance that should have been done years ago ..."

Mr. Gaffney next addressed the item concerning "Scheduling Additional Joint Boards Meeting." Mr. Boyd stated that it was supposed to occur after the DEQ meeting, so he felt that this should not be scheduled until the status of the DEQ meeting is known, and the other Board members were in agreement with that recommendation.

8.0 Other Items from Board/Staff not on the Agenda

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

9.0 Closed Meeting

There was no need for a closed meeting.

10.0 Adjournment

There being no further business, Mr. Boyd moved that the meeting be adjourned, seconded by Mr. Tucker. All members present voted aye, and the meeting was adjourned at 4:20 p.m.

Respectfully submitted,

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

We have heard on multiple occasions that the RWSA knows that there is a deadline in November 2011 to submit a regional water supply plan that is prepared in compliance with State regulations.

The RWSA has also indicated that the demand analysis prepared to support the new dam and pipeline project will be updated to satisfy the requirements. That statement predated the decision to request an opinion from Swartz Economic Engineering – an exercise that only resulted in a delay of several months.

I'd like to point out that the state regulations identify the methodology developed by the American Water Works Association as a preferred method to do demand analyses. This methodology has been revised since it was used by RWSA's consultant, specifically for how conservation is accounted for – not by a short-cut percentage reduction or a "one-time step-down."

The entire issue revolves around a single question – how much water will this community need to handle the worst of the worst droughts – not today, but at least 30 years from now. This is exactly what the state-required plan will address – using all of the data available and using updated methodologies.

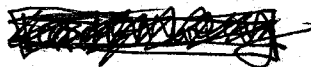
When City Council crafted its resolution on September 20th, Dr. Brown specifically asked that it include a statement that we evaluate actual water use and actual population every 10 years. This is perfectly consistent with the state requirements. Plus, since nearly 10 more years of consumption records are now available, we should not accept any more delays.

You know from this community's previous efforts – and I can confirm as a consultant who works regularly on community-based plans that require research and consensus building – it's very obvious that we are already running late.

I have many questions for the RWSA on this matter – but will limit it to just two at this time:

1. Have you put together a proposed schedule to deliver the plan to the state by the deadline?
2. How was the 2007 state grant of \$20,000 used to prepare for the state-required water supply plan?

Rebecca C. Quinn
296-1349
September 28, 2010



The City has gone to considerable expense to seek second opinions about cost estimates that were in doubt and has now found far lower estimates on dredging, and better information on repairing and raising the existing Lower Ragged Mountain dam than had been provided by consultants working under Rivanna's oversight.

Given this investment, it is important that the City representatives on the RWSA board make sure any additional work is done by consultants who are truly independent and not influenced by previous work or associations with RWSA.

The RWSA has stated repeatedly that its responsibility is to further the "Community Water Plan" that resulted in the proposed new dam and pipeline. Given that, it is difficult for many of us in the public to see how consultants working for RWSA would be truly objective.

I believe the following e-mails show that at least one member of the ITRT has, apparently without benefit of technical information, formed a negative opinion regarding the existing dam. To summarize in chronological order:

1. August 11, 2009 at 11:25 pm and 3:26 pm. A member of the local media contacted two members of the ITRT seeking corroboration of a statement made by the RWSA director that, based on a review of the 1913 report, the ITRT "did express significant concerns were RWSA to propose to build a new spillway for the existing dam".
2. August 12, 2009 at 8:55 am. One member of the ITRT replied to the reporter and declined to comment.
3. August 12, 2009 at 12:00 am (midnight). The other member of the ITRT forwarded the reporter's e-mail to an RWSA engineer stating "I am not aware of what Tom quoted, or where the comment about the new spillway for the existing dam was referring to."
4. August 12, 2009 at 12:13 pm. The RWSA director e-mailed this second member of the ITRT, stating "We will contact you to discuss."

An article published in The Daily Progress on November 25, 2009 included the following:

"Dan Johnson, vice president of GEI Consultants in Boulder, was a member of the panel assembled by RWSA earlier this year to review engineering data and a 1913 safety report for the lower dam. He confirmed in an August interview that the independent panel expressed what Frederick has described as "significant concerns" about any construction on the 1908 dam.

This is why I ask the City to keep any outside review of Black and Veatch's work in the City's control, as well as the dredging RFP.

Betty Mooney
981-4421
September 28, 2010

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“Work could be done, but you would have to lower the reservoir [water level],” Johnson said. “There was discussion about raising the existing dam ... but there is no great cost benefit and you end up with an old dam integrated with a new dam. With an entirely new dam downstream, you can keep operating the reservoir, and that is very valuable.”

http://www2.dailyprogress.com/news/cdp-news-local/2009/nov/25/state_gives_rwsa_conditional_permit_to_keep_dams_i-ar-92856/

Chuck Kent

③
From: Dan Johnson [dljohnson@geiconsultants.com]
Sent: Wednesday, August 12, 2009 12:00 AM
To: Chuck Kent
Subject: Fwd: left you a voicemail

Chuck,

I am forwarding this to you prior to making any contact. I am not aware of what Tom quoted, or what the comment about the new spillway for the existing dam was referring to. Perhaps there are two expert panels, one in the early 20th century and the current one. Do you suggest communication with this reporter?

Thanks,
Dan

>>> "Brian Wheeler" <bwheeler@cvilletomorrow.org> 8/11/2009 1:25 PM >>>

Mr. Johnson – Just left you a voicemail and I realized I might not have mentioned my organization. I work for Charlottesville Tomorrow and we have been reporting on the community water supply issue since 2005.

I am trying to find a source on the recent panel of dam experts that can corroborate the following statement made in an electronic interview we did with Tom Frederick of the RWSA with respect to the Mayo's Rock report from 1913 related to the lower Ragged Mountain dam.

"With this mass of earth in place, there is no evidence that the dam will not perform satisfactorily under fair weather conditions, and it is performing well today. However, after reviewing the 1913 report, RWSA's dam expert panel did express significant concerns were RWSA to propose to build a new spillway for the existing dam, if the construction of that spillway would weaken or interfere, even temporarily, with the integrity of the existing earthen abutment."

Can you help me confirm that this is a fair and accurate description of the expert panel's findings? Thanks in advance.

Brian

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Brian Wheeler, Executive Director
Charlottesville Tomorrow
230 Court Square, Suite 201
Charlottesville, VA 22902
bwheeler@cvilletomorrow.org
tel: 434-295-4905
tel: 800-252-5775
www.cvilletomorrow.org

Chuck Kent

④
From: Tom Frederick [tfrederick@rivanna.org]
Sent: Wednesday, August 12, 2009 12:13 PM
To: 'Dan Johnson'
Cc: Chuck Kent
Subject: FW: Reporter with a brief question

We will contact you to discuss.

②
From: Geosystems, L.P. [mailto:dabruce@geosystemsbruce.com]
Sent: Wednesday, August 12, 2009 8:55 AM
To: Tom Frederick
Subject: Fw: Reporter with a brief question

----- Original Message -----

From: Geosystems, L.P.
To: Brian Wheeler
Sent: Wednesday, August 12, 2009 8:54 AM
Subject: Reporter with a brief question

Dear Mr. Wheeler,

I respectfully decline your invitation to comment on this statement. When serving on advisory panels, it is always my policy not to issue independent statements to the media.

Best personal regards,

Donald A. Bruce, Ph.D., C.Eng., L.G., L.E.G.
President - GEOSYSTEMS, L.P.
P.O. Box 237, Venetia, PA 15367 (USA)
office: (724) 942-0570
cell: (412) 997-1784
fax: (724) 942-1911
Website: www.geosystemsbruce.com
Email: dabruce@geosystemsbruce.com

①
----- Original Message -----

From: Brian Wheeler
To: dabruce@geosystemsbruce.com
Sent: Tuesday, August 11, 2009 3:26 PM
Subject: Reporter with a brief question

Dr. Bruce – I am a reporter with Charlottesville Tomorrow and we have been reporting on the community water supply issue in Charlottesville since 2005.

I am trying to find a source on the recent panel of dam experts that can corroborate the following statement made in an electronic interview we did with Tom Frederick of the RWSA

with respect to the Mayo's Rock report from 1913 related to the lower Ragged Mountain dam.

"With this mass of earth in place, there is no evidence that the dam will not perform satisfactorily under fair weather conditions, and it is performing well today. However, after reviewing the 1913 report, RWSA's dam expert panel did express significant concerns were RWSA to propose to build a new spillway for the existing dam, if the construction of that spillway would weaken or interfere, even temporarily, with the integrity of the existing earthen abutment."

Can you help me confirm that this is a fair and accurate description of the expert panel's findings? Thanks in advance.

Brian

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MEMORANDUM

**TO: RIVANNA WATER & SEWER AUTHORITY
BOARD OF DIRECTORS**

FROM: JENNIFER A. WHITAKER, CHIEF ENGINEER

REVIEWED BY: THOMAS L. FREDERICK, EXECUTIVE DIRECTOR

SUBJECT: RAGGED MOUNTAIN DAM – FINAL DESIGN

DATE: SEPTEMBER 28, 2010

Background

At the end of the September 21, 2010 meeting of the “four boards”, an “action items” list was developed that included having the Authority staff obtain a fee estimate for the final design of the proposed earthen Ragged Mountain Dam to an increased pool height of somewhere between 30-feet and 42-feet. Staff then requested that Schnabel compile and present a detailed fee estimate for the remaining final design. Schnabel has indicated that most of the remaining design on the dam can not proceed until a specific height has been determined for the dam structure to be built in the subsequent construction contract, with the exception of the outlet tunnel. Provided the pool height increase is at least 20-feet, Schnabel can proceed with the design of the outlet tunnel, at a fee of \$71,365.

As requested, Schnabel provided the Authority with an estimate of costs to complete the final design activities. This fee estimate encompasses dam design (including the tunnel), additional permitting support, and additional community/public relations support. The fee was based on a single design and construction phase approach, and is detailed below:

Task 1 – Project Management:	Continue current lump sum budget
Task 2 – Final Hydrologic and Hydraulic Report	\$ 15,000
Task 3 – Final Design	\$ 789,050
Task 4 – Additional Permitting Support	\$ 35,000
Task 5 – Additional Community/Public Relation Support	<u>\$ 29,950</u>
Total Not-to-Exceed Estimated Fee =	\$ 869,000

Also at the request of RWSA staff, Schnabel included a separate fee proposal for project bidding and contractor selection of \$45,000.

Board Action Requested:

RWSA staff requests direction from the Board of Directors.