

Albemarle County Service Authority Board of Directors

1 The Board of Directors of the Albemarle County Service Authority (ACSA) met in
2 a regular session on November 5, 2009, at 8:00 a.m. at the Administration and
3 Operations Center at 168 Spotnap Road in Charlottesville, Virginia.

4 **Members Present:** Mr. Wagner, Chairman; Messrs. Carter, Colbaugh, Martin;
5 Dr. Palmer

6 **Members Absent:** Mr. Roberts, Vice-Chairman

7 **Staff Present:** Messrs. Bowling, Fern, Gorham; Ms. Breeden, Mrs. Herr

8 **Public Present:** Mr. Tom Frederick with Rivanna Water and Sewer Authority
9 and Sean Tubbs with Charlottesville Tomorrow

10

11 **1. Call to Order**

12 The Chairman called the meeting to order and a quorum was established.

13

14 **2. Dredging Feasibility Study – Mr. Tom Frederick (Recording Time:**
15 **08:05:36 a.m.)**

16 The Chairman stated that there was consensus, among the Albemarle
17 County Service Authority (ACSA) Board, of disappointment regarding the
18 reduction of the Scope of Services for the Dredging Feasibility Study by City
19 Council (City). He stated the ACSA Board asked to meet with Mr. Frederick to
20 discuss ways to help fill the voids left by the reduction and turned the floor over to
21 Mr. Frederick.

22 Mr. Frederick explained that discussions were held by the Rivanna Water
23 and Sewer Authority (RWSA) to determine a Water Supply Plan which followed
24 State and Federal Regulations, and incorporated significant public comment. He
25 stated that dredging, which involved a lot of logistical issues whether it was
26 performed once or every ten years, was discussed as an option, but would not
27 completely solve the problem. The logistical issues included finding land to
28 conduct the different operations involved in handling the sediment removed from
29 the reservoir, cost of operations, and limits posed by zoning regulations in terms
30 of where the sediment could be applied, as well as the condition of the economy.
31 Mr. Frederick stated that all these issues were time-specific and could be

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1 identified by conducting a rigorous analysis at the present time, but could not be
2 determined for 20, 30 or 40 years from now. He stated these issues were also a
3 major concern for both the ACSA and the public.

4 Mr. Frederick stated interest had been expressed to keep dredging on the
5 table, as an option, which was why the Water Supply Plan, centered on the
6 Ragged Mountain Dam, was written as an alternative to supply water that would
7 yield a need of 50 years. He stated, that from a regulatory standpoint dredging
8 could be permitted, without being part of the 50-Year Water Supply Plan, as an
9 individual project. Mr. Frederick stated, within the last year and half, a lot of
10 interest had been expressed to dredge. As a result of that interest, the South
11 Fork Stewardship Task Force (Task Force) was formed to examine dredging.
12 The Task Force made recommendations, in terms of emerging wetlands and how
13 that would impact future dredging, and recognized the need for a Bathymetric
14 Survey, which would need to be conducted in the near future, and that dredging
15 could be undertaken as an “opportunistic” function when the economy presented
16 a better opportunity to do so. He stated that at least one particular group, within
17 the community, felt that dredging should be a direct part of the Water Supply
18 Plan and should be conducted in place of other alternatives selected by the
19 community three years ago. Mr. Frederick stated that there had been a lot of
20 discussion that dredging would not meet the water supply needs, as a new dam
21 would. He stated that he had heard, within public debate, a lot of poignant
22 discussion, as well as questions, directed toward RWSA for the amount of money
23 spent to obtain necessary permits. Mr. Frederick stated in addition, RWSA had
24 been unjustly criticized for not answering questions raised in 2009, which did not
25 appear to be critical to the decisions made by the community in 2005 and 2006.

26 Mr. Frederick stated that RWSA developed a scope of services for a
27 Dredging Feasibility Study, which was modified and approved by the City before
28 being approved by the RWSA Board of Directors. Mr. Frederick stated the scope
29 of services, which included what the City had approved and agreed to fund, with
30 regard to the majority of studies, was then presented to consultants.

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1 Mr. Frederick stated that a selection committee was then formed from a
2 broad group of individuals (including a few citizens suggested by Mayor Norris)
3 representing the ACSA, the City, and RWSA to review proposals submitted by
4 consultants for a Dredging Feasibility Study. During the committee's review,
5 there was unanimous consensus on which consultant would be the best to
6 conduct a study. The consultant agreed upon was HDR Engineering, Inc. (HDR).

7 Mr. Frederick stated in regard to a statement made that the City may not
8 wish to fund all of the work, RWSA suggested other options be considered, such
9 as a reduced scope of services, at a reduced price. The City then decided to
10 take the lowest of pricing options offered by HDR, and eliminate the scope of
11 services pertaining to beneficial use of sediment. He stated that during dredging
12 debates within the community, beneficial use of sediment was a big topic. In
13 2004, RWSA asked Gannett Fleming to conduct a study which would satisfy the
14 regulatory requirements for a Water Supply Plan, without conducting a "full-
15 blown" Dredging Feasibility Study. This study would evaluate alternatives
16 sufficient enough to satisfy the criteria of the Clean Water Act. Mr. Frederick
17 stated, within Gannett Fleming's Study, a Beneficial Use of Sediment Analysis
18 was not conducted, in detail, but investigations were conducted by phone, to
19 determine potential sediment use within the community. He stated that Gannett
20 Fleming developed a range of scenarios and pricing estimates. One scenario
21 included the assumption that 50% of the sediment removed from the reservoir
22 had beneficial use. Another scenario included a worst case, whereas 100% of
23 the sediment removed had to be disposed. Mr. Frederick stated that Gannett
24 Fleming published a report detailing the range of estimates for the different
25 scenarios. He stated that Gannett Fleming's Report was heavily criticized by
26 citizens within the community, who wished to see dredging made the primary
27 objective of the Water Supply Plan. He stated that he was concerned that the
28 RWSA could be taking a step backwards if they are required to reduce the scope
29 of services comparable to what Gannett Fleming proposed in 2005. The
30 Beneficial Use of Sediment Analysis was estimated at \$24,932, which still
31 remained unfunded.

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1 Mr. Frederick stated another concern for RWSA was in regard to the
2 reduction of the number of public meetings proposed by HDR in their Standard
3 Feasibility Assessment Proposal. There is great public desire to be involved in
4 issues that are of significant importance within the community. Mr. Frederick
5 stated that if a study was going to be conducted to determine answers, it would
6 be a mistake to only hold one public meeting at the end of the project, as is
7 currently funded by the City. He felt that it was best to have more public
8 interaction, earlier in the process, in order to obtain feedback on which decisions
9 should be made, on how to continue to conduct the study.

10 Mr. Frederick stated that due to a motion made by Mr. Gary Fern,
11 Executive Director of the ACSA, during a RWSA Board of Directors' meeting last
12 week, a second public meeting, funded by the ACSA, had been included within
13 the study. He explained that the Dredging Feasibility Study would be a two-stage
14 process, with 8 to 9 steps categorized in two separate stages. The first stage,
15 Reservoir Characterization, would include a Bathymetric Survey, a Pre-Dredge
16 Survey and activity performed around the reservoir to collect data in order to
17 determine how much sediment there would be as a result of dredging. He stated
18 the Reservoir Characterization stage would also answer questions about
19 emerging wetlands and what limitations they might pose. Mr. Frederick
20 explained that samples of sediment would be collected and analyzed for
21 characteristics that could be used later during a Beneficial Use of Sediment
22 Analysis. This information would be helpful in determining how to handle the
23 sediment, once removed from the reservoir, how easy it would be to drain [de-
24 water] the sediment, how much land would be required and what type of
25 equipment was needed. Mr. Frederick stated that after the first stage was
26 completed, a public meeting would be held to discuss the findings to date, with a
27 significant amount of time allowed to answer questions from the public. He
28 stated rather than have the meeting be a podium for the public to criticize the
29 process, citizens who were genuinely interested in the Dredging Feasibility
30 Study, could be elicited to determine what level of effort was needed to look at
31 the next stage, which would address what would be done with the sediment. Mr.

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1 Frederick stated the current assessment required the consultant to review maps
2 and available data, and conduct a Desktop Analysis of potential sites around the
3 reservoir for the processing of sediment, as well as disposal. He stated that
4 based on a desktop analysis, the consultant would narrow the potential sites
5 down to two, and only detail those two sites. Mr. Frederick stated there were four
6 potential landowners who have requested their sites be reviewed. He stated due
7 to the reduced scope of services, two of the four sites would be eliminated as
8 potential sites. Mr. Frederick stated that if the community chose to study all four
9 sites, in detail, more funds would be needed.

10 Mr. Bowling asked if that would be in addition to money already allocated.
11 Mr. Frederick replied yes. Mr. Bowling asked what a Beneficial Use of Sediment
12 Analysis was. Mr. Frederick replied an analysis would include soil
13 characterization, soil volume, and a review of the economical means for
14 removing the sediment, and other options on how the sediment could be used.
15 He stated the more sediment used, the less to be disposed of, which would
16 reduce the cost indicated in a Dredging Feasibility Study.

17 Dr. Palmer asked Mr. Frederick if he felt the City had information, with
18 respect to those sites, which determined their decision to reduce the number of
19 sites from four to two, or if it was strictly a financial decision. Mr. Frederick
20 replied that he was not aware of any information the City may have had on those
21 sites. He stated that he did not fault the City for having to make that difficult
22 decision, but from what he knew, part of the decision, if not all, was based on
23 cost.

24 Dr. Palmer asked what the difference in pricing was to review four sites,
25 as opposed to only two. Mr. Frederick replied, considerably more. Mr. Fern
26 added that it would be an additional \$140,708.

27 Dr. Palmer asked Mr. Frederick to elaborate on alternatives that were
28 initially studied, to the degree that satisfied the Clean Water Act. Mr. Frederick
29 explained that the Clean Water Act sets purposes and objectives in criteria,
30 which were sometimes not easy to quantify. He stated in order for RWSA to
31 satisfy the Clean Water Act, regular consultations with RWSA's attorney were

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1 held to determine the level of detail needed in order to assess if an alternative
2 met the criteria of “least environmentally damaging”. He stated the 32 different
3 alternatives offered by Gannett Fleming were reviewed by RWSA to determine
4 which alternatives could be set aside and which passed regulatory measures.
5 Mr. Frederick stated at one point in the process, RWSA’s attorney determined
6 that there was not enough information to suggest that dredging was the least
7 environmentally damaging, or if it should be set aside, which was why dredging
8 made the short list of four alternatives that required more rigorous investigation.
9 After more rigorous investigations, RWSA’s attorney advised that RWSA’s
10 position was strong enough to narrow the list down to two, which was detailed in
11 a memorandum by Gannett Fleming.

12 Dr. Palmer asked what provisions of the Clean Water Act helped to decide
13 that dredging be included as one of those two remaining alternatives. Mr.
14 Frederick stated that data needs to show that there is clearly one alternative
15 which is the least environmentally damaging, compared to the other alternatives;
16 or that one alternative is more “practicable”. He explained that “practicable” is
17 not defined in the Clean Water Act, but is determined using a combination of
18 what is written in the act and 30 years of case law. Mr. Frederick added that
19 RWSA’s attorney stated that it was not the purpose of the Clean Water Act to
20 specify that every alternative be designed, in detail, in order to make the decision
21 on what alternative was the least environmentally damaging. He stated that it
22 was never the objective of the project to spend an endless amount of money
23 designing every possible alternative in order to evaluate all the alternatives. Mr.
24 Frederick stated the decisions, which were made during the Water Supply Plan
25 process, were satisfied by the regulatory agencies themselves, whose job it is to
26 determine if the Clean Water Act is satisfied.

27 Mr. Colbaugh asked what the outcome of the summary report would be,
28 with regard to the tasks approved by the Board, and if they would determine how
29 much dredging would cost. Mr. Frederick stated that when interest groups,
30 promoting a Dredging Feasibility Study, were coming to the various boards
31 pleading their case, one of the requests made was that a reliable estimate (plus

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1 or minus 10-15%) be obtained. He stated that an engineering study would need
2 to be very rigorous to obtain an estimate within 10-15%, but could be done. The
3 scope of services approved had that objective in mind. Mr. Frederick stated that
4 he believed there was no study that could determine what the economy would be
5 like in 20, 25, 30 or 35 years. He stated that if the agencies were willing to
6 conduct a sufficient scope of work, a reliable estimate could be obtained for the
7 present. Mr. Frederick stated that when the City decided to remove the
8 Beneficial Use of Sediment Analysis from the scope of services, RWSA spoke
9 with their consultant to determine the impact. The consultant was very clear in
10 stating that if one, or both, of the site alternatives being considered in detail,
11 reached a point where the property owner did not care about the sediment
12 constituents and was willing to take on the risk of handling the sediment, either
13 by selling the sediment for profit or having to dispose of the sediment
14 themselves, a 10-15% reliability cost opinion could be achieved. He added that
15 HDR stated that without conducting a Beneficial Use of Sediment Analysis, a 10-
16 15% reliability cost opinion could not be achieved for an alternative where the
17 RWSA would have to determine final disposition of the sediment; however, a
18 much broader range could be provided. Mr. Frederick stated this caused him to
19 raise the question as to whether or not additional funding could be authorized to
20 review additional sites. He felt that it was his job to pose the question that, if we
21 do not commit to fund the Beneficial Use of Sediment Analysis, a 10-15%
22 reliability cost opinion, that the public was asking for, could not be achieved.

23 Mr. Colbaugh stated ... "the objective is, clearly, to come up with a
24 number of how much does dredging cost." Mr. Frederick stated ... "that was the
25 objective I clearly understood, when we were scoping the project." Mr. Colbaugh
26 stated that he understood the site evaluation and beneficial use tasks were in the
27 second stage of the study. Mr. Frederick replied that these scope of service
28 items were all in the second half of the study.

29 Dr. Palmer stated she understood that the RWSA was going to ask
30 Schnabel [Schnabel Engineering] that they analyze the feasibility of a 13-foot
31 increase on the existing dam. She added that it was her understanding that the

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1 13-foot figure comes from the Gannett Fleming Study that was done years ago in
2 response to a request as to how high the existing dam could be raised. Dr.
3 Palmer stated, with respect to water supply planning, this is a somewhat arbitrary
4 figure. She voiced concern over the ACSA being asked to pay for another study
5 and the additional studies which the City could request. She asked that any
6 further studies be required to explicitly state their connection to the Community
7 Water Supply Plan. Dr. Palmer further stated, "I would like to know how this fits
8 into our planning process."

9 Mr. Frederick stated over the course of last year, particularly within the last
10 few months, public comment, from citizens within the community, had been
11 received by RWSA expressing different ideas on how RWSA could study other
12 alternatives, other than the one approved in 2006. He stated that the core
13 question was, how much information did decision makers need, collectively, to
14 decide whether to reaffirm or modify the existing plan. Mr. Frederick stated that
15 he was not sure what the answer was, but that collecting more data would cost
16 more money.

17 Mr. Carter stated his perception of dredging was a machine, sitting in the
18 middle of the reservoir, digging out sediment and placing that sediment on a
19 barge to be loaded onto a truck and taken away. He felt perhaps his perception
20 was wrong, after hearing Mr. Frederick's explanation of dredging, which involved
21 placing the sediment on property adjacent to the reservoir. Mr. Carter asked Mr.
22 Frederick if that involved a significant amount of land. Mr. Frederick replied yes,
23 depending on how the sediment was processed. He stated that Mr. Carter's
24 perception about dredging was accurate, in terms of how to remove the sediment
25 from the reservoir. Mr. Frederick explained that there was a type of dredging
26 where equipment was used to reach down into the reservoir to pull sediment out,
27 which was loaded onto a container to be taken away. He stated that another
28 type of dredging, which deserved merit and attention, and was suggested by
29 Gannett Fleming in 2005 because of the size and length of the reservoir, was
30 hydraulic dredging, which used a pump, attached to a dredge machine, to stir up

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1 sediment at the bottom of the reservoir and pump the sediment through a pipe
2 onto land.

3 Mr. Carter asked if that type of dredging required the permission of the
4 property owner. Mr. Frederick replied yes, since that type of dredging involved
5 intermediate processing, due to the amount of water that would need to be
6 removed from the sediment before being used. He stated preferably, this would
7 require land closest to the reservoir. Mr. Carter asked if part of the Dredging
8 Feasibility Study was to determine what method to use? Mr. Frederick replied
9 yes.

10 Mr. Carter asked, "Where is the 50-Year Plan, right now? Are we still
11 working on a parallel track right now?" Mr. Frederick replied yes, the RWSA
12 Board had authorized completing a preliminary design of the Ragged Mountain
13 Dam, under contract to Schnabel, and expected to have, sometime in the mid-to-
14 late spring of 2010, a new preliminary opinion of probable project cost for the
15 new dam. He stated earlier this year, the Four Boards met jointly to determine
16 what information was needed, with a decision made that before any construction
17 took place on the new dam, a Dredging Feasibility Study would need to be
18 completed, as well as a review of the conceptual design of the pipeline between
19 the South Fork Rivanna River and Ragged Mountain had to be completed.

20 Dr. Palmer stated, "I think it is important, when we communicate to the
21 public, that they understand this particular dredging operation is not like others.
22 That we have a seven and one half-mile long run of the reservoir." This
23 configuration presents logistical problems. She added, "Most dredging
24 operations that you would read about are in the order of a couple hundred
25 thousand cubic yards, where we are talking about taking out two million cubic
26 yards and so the quantity and the length of the reservoir add to the logistical
27 problems that we have."

28 Mr. Martin stated "We've already decided to fund the second public
29 meeting, and money for that will come out of the Watershed Fund; it's Service
30 Authority money, which is in a reserve fund that RWSA has been building over
31 the years." Mr. Frederick stated that a payment plan had been developed where

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1 tasks jointly funded would come from the Watershed Fund. He stated that tasks
2 funded only by the City, would be billed directly to the City. The \$8,880 the
3 ACSA agreed to fund for the second public meeting would be billed directly to the
4 ACSA.

5 Mr. Martin asked, if the ACSA were to decide to help fund the Beneficial
6 Use of Sediment Analysis, would the \$24,932.00 come directly from the ACSA?
7 Mr. Frederick replied yes, and stated that if the ACSA agreed to fund the
8 Beneficial Use of Sediment Analysis, and the City agreed not to, RWSA would
9 need permission to bill the ACSA directly. Mr. Martin stated, "With respect to the
10 \$100,000, I was not exactly sure what that would cover. It involves talking to
11 more than two possible recipients of the sediment." Mr. Frederick stated the
12 \$100,000 would cover the original scope of services, which allowed a detailed
13 analysis of up to four sites.

14 Mr. Martin asked, "Since the City Council meeting, where City Council
15 narrowed the scope, have you gotten any indications that the City is having
16 second thoughts about what they did, and is there a possibility that the City will
17 contribute more funding or restore the scope of the study?" Mr. Frederick
18 replied, "In fairness, at the meeting where City Council made the decision on
19 what they wanted, which led to the reduced scope, Ms. Mueller was standing
20 before City Council helping me answer questions that they wanted to ask her and
21 she asked the Council, even as they were making the decision, 'are you willing to
22 reconsider this if new information comes forward?' And they said yes."

23 Mr. Martin asked, "Where are we in that process, as far as approaching
24 the City Council?" Mr. Frederick replied he was not sure if the City had been
25 approached at this point and time, at least publically. Dr. Palmer added, "I don't
26 think we need to until the second half of the study." Mr. Martin stated "That is
27 another question that I have, the study has been broken down since the RFP
28 [Request for Proposal] was issued into these two phases, and the first phase
29 ends with a public meeting. Is there a "time-out" period after that second public
30 meeting where the contractor just stops work while we decide what to do on the
31 second phase? How much time is going to go by in order to decide what to do in

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1 the second phase?” Mr. Frederick stated he viewed the scope in two parts, and
2 once the consultant finished Phase 1 with data presented at a public meeting, it
3 was possible that a desktop analysis could be started on Phase 2. He stated the
4 consultant would only be able to do a limited amount, particularly if the scope
5 was going to be amended. Mr. Frederick stated his intention for the public
6 meeting, especially if issues were not rectified regarding funding for Phase 2,
7 was to share with the public what tasks were funded. He stated that if the public
8 were to ask for other tasks to be investigated, the response would be that the
9 current budget only allowed certain tasks to be conducted. Mr. Frederick stated
10 that if the public meeting was structured correctly, allowing citizens the
11 opportunity to express their opinion on which tasks should be conducted, then
12 perhaps feedback could be obtained on whether or not to expand the scope of
13 services. He stated that if the public were to be critical about what was not done
14 at the end of the study, one could say that opportunity was given to express
15 thoughts and opinions before decisions were made.

16 Mr. Martin stated, “I assumed from Jim’s earlier question, that you may
17 have been contemplating reserving a decision on how much money the Service
18 Authority should invest, or can invest, until after the first phase is over. Is that
19 workable for your purposes if we did that, or would you rather have commitments
20 up front, right now before the thing starts?” Mr. Frederick replied the “drop dead”
21 decision point was at the end of the first public meeting. He stated that if
22 decision makers were not able to decide on a scope of services for Stage 2, the
23 project would then be delayed. He added that a decision was not needed prior to
24 the end of the public meeting, but a decision could be made earlier. Mr.
25 Frederick stated it was important to understand that what was authorized in the
26 current budget would be shared with the public at the meeting. Mr. Martin asked,
27 approximately, when the second public meeting would be held. Mr. Frederick
28 replied that a date had not yet been determined, but that it would not be within
29 the next 60 days. He stated it could be fairly early in 2010. He added that
30 RWSA had requested that the consultant provide a schedule on how the
31 Reservoir Characterization would be completed. Mr. Frederick stated he would

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1 be able to set a date for the second public meeting after the Reservoir
2 Characterization was finished.

3 Mr. Martin stated, "My personal attitude is that this Feasibility Study should
4 not be done at all. We are beyond that, and it is going to be done, and if it is
5 going to be done, it should be done right and not leave questions at the end.
6 Would you tell us, just give us a precise list of what you would like us to do?" Mr.
7 Frederick stated the original scope of services was very practical and would
8 accomplish what the community wanted. He stated the question, which he was
9 not able to answer, and may not ever be able to answer, was whether RWSA
10 would be able to answer every individual question with the current scope of
11 services. He added the obvious answer, would be no. Mr. Frederick stated that
12 RWSA hoped to answer all the very important questions, and he felt the original
13 scope of services did address them.

14 Mr. Martin asked if the Beneficial Use of Sediment Analysis was part of
15 the expanded study, or if that would be an additional \$24,923. Mr. Frederick
16 stated the Beneficial Use of Sediment Analysis was part of the expanded study,
17 which was currently not funded. Mr. Martin stated "In terms of money short-fall
18 that you would need to do what you wanted to, right now, we are talking about
19 \$141,000 for the expanded scope, in addition to \$25,000 for the Beneficial Use of
20 Sediment Study." Mr. Frederick stated that decisions made by the City did
21 exclude the Forebay Analysis, which the ACSA had previously agreed to help
22 fund. He stated that RWSA had offered the opinion that the Forebay Analysis
23 could be conducted if the community expressed interest in taking dredging to the
24 next step, but was not necessary to determine dredging feasibility and to obtain a
25 cost estimate to dredge now.

26 Mr. Colbaugh asked Mr. Frederick if raising the existing dam had been
27 investigated, and if so, what type of dam modifications were being considered?
28 In addition, he asked if it was possible to lay reinforced concrete on the backside
29 to raise the existing dam 15 or 20-feet? Mr. Frederick stated that RWSA had
30 consulted with Schnabel about what information was necessary to determine a
31 reliable, preliminary cost estimate for raising the existing dam. Schnabel

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1 determined that geotechnical investigations would be required in order to
2 understand the properties of the existing dam, in addition to taking core samples
3 of the existing concrete structure. He stated that information about the
4 foundation, and perhaps even shallow depths beneath the foundation of the
5 existing dam, would need to be known in order to determine how the existing
6 dam was connected to the foundation. Mr. Frederick stated that a study to raise
7 the existing dam by a small height would cost, without labor estimates, around
8 \$300,000, with the majority of that cost being geotechnical investigations. He
9 stated in order to raise the existing dam by 45 feet, the cost would be equivalent
10 to the Water Supply Plan, and could cost close to \$500,000 in geotechnical
11 investigations. The increased cost was the result of a taller dam, causing larger
12 pressures, and the need for more information to be obtained about foundation
13 conditions to make the analysis. Mr. Frederick stated this information was
14 shared with RWSA, as well as the City, and was met with surprise and shock,
15 because perhaps the perception of raising the existing dam was that it was easy
16 to do.

17 Dr. Palmer stated that also discussed at the RWSA meeting, was the fact
18 there was not any cost savings in raising the existing dam, because doing so
19 would require completely encapsulating the dam. She stated suggestions were
20 that it would cost more than previously thought. Dr. Palmer stated, within the
21 public, there was a perception that Gannett Fleming conducted a very detailed
22 study on the existing dam, which determined 13-feet was the highest the dam
23 could be raised, and would cost under \$10 million, she thought. She stated that
24 Ms. Jennifer Whitaker, RWSA, had stated that it was much more costly than
25 suggested and asked if that were true.

26 Mr. Frederick stated that he did not have a firm answer, and did not want
27 to suggest that RWSA did. He stated that during RWSA's kick-off meeting with
28 Schnabel Engineering, Inc. (Schnabel) regarding the preliminary design to raise
29 the dam 45 feet, RWSA asked Schnabel what it would take to obtain a good cost
30 estimate to answer that question. Mr. Frederick explained that Schnabel stated
31 they would not be able to conduct a study without collecting data, since they did

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1 not know the structural characteristics of the existing dam and foundation to
2 answer those questions. He stated in order to determine those answers, a
3 detailed study was required, which would cost between \$300,000 and \$500,000.
4 He stated that RWSA asked Schnabel, based on their experience and what they
5 knew about dams of that type, if spending that amount of money to conduct
6 geotechnical investigations would determine that raising the existing dam would
7 be a better alternative than building a new dam. Schnabel stated that they would
8 not be able to determine that answer until studies were conducted. Mr. Frederick
9 stated that Schnabel had stated that in their opinion it was not worth the
10 investment to make that determination. Mr. Frederick stated that Schnabel was
11 frank with RWSA, and he felt this information was important enough to share with
12 decision makers, including the RWSA Board, the City and the ACSA Board. He
13 stated that there was criticism regarding the information from citizens who refer
14 to themselves as the "Sustainable Water Plan" group. Ms. Dede Smith
15 suggested that for Schnabel to have offered that information up front represented
16 a conflict of interest, and in her opinion, RWSA should find a different consultant
17 to conduct the 13-foot study. Mr. Frederick stated that he did not agree with Ms.
18 Dede Smith's opinion, and felt that what Schnabel did was what RWSA asked
19 them to do.

20 Dr. Palmer asked if her understanding was correct that Ms. Holly Edwards
21 asked that RWSA staff come back before the Board with a price from Schnabel
22 to conduct the geotechnical investigations. Mr. Frederick replied that RWSA had
23 requested a detailed estimate from Schnabel for the geotechnical investigations,
24 which they hoped to have any day now. He stated at the meeting with the City,
25 there was no expression, publically, on the part of any councilor that indicated
26 RWSA needed to expend \$300,000. Mr. Frederick stated that a few days after
27 the meeting, it was quoted in The Daily Progress that there was still interest to
28 obtain that information. Mr. Frederick stated he asked Mr. Gary O'Connell, City
29 Manager, if the City wished Schnabel to present a proposal to study raising the
30 existing dam, and at what height. Mr. O'Connell's response was that he believed
31 the City did want Schnabel to study raising the existing dam by 13 feet. Mr.

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1 Frederick stated that he had expressed publically, at the RWSA Board Meeting
2 last week, that if RWSA were to obtain an estimate for raising the dam 45 feet
3 and 13 feet, the two different cost estimates would meet two different needs; how
4 was that information going to be used to make a decision. He felt that this was a
5 fair question to ask so that RWSA knew up front before expending a lot of
6 money.

7 Mr. Colbaugh asked what level of design was used by Gannett Fleming to
8 determine the 13 feet and if a cost estimate was provided? Mr. Frederick stated
9 that Gannett Fleming offered a conceptual level estimate for raising the dam 13
10 feet. He stated the body of the report referred to additional investigations that
11 would need to be conducted. Mr. Frederick stated the report referred to an
12 alternative for the existing dam, which required removing buttresses from the
13 concrete structure and draining the reservoir. He stated the report did not
14 elaborate on details for draining the reservoir or what the impacts of doing so
15 would be to the community. That question remained unanswered. He stated the
16 text of the report also discussed additional investigations that needed to be
17 conducted at a preliminary design level. Mr. Frederick stated that a conceptual
18 level estimate could possibly change, based on further investigations. He stated
19 that cost estimates from that report had been discussed publically, in the context
20 of "that's a firm number", but were outdated in terms of the economy. The
21 numbers were provided on a conceptual level without conducting additional
22 investigations, which may or may not increase cost. Mr. Frederick stated a good
23 idea of whether or not there was possible additional cost could be determined by
24 conducting the study. He felt that it was a "bit" irresponsible to offer to the public,
25 costs from the report as final reliable estimates, when that was not the intent.

26 Dr. Palmer stated there had been a lot of discussion, publically, about
27 defining the route of the South Fork Rivanna River to the Ragged Mountain Dam
28 Pipeline. She asked Mr. Frederick if there had been any interest from the City to
29 conduct a study for redefining the route. Mr. Frederick replied he had not heard
30 any Councilor express the desire to conduct a more detailed design study of the
31 pipeline. He stated that he had heard discussion regarding a study of the

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1 pipeline from Ms. Betty Mooney, Mr. Richard Lloyd and Mr. Kevin Lynch. Mr.
2 Colbaugh stated that it was not planned to be constructed for another 10 years.
3 Mr. Frederick stated in the fall of 2007, RWSA held a public meeting hoping to
4 begin discussions on how to phase the Water Supply Plan. He stated during
5 discussions to determine, as a community, what the plan would consist of,
6 questions were raised about phasing. RWSA decided the best way to deal with
7 those questions would be to decide what the plan entailed first. RWSA offered
8 an option of constructing both a dam and a pipeline at the same time which,
9 RWSA later determined, would lead to more significant wholesale rate increases.
10 RWSA also offered the option of constructing the dam first, and then the pipeline
11 at a later time. Mr. Frederick stated that an actual model had been run of safe-
12 yield based on 2020 demands, as projected in 2004 by Gannett Fleming. The
13 model determined that the Ragged Mountain Reservoir, after a major drought,
14 could be refilled from the Sugar Hollow Pipeline; it would take awhile to refill, but
15 could be accomplished. He stated this demonstrated that, if the community
16 wished to delay construction of a new pipeline, it could, reliably, be done. Mr.
17 Frederick stated that one question, which required some judgment call, and was
18 getting more and more difficult to answer, was that by 2020 the Sugar Hollow
19 Pipeline would be 93 years old; how much longer could the decision to construct
20 a new pipeline be put off?

21 Dr. Palmer stated, originally RWSA had included easement acquisition for
22 the pipeline in their 2011 CIP Budget. She asked if there were any intentions to
23 do so for 2012 or 2013, or if this was even on the agenda at this point. Mr.
24 Frederick stated there were two issues that would help determine when to
25 finalize the route and begin to acquire rights-of-way. One, which was reviewed
26 by RWSA during studies conducted for the Water Supply Plan, was a route
27 located on the edge of VDOT's right-of-way, which they acquired when they were
28 planning to construct a by-pass. He stated that RWSA understood by 2012,
29 VDOT would make a final decision on whether or not to keep that right-of-way, or
30 sell the right-of-way back to property owners. Mr. Frederick stated this was an
31 important decision, because if the right-of-way was maintained as a public right-

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1 of-way, it would be a very logical place to construct an underground pipeline, and
2 would have the least disturbance on adjoining and nearby properties. He stated
3 that if VDOT decided to sell the right-of-way back to property owners, that exact
4 alignment for an underground pipeline would no longer make sense, but that
5 there were alternate routes that could be investigated which were not very far
6 from this public right-of-way. Mr. Frederick stated that detailed studies had not
7 yet been conducted for a pipeline and were not scheduled.

8 Mr. Frederick stated that RWSA staff was being asked to conduct more
9 and more studies to determine whether or not to continue with the original plan
10 approved, or if the plan needed to be amended. Mr. Frederick stated that these
11 were studies RWSA did not anticipate when setting future work programs. Mr.
12 Frederick stated that, either more staff would need to be hired, or some of the
13 decisions would need to be postponed, as well as other work. He stated there
14 was only so much that could be done, and done well. He stated these were the
15 two items that would influence the decision on the pipeline. Mr. Frederick stated
16 that RWSA did not have the staff or the budget to conduct a detailed analysis of
17 the pipeline now, in addition to other things RWSA had been asked to do.

18 Dr. Palmer asked Mr. Frederick if RWSA would consider hiring additional
19 staff if it were not for the additional studies? Mr. Frederick stated that RWSA
20 staff, based on what plans had been developed, was tight, but workable. He
21 stated that in RWSA's view, the concern was the amount of effort being applied
22 to public processes, additional studies, Freedom of Information Act requests and
23 other things related to the Water Supply Plan, which was taking time that RWSA
24 did not anticipate. He stated that if this process continued for several years,
25 RWSA would need more assistance. Dr. Palmer asked if it would be best to hire
26 a Public Relations person or an additional engineer, and what Mr. Frederick felt
27 would be most valuable to resolve issues confronting the RWSA. Mr. Frederick
28 stated if RWSA continued to conduct more technical studies, there would be a
29 need for more technical staff.

30 Mr. Bowling stated he felt Mr. Martin addressed "the heart of the matter"
31 with the question he asked earlier in the meeting, and asked Mr. Frederick, what

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1 he would do if he were the ACSA, to help the process along? Mr. Frederick
2 stated that he felt the ACSA, should have been included in earlier discussions
3 regarding how many more studies were needed to determine answers and who
4 should be paying. He stated that he did not pretend it was easy for public
5 officials to make decisions, especially when receiving phones calls every day
6 asking if other alternatives had been considered. Mr. Frederick stated that
7 RWSA could assist with that process. He felt that sometimes the perception of
8 the public was that the RWSA's and the ACSA's opinions were "salt" and were
9 not to be trusted at this point in the process. Mr. Frederick stated that he felt
10 everyone did their very best, everyday, to have the integrity to help the
11 community make the right and best decisions. Mr. Frederick stated that RWSA
12 needed to reach a point where there was enough information to reaffirm
13 decisions in order to move forward, and felt that the ACSA needed to play a role
14 in doing so.

15 Mr. Colbaugh stated that it would be hard for the ACSA to "pound on the
16 table" until late spring when dam construction costs have been determined. Mr.
17 Frederick stated that in terms of what information was needed, additional studies
18 need to be identified now, rather than in the spring.

19 Dr. Palmer asked, if using Gannett Fleming's estimate of \$85 million for
20 the Ragged Mountain Dam construction is being too conservative? She felt the
21 \$85 million figure had not changed the Water Supply Plan in any way. Dr.
22 Palmer stated that Schnabel determined, in their best estimate, that the
23 construction would be less than \$85 million.

24 Mr. Frederick stated that RWSA was very hopeful that a much better plan,
25 and cost, would come forward from the studies currently being conducted, than
26 what was offered by Gannett Fleming in August of 2008, which was a very
27 conservative plan.

28 Mr. Carter stated, "I think your point is well taken that the other side of the
29 coin should be looked at, because I believe from what I have seen and read, the
30 only thing that City Council, particularly, is getting now is one side, basically."
31 He suggested that the ACSA Board thoughtfully consider how they can be a

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1 stronger advocate for the CWSP and gain credibility in the eyes of the City
2 Council. Mr. Carter added that he sees an on-going debate regarding the CWSP
3 and the need for the ACSA Board to be more proactive.

4 Mr. Colbaugh stated, "We have a lot of customers, so certainly we have
5 the ability to communicate with them, whether it's with a bill stuffing or whatever.
6 We certainly have the obligation to communicate with them. Should we try and
7 develop a position paper? Do we want to raise the issue about how the City is
8 moving forward with this and it's not our decision to move forward with a
9 Dredging Study?"

10 Mr. Carter stated "I think this is something we really need to talk about."
11 Dr. Palmer agreed and stated "We should, and we have to talk about what the
12 Board of Supervisors can do, now that we have a new Board of Supervisors."

13 Dr. Palmer asked Mr. Frederick to elaborate on the Virginia Soil and Water
14 Conservation (VSWC) Board Meeting that he and Ms. Jennifer Whitaker were
15 asked to attend in November regarding dam safety. She stated the Dam Safety
16 Division had asked RWSA to appear before the VSWC Board to answer
17 questions concerning the schedule of repairing or replacing the old Ragged
18 Mountain Dam, and the fact that RWSA did not own the property on which it
19 stood. She asked if this would be a public meeting and if a list of questions had
20 been provided to RWSA. Mr. Frederick stated the VSWC Board was a public
21 body of citizens, appointed based on general statutes at the State level; it
22 oversees policy decisions of the Department of Conservation and Recreation
23 (DCR) located in Richmond, Virginia. He stated the Dam Safety Division was
24 part of the DCR and policy level decisions affected by dam safety appeared
25 before the VSWC Board, which was open to the public. Mr. Frederick stated that
26 RWSA had been asked to appear before the VSWC Board to discuss the project
27 and submit a new revised schedule. He stated that he had not been provided
28 with a list of questions. Mr. Frederick stated that he was not sure what the scope
29 of the questions would be, and that RWSA would do their best to answer the
30 questions asked.

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1 Dr. Palmer stated in the RWSA Executive Director's Report, concern had
2 been expressed over the fact that RWSA was constructing a dam on property not
3 owned by RWSA. Mr. Frederick stated from what he understood, the key
4 purpose for RWSA's meeting with the VSWC Board was because Dam Safety
5 Division staff had expressed concern over the schedule for the project, and when
6 dam safety issues would be rectified. He stated the Dam Safety Division did not
7 take a position on how to correct deficiencies. It was expressed that part of their
8 agenda, as an agency, was to clean up their files and records confirming if the
9 RWSA was the property owner or not. Mr. Frederick stated that the City of
10 Charlottesville was the property owner.

11 Mr. Martin stated the VSWC Board Meeting was scheduled the same day
12 as the ACSA November Board Meeting. He asked Mr. Frederick if it would be
13 useful to have ACSA representation at the meeting in support of the Water
14 Supply Plan. Mr. Frederick felt that it would not hurt, and could be useful for the
15 ACSA to be in attendance so they could help field a question or two. After brief
16 discussion regarding a VSWC Board Meeting Agenda, and not knowing the
17 matters' placement, the Board agreed to wait before deciding to reschedule
18 ACSA's November Board meeting in order to attend.

19 Mr. Wagner stated that he tried to explain to a lot of folks, who feel
20 dredging is a good idea just by what they read in the papers, why dredging was
21 not the solution that it was reported to be by a lot people. He stated that one
22 statement he made during his explanation was to proceed with the Water Supply
23 Plan for 50 years first, and maybe down the road somewhere dredge the
24 reservoir; perhaps the 50-year plan, with dredging, turns out to be an 80-year
25 plan. He asked Mr. Frederick if that was a reasonable alternative. Mr. Frederick
26 replied yes.

27 Dr. Palmer stated that Mr. Frederick had discussed, during an RWSA
28 Board Meeting, restructuring the RWSA Wholesale Rates. She stated that a
29 letter was written to RWSA by the ACSA Board suggesting that if they were
30 going to do so, they may want to do so soon. She asked Mr. Frederick if that
31 was something that RWSA was still considering, or if that would be put on hold

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1 for another year. Mr. Frederick stated that if it was the desire of the ACSA Board
2 to have those discussions, then discussions should be held, but that the City
3 would have to be included and that RWSA was prepared to move forward with
4 such discussions. He stated that if the ACSA or the City requested RWSA to
5 consider a matter, the request should be granted. He stated that in order for a
6 decision to be made on restructuring RWSA Wholesale Rates, the matter would
7 need to come before the RWSA Board, where there were both County and City
8 representatives. Dr. Palmer stated that the ACSA was prepared to move
9 forward, but realized RWSA staff only had so much time and the ACSA Board did
10 not want to burden staff anymore at a time when staff was already burdened.
11 However, this was decided, as a Board, that we would like to see the matter
12 pursued. Mr. Colbaugh stated that it would help the ACSA's budget process to
13 know ahead of time, perhaps in January or February, whether that was going to
14 be the case so that fee and rate structures could be set accordingly.

15 Dr. Palmer stated that today's discussion was very helpful and thanked
16 Mr. Frederick for his time. She stated that she would like to speak with Mr.
17 Frederick at a later date and time, to gain a better understanding of the Clean
18 Water Act. She stated that the ACSA Board would discuss ways to see how they
19 could better support the RWSA. Mr. Martin thanked Mr. Frederick for all of his
20 personal efforts in the entire process and to commiserate with Mr. Frederick with
21 respect to personal abuse directed towards RWSA; this was totally unwarranted,
22 and he complimented Mr. Frederick in the very responsible way he has handled
23 the situation. He stated that personally, he felt that Mr. Frederick was doing a
24 spectacular job.

25 Mr. Frederick informed the ACSA Board of recent e-mails received by
26 citizens regarding the idea of restoring the Sugar Hollow Pipeline as the new
27 pipeline in lieu of the South Fork Rivanna River Pipeline. He felt that the ACSA
28 Board needed to be aware of this information.

29 Mr. Colbaugh asked what the problem would be to restore the Sugar
30 Hollow Pipeline in lieu of the South Fork Rivanna Pipeline, other than cost. Mr.
31 Martin replied there was not enough water in the Moorman's River to justify a

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1 pipeline. Dr. Palmer added there was a problem with transfer of capacity as well.
2 Mr. Frederick stated that the Sugar Hollow Reservoir watershed, that feeds the
3 reservoir, is about 5% of the land area that serves the South Fork Rivanna
4 Reservoir. He added in order to get 18.7 MGD safe-yield using the Sugar Hollow
5 Pipeline, instead of South Fork Rivanna Pipeline, you would need to remove
6 more water from a much smaller watershed, depriving more water from the
7 Moorman's River. He stated one way to try and mitigate that, would be to
8 construct a larger reservoir. This would work up until a point was reached where
9 the reservoir was as large as the watershed that had been filled. Mr. Frederick
10 stated the idea of expanding the Sugar Hollow Reservoir was one of 32 original
11 alternatives, but was dismissed early in the process due to encroachment of
12 federal park land. Mr. Frederick stated that the revitalized discussion of going to
13 Sugar Hollow mentioned absolutely nothing about doing anything with the dam or
14 the reservoir, which would take significantly more water out of the rivers. He
15 stated that early in the process, when reviewing 32 alternatives, originally the
16 Ragged Mountain concept was to use Sugar Hollow. Mr. Frederick stated there
17 was substantial concern expressed about that concept in public meetings held by
18 interest groups within the community. The decision was made as a community,
19 with a lot of public information and support, to move the water to South Fork,
20 which he felt was a better concept for a lot of reasons; a much bigger watershed,
21 recognizing the ecological needs of the river better; also providing a direct
22 connection between two reservoirs that would be feeding the two major water
23 treatment plants, which offered a lot of advantages in terms of interchangeability
24 between reservoirs. Mr. Frederick stated the question now being raised is, do we
25 go back, after decisions were made as a community, and start reviewing that
26 issue again?

27 Mr. Colbaugh stated that was a very good explanation and one that should
28 be able to satisfy the needs of someone who wanted to listen. Mr. Frederick
29 stated that issue was probably one of the top five reasons why this community
30 came together in 2006 and unanimously supported a really good plan. He
31 stated that the community helped build the plan, but was then supported by the

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1 regulatory agencies, because they are in the business of promoting ecological
2 stream flow; so not only is it a permit condition now, but to go back now means
3 going back to DEQ and asking them to change the permit condition, which could
4 be a problem.

5 Dr. Palmer stated that, on the website for the Sustainable Water Supply
6 Organization, there was a list of myths about the Water Supply Plan, and one of
7 those was that the Moorman's River was stressed now and would be stressed in
8 the future with a new Sugar Hollow Pipeline. The intention was to insinuate that
9 the stream flows that were designed by The Nature Conservancy were bogus
10 and not necessary.

11 The Board thanked Mr. Frederick for his discussion and time.

12 The Chairman asked if there was anything else from any of the members
13 of the Board.

14 Mr. Colbaugh asked Mr. Fern if he could provide the Board with a detailed
15 budget calendar. He felt this would be helpful since some of the items discussed
16 today were important to the ACSA, as well as staff, in regard to Strategic
17 Planning issues, and for when the ACSA would need to know information on
18 connection fees. Mr. Colbaugh stated that he would like the Board to have
19 discussion on rates before publishing them. He stated that last year the ACSA
20 published a rate increase of 12%; but ended up with only a 1% rate increase.

21 Dr. Palmer stated before discussion was held by the Board to determine
22 what the ACSA could do to help RWSA, the Board needed to find out what the
23 Albemarle County Board of Supervisors' situation was and what role that may
24 play in the ACSA Boards' situation. Mr. Carter agreed. Mr. Colbaugh stated that
25 would also play a part in the budget process, which was a real contracted time
26 period. Mr. Carter stated that he was confident this would be the only Board that
27 had their budget set and ready to go two months ahead of time.

28 Mr. Martin stated "It would be nice to talk about the rates, I agree, but I do
29 not know how we could talk about rates without having a draft of the entire
30 budget. Once we have a draft of the entire budget, it's open to the public." Mr.

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1 Colbaugh agreed and stated "I just don't want to have the big discrepancy that
2 we had last year."

3 Dr. Palmer stated "I'm sure that you understand this, but bringing up the
4 wholesale rate issue, I had no thought that would actually show up in the budget
5 soon or affect us for this coming year. I just assumed that would take quite a
6 while, but I just didn't want to lose track of it and I think it's important to keep that
7 in mind and move forward with it." Mr. Fern stated that he was not sure if that
8 would occur in this budget. Dr. Palmer stated that she would be really surprised
9 if it did.

10 **3. Adjourn (Recording Time: 11:29 a.m.)**

11 ***There being no further business, Mr. Carter moved that the meeting***
12 ***be adjourned, seconded by Dr. Palmer. All members voted aye.***

13

14

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Gary W. Fern, PE, Secretary-Treasurer